THE FLORA OF FAIR RIVER FARM, LINCOLN COUNTY, MISSISSIPPI, U.S.A.

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ABSTRACT

Southwest Mississippi is a poorly studied, but biologically diverse region, encompassing the broad transition from the East Gulf Coastal Plain longleaf pine-bluestem ecosystem to the rich hardwood forests of the Loess bluffs and hills. A floristic inventory of an approximately 694.7-hectare privately owned natural area in Lincoln County was conducted. The Fair River Farm is situated in a region of highly dissected terrain around the Little Fair River and Kees Creek, near the transition between two major level III ecoregions, and the boundary between the Pearl River and lower Mississippi River drainage basins. 744 vascular plant taxa and 72 bryophytes were documented. 495 taxa are new to Lincoln County, and 3 are new to the state of Mississippi; 27 species are designated special concern by the Mississippi Natural Heritage Program, 13 are on the watch list and 14 are on the tracking list. Photographic records available on iNaturalist are used for some species as an alternative to physical vouchers. Plant communities present on the tract are discussed and briefly and qualitatively compared to General Land Office records, original county soil surveys, and historic descriptions of the region, with emphasis on the distribution of longleaf pine (*Pinus palustris* Mill.), now very rare on the tract. The number of county records highlights the need for more survey work and potentially underreported biological diversity and conservation value of the southwest region of Mississippi and other poorly collected areas of the Southeastern U.S.; this inventory may inform land management decisions on the tract and elsewhere in the region.

RESUMEN

El suroeste de Mississippi es una región escasamente estudiada, pero biológicamente diversa, que abarca la amplia transición del ecosistema de pino azul de tallo largo de la llanura costera del este del golfo a los ricos bosques de frondosas de los acantilados y colinas de Loess. Se realizó un inventario florístico de un área natural privada de aproximadamente 694,7 hectáreas en el condado de Lincoln. Fair River Farm está situada en una región de terreno muy disecado alrededor de Little Fair River y Kees Creek, cerca de la transición entre dos ecorregiones importantes de nivel III y el límite entre las cuencas de drenaje del río Pearl y la parte baja del río Mississippi. Se documentaron 744 taxones de plantas vasculares y 72 briófitos. 495 taxones son nuevos en el condado de Lincoln y 3 son nuevos en el estado de Mississippi; 27 especies están designadas 'de interés especial' por el Programa de Patrimonio Natural de Mississippi, 13 están en la lista de vigilancia y 14 están en la lista de seguimiento. Los registros fotográficos disponibles en iNaturalist se utilizan para algunas especies como alternativa a los comprobantes físicos. Las comunidades de plantas presentes en el tramo se discuten y se comparan breve y cualitativamente con los registros de la Oficina General de Tierras, los levantamientos originales del suelo del condado y las descripciones históricas de la región, con énfasis en la distribución del pino de hoja larga (Pinus palustris Mill.), ahora muy raro en el transecto La cantidad de registros del condado destaca la necesidad de más trabajo de estudio y la diversidad biológica y el valor de conservación potencialmente subestimados de la región suroeste de Mississippi y otras áreas escasamente recolectadas del sureste de los EE. UU.; este inventario puede informar las decisiones de manejo de la tierra en el tramo y en otras partes de la región.

INTRODUCTION

Floristic inventories are an important resource for biodiversity conservation, informing systematic conservation planning and natural resource management at both a local and regional level. Although Mississippi (MS) is situated in the North American Coastal Plain biodiversity hotspot, a conservation priority both for the U.S. and globally (Noss et al. 2015), its flora remains one of the most poorly documented in the United States. Only 14 counties in the state have been surveyed, most of which are in the northern portion of the state. No county survey exists for Lincoln County; of the 40 checklists, inventories, and surveys published in Mississippi (McFarland et al. 2020) outside of the Loess bluffs, only two floristic inventories have been conducted in southwest Mississippi—a survey of the Homochitto National Forest (Havran 2004), and of Amite County (Alford 2001), both located well west of Fair River Farm and in the Homochitto River basin. The counties of southwest MS outside of the Loess bluffs are some of the most poorly represented in herbaria, but diverse (SERNEC 2021;

J. Bot. Res. Inst. Texas 16(1): 227–254. 2022
https://doi.org/10.17348/jbrit.v16.i1.1229

Heather Sullivan, MMNS herbarium curator, pers. comm.). As such, more formal investigation of the flora of the region and of significant natural areas within it is needed.

Fair River Farm is a 694.7-hectare privately owned natural area and former farm, mostly contiguous, in east-central Lincoln County, Mississippi (Fig. 1), currently leased and managed by the Fair River Institute, a 501(c)(3) nonprofit. Much of the acreage of Fair River Farm is in natural secondary forests, with some very limited areas of old-growth in the steepest ravines and in frequently flooded bottoms. A detailed history of past land use does not exist, but much of the tract remains in comparatively undisturbed condition and locally provides an important refugium for native flora and fauna, with the surrounding landscape dominated by monocultural loblolly pine (*Pinus taeda* L.) plantations, bahiagrass (*Paspalum notatum* Flüggé) pastures, and clearcuts. Its position at the intersection of several major ecological or physiographic regions of the state, and wide variation in topography and substrates at the fork of the Little Fair River, allows for a diversity of vascular plant communities including upland pine and oak-hickory woodlands, rich mesophytic hardwood forests, bottomland forests, and open grassland, wetland, and riverine scrub.

General Land Office (GLO) surveys provide some of the most detailed records available of historic conditions that can inform habitat restoration practices. GLO surveys contain both plat maps of every township, which occasionally provide approximate locations of notable natural features such as wetlands and prairies, and survey notes, which describe the landscape encountered by the surveyors when walking section lines in detail and record the positions of "witness trees" at each quarter-section (Gray 2010). Witness trees have been used to determine canopy composition and stand density (Gray 2010; Hanberry et al. 2018; Bragg 2003). GLO records were investigated along with several other historic sources to assess plant communities historically present in the region, with emphasis on the distribution of longleaf pine (*Pinus palustris* Elliott). Longleaf pine woodlands are considered an endangered ecosystem, of primary interest to conservation in the southeastern coastal plain (Noss et al. 2015).

Surface fires were common in the upland portions of the region pre-settlement, with fire return intervals in much of the hilly inner coastal plain of south Mississippi averaging approximately 4.01–6.00 years in fire-maintained systems (Guyette et al. 2012) and as low as 2 years in longleaf pine ecosystems (White & Harley 2016). Across much of the southeastern coastal plain, fire suppression has had dramatic effects on community structure and resulted in greatly reduced diversity in formerly fire-maintained upland systems (Noss et al. 2015; Noss et al. 2021). Prescribed fire is widely used in the south in restoration of upland forests and woodlands, including both oak-hickory and pine-dominated types, to historic conditions and has been demonstrated to increase vascular plant diversity (Guyette et al. 2012; Noss et al. 2015; White & Harley 2016; Cannon & Brewer 2013; Noss et al. 2021). There is little history of prescribed fire use within the past century on Fair River Farm, and closed forests dominate throughout, but significant remnants of the original fire-maintained understory vegetation persist on maintained rights-of-way and in mowed hayfields, as is the case in many areas of the South (Noss et al. 2021). Restoration of natural fire regimes in upland forest types present at Fair River Farm through prescribed burns is a primary management objective.

The primary goals of this research are to improve our understanding of the plant communities and floristic diversity of southwest Mississippi, an "under-botanized" region of an under-botanized state, and to inform the development of a restoration plan for the Fair River Farm and Fair River Institute. Primary objectives were to (1) document the entire vascular flora of Fair River Farm and its environs, (2) compile a complete annotated checklist, (3) provide a detailed qualitative description of the plant communities on the tract and species occurring within them, (4) conduct a qualitative review of historic descriptions and early surveys of the region, to determine the extent to which the landscape has been altered by anthropogenic disturbance, with emphasis on the distribution of longleaf pine, informing future land management decisions for the tract.

THE STUDY SITE

The Fair River Farm is located in east-central Lincoln County, Mississippi, in the southwest region of the state. The main tract, approximately 571.7 hectares, is located at longitude 90°17′45.2″W and latitude 31°33′54.9″N,

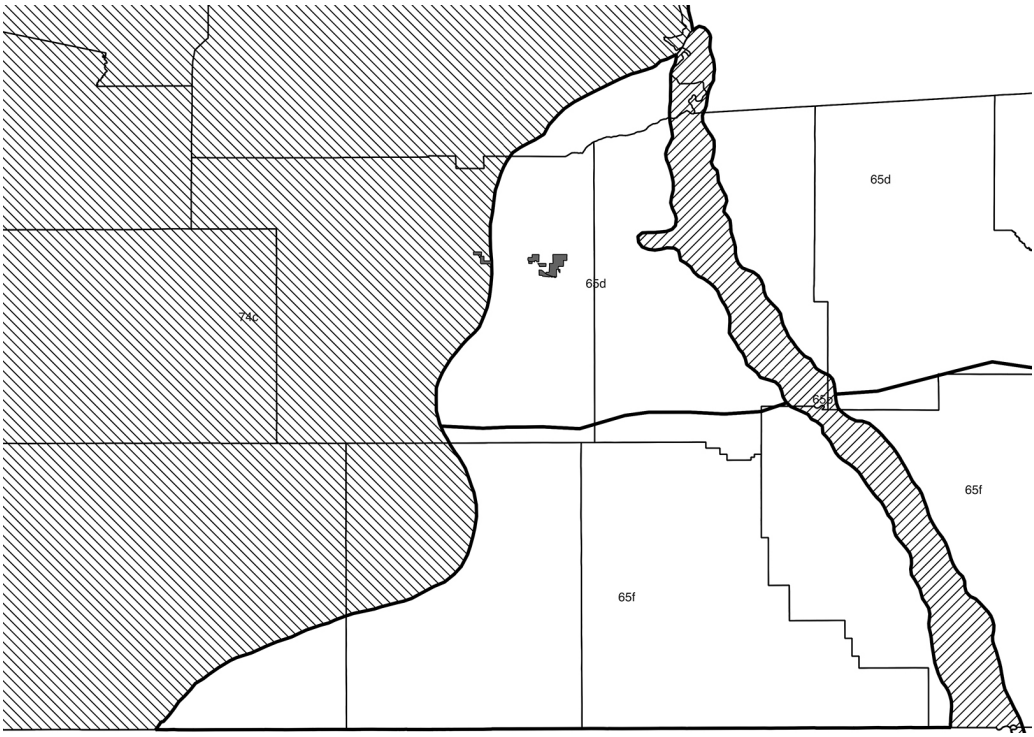

Fig. 1. Fair River Farm in relation to EPA Level IV Ecoregions (Chapman et al. 2004).

north of U.S. Highway 84, and west of Fair River Rd. A second, smaller tract surveyed, comprising approximately 112.4 hectares, is located approximately 2.7 miles west at longitude 90°22′27.5″W and latitude 31°34′13.0″N, on both sides of Nalco Ln. NE. The entire Fair River Farm falls within the U.S. Geological Survey Fair Oak Springs 7.5-minute quadrangle. It includes most of section 15 and parts of sections 17, 21, 22, 28, and 27 in Township 7 North, Range 9 East and parts of sections 14 and 15 in Township 7 North, Range 8 East.

Lincoln County is situated in the southwest region of the state, within the East Gulf Coastal Plain floristic province. The placement of east-central Lincoln County in current physiographic classifications of Mississippi is ambiguous. While it is well within the native range of longleaf pine (*Pinus palustris* L.) and broader definitions of the Pine Belt or Longleaf Pine Hills (e.g., Fenneman 1938, Lowe 1919, Hilgard 1860), all of Lincoln County is excluded from narrower definitions of the Pine Belt (e.g., MARIS 1994). While the Fair River Farm area is far from the Loess bluffs or hills proper, more than half of Lincoln County lies within the Mississippi Valley Loess Plains level III ecoregion (Chapman et al. 2004). Fair River Farm is close to the intersection of three level IV ecoregions: the Southern Hilly Gulf Coastal Plain (65d), the Southern Pine Plains and Hills (65f), and the Southern Rolling Plains (Fig. 1). The placement of east-central Lincoln County in Hodgkins et al. (1976), a more detailed physiographic classification, is similar; the main tract falls barely within region 30a (Southern Loam Hills- Rugged Topography), but within a few miles of the 4-way intersection between regions 30d (Southern Loessial Loam Hills- Rugged Topography), 30e (Southern Loessial Loam Hills- Gentle Topography), and 30c (Fragipan loam hills).

Fair River Farm falls entirely within the Pearl River Drainage Basin, positioned over rugged terrain along the Little Fair River, just above its junction with Kees Creek to form the Fair River, a major Pearl River

tributary. The second, smaller tract (mostly pasture) is drained partly by Kees Creek and partly by East Bogue Chitto Creek. The Homochitto National Forest and Amite County, where the two other inventories in south Mississippi were conducted, are within the lower Mississippi River and Lake Pontchartrain drainages. Local relief varies from approximately 300 to 455 feet; the terrain is quite rugged north of the Little Fair River in section 15.

Climate, Geology, and Soils

Lincoln County, Mississippi has a humid subtropical climate. Hot summers and cool winters are typical. Annual precipitation is roughly 152 cm on average. The coldest month of the year is January, with average monthly temperatures around 9.1°C; the hottest month is July, with average monthly temperatures around 27.1°C (NOAA 2021).

The geology of Lincoln County is not diverse, consisting entirely of undifferentiated coastal plain sediments. Surface geology of the Fair River Farm is dominated by the Citronelle formation, which contains mostly Pliocene-aged red sand, gravel, and white clay; the Pascagoula and Hattiesburg formations, containing Miocene-aged clay, sandy clay, sand, and some siltstone, cover a smaller area near Big Springs Drive. A mantle of Loess of varying thickness is present, originating as wind-blown silt deposited from the Mississippi River.

Soils are mostly acidic to circumneutral silt loams, sandy loams, and gravelly sandy loams, with some outcrops of acidic clay. Falaya series soils predominate in stream bottoms; Guinn and Boswell series soils dominate the uplands, particularly ruggedly dissected ridges and ravines. Minor soils include Providence and Bude silt loam, on a few richer slopes supporting mostly hardwoods; Ora silt loam, formerly mapped as Memphis and generally loamy and quite deep within Fair River farm, on a few broad flat ridgetops, mostly in old fields; Ruston sandy loam, on a few of the higher ridges; and Hatchie and Freeland soils, confined to a single raised terrace of the Little Fair River, dominated by an ambiguous open oldfield grassland community (FG).

History and Land Use

Approximately 77% of the acreage of Fair River Farm is in natural forest, the majority of which is second- or third-growth mixed shortleaf pine, loblolly pine, and hardwoods. A further 18% is in a mixture of bahiagrass (*Paspalum notatum* Flügge) and little bluestem (*Schizachyrium scoparium* (Michx.) Nash) pasture, much of which is now vegetated in large part with native herbaceous plants. A small fraction (roughly 5%) of the tract is in managed loblolly pine (*Pinus taeda* L.) plantations. Most pastures are maintained only by a single annual hay-cutting, typically in September through November; a small acreage on the east side is actively grazed. Heliophytic understory vegetation is otherwise mostly restricted to rights-of-way, roadsides, fire lanes, and old fields, although the powerline intersecting Fair River Farm, managed by the Entergy Corporation, is degraded by intensive herbicide use and disturbance from heavy equipment, supporting no conservative native flora and dominated by extensive infestations of *Lygodium japonicum* and *Perilla frutescens*.

The area was settled in the mid-19th century, albeit rather sparsely. Old roadbeds and the remains of several homesteads can be seen in the area along Big Springs Dr.; timbers remain from the original ford on the Little Fair River and later roads within Fair River Farm. The Fair River School stood near the corner of section 21, 22, 27, and 28, and a cemetery perhaps associated with the original Hopewell church remains in the northeast corner of section 22. Where structures no longer exist, past intensive disturbance along these mapped roads and scattered homesteads is evident in the plant communities; loblolly pine, now mature, predominates, with localized infestations of cultivated exotics such as *Wisteria sinensis* and *Nandina domestica*. Detailed records of land use do not exist for the intervening period in the late 19th and early 20th century. However, the town of Brookhaven was a center for longleaf pine logging, and Hoffman (1992) describes dummy lines constructed in the vicinity of Fair River Farm; any longleaf pine which may have been present on the tract was logged in the early 20th century. Old growth forests persist only in the steepest ravines.

Within living memory, human use has been much more limited; grazing and hay-cutting has been restricted to mostly small pastures scattered on loamier ridgetops and terraces, logging to a few small clearcuts and select-cuts in some of the lower quality, loblolly pine- dominated forest land (RPF and LPF

communities). The original management of two open old fields (with the main populations of *Orthochilus ecristatus* and *Polygala boykinii*), now entirely *Schizachyrium scoparium* with exotic pasture grasses restricted to maintained paths, is unknown—it is possible they have been maintained only by hay-cutting and were never improved. Perhaps the greatest current threat to native flora on Fair River Farm is the destruction of heliophytic vegetation in open areas by deer hunters for ryegrass food plots, a practice which is widespread in Mississippi. As of 2021 this is prohibited on the 15th section (permitted only on the powerline right-of-way and two pastures in sections 21 and 22), which contains the most extensive grassland remnants on Fair River Farm, supporting many rare and conservative species not found elsewhere. However, large tracts of remnant heliophytic understory there have been lost to this practice within the past two decades.

METHODS

Sampling surveys were conducted periodically beginning in January 2019 and through 2020 after the discovery of *Dryopteris celsa* (L.) Brittons, Sterns, & Poggenb. by the author in November of 2018 (see Kees and Weakley 2018). Random meander search surveys were conducted in all months of the year focusing on significant microhabitats such as the fire lane on the northeast border, forested seepages, streambanks and clay ledges, remnant old-growth or other mature forest, and steep ravines and bluffs. Vouchers were deposited at the Mississippi Museum of Natural Science (MMNS), University of North Carolina, Chapel Hill (NCU) herbaria, and University of West Alabama (UWAL) herbaria, all collected by the author.

The majority of taxa reported, especially those in taxonomically "difficult" groups, are documented by a physical voucher. Images for most species are also stored on iNaturalist, accessible in the Fair River Institute Biodiversity traditional project (https://www.inaturalist.org/ projects/fair-river-institute-biodiversity). In some cases, typically species with small and sensitive populations on the tract and extremely common and widespread species already well-represented in scientific collections, only photographic documentation is provided. The bryophyte checklist is based on collections made in December 2021 and likely incomplete; all bryophyte species are documented by both physical voucher specimens and detailed photos, including microscope views, on iNaturalist.

Scanned GLO survey notes for the sections intersecting or adjacent to Fair River Farm, provided by Toby Gray (MSU) as TIFF images, were transcribed and are included here as Appendix 1; witness trees are summarized in Table 2. The scanned surveys were originally on microfiche; the location of the original copies is not known (Toby Gray pers. comm.), and survey notes are not available through the Bureau of Land Management portal. Because of poor image quality and damage to the surveys, some pages were nearly illegible. Other shortcomings and biases of GLO surveys have been amply discussed elsewhere (e.g Bragg 2003).

RESULTS AND DISCUSSION

Some 744 vascular plant and 72 bryophyte taxa were documented (Table 1). 495 taxa are new to Lincoln County, and 3 are new to the state of Mississippi. 74 species are exotic, approximately 8.9% of the flora. 14 taxa are tracked species and 13 are watch list species as designated by the Mississippi Natural Heritage Program.

Plant Communities

A qualitative assessment of the plant communities present on the tract is offered for the checklist, with reference to MNHP (2006) and the 2021 U.S. National Vegetation Classification.

Paspalum notatum – Schizachyrium scoparium **oldfield grassland [OG].—**This community occurs in old fields maintained by annual mowing or hay-cutting. A mix of early-successional native herbaceous plants and exotic agronomic grasses dominate, with occasional more conservative relict grassland heliophytes (such as *Spiranthes lacera* var. *gracilis, Polygala boykinii, Gentiana villosa,* and *Asclepias tuberosa* var. *cordata*). In all but one unimproved pasture, *Paspalum notatum* makes up nearly 100% cover; though *Schizachyrium scoparium* often becomes the aspect dominant in late fall. Other common species are *Lolium arundinaceum, Agrostis hyemalis, Carex complanata, Carex texensis, Carex triangularis, Andropogon tenuispatheus, Asclepias viridis, Rumex hastatulus, Symphyotrichum praealtum* var. *subasper, Symphyotrichum pilosum* var. *pilosum, Symphyotrichum*

Table 1. Families and genera with largest number of taxa on Fair River Farm.

Family	Number of taxa	Genus	Number of taxa
Asteraceae	104	*Carex*	36
Poaceae	94	*Dichanthelium*	18
Cyperaceae	69	*Cyperus*	15
Fabaceae	49	*Quercus*	13
Lamiaceae	24	*Juncus*	11
Rosaceae	17	*Symphyotrichum*	10
Ericaceae	17	*Desmodium*	10
Fagaceae	14	*Viola*	9
Rubiaceae	14	*Solidago*	8
Juncaceae	13	*Eupatorium*	8
Euphorbiaceae	13	*Smilax*	8

dumosum var. *dumosum, Rudbeckia hirta, Verbena rigida, Desmodium ciliare, Desmodium rotundifolium, Bromus* spp., *Rubus* spp., *Agalinis fasciculata, Spiranthes vernalis, Helianthus angustifolius,* and *Cirsium horridulum.*

Schizachyrium scoparium – Andropogon tenuispatheus – Symphyotrichum praealtum var. *subasper* **oldfield grassland [FG].—**This community occurs in two old fields with some history of prescribed fire over Falaya series soils on raised terraces adjacent to lower-lying bottomland forest types. *Schizachyrium scoparium* dominates; *Symphyotrichum praealtum* var. *subasper* forms large rhizomatous colonies throughout. The presence of *Orthochilus ecristatus* nearly throughout suggests open woodland conditions pre-settlement, perhaps flatwoods with some mixture of *Quercus alba, Q. stellata, Pinus taeda,* and *P. echinata*. *Juncus coriaceus* is codominant in wetter swales and drains; *Arundinaria tecta* is common on sandier soils adjacent to the Little Fair River. Other common herbaceous species are *Solidago altissima* var. *pluricephala, Agalinis fasciculata, Helianthus angustifolius, Andropogon tenuispatheus, Rudbeckia hirta, Aristida purpurascens, Desmodium paniculatum, Andropogon gyrans, Malus angustifolia, Morella cerifera, Cicuta maculata, Vaccinium elliottii, Euthamia leptocephala, Pycnanthemum tenuifolium, Pityopsis graminifolia, Solidago rugosa* var. *celtidifolia, Lespedeza cuneata*, *Lespedeza capitata,* and *Spiranthes vernalis.*

Pinus taeda – Liquidambar styraciflua – Ligustrum sinense **ruderal pine forest and plantation [RPF]**.—This anthropogenic community occurs in planted pine plantations and areas where there has been intensive logging, chemical or mechanical site preparation, or agricultural use within the past 5 decades, including recent clearcuts. The understory has a dense layer of duff with almost no native flora. It occupies a relatively small area within the tract and is for the most part of little floristic interest; no rare species occur in this type, and most species reported were found only within clearcuts or along roads.

Pinus taeda – Pinus echinata **forest [LPF]**.—This is the dominant forest across Fair River farm and Lincoln County broadly (excluding areas converted to intensive silvicultural or agricultural uses), occurring on gentle slopes and broad ridgetops over a range of soils with limited history of anthropogenic (logging or agricultural) disturbance. *Pinus taeda* is dominant mixed with varying amounts of *Pinus echinata* and some hardwoods in the midstory. The understory is not diverse, dominated by generalist, shade-tolerant herbs such as *Chasmanthium sessiliflorum* and woody species such as *Vaccinium arboreum* and *Vaccinium elliottii*. Remnant heliophytic understory vegetation persisting on roadbanks and maintained rights-of-way, including a few rare species, is mostly responsible for the high number of taxa reported from this community.

Pinus echinata – Quercus marilandica xeric pine forest [XPF]. This community is restricted to inclusions of deeper sandy soils within the Ruston series on ridgetops and upper slopes near the northeast boundary of the property; it is possible that *Pinus palustris* was originally the dominant tree. The understory is dominated by dense thickets of *Ilex vomitoria,* but a few scraps of remnant heliophytic vegetation persist along maintained fire lanes, although much has been destroyed for food plots; *Andropogon gyrans, Andropogon ternarius, Gymnopogon ambiguus, Tridens chapmanii, Toxicodendron pubescens, Asclepias amplexicaulis, Dichanthelium acuminatum* var. *acuminatum, Rosa carolina, Monarda punctata, Seymeria cassioides, Symphyotrichum adnatum, Penstemon laxiflorus, Crocanthemum caroliniaum, Agave virginica,* and *Spiranthes tuberosa* are characteristic.

Quercus (*coccinea, stellata, falcata, alba*) – *Carya* (*tomentosa, pallida*) – *Pinus echinata* **oak-hickory-pine forest [OHF]**.—This forest occurs on submesic to subxeric upper slopes, narrow ridgetops, and sandy river bluffs, where moderate fire return intervals presumably would have occurred presettlement. Fair River Farm supports many extensive, mature stands of this type, particularly on the 15th section. The canopy is

dominated by upland oaks, especially *Quercus coccinea,* with some *Q. stellata* and *Q. falcata* in drier, sandier soils, and *Q. alba* along drains and downslope at the transition to the OBF community; *Carya tomentosa* and *C. pallida*; *Pinus echinata*; and, in disturbed examples, some *Pinus taeda*. A dense midstory of *Callicarpa americana, Ilex vomitoria, Vaccinium elliottii, Vaccinium arboreum, Oxydendrum arboreum*, and other shrubs and understory trees has invaded many examples as a result of fire suppression. Rich heliophytic understory flora persists on maintained rights-of-way, threatened by the tilling of ryegrass food plots. *Schizachyrium scoparium* dominates, with some *Andropogon gerardi* in more mesic soils; forbs are diverse, including *Agalinis purpurea, Tephrosia virginiana, T. spicata, Polygala boykinii, Spiranthes sylvatica, Ceanothus americanus, Symphyotrichum concolor, S. patens, Salvia azurea* var. *azurea, Aureolaria grandiflora, Pteridium pseudocaudatum, Liatris squarrosa, L. squarrulosa, Gentiana villosa, Eryngium yuccifolium* var. *yuccifolium, Asclepias tuberosa, Eurybia hemispherica, Orbexilum pedunculatum,* and *Viola pedata.*

Quercus alba-Fagus grandifolia **submesic beech-oak forest [OBF]**.—This forest mostly occurs on steep, sandy or gravelly mid-to-upper slopes of ravines and bluffs, and stream bottoms of smaller tributaries, forming the transition between MF and either LPF or OHF communities. *Fagus grandifolia* and *Quercus alba* dominate, with *F. grandifolia* becoming more abundant downslope. The understory is sparse, less rich than the MF community but still supporting some conservative shade-tolerant herbs and shrubs. *Chasmanthium sessiliflorum, Sceptridium biternatum, Arundinaria gigantea, Hexastylis callifolia, Viola palmata, Carex ignota, Carex floridana, Viola walteri, Lilium michauxii, Uvularia perfoliata, Oxalis violacea,* and *Epifagus virginiana* are typical.

Liriodendron tulipifera – Fagus grandifolia – Pinus glabra **mixed mesophytic forest [MF]**.—This forest occurs in ravine bottoms (below OBF communities) and rich slopes, generally below steep bluffs where historically sheltered from fire. The canopy contains varying amounts of *Liriodendron tulipifera, Fagus grandifolia, Pinus glabra,* and other mesophytic hardwoods. The midstory is sparse, except under canopy gaps, with a diverse understory of shade-tolerant herbaceous plants, typically including *Polystichum acrostichoides, Arisaema* spp., *Carex digitalis* var. *floridana, Athyrium asplenioides, Sanicula canadensis* var. *floridana, H. callifolia, Trillium* spp., *Arundinaria gigantea, Nabalus altissimus, Mitchella repens,* and *Galium uniflorum*. On especially rich slopes, *Phegopteris hexagonoptera* and *Brachyelytrum erectum* may be locally dominant.

Quercus (*nigra, laurifolia, michauxii*) *– Liquidambar styraciflua – Pinus taeda* **bottomland forest [DTF]**.—This is the dominant bottomland forest community along the Little Fair River and its larger tributaries, occurring over relatively well-drained deposits of sandy and silty alluvium and natural levees, where it is subject to periodic flooding and, historically, mixed severity fires during dry spells. It is presumed to be the natural habitat of *Pinus taeda* and the source of naturally regenerated stands which have expanded into disturbed uplands. The canopy is variable but typically contains *Liquidambar styraciflua* with varying amounts of *Quercus nigra, Q. laurifolia,* and *Q. michauxii, Pinus taeda,* and *Fagus grandifolia* var. *caroliniana*. The woody understory is fairly diverse and less dense than BTF, typically containing *Halesia diptera, Illicium floridanum, Carpinus caroliniana*, *Ditrysinia fruticosa, Smilax smallii, Amelanchier arborea,* and rarely *Stewartia malacodendron*; common herbaceous plants include *Carex abscondita, Arisaema pusillum, Podophyllum peltatum,* and *Polygonatum biflorum*. Substantial infestations of *Ligustrum sinense* occur in disturbed examples.

Magnolia grandiflora – Fagus grandifolia – Illicium floridanum **beech-magnolia floodplain forest [BTF]**.—This frequently flooded forest occurs in narrow strips on highly acid, moderately to poorly drained soils along the Little Fair River, mostly below steep bluffs or natural levees. Nearly impenetrable *Illicium floridanum* "hells" dominate the understory; in more hydric soils *Sphagnum* spp. form mats on the forest floor. Forested seepages (AS community) sometimes occur imbedded in this community. *Hypoxis curtissii* was observed only along streams within this community.

Nyssa biflora – Liquidambar styraciflua – Carex bromoides **subhydric brownwater terrace forest [WTF]**.—This community is restricted to a few fragments over silty terraces on the west side of the Little Fair River; most has been destroyed by clearcutting or conversion to pasture. *Nyssa biflora* and *Liquidambar styraciflua* are dominant canopy trees, with lesser amounts of *Magnolia virginiana, Quercus michauxii, Quercus alba,* and *Pinus glabra,* and perhaps historically *Taxodium distichum*. *C. bromoides* is diagnostic and abundant nearly throughout. Other common herbaceous plants include *Hymenocallis occidentalis, Cardamine bulbosa,*

Trillium cuneatum, Podophyllum peltatum, and *Viola edulis. Dryopteris celsa*, *Carex stipata* var. *maxima,* and *Gratiola floridana* occur primarily within this community.

Magnolia virginiana – Nyssa biflora – Carex howei **acid forested seepage [AS]**.—This community occurs over permanent, acid seepage at the bases of steep sandy bluffs and ravines, often surrounded by OBF communities. *Magnolia virginiana* and *Nyssa biflora* dominate and are often the only canopy trees present; the midstory is sparse, with a diverse herbaceous understory (especially Cyperaceae and ferns) usually dominated by *Carex howei, Carex leptalea,* and *Lorinseria areolata. Itea virginica, Viburnum nudum, Rhynchospora mixta, Eleocharis tortilis, Osmunda spectabilis, Osmundastrum cinnamomeum, Solidago salicina, Platanthera clavellata, Medeola virginiana,* and *Arnoglossum ovatum* var. *ovatum* are common and diagnostic.

Saururus cernuus – Orontium aquaticum – Cephalanthus occidentalis **brownwater slough [BS]**.—This wetland community occurs in seasonally ponded depressions along the main channel of the Little Fair River, surrounded by the BTF and DTF communities. A mixture of aquatic herbs usually dominated by *Saururus cernuus* and *Orontium aquaticum* occurs in standing water; *Cephalanthus occidentalis* is common on the margins.

Salix nigra – Juncus spp. – *Carex* spp. **early successional open wetland [W]**.—This community occurs in larger sandbar swales, and around the margins of anthropogenic ponds and other seasonally wet depressions (often anthropogenic in origin). *Cephalanthus occidentalis* and *Salix nigra* are common woody plants; various *Carex* spp. and *Juncus* spp. are the dominant herbs.

Riparian [R].—This community includes streambanks, ledges, cliffs, gravel and sand bars, and mudflats along the Little Fair River and its larger tributaries frequently scoured by flooding. Dominant woody species include *Carpinus caroliniana, Vitis rotundifolia*, *Salix nigra, Itea virginica,* and *Rubus pensilvanicus*; common herbaceous plants include *Cinna arundinacea, Agrostis perennans, Rudbeckia laciniata, Coleataenia rigidula, Cuscuta gronovii, Persicaria sagittata, Desmodium paniculatum, Brintonia discoidea, Kellochloa verrucosa, Paspalum boscianum, Cyperus* spp., *Edrastima uniflora, Ludwigia* spp., *Commelina* spp., *Pluchea camphorata, Sesbania herbacea,* and *Packera glabella*. Bryophytes are abundant, especially *Pallavicinia lyelii, Dumortiera hirsuta, Climacium americanum, Leptodictyum riparium, Atrichum* spp., *Calliergonella lindbergii,* and *Sphaerocarpos texanus*.

Anthropogenic [U].—This includes communities of ruderal species found growing in heavily modified habitats of anthropogenic origin, including cement sidewalk cracks, roofs, old bricks, lawns, planted trees and shrubs, bare asphalt, plowed food plots, and active, compacted or rutted dirt roads (but not backslopes and ditches, which often support remnants of natural heliophytic understory vegetation). A number of bryophytes, exotics, ruderal species were restricted to such frequently disturbed habitats.

NOTABLE OCCURRENCES

Antennaria solitaria Rydb. **S3S4G5;** watch list species, county record. This species reaches its southwestern limit in rich forests in southwestern Mississippi and the Louisiana Florida Parishes, except one outlying occurrence west of the Mississippi River in Louisiana. Colonies occur in the OBF community on steep well-draining lower slopes above streams or seepages, with *Hexastylis callifolia, Carex ignota, Mitchella repens,* and occasionally *Chamaelirium luteum*.

Carex crinita Lam. var. **brevicrinis** Fernald. **S3S4G5;** watch list species. *C. crinita* was first reported for Lincoln County in 2004; it was collected at a single site on Fair River Farm where a stream intersects a maintained fire lane, but may also occur in some AS communities.

Carex floridana Schwein. **S3G5;** tracked species, county record. This species occurs scattered on upper slopes in the OBF community.

Carex radiata (Wahl.) Small. **S2G5;** tracked species, county record. One small population of this species was observed in the floodplain of a small stream, with *Carex lurida* and *Chasmanthium*.

Carex stipata Muhl. ex. Willd. var. **maxima** Chapm. **S1G5T5;** tracked species, county record. A single large, dense colony of this species was found in the wet terrace forest community, associated with *Juncus coriaceus, Carex lurida, Carex bromoides,* and some *Dryopteris celsa*. This is the second report for the state of Mississippi.

Collinsonia punctata Elliott. **S1G3;** tracked species, county record. *C. punctata* occurs at a number of sites on

Fair River farm; the largest colony covers the base of a steep slope on a fire lane in the 15th section. Several smaller groups of plants were observed at the base of steep slopes under *Magnolia grandiflora* in MF communities.

Collinsonia tuberosa Michx. **S3S4G3;** watch list species, county record. This appears to be the first report of this taxon from southwest Mississippi, although its recognition is controversial and distribution is poorly known. A single small colony was found, with *Collinsonia punctata*.

Crataegus pulcherrima W.W. Ashe var. **pulcherrima**. **S3S4G4;** watch list species, county record. *C. pulcherrima* var. *pulcherrima* is most common at the transition between OBF and OHF communities at the tops of steep bluffs and on upper slopes, in sandy or gravelly soils (Guinn series), often associated with *Ilex ambigua, Sideroxylon lanuginosum, Oxalis violacea,* and *Carex nigromarginata,* and is scattered on roadsides in the other upland forest types, rarely flowering in areas with low sunlight penetration and probably preferring moderate fire return intervals.

Delphinium carolinianum Walter ssp. **vimineum** (D. Don) M.J. Warnock. **SNRG5T5;** county record. Fair River Farm populations of this species are intermediate between var. *carolinianum* and var. *vimineum,* with the less robust stature and often also strong vertical taproots of the latter, but somewhat more divided leaves than typical; herbarium material from across south MS (excluding the calcareous prairies of the black belt) is similarly intermediate. Listed by Hilgard (1860) as a characteristic species of dry longleaf pine woodlands across the southern third of the state, this entity appears to have declined precipitously in the state, with only a handful of collections in the past three decades, mostly on roadsides. On Fair River Farm this species is restricted to two slopes on a maintained fire lane in the OHF community over Guinn and Boswell series soils, where it is fairly abundant (several hundred flowering stems in both 2020 and 2021), associated with *Asclepias amplexicaulis, Asemeia grandiflora, Coreopsis pubescens,* and *Penstemon laxiflorus*.

Dryopteris celsa Britton, Sterns, & Poggenb. **S1G4;** tracked species, state record. This is the only known population of this rare fern in Mississippi, previously reported by Kees & Weakley (2018). Several hundred plants occur in a remnant wet terrace forest community and scattered in adjacent loblolly pine forest on former pasture. Most of the population is on the border of the 16th section; it is likely that the bulk of the population was originally in the mature wet terrace forest on the southeast corner of the 16th section which was destroyed in the 1990s for loblolly pine plantations.

Eleocharis microcarpa Torr. var. **microcarpa**. **S2G5TNR;** tracked species, county record. This species occurs scattered in the AS community, where it is much less abundant than *E. tortilis* and *E. tuberculosa*. There are few collections of this variety on SERNEC, all from southeast MS, mostly the coastal counties.

Eleocharis tortilis (Link) Schult. **S3S4G5;** watch list species, county record. *E. tortilis* is characteristic and abundant in less disturbed AS communities, usually associated with *Viburnum nudum, Solidago salicina, Carex howei, Carex leptalea, Lorinseria areolata, Rhynchospora mixta,* and *Athyrium asplenioides*.

Gratiola floridana Nutt. **S1G3;** tracked species. Plants occur in scattered colonies over seepage in the WTF community and scattered in seepage along streams in the MF community. *G. floridana* appears to prefer richer substrates, absent from the more acid soils of the AS community.

Hexastylis callifolia (Small) Small. This is a rare species endemic to the Gulf Coastal Plain, formerly lumped under *H. arifolia*; it has not been reported for Lincoln County, although collections of *H. arifolia* may actually represent this species. It is unclear how much of the *Hexastylis* on Fair River Farm is *H. callifolia*, since the two species are identical vegetatively; it is possible *H. arifolia* is entirely absent.

Hypoxis curtissii Rose. **S1G4;** tracked species, county record. This is the first report for southwestern Mississippi and far distant from previous reports in the coastal and southeastern counties. *H. curtissii* is rare on Fair River Farm; only a few individuals were seen in silty soils along small streams in the BTF community.

Juncus nodatus Coville. **S3S4G5;** watch list species, county record. *J. nodatus* was collected once on disturbed pond margins in an old pasture, where it is locally common and weedy; it has been collected in similar disturbed habitats at sites scattered throughout the state, likely underreported and not significantly rare.

Lobelia appendiculata DC. **S3S4G4;** watch list species. *L. appendiculata* is widespread and weedy in southwest MS and probably does not warrant tracking. It is common at Fair River Farm in roadsides, old pastures, and trails, frequently on disturbed soil and in *Paspalum notatum*-dominated areas.

Malus ioensis (Alph. Wood) Britt. **S1G5;** tracked species, county record. Other than one historic collection, possibly misidentified (Harvard, *C.C. Compton s.n.*), this is the first report of *M. ioensis* for Mississippi. Scattered plants occur in the FG community and on the 15th section fire lane.

Matelea carolinensis (Jacq.) Woodson. **S3G4;** tracked species, county record. *M. carolinensis* occurs in the

Loess bluffs farther north as well as the two prairie belts, and has been collected twice in the Homochitto National Forest, farther west. It is scattered in the MF community on rich lower slopes, under *Liriodendron tulipifera* and *Pinus glabra*.

Medeola virginiana L. **S3S4G5;** watch list species, county record. *M. virginiana* is rare in Mississippi farther south, reaching its southwestern limit in the Louisiana Florida parishes and southwestern Mississippi. It is locally common on Fair River Farm, where it occurs in large, mostly vegetative colonies on the margins of AS communities.

Mikania cordifolia (L.) Willd. **S3S4G5;** watch list species, county record. *M. cordifolia* is fairly common in southwestern Mississippi, and occurs scattered in a wide range of bottomland forest types in Fair River Farm, including some disturbed sites.

Orthochilus ecristatus (Fernald) Bytebier. **S1G2;** tracked species, county record. *O. ecristatus* is locally abundant in two old pastures over a raised terrace of the Little Fair River, dominated by *Schizachyrium scoparium* and native heliophytic plants (MF community), perhaps former mixed pine and hardwood flatwoods. This species is extremely rare in the state; of the 11 reports, only two small populations in Perry and Hancock counties have been observed within the past 30 years. Except for one historic collection in Chickasaw county, it was previously known only from longleaf pine savannahs of southeast Mississippi.

Packera obovata (Muhl. ex Willd.) W.A. Weber and Á. Löve. **SNRG4;** county record. This species is rare in Mississippi, known mostly from the black belt and Tishomingo County, and reaching its southwestern limit east of the Mississippi river in mesophytic forests over Loessial soils in southwestern Mississippi and the Louisiana Florida Parishes. In southwest MS, it has been collected only once before (MMNS, K. L. Gordon 3777). At Fair River Farm, it is locally common on one rich upper north-facing slope, associated with *Brachyelytrum erectum, Polystichum acrostichoides,* and *Tragia cordata,* under *Quercus alba* and *Fagus grandifolia*.

Polygala boykinii Nutt. var. *boykinii*. **S3S4G4;** watch list species. *P. boykinii* was last collected in Lincoln County in 1967 (MISS, S.B. Jones 14473). Thousands of plants occur associated with *Schizachyrium scoparium, Asclepias tuberosa, Asclepias viridis, Rosa carolina, Physostegia angustifolia,* and *Rudbeckia hirta* in one outlying old field; large populations occur on the maintained fire lane in the 15th section and scattered plants were observed on other roadsides.

Rhynchospora mixta Britton. **S3S4G5;** watch list species. *R. mixta* is common in some AS communities, associated with *Viburnum nudum, Solidago salicina, Carex howei, Carex leptalea, Lorinseria areolata,* and *Athyrium asplenioides,* scattered elsewhere along streams and in roadside ditches.

Spiranthes lacera (Raf.) Raf. var. **gracilis** (Bigelow) Luer. **S2G5;** tracked species. On Fair River Farm *S. lacera* var. *gracilis* is restricted to two old pastures dominated by *Paspalum notatum,* where there is a fairly robust population. At both sites it occurs in much deeper, loamier soils, derived from a thicker mantle of Loess, than those of less disturbed ridgetops supporting *S. tuberosa* and *S. sylvatica,* perhaps with a preference for open woodlands with more mesic and calcareous soils (it is also known from Jackson prairies over calcareous Yazoo clay in central Mississippi). Much of this type was converted to improved pasture several decades ago and may have been plowed for crops in the late 1800s or very early 20th century.

Spiranthes ovalis Lindley var. **ovalis**. **S2S3G5T3;** tracked species, county record. *S. ovalis* is nowhere abundant on Fair River Farm; scattered plants occur in the MF community, several on roadbanks, at the edge of colonies of *Illicium floridanum*.

Spiranthes sylvatica P.M. Brown. Recognition of this taxon is controversial, and it has not yet been reported for Mississippi; however, plants corresponding to *S. sylvatica* P.M.Brown are abundant through much of Mississippi in oak-hickory and oak-hickory-pine forest types, perhaps even more common than *S. praecox* sensu stricto (William McFarland, USACE botanist, pers. comm.). Both taxa occur on Fair River Farm; *S. sylvatica* is scattered in OHF communities along partially shaded roadbanks, generally blooming about three weeks earlier than *S. praecox,* which was observed in a single disturbed powerline right-of-way in the LPF community.

Trillium ludovicianum Harb. **S1G4;** tracked species. Scattered narrow-petaled plants corresponding to *T. ludovicianum* occur along several tributaries of the Little Fair River. It is unclear how much of MS material represents intergrades or extreme narrow-petaled forms of *T. cuneatum*. *T. foetidissimum,* which is abundant farther west in the Loess bluffs and thin Loess hills, is apparently absent from Fair River Farm.

Table 2. Witness trees in sections intersecting or adjacent to Fair River farm. Diameter measurements given in inches.

Name in GLO survey	Probable identification	Number of witness trees (%)	Maximum diameter	Minimum diameter	Mean diameter
Hickory	*Carya tomentosa, Carya pallida*	6 (10.7%)	19	6	8.5
Chestnut	*Quercus michauxii*	2 (3.6%)	26	20	23
Black Oak	*Quercus velutina*	2 (3.6%)	41	16	28.5
Spanish Oak	*Quercus coccinea*	1 (1.8%)	–	–	36
Black Jack	*Quercus marilandica*	1 (1.8%)	–	–	20
Holly	*Ilex opaca*	1 (1.8%)	–	–	18
Magnolia	*Magnolia grandiflora*	1 (1.8%)	–	–	18
Maple	*Acer rubrum, Acer floridanum*	1 (1.8%)	–	–	18
Pine	*Pinus echinata, Pinus palustris, Pinus taeda*	15 (26.8%)	36	10	21.6
Post Oak	*Quercus stellata*	8 (14.3%)	26	10	18.5
Red Oak	*Quercus falcata, Quercus pagoda, Quercus coccinea*	16 (28.6%)	40	6	20.75
White Oak	*Quercus alba*	1 (1.8%)	–	–	30
Sweet pine	*Pinus glabra*	1 (1.8%)	–	–	18

NOTES ON PRE-SETTLEMENT PLANT COMMUNITIES AND GENERAL LAND OFFICE SURVEYS

Descriptions of the region prior to early 20th century logging are few. Hilgard (1860) provides one of the earliest general physiographic descriptions of Mississippi, although he does not describe Lincoln (then included in Lawrence County) in detail, stating only "changes of soil corresponding to those just described [in Marion and Franklin counties], occur there also, on the same meridian, or a little further east." While many later sources bluntly assert that longleaf pine was the dominant canopy tree across the entire county or the vast majority, his description of this transitional region between the Pine Hills and "Loam Lands" or Loess plains farther south, corresponds quite well to the change in upland canopy composition seen on Fair River Farm in less disturbed forests and woodlands:

> As we advance westward from E. Marion county toward the Mississippi River, we observe, up to the dividing ridge between the Amite and Homochitto, a pretty regular increase, in clayeyness of the subsoil; and a nearer approach of it to the surface; keeping pace with a pretty steady improvement in the fertility of the uplands, and, a gradual change of the forest growth as above described: to that of the Southern River Counties. The Oaks [*Quercus stellata* and *Quercus marilandica*] become more frequent and are joined by the Spanish ("Red"), Scarlet (" Spanish;"), the (true) Red, and the Black Oak, and some Hickory and Sweet Gum; while the Short-leaf Pine gradually becomes predominant over the Longleaf, which, in E. Franklin, appears only in belts or ridges and a few miles W. of Meadville disappears altogether.

Otherwise rather vague, the original 1912 soil survey describes part of section 22, now occupied by the LPF community, with one of the few remaining *Pinus palustris* trees on the tract:

> Some of the largest areas are located near Fair River… A large proportion of this type is forested with red oak, post oak, and shortleaf and longleaf pine, most of it being of a "scrubby" nature and not of much commercial value.

This provides unequivocal evidence for both longleaf (*Pinus palustris*) and shortleaf pine (*Pinus echinata*) as prominent canopy trees in the Fair River Farm area into the early 20th century, in association with upland oaks.

GLO survey notes are also sparse in their descriptions of plant communities, labeling all section lines as "3rd rate rolling," "undulating," or occasionally "hilly" land, "timber[ed] with pine and oak" or "pine and oak, some hickory." Witness trees are informative (Table 2), and again consistent with the presence of large areas of mesophytic forest with mature fire-intolerant canopy trees in ravines and bottoms, and oak-hickory and shortleaf pine woodlands as the dominant upland type, with a lesser amount of *Pinus palustris*.

Surveyors did not distinguish between different species of pine (4 are common on the tract). At several section posts on ridgetops, only large pines were blazed—perhaps representing some small areas of longleaf pine or shortleaf pine woodland on poorer soils. The majority of witness trees (51.8%), however, are mature

(16–30 in. diameter) upland oaks, with fewer pines (28.6%) and hickories (10.7%), a canopy composition remarkably similar to mature oak-hickory and oak-hickory-shortleaf pine forest types which now occupy less disturbed uplands on Fair River Farm. The presence of mature, fire-intolerant, mesophytic trees (such as *Ilex opaca* and *Acer rubrum*) in upland areas (likely steep slopes or small stream bottoms) suggests ample areas of closed mixed mesophytic forest with low fire return intervals were present pre-settlement—these are the forests best preserved today.

In any case, it seems unlikely that *Pinus taeda* occupied ridgetops and upper slopes to any major extent pre-settlement, and that the LPF communities which now dominate most of the upland portion of Fair River Farm represent former oak-hickory, shortleaf pine, and longleaf pine—dominated woodlands degraded by past logging or agricultural abuse. The notable lack of white oak (*Quercus alba*) in GLO surveys, also not mentioned in Hilgard (1860) as characteristic of slope or bottom forests in the area, is interesting; it seems likely that its ability to regenerate under shaded, fire-suppressed conditions has allowed it to advance upslope from a formerly relatively narrow niche at the expense of pyrophytic species, particularly *Quercus stellata* and *Quercus coccinea*.

ANNOTATED CHECKLIST

Nomenclature and nativity status for vascular plants follows Weakley (2022). Cultivated species and lawn grasses along Big Springs Drive are excluded, but naturalized exotic species are included in the checklist. Exotic species are marked with an asterisk (*), exotic species which are invasive within Fair River Farm (spreading sufficiently to displace native species or significantly alter community structure) are marked with a double asterisk (**), species of uncertain nativity are marked by an asterisk followed by a question mark (*?) and species with both native and exotic genotypes present are marked with an asterisk in parentheses ((*)). Collection numbers and iNaturalist observation identification numbers (OIDs) are provided. When possible, for species without a physical voucher from Fair River Farm by the author, a physical voucher taken from within the county is referenced. This is typically done for species which are known to be common in the region, or species with small and sensitive populations on Fair River Farm or other factors limiting the collection of physical vouchers. NatureServe ranks and MNHP designations (tracking or watch list) are included for rare species which have been evaluated; significantly rare species are also discussed individually.

ANTHOCEROTOPHYTA

Anthocerotaceae

Phaeoceros carolinianus (Michx.) Prosk. Kees 1105; OID: 103924510. Common; R.

BRYOPHYTA

Amblystegiaceae

Campyliadelphus chrysophyllus (Bridel) Kanda. Kees 1074; OID: 103732695, 104246024. Rare; OG, RPF, U.

Hygroamblystegium varium (Hedw.) Mönk. Kees 1183; OID: 104164052. Common; OG

Leptodictyum riparium (Hedw.) Warnst. Kees 1158; OID: 103921941, 104252593, 104081442, 103926823, 103925064. Common; R, BS.

Anomodontaceae

Claopodium rostratum (Hedw.) Ignatov. Kees 1113; OID: 103925770. Rare; MF.

Pseudanomodon attenuatus (Hedw.) Ignatov & Fedosov. Kees 1125; 103924147. Common; MF, WTF, BTF, DTF, BS, RSS.

Archidiaceae

Archidium tenerrimum Mitt. Kees 1192; OID: 104245254. Rare; RPF.

Brachytheciaceae

Brachythecium acuminatum (Hedw.) Austin. Kees 1148; OID: 104432416. Rare; OHF.

Brachythecium oxycladon (Brid.) A. Jaeger. Kees 1065, 1069; OID: 103718430, 103759335. Rare; U.

Bryoandersonia illecebra (Hedw.) H. Rob. Kees 1066, 1135; OID: 103723280, 103924910, 103924219. Common throughout.

Clasmatodon parvulus (Hampe) Sull. Kees 1141, 1184; OID: 104250943, 103926971. Common; LPF, RPF, MF, DTF.

Oxyrrhynchium hians (Hedw.) Loeske. Kees 1127, 1136; OID: 103732248, 103924074, 103924272, 103924949. Common; OG, R, RPF, LPF, MF, U.

Rhynchostegium serrulatum (Hedw.) A. Jaeger. Kees 1082; 103783798, 103732928. Uncommon; LPF, OBF, MF, OHF, WTF, U.

Bruchiaceae

Trematodon longicollis Michx. Kees 1103; OID: 103922926. Rare; R.

Bryaceae

Ptychostomum creberrimum (Taylor) J.R. Spence & H.P. Ramsay. Kees 1072; OID: 103768122. Rare; U.

Calymperaceae

Syrrhopodon texanus Sull. Kees 1162; OID: 104209192. Common; AS, WTF.

Climaceaceae

Climacium americanum Brid. Kees 1130, 1142; OID: 103924010, 103922383. Common; BS, R, WTF.

Dicranaceae

Dicranum condensatum Hedw. Kees 1123; OID: 104431778. Uncommon; LPF, RPF, U.

Ditrichaceae

Ditrichum pallidum (Hedw.) Hampe. Kees 1064; OID: 103718512. Common; OG, RPF.

Entodontaceae

Entodon macropodus (Hedw.) Müll. Hal. Kees 1176; OID: 104085827. Uncommon; WTF.

Entodon seductrix (Hedw.) Müll. Hal. Kees 1121; OID: 103922494, 103895178. Common throughout.

Fissidentaceae

Fissidens bryoides Hedw. Kees 1070; OID: 103761723. Rare; U.

Fissidens bushii (Cardot & Thér.) Cardot & Thér. Kees 1126; OID: 103924391. Uncommon; R.
Fissidens dubius P. Beauv. Kees 1186; OID: 104246833. Common; OBF, MF, WTF, AS.
Fissidens elegans Brid. Kees 1185; OID: 104163025. Uncommon; OBF, R.
Fissidens polypodioides Hedw. Kees 1164; OID: 104084825. Rare; R.
Fissidens subbasilaris Hedw. Kees 1151; OID: 104250639. Uncommon; OBF, MF.

Funariaceae
Physcomitrium pyriforme (Hedw.) Hampe. Kees 1075; OID: 103923917. Common; OG, RPF, R, U.

Hypnaceae
Isopterygium tenerum (Sw.) Mitt. Kees 1124; OID: 103924732. Uncommon; LPF, MF, OBF, WTF, R.
Platygyrium repens (Brid.) Schimp. Kees 1138; OID: 103922551. Uncommon; WTF, DTF, U.

Leptodontaceae
Forsstroemia trichomitria (Hedw.) Lindb. Kees 1101, 1131; OID: 103925002. Common throughout.

Leskeaceae
Leskea australis Sharp. Kees 1067; OID: 103726894, 103778136. Uncommon; U, WTF, DTF.

Leucobryaceae
Leucobryum albidum (Brid. ex P. Beauv.) Lindb. Kees 1134; OID: 103924302. Common throughout.
Leucobryum glaucum (Hedw.) Angstr. Kees 1084; OID: 103783678. Rare; U.

Leucodontaceae
Leucodon julaceus (Hedw.) Sull. Kees 1081; OID: 103783540. Common throughout.

Mniaceae
Plagiomnium ciliare (Müll. Hall.) T.J. Kop. OID: 103924632. Common; MF, R, AS, WTF.
Plagiomnium cuspidatum (Hedw.) T.J. Kop. OID: 103933860. Rare; R, MF.
Plagiomnium rostratum (Schrad.) T.J. Kop. Kees 1152; OID: 104249849. Rare; WTF.

Myriniaceae
Schwetschkeopsis fabronia (Schwägr) Broth. Kees 1120; OID: 104149129. Uncommon; WTF, R, AS, MF.

Polytrichaceae
Atrichum angustatum (Brid.) Bruch & Schimp. Kees 1139; OID: 103921752. Common throughout.
Atrichum undulatum (Hedw.) P. Beauv. Kees 1128; OID: 103922633. Uncommon; R, AS, WTF.
Polytrichum commune Hedw. Kees 1132; OID: 103924720. Uncommon; MF.
Pogonatum pensilvanicum (Bartram ex Hedw.) P. Beauv. Kees 1178; OID: 104249472. Uncommon; R.

Pottiaceae
Barbula indica (Hook.) Spreng. Kees 1179; OID: 104251679. Uncommon; OG.
Tortella humilis (Hedw.) Jenn. Kees 1146; OID: 103921196. Common; OBF, U.
Weissia controversa Hedw. Kees 1071; OID: 103763730. Rare; U.

Pylaisiaceae
Calliergonella curvifolia (Hedw.) B.H. Allen. Kees 1191; OID: 104246527. Uncommon; OG, RPF.
Calliergonella lindbergii (Mitt.) Hedenäs. Kees 1122, 1129; OID: 103925052, 104245145, 103922742. Common; R, MF, LPF, DTF, WTF, RPF.

Sematophyllaceae
Sematophyllum adnatum (Michx.) E. Britton. Kees 1083; OID: 104161051, 103787283. Common throughout.

Sphagnaceae
Sphagnum lescurii Sull. Kees 1096; OID: 103924685. Common; R, AS, BTF.

Theliaceae
hirtella (Hedw.) Sull. Kees 1102; OID: 103924997. Common; MF, OBF, LPF.

Thuidiaceae
Thuidium delicatulum (Hedw.) Schimp. Kees 1098, 1116; OID: 101901865, 103926097. Common throughout.

MARCHANTIOPHYTA

Cephaloziaceae
Fuscocephaloziopsis connivens (Dicks.) Vána & L. Söderst. Kees 1153; OID: 103924788. Common; LPF, RPF, OBF, OHF.
Odontoschisma sphagni (Dicks.) Dumort. Kes 1099; OID: 103925711. Common; R, AS.

Dumortieraceae
Dumortiera hirsuta (Sw.) Nees. Kees 1188; OID: 104208156. Common; R.

Frullaniaceae
Frullania brittoniae A. Evans. Kees 1194; OID: 103900902. Common; LPF, OHF.
Frullania ericoides (Nees) Mont. Kees 1196; OID: 104160724. Common; OHF, LPF.
Frullania kunzei (Lehm. & Lindenb.) Lehm. & Lindenb. Kees 1145; 104432175. Uncommon; OBF.

Lejeuneaceae:
Lejeunea flava (Sw.) Nees. Kees 1180; OID: 104159793. Common throughout.
Leucoelejeunea clypeata (Schwein.) A. Evans. Kees 1093; OID: 103899144. Common throughout.
Leucolejeunea conchifolia (A. Evans) A. Evans. Kees 1092; OID: 103898719. Common throughout.
Leucolejeunea unciloba (Lindenb.) A. Evans. Kees 1086; OID: 103792698. Common throughout.

Lophocoleaceae:
Lophocolea heterophylla (Schrad.) Dumort. Kees 1163; OID: 104148129. Common; R.

Pallaviciniaceae:
Pallavicinia lyellii (Hook.) Carruth. Kees 1117; OID: 103586423. Common; AS, R, BS.

Pelliaceae
Pellia epiphylla (L.) Corda. Kees 1173; OID: 104249414. Rare; WTF.

Porellaceae
Porella pinnata L. Kees 1116; OID: 103926916. Common; LPF, MF, U.
Porella platyphylla (L.) Pfeiff. Kees 1150; OID: 103994654. Common; OBF, MF.

Radulaceae
Radula australis Austin. Kees 1144; OID: 104432762. Uncommon; OHF, OBF.

Riccardiaceae:
Riccardia multifida (L.) Gray. Kees 1106; OID: 103924610. Common; R, MF.

Ricciaceae:
Ricciocarpus natans (L.) Corda. Kees 1110; OID: 103923874. Common; R.

Scapaniaceae:
Scapania nemorea (L.) Grolle. Kees 1170; OID: 104147422. Common; R.

Sphaerocarpaceae:
Sphaerocarpus texanus Austin. Kees 1108, 1109; OID: 103923946. Common; R.

LYCOPODIOPHYTA

Selaginellaceae
Lycopodioides apoda (L.) P. Beauv. Kees 1100; OID: 103921697. Uncommon; R.

MONILOPHYTA

Aspleniaceae
Asplenium platyneuron (L.) Britton, Sterns & Poggenburg. J.D. Ray 5383 (MISS). Common throughout.

Athyriaceae
Athyrium asplenioides (Michx.) A.A. Eaton. S.B. Jones 12803, J.D. Ray 5415 (MISS). Common; AS, WTF, MF, R, BTF.
** *Deparia petersenii* (Kunze) M. Kato. Kees 2; OID: 34631005, 27411345. Uncommon; WTF, AS, MF, R, U.

Blechnaceae
Lorinseria areolata (L.) C. Presl Blechnaceae. Kees 24. Common; AS.

Cystopteridaceae
Cystopteris protrusa (Weatherby) Blasdell. Kees 19; OID: 18520370, 25681416. Uncommon; MF.

Dennstaedtiaceae
Pteridium pseudocaudatum (Clute) Christenhusz. OID: 23029239; S.B. Jones 14466 (MISS). Common; XPF, LPF.

Dryopteridaceae
Dryopteris celsa (W. Palmer) Knowlton, Palmer, & Pollard. S1G4; tracked species Kees 1, Kees 5; OID: 27178249, 18527903. Locally common; WTF, AS.
** *Dryopteris erythrosora* (D.C. Eaton) Kuntze. Kees 4; OID: 18611362. Locally common; RPF
Polystichum acrostichoides (Michx.) Schott. S.B. Jones 12801 (MISS). Common; LPF, RPF, OHF, OBF, MF, BTF, R.

Lygodiaceae
***Lygodium japonicum* (Thunberg) Sw. OID: 18504534. Common throughout.

Onocleaceae
Onoclea sensibilis L. var. *sensibilis*. OID: 18545076. Common; BS, R, LPF.

Ophioglossaceae
Botrypus virginianus (L.) Michx. Kees 9; OID: 28330442, 18545057. Rare; MF, WTF.
Ophioglossum pycnostichum. Kees 11; OID: 39949584, 18611363. Rare; LPF, MF, OG.
Sceptridium biternatum (Savigny) Lyon. Kees 11; 32113484, 19783567, 18610177. Common; LPF, RPF, OHF, OBF, MF, WTF, OG.
Sceptridium dissectum (Spreng.) Lyon. Kees 276; OID: 32113472. Uncommon; OBF, LPF.

Osmundaceae
Osmunda spectabilis Willd. OID: 18528009. Common; AS, WTF, R, BTF, W.
Osmundastrum cinnamomeum (L.) C. Presl. OID: 18545065, 45608831. Common; AS, WTF, R, BTF.

Polypodiaceae
Pleopeltis michauxiana (Weatherby) Hickey & Sprunt. Common; RPF, LPF, MF, OBF, OHF, DTF, U.

Thelypteridaceae
Christella hispidula (Decaisne) Holttum var. *versicolor*. Kees 23; OID: 27179060. Rare; MF.
Pelazoneuron kunthii (Desv.) A.R. Sm. & S.E. Fawc. OID: 28330384, 27178235, 18520413. Correll 10550 (DUKE). Uncommon; R, LPF, MF.
***Macrothelypteris torresiana* (Gaudichaud-Beaupré) Ching. Kees 17; OID: 26937666. Common; RPF, LPF, MF, WTF, DTF, R, BS, AS.
Phegopteris hexagonoptera (Michx) Fée. Kees 397; OID: 40563557. Locally common; MF.

ACROGYMNOSPERMAE

Cupressaceae
Juniperus virginiana L. var. *virginiana*. MISSA, C.L. Magee 4. Uncommon; RPF, OG.
Taxodium distichum (L.) L.C. Richard. Rare; DTF, WTF.

Pinaceae
Pinus echinata Mill. S.B. Jones 12755 (MISS). Common; XPF, LPF, OHF, OBF.
Pinus elliottii Engelm. OID: 38202259. Rare; XPF.
Pinus glabra Walter. Kees 34; OID: 81124199. Common; MF, BTF, WTF, OBF, OHF, DTF.
Pinus palustris Mill. OID: 101901963. Single tree; LPF.
(*) *Pinus taeda* L. L.C. Temple 7986 (MISS). Common throughout.

BASAL ANGIOSPERMS

Annonaceae
Asimina parviflora (Michx) Dunal. OID: 28330685. Common; XPF, LPF, OHF, OBF.
Asimina triloba (L.) Dunal. Locally common; MF.

Aristolochiaceae
Endodeca serpentaria (L.) Raf. Kees 157; OID: 27178254. Common; LPF, RPF, OHF, OBF, MF.
Hexastylis arifolia (Michx.) Small. OID: 18545631; Kral 23421 (BRIT). Common; MF, OBF, OHF.
Hexastylis callifolia (Small) Small. OID: 102478965, 108533671. Uncommon; MF.

Illiciaceae
Illicium floridanum Ellis. OID: 39949909. Common; MF, BTF, DTF, AS.

Magnoliaceae
Liriodendron tulipifera L. var. *tulipifera*. OID: 81123771. Common; MF, OHF, OBF, WTF, DTF, RPF.
Magnolia grandiflora L. OID: 104204132. Common; BTF, MF, PF, LPF
Magnolia virginiana L. var. *australis*. OID: 104204112. Common; AS.

Lauraceae
Sassafras albidum (Nutt.) Nees. S.B. Jones 12782, 12858 (MISS). Uncommon; OG, LPF.

MONOCOTYLEDONAE

Saururaceae

Saururus cernuus L. OID: 25594307. Locally common; BS, W.

Araceae

Arisaema dracontium (L.) Schott. Rare; WTF, MF.
Arisaema pusillum (Peck) Nash. Uncommon; DTF, MF.
Arisaema quinatum (Nutt.) Schott. OID: 41556378, 31075248; C.T.Bryson 20054 (MMNS). Uncommon; MF, WTF.
** *Colocasia esculenta* (L.) Schott. Locally common; R, W.
Orontium aquaticum L. OID: 23027297. Locally common; BS.

Agaveaceae

Agave virginica L. OID: 52096337, 39949804; L.C. Temple 9993 (MISS). Rare; XPF.
Yucca filamentosa L. OID: 27599228, 18611361. Uncommon; OHF, XPF, OG, LPF.
Yucca flaccida Haworth. OID: 28471495. Uncommon; OG.
*? *Yucca recurvifolia* Salisbury. OID: 37321883, 40563386. Uncommon; LPF.

Alismataceae

Sagittaria latifolia Willld. var. *latifolia*. Kees 285. Locally common; R, W.

Alliaceae

Allium canadense L. var. *canadense*. Kees 63. Common; OG, WTF, DTF, RPF.
Allium mutabile Michx. J.B. Flint s.n. (NYBG). Rare; OG.
Nothoscordum bivalve (L.) Britton. Rogers 8490 (MISS). Common; OG, RPF, LPF, U.

Amaryllidacae

Hymenocallis occidentalis (Leconte) Kunth var. *occidentalis*. OID: 39949897, 18546710, 52769821. Locally common; WTF.
* *Zephyranthes candida* (Lindley) Herbert. Kees 233; OID: 31075215. Locally common; OG, U.

Chionographidaceae

Chamaelirium luteum (L.) A. Gray. OID: 42642423. Rare; OBF, OHF.

Colchicaceae

Uvularia perfoliata L. OID: 40563893. Common; OBF.

Commelinaceae

* *Commelina communis* L. Kees 215. Rare; R.
Commelina virginiana L. Kees 182. Rare; WTF, DTF.
Tradescantia hirsutiflora Bush. OID: 104205800; S.B. Jones & F. Renfrey 12798 (MISS). Rare; XPF, OHF.
Tradescantia ohiensis Raf. Rare; OHF.
Tradescantia virginiana L. OID: 42641384. Rare; OHF.

Cyperaceae

Carex abscondita Mackenzie. Kees 92; OID: 45608643. Common; DTF, BTF.
Carex albicans var. *australis*. Kees 387; OID: 41559240. Rare; MF, WTF.
Carex albolutescens Schweinitz. Kees 384; OID: 40563835. Rare; AS, R.
Carex aureolensis Steud. Kees 85. Common; W, OG, U.
Carex austrina Mackenzie. Kees 80; OID: 41556302. Locally common; OG.
Carex basiantha Steud. Kees 395; OID: 40563422. Locally common; OBF.
Carex bromoides Willd. ssp. *bromoides*. Kees 100; OID: 45602261. Locally dominant; WTF.
Carex cherokeensis Schweinitz. Kees 39, Kees 75. Common; OG, U, RPF.
Carex complanata Torr. & Hook. Kees 59. Common; OG, FG, U, RPF, LPF.
Carex crebriflora Wiegand. OID: 40563397, 27178173. Rare; MF.
Carex crinita Lam. var. *brevicrinis* Fernald. S3S4G5; watch list species. Kees 389; OID: 40563729. Rare; R.
Carex debilis Michx. Kees 60, Kees 130; OID: 25681422. Common; MF, R, AS, WTF, BTF.
Carex digitalis Willd. var. *floridana* (L.H. Bailey) Naczi & Bryson. Kees 95; OID: 27178161, 26529725, 41556750. Common; OBF, MF.
Carex festucacea Schkurh ex Willd. OID: 41557162. Rare; OG.
Carex flaccosperma Dewey. Kees 96; OID: 27956101. Common; OG, FG, RPF, LPF, OHF.
Carex floridana Schweinitz. S2G5; tracked species. OID: 45688356. Uncommon; OBF, OHF.
Carex glaucodea Tuckerman ex Olney. Kees 378; OID: 41556515. Rare; OHF.
Carex howei Mackenzie. Kees 99; OID: 40563799. Rare; AS, WTF, BTF.
Carex intumescens Rudge var. *intumescens*. Kees 58; OID: 40563363, 25681375)
Carex kraliana Naczi & Bryson (Kees 379; OID: 41556724)
Carex laevivaginata (Kükenthal) Mackenzie. Kees 386; OID: 41557045. Rare; MF.
Carex leptalea Wahlenberg var. *harperi* (Fernald) Weatherby & Griscom. Kees 57; OID: 40563812, 27178204, 25706532. Common; AS, WTF, BTF.
Carex leavenworthii Dewey (Kees 97). Common; OG, FG, U.
Carex longii Mackenzie. Kees 91; OID: 41557101. Common; OG, FG, U.
Carex lupulina Muhl. ex Willd. Kees 83; OID: 25681333. Uncommon; R, W.
Carex lurida Wahlenberg. Kees 84; OID: 25681367. Common; W, R, BTF, AS.
Carex nigromarginata Schweinitz. Kees 40; OID: 39949655. Common; OHF, OBF.
Carex pigra Naczi. OID: 40563458. Rare; MF.
Carex radiata (Wahl.) Small. S2G5; tracked species. Kees 388; OID: 40563943. Rare; AS.
Carex stipata Muhl. ex. Willd. var. *maxima* Chapman. S1G5T5; tracked species. Kees 116; OID: 45602287. Single site but abundant; WTF.
Carex striatula Michx. Kees 93; OID: 41556767. Common; OBF, MF.
Carex styloflexa Buckley. Kees 90; OID: 40563368. Uncommon; R, MF.
Carex texensis (Torr. ex. L.H. Bailey) L.H. Bailey. Kees 98. Common; OG, FG, U.
Carex triangularis Boeckeler. Kees 62, Kees 118; OID: 41556657. Common; OG, FG, U, W.
Carex sangamonensis (Clokey) Mohlenbr. Kees 101; OID: 26571575. Common; R, W, MF, WTF, DTF, BTF.
Carex vulpinoidea Michx. Kees 117. Common; OG, FG, W.
Cyperus brevifolius (Rottb.) Endl. ex Hasskarl. Common; U.
Cyperus compressus L. C.T.Bryson 14108 (VSC). Common; U.
Cyperus croceus Vahl. Kees 189; OID: 27178081. Common; OG, U.
Cyperus echinatus (L.) A.W.Wood. Kees 190; OID: 28471469, 27178068. Common; OG, FG, XPF, LPF.
Cyperus erythrorhizos Muhl. Kees 337; OID: 33628460. Uncommon; R, W.
Cyperus esculentus L. var. *leptostachyus* Böckeler. Common; R, U.
Cyperus haspan L. Kees 244; OID: 32029670. Uncommon; FG.
Cyperus hortensis (Salzmann ex Steud.) Dorr. Kees 295; OID: 33628477. Uncommon; R.

** Cyperus iria* L. Kees 228; OID: 52769897. Common; U, RPF.
Cyperus pseudovegetus Steud. Kees 142; OID: 27600269. Uncommon; FG.
Cyperus retrorsus Chapman. Kees 188; OID: 27178085. Common; OG, FG, U.
** Cyperus rotundus* L. Common; U.
Cyperus sesquiflorus (Torr.) Mattf. & Kük. Kees 128. Common; OG, U.
Cyperus strigosus L. Kees 211; OID: 28329791. Common; W, R, FG, OG.
Cyperus virens Michx. Kees 143; OID: 27599250. Rare; BS, W, FG.
Eleocharis microcarpa Torr. var. *microcarpa.* S2G5TNR; tracked species. Kees 303; OID: 31650359. Rare; AS.
Eleocharis obtusa (Willd.) Schult. Kees 197. Common; W, RPF, R, U.
Eleocharis tortilis (Link) Schult. S3S4G5; watch list species. OID: 81124391. Locally common; AS.
Eleocharis tuberculosa (Michx.) Roem. & Schult. J.A. Kees 333; OID: 38202201, 35748014. Uncommon; RPF, AS, R. Schultes.
Fimbristylis autumnalis (L.) Roem. & Schult. Kees 302. Rare; U, R.
Fimbristylis decipiens Kral. Kees 293. Rare; U.
** Fimbristylis dichotoma* (L.) Vahl (s.s.). Kees 299; OID: 33628412. Rare; U.
** Fimbristylis littoralis* Gaudichaud. Kees 329. Rare; U, R.
Isolepis carinata Hook. & Arn. ex Torr. Kees 377; OID: 41556608. Locally common; RPF, OG.
Rhynchospora caduca Elliott. Kees 138; OID: 28330926. Common; FG, OG.
Rhynchospora corniculata (Lam.) A. Gray. Kees 227. Rare; BS.
Rhynchospora inexpansa (Michx.) Vahl. Kees 191; OID: 28330962. Common; LPF, OG, FG, W.
Rhynchospora globularis (CHapman) Small. Kees 137. Common; OG, FG, U.
Rhynchospora glomerata (L.) Vahl var. *glomerata.* Kees 192; OID: 28331339, 31453484.
Rhynchospora mixta Britton. S3S4G5; watch list species. Kees 178; OID: 47339733. Common; AS, WTF, BTF, R.
Rhynchospora recognita (Gale) Kral. Kees 141; OID: 27887524. Common; OG, FG.
Scirpus cyperinus (L.) Kunth. Kees 144; OID: 27580170. Rare; R.
Scleria triglomerata Michx. Kees 106. Common; OBF, OHF, LPF.
Scleria ciliata var. *elliottii.* OID: 42641001. Rare; LPF.

Dioscoreaceae
Dioscorea villosa L. Kees 122; OID: 23027368. Common; MF, WTF.

Hypoxidaceae
Hypoxis curtissii Rose. Kees 86; OID: 25681444. Rare; BTF, BS.
Hypoxis hirsuta (L.) Coville. OID: 39949955. Rare; OHF, XPF.

Iridaceae
** Iris germanica* L. OID: 81123669. Rare; RPF.
Sisyrinchium angustifolium Mill. OID: 81117114. Common; OG, LPF, RPF, U.
Sisyrinchium rosulatum E.P. Bicknell. Common; OG, U.

Juncaceae
Juncus acuminatus Michx. Kees 195. Rare; W.
Juncus biflorus Elliott. Kees 135. Common; OG, FG, U.
Juncus brachycarpus Engelm. Kees 136; OID: 47339618. Common; OG, FG, R, W.
Juncus coriaceus Mack. Kees 164. Common; FG, WTF, OG, W, R.
Juncus dichotomus Elliott. Kees 133; OID: 42641511. Common; OG, LPF, XPF.
Juncus diffusissimus Buckley. Kees 131; OID: 25681473. Locally common; W.
Juncus effusus L. *ssp. solutus* (Fernald & Wiegand) Hämet-Ahti. Common; W, R.
Juncus nodatus Coville. S3S4G5; watch list species. Kees 132. Locally common; W.
Juncus scirpoides Lam. Kees 184; OID: 47339781. Common; OG, LPF.
Juncus tenuis Willd. Kees 134. Common; OG, U.
**? Juncus validus* Coville ssp. *validus*. Kees 119; OID: 25706525. Common; OG, FG.
Luzula bulbosa (Wood) Smyth & Smyth. Kees 56; OID: 39949665, 28330005. Common: MF, R, U, OG.
Luzula echinata (Small) F.J. Hermann. OID: 40563527. Common; R, MF, WTF, DTF.

Liliaceae
Lilum michauxii Poir. Kees 77; OID: 23028115. Common; OBF, OHF.
Medeola virginiana L. S3S4G5; watch list species. Kees 78; OID: 23028764, 28330496. Common; AS, BTF.

Orchidaceae
Listera australis Lindley. Common; MF, OBF, LPF, BTF, DTF.
Malaxis unifolia Michx. Kees 18; OID: 27599264, 40563605. Rare, OBF.
Orthochilus ecristatus (Fernald) Bytebier. S1G2; tracked species. Kees 3; OID: 31453476, 17645600. Single site but locally abundant; FG
Platanthera clavellata (Michx.) Leur. Kees 165; OID: 52769832, 27178115. Common; AS, WTF.
Spiranthes lacera (Rafinesque) Rafinesque *var. gracilis* (Bigelow) Luer. S2G5; tracked species. OID: 58954729. Rare; OG.
Spiranthes praecox (Walter) S. Watson. OID: 45602069. Rare; LPF
Spiranthes sylvatica P.M. Brown. OID: 42641370, 45602099. Rare; OHF.
Spiranthes ovalis var. *ovalis.* S2G5T3; tracked species. Kees 8; OID: 34631153, 18546789. Rare; WTF, MF.
Spiranthes tuberosa Raf. OID: 47426274. Rare; XPF
Spiranthes vernalis Engelm. & A. Gray. Kees 126. Common; OG, FG, U.
Tipularia discolor (Pursh) Nutt. Kees 50. Common; OBF, OHF, MF, DTF.

Poaceae
Agrostis hyemalis (walter) Britton, Sterns, & Poggenburg. Kees 72; OID: 42642625, 25690918. Common; OG.
Agrostis perennans (Walter) Kees 245; OID: 31589996. Uncommon; FG, R, OG.
Andropogon gerardi Vitman. Kees 257; OID: 32140725. Rare; OHF, DTF.
Andropogon glomeratus (Walter) Britton, Sterns, & Poggenburg. Kees 250; OID: 32140786. Uncommon; OG.
Andropogon gyrans W. W. Ashe. Kees 345, 365; OID: 38202309. Uncommon; XPF, FG, LPF.
Andropogon tenuispatheus (Nash) Nash. Kees 346. Common; FG, OG.
Andropogon ternarius Michx. OID: 64006975. Rare; XPF.
Andropogon virginicus L. var. *virginicus.* OID: 36263099. Common; OG, FG, U.
Aristida oligantha Michx. OID: 64007092. Common; XPF, U.s
Aristida purpurascens Poir. Kees 351; OID: 36263108. Common; FG, OG, XPF.
Arundinaria gigantea (Walter) Muhl. Common; MF, OBF, OHF, DTF, WTF, AS.
Arundinaria tecta (Walter) Muhl. OID: 39949946. Common; OHF, DTF, FG.
** Avena sativa* L. Waif, rarely persistent or spreading from use in food plots; OG, U.
Axonopus fissifolius (Raddi) Kuhlman. Common; U, OG.
Brachyelytrum erectum (Schreb.) P. Beauv. Kees 112; OID: 27178040.

* *Briza minor* L. Kees 73. Common; OG, U.
* *Bromus commutatus* Schrader. Kees 107. Common; OG.
* *Bromus hordeaceus* L. ssp *hordeaceus.* Kees 114. Locally common; OG.
Chasmanthium sessiliflorum (Poir.) Yates var. *sessiliflorum*. OID: 47883646. Common, sometimes dominant in understory; LPF, RPF, XPF, OHF, OBF, WTF, DTF, MF.
Cinna arundinacea L. Kees 218; OID: 31453527. Rare; R, WTF.
Coleataenia anceps (Michx.) Soreng ssp. *anceps.* Kees 171. Common; OG, FG.
Coleataenia anceps (Michx.) Soreng var. *rhizomata* (Hitchc. & Chase) Soreng. Kees 294; OID: 31453532, 27187458. Common; OG, XPF.
Coleataenia rigidula (Bosc ex Nees) LeBlond ssp. *rigidula.* Kees 251; OID: 32140758. Common; R, DTF, W.
Cynodon dactylon (L.) Pers. Common; OG, U.
Danthonia sericea Nutt. OID: 41557361. Common; XPF, LPF.
Danthonia spicata (L.) P. Beauv. ex Roem. & Schult. Kees 113. Common; RPF, OG.
Dichanthelium aciculare (Desvaux ex Poir.) Gould & Clark. OID: 58962254. Common; XPF, LPF, RPF.
Dichanthelium acuminatum (Sw.) Gould & Clark var. *acuminatum.* Kees 104, 153, 155; OID: 42641049. Common throughout.
Dichanthelium acuminatum (Sw.) Gould & Clark var. *lindheimeri* (Nash) Gould & Clark. Kees 156, 350; OID: 42641213. Common; DTF, R.
Dichanthelium angustifolium (Elliott) Gould. Kees 243; OID: 45610383, 45602119. Common; LPF, XPF, OHF.
Dichanthelium boscii (Poir.) Gould & Clark. Kees 82. Common; MF, OBF, OHF.
Dichanthelium commutatum (Schult.) Gould var. *commutatum.* Common; MF, OBF.
Dichanthelium commutatum (Schult.) Gould var. *joorii.* Common; OG, DTF.
Dichanthelium consanguineum (Kunth) Gould & Clark. Kees 103, Kees 265; OID: 42641072. Common; LPF, XPF.
Dichanthelium depauperatum (Muhl.) Gould. OID: 49845918. Rare; RPF.
Dichanthelium dichotomum (L.) Gould var. *dichotomum.* Kees 344; OID: 49846638.
Dichanthelium filiramum (W.W. Ashe) Leblond. OID: 52769928, 45610408. Common; RPF, LPF, XPF.
Dichanthelium laxiflorum (Lam.) Gould. Kees 170; OID: 52769916. Common throughout on disturbed soil.
Dichanthelium microcarpon (Muhl. ex Elliott) Mohlenbr. Kees 102; OID: 42641021, 26572793. Common; AS, BS, R, WTF, BTF.
Dichanthelium oligosanthes (Schult.) Gould var. *oligosanthes.* OID: 52280662. Rare; XPF
Dichanthelium polyanthes (J.A. Schutes) Mohlenbrock. Kees 120; OID: 27599098. Common; R, RPF, LPF, MF, W.
Dichanthelium ravenelii (Scribn. & Merrill) Gould. Kees 375; OID: 41556820, 52769881. Common; OHF, XPF, LPF.
Dichanthelium scoparium (Lam.) Gould. Kees 121. Common; OG, FG, LPF, DTF.
Dichanthelium sphaerocarpon (Elliott) Gould. Kees 200, Kees 376; OID: 47886681, 45610223. Common; RPF, OG.
Dichanthelium tenue (Muhl.) Freckmann & Lelong. OID: 53310034. Common; LPF, RPF.
Dichanthelium villosissimum (Nash) Freckman var. *villosissimum*. OID: 47059937. Common; LPF, OHF, XPF.
Digitaria ciliaris (Retz.) Köler. Common; U, R, OG.
* *Digitaria ischaemum* (Schreb.) Muhl. Kees 204. Rare; U, OG
* *Echinochloa colonum* (L.) Link. Kees 280. Uncommon; U,W,R.
* *Eleusine indica* (L.) Gaertner. Kees 242. Common; U, OG.
Elymus glabriflorus (Vasey ex L.H. Dewey) Scribn. & C.R. Ball var. *glabriflorus.* Kees 140, Kees 240; 49843699, 32509276. Common; OHF, DTF, FG, OG, LPF.
Eragrostis hirsuta (Michx.) Nees. OID: 62832206. Common; RPF.
Eragrostis refracta (Muhl.) Scribn . Kees 357. Rare; FG.
Eragrostis spectabilis (Pursh) Steud. Kees 258; OID: 32509421. Common; XPF, LPF, RPF, OHF, FG, OG.
Erianthus contortus Elliott. Kees 264; OID: 32140582. Common; W, LPF.
Erianthus giganteus (Walter) P. Beauv. Kees 349. Rare; OG.
Festuca myuros L. Kees 229. Common; OG.
Gymnopogon ambiguus (Michx.) Britton, Sterns, & Poggenburg. OID: 52096297. Rare; XPF, OHF.
Hordeum pusillum Nutt. Common; OG.
** *Imperata cylindrica* (L.) P. Beauv. Kees 109. Rare; LPF.
Kellochloa verrucosa (Muhl.) Lizarazu. Kees 254; OID: 32140793. Common; R.
Leersia oryzoides (L.) Sw. Kees 320; OID: 33628468. Uncommon; R.
Leersia virginica Willd. Kees 162; OID: 27187463. Common; OG, U, DTF, WTF, R, W.
** *Lolium arundinaceum* (Schreb.) Darbyshire. Kees 108. Common; OG, FG.
* *Lolium perenne* L. var. *aristatum* Willd. Kees 74; OID: 25691766. Common; OG.
Melica mutica Walter. Kees 111. Uncommon; MF.
** *Microstegium vimineum* (Trin.) A. Camus. Kees 288; OID: 32509430. Uncommon; DTF, R, OHF.
Muhlenbergia schreberi J.F. Gmel. Kees 159; OID: 27187475. Common; R, DTF, U.
Oplismenus setarius (Lam.) Roem. & Schult. Kees 163. Common; U, LPF, MF
Panicum dichotomiflorum Michx. var. *dichotomiflorum*. Kees 406; OID: 62832151. Locally common; RPF.
Paspalum boscianum Flügge. Kees 248; OID: 32140800. Common; R.
* *Paspalum dilatatum* Poir. ssp. *dilatatum*. Common; OG.
Paspalum floridanum Michx. S.B. Jones 14460 (MISS). Common; XPF, LPF, OHF.
Paspalum laeve Michx. var. *leave.* Kees 168; OID: 32140601. Common; OG, LPF.
** *Paspalum notatum* Flügge. Kees 115. Common; OG.
Paspalum setaceum Michx. var. *setaceum.* OID: 57947423. Uncommon; XPF, LPF.
** *Paspalum urvillei* Steud. Kees 110. Common; OG, RPF, R, FG.
Piptochaetium avenaceum (L.) Parodi. Kees 390; OID: 40563923. Common; OHF.
Phalaris caroliniana Walter. Kees 70. Common; OG.
Phanopyrum gymnocarpon. OID: 104252653. Locally common; BS.
Poa autumnalis Muhl. ex Elliott. OID: 40563352. Common; OG, U, MF.
** *Rottboellia cochinchinensis* (Loure.) W.D. Clayton. Kees 362; OID: 34630994. Rare, on roadside.
Schizachyrium scoparium (Michx.) Nash var. *scoparium*. Kees 249. Common nearly throughout, dominant in open grassland.
Setaria parviflora (Poir.) Kerguélen. Kees 166; OID: 32029605. Common; OG, FG.
* *Setaria pumila* (Poir.) Roem. & Schult. *ssp. pumila.* Kees 224. Common; OG, RPF.
** *Sorghum halapense* (L.) Pers. Common; OG.
Sphenopholis nitida (Biehler) Scribn. Kees 392; OID: 40563721. Rare; OBF.
Sphenopholis obtusata (Michx.) Scribn. Common; OG.
* *Sporobolus indicus* (L.) R. Brown. Kees 214. Common; OG.

Tridens chapmanii (Small) Chase. S2G3; tracked species. Kees 404; OID: 64007141. Rare; XPF.
Tridens flavus (L.) Hitchc. Kees 222. Common; OG.
Tridens strictus (Nutt.) Nash. OID: 60142879; Rare; LPF.
Tripsacum dactyloides (L.) L. *var. dactyloides.* OID: 28471477. Uncommon; OG, LPF.
* *Triticum aestivum* L. Waif, rarely persistent or weakly naturalizing from use in food plots.
* *Urochloa platyphylla* (Munro ex Wright) Webster. Kees 229. Rare; U, OG.

Ruscaceae
Polygonatum biflorum (Walter) Elliott var. *biflorum.* OID: 39949860, 23727025; Common; DTF, MF.
** *Liriope spicata* Loureiro. Rare; RPF, WTF.

Smilacaceae
Smilax bona-nox L. var. *bona-nox.* OID: 104205109. Common throughout.
Smilax glauca Walter. Kees 208; OID: 32509255, 28330353. Uncommon; RPF, LPF, DTF.
Smilax hispida Raf. OID: 40563796, 36263089. Uncommon; OBF.
Smilax laurifolia L. Kees 808; OID: 86109655. Uncommon; AS.
Smilax lasioneura Hook. OID: 40563967. Rare; MF, OHF.
Smilax rotundifolia L. OID: 104205001; S.B. Jones & F. Renfrey 12842 (MISS, LSU). Common; OG, LPF, RPF, DTF, BTF.
Smilax smallii Morong. Kees 284; OID: 20070381, 22364984. Common; OHF, LPF, RPF, R, DTF, BTF.
Smilax pumila Walter. Kees 20; OID:18547545. Common; OHF, LPF.

Trilliaceae
Trillium cuneatum Raf. OID: 40563343; R.F. Kral 23424 (AUA). Common; MF, OBF, OHF, WTF, DTF.
Trillium ludovicianum Harb. S1G4; tracked species. Kees 46; OID: 39949648, 24465365. Rare; MF.

Typhaceae
Typha latifolia L. OID: 26153507. Rare; W.

EUDICOTYLEONAE

Acanthaceae
Ruellia caroliniensis (J.F. Gmelin) Steud. Kees 149. Common; OG, FG, U, LPF, RPF, OHF.

Adoxaceae
Sambucus canadensis L. S.B. Jones 12828 (NCU, MISS). Uncommon; RPF, LPF.
Viburnum rufidulum Raf. Kees 342; OID: 36263140, 60143251. Uncommon; OHF, LPF.
Viburnum scabrellum (Torr. & A. Gray) Chapm. Kees 347; OID: 36263114. Uncommon; LPF, DTF.
Viburnum nudum L. Kees 348; OID: 36263123. Common; AS, DTF.

Altingiaceae
Liquidambar styraciflua L. S.B. Jones & F. Renfrey 12773 (MISS). Common throughout.

Anacardiaceae
Rhus glabra L. Kees 332. G.L. Webster 3294 (NY). Rare; LPF.
Rhus copallinum L. var. *copallinum.* S.B. Jones & F. Renfrey 12757 (MISS). Common; FG, OG.
Toxicodendron pubescens Mill. OID: 41556902; W.T. Gillis 5979 (VDB). Locally common; XPF.
Toxicodendron radicans (L.) Kunze var. *radicans*. Common throughout.

Apiaceae
Chaerophyllum tainturieri Hook. Kees 65. Common; OG, U, DTF, R.
Cyclospermum leptophyllum (Persoon) Sprague ex Britton & Wilson. Kees 158. Uncommon; OG.
Cicuta maculata L. Kees 179. Uncommon; FG.
Spermolepis divaricata (Walter) Raf. ex Seringe. OID: 42641233. Uncommon; XPF
Eryngium integrifolium Walter. Kees 256; OID: 32140697. Common; R, AS.
Eryngium prostratum Nutt. ex DC. OID: 41557336; J.D. Ray, JR. 5392 (USF). Uncommon; U, R.
Eryngium yuccifolium Michx var. *yuccifolium*. OID: 39949915, 52095848; J.D. Ray Jr. 7834 (NLU). Rare; OHF, R.
Oxypolis rigidior (L.) Raf. OID: 60143820. Uncommon; AS.
Ptilimnium capillaceum (Michx.) Raf. OID: 42642564, 27598653. Common; R.
Sanicula canadensis L. OID: 104204606. Common; RPF, LPF, OBF, OHF, MF, DTF, WTF.
Sanicula smallii E.P. Bicknell. OID: 40563508. Uncommon; OBF, OHF.
Thaspium trifoliatum (L.) A. Gray var. *trifoliatum.* OID: 42642520. Rare, single plant seen; OBF.

Apocynaceae
Apocynum cannabinum L. Kees 279; OID: 32509329. Locally common; LPF.
Asclepias amplexicaulis Sm. Kees 687; OID: 45608776. Uncommon; OHF, XPF.
Asclepias tuberosa L. var. *interior* (Woodson) Shinners. OID: 25681291, 45610047; S.B. Jones & F. Renfrey 12819 (MISS). Uncommon; OG, LPF, OHF.
Asclepias variegata L. OID: 45602242, 42642484; S.B. Jones & F. Renfrey 12784 (MISS). Common; LPF, OHF, OBF, XPF.
Asclepias viridis Walter. OID: 47012596; Gordon 73 (MMNS). Common; OG, FG, LPF, OHF, OBF.
Gonolobus suberosus (L.) R. brown var. *suberosus.* OID: 18504485. Common; OBF, MF, DTF, LPF, RPF.
Matelea carolinensis (Jacq.) Woodson. S3G4; tracked species. Kees 694; OID: 81116702, 81116656, 81124243. Rare; MF, OBF.
Thyrsanthella difformis (Walter) Pichon. Uncommon; OHF.

Aquifoliaceae
Ilex ambigua (Michx.) Torr. Kees 393; OID: 40563569. Locally common; OHF, OBF.
Ilex decidua Walt. Uncommon; OG, RPF.
Ilex longipes Chapman & Trelease. OID: 81124635. Uncommon; LPF, OHF.
Ilex opaca Aiton. Robert A. Stewart II s.n. (DSC). Common; MF, OBF.
Ilex verticillata (L.) A. Gray. OID: 45608822. Uncommon; AS.
Ilex vomitoria Aiton. OID: 104205047; S.B. Jones & F. Renfrey 12759 (MISS). Common; XPF, DTF, OG, RPF, LPF, OHF, MF.

Araliaceae
Aralia spinosa L. OID: 74596046; S.B. Jones & F. Renfrey 12854 (MISS). Common; RPF, LPF, OBF, R.
Hydrocotyle verticillata Thunb. OID: 67329000; J.D.Ray Jr. 5406 (MISSA). Rare; WTF, DTF.

Asteraceae
Ageratina altissima (L.) L.M. King. OID: 81123750. Rare; XPF.
Ageratina aromatica (L.) Spach. OID: 34631131; Rare; MF.
Ambrosia artemisiifolia L. Kees 316. Common; RPF, U, OG, R.
Antennaria plantaginifolia (L.) Richardson. OID: 39949767; J.D. Ray Jr. 7820 (USF). Common; OHF.
Antennaria solitaria Rydb. S3S4G5; watch list species. Kees 682; OID: 62688786. Uncommon; OBF.
Arnoglossum ovatum (Walter) H.E. Rob. var. *ovatum*. Kees 6; OID: 54117385, 32509435. Common; R, WTF, MF, AS.

* *Artemisia annua* L. Kees 359. Rare; LPF.

**? *Baccharis halimifolia* L. S.B. Jones & Renfrey 12753 (MISS). Common; FG, OG, RPF, LPF.

Bidens bipinnata L. Kees 269. Common; OG, RPF.

Boltonia diffusa Elliott var. *diffusa*. Kees 237. Common; OG, XPF, OHF, RPF, LPF.

Brickellia eupatorioides (L.) Shinners var. *eupatorioides*. OID: 60143259. Uncommon; OHF, XPF.

Brintonia discoidea (Elliott) Greene. OID: 32509444; L.C. Temple 7963 (MISS). Common; LPF, DTF, MF, R.

Chrysopsis mariana (L.) Elliott. Kees 253. Common; LPF, RPF, XPF, OHF.

Cirsium carolinianum (Walter) Fernald & Schubert. OID: 42641535; S.B. Jones & F. Renfrey 12827 (MISS). Rare; OHF.

Cirsium discolor (Muhl. ex Willd.) Spreng. Kees 212; OID: 30577149, 58960516. Uncommon; OG, OHF.

Cirsium horridulum Michx. var. *horridulum*. OID: 39949865; S.B. Jones & C. Jones 4365 (MISS). Common; OG, RPF, LPF, R.

Cirsium nuttallii DC. OID: 58960696; S.B. Jones 14483 (MISS). Rare; RPF.

* *Cirsium vulgare* (Savi) Tenore. OID: 49383058. Rare; RPF.

Conoclinium coelestinum (L.) DC. C. Havran 1303 (MISS). Common; OG, FG.

*? *Coreopsis lanceolata* L. S.B. Jones & Renfrey 12844. Rare; OHF.

Coreopsis pubescens Elliott var. *pubescens*. Kees 260; OID: 32509392. Common; OHF, OBF, LPF.

* *Coreopsis tinctoria* Nutt. var. *tinctoria*. OID: 58961313. Rare, LPF.

Coreopsis tripteris L. C. Havran 1292, L.C. Temple 3817 (MISS). Common; LPF.

Eclipta prostrata (L.) L. Kees 310. Rare; R.

Erechtites hieraciifolius (L.) Raf. ex DC. Kees 266. Common; U, RPF, OG.

Elephantopus carolinianus Räuschel. Kees 154. Common; OG, RPF, DTF, OBF,

Elephantopus tomentosus L. OID: 81116772, 104204073. Common; LPF, RPF, OBF, OHF, MF, DTF, OG, U.

Erigeron canadensis L. Kees 239. Uncommon; OG.

Erigeron philadelphicus L. var *philadelphicus*. OID: 67328975; J.D. Ray Jr. 7825 (USF). Uncommon; U, MF.

Erigeron pulchellus Michx. var. *pulchellus*. OID: 39949759. Uncommon; OHF.

Erigeron pusillus Nutt. Kees 31. Common; OG.

Erigeron strigosus Muhl. ex Willd. var. *strigosus*. S.B. Jones & F. Renfrey 12807 (MISS). Common; OG.

* *Erigeron sumatrensis* Retz. Kees 238. Common; OG.

Eupatorium album L. Kees 236; OID: 30577105.

Eupatorium capillifolium (Lam.) Small. L.C. Temple 7962 (MISS). Common; OG, U, disturbed soil throughout.

Eupatorium perfoliatum L. L.C. Temple 6975. Common; R, LPF, FG, RPF.

Eupatorium x *pinnatifidum* Elliott. Kees 255; OID: 81123952, 32509396. Common; OG, RPF.

Eupatorium rotundifolium L. Kees 29; OID: 18567795. Common; FG, OG, RPF, LPF.

Eupatorium scabrium Elliott. OID: 60143277. Common; LFP, OHF, XPF.

Eupatorium serotinum Michx. L.C. Temple 7959. Common; OG, W, RPF, disturbed soil throughout.

Eupatorium torreyanum Short & Peter. Kees 213; OID: 58962311, 30577161. Rare; OG.

Eurybia hemispherica (Alexander) G.L. Nesom. Kees 311; OID: 58960645. Common; OG, RPF, LPF, OHF, XPF, OG.

Euthamia leptocephala (Torr. & A. Gray) Greene. OID: 17387334; L.C. Temple 7967 (MISS). Common; OG, FG, LPF, RPF.

Eutrochium fistulosum (Barratt) E.E. Lamont. Kees 220; OID: 30577125. Uncommon; R, W, AS.

Fleischmannia incarnata (Walter) King & H.E. Rob. Kees 22. Rare; RPF, WTF, MF.

Gamochaeta argyrinea G.L. Nesom. Pruski 4578 (LSU, MO, MISS). Common; R.

Gamochaeta pensylvanica (Willd.) Cabrera. OID: 65834700. Common; R, OG, U.

Helenium autumnale L. Kees 312. Rare; FG, LPF.

Helenium flexuosum Raf. Kees 205. Common; LPF, RPF, DTF, FG.

Helianthus angustifolius L. Kees 328. Common throughout.

Helianthus divaricatus L. OID: 49845756, 40563750; S.B. Jones & F. Renfrey 12848 (MISS). Common; OHF.

Helianthus hirsutus Raf. Kees 287; OID: 49845756. Uncommon; OHF, LPF.

Helianthus microcephalus Torr. & A. Gray. OID: 64006893. Uncommon; DTF.

Helianthus resinosus Small. Kees 230; OID: 28330055. Common; LPF, XPF.

Helianthus strumosus L. Kees 231; OID: 32509357. Common; LPF, OHF, XPF, RPF.

Heliopsis gracilis Nutt. Asteraceae. OID: 49845835. Rare; OBF.

Hieracium gronovii L. Asteraceae. Kees 226. Common; LPF, XPF, OHF.

* *Hypochaeris chillensis* (Kunth) Britton. Kees 123. Locally common; OG.

* *Hypochaeris radicata* L. OID: 41556687. Uncommon; OG.

Krigia cespitosa (Raf.) K.L. Chambers. Kees 67. Common; OG, U.

Krigia dandelion (L.) Nutt. Kees 79; OID: 39949715. Common; OG, FG.

Krigia virginica (L.) Willd. Kees 1156

Lactuca canadensis L. L.C. Temple 3818 (MISS). Common; OG.

Lactuca floridana (L.) Gaertn. OID: 81124098. Rare; OBF.

Lactuca graminifolia Michx. var. *graminifolia*. OID: 42641424. Rare; XPF, OHF.

Liatris squarrosa (L.) Michx var. *squarrosa*. Kees 298; OID: 31453447, 58961350, 54117470, 52096142. Common; XPF, OHF.

Liatris squarrulosa Michx. Kees 323; OID: 33628580, 60143242. Rare; OHF.

Mikania cordifolia (L.) Willd. S3S4G4; watch list species. Kees 35; OID: 49846687, 32113601. Common; WTF, DTF, MF.

MIkania scandens (L.) Willd. OID: 32113601. Common; R, RPF.

Nabalus altissimus (L.) Hook. Kees 14; OID: 27178007. Common; MF, BTF, OBF.

Packera anonyma (Wood) W.A, Weber & Á. Löve. Kees 66; OID: 28471383. Common; OG, FG, LPF.

Packera glabella (Poir.) C. Jeffrey. Kees 47. Common; R, WTF, DTF.

Packera obovata (Muhl ex Willd.) W.A. Weber and Á. Löve Asteraceae. OID: 67328971. Single site but locally abundant; MF.

Pityopsis tenuifolia (Torr.) Nesom. Kees 26; OID: 18547623. Common; LPF, FG, OHF.

Pluchea camphorata (L.) DC. OID: 104203926. Common; R, RPF, LPF, DTF, W.

Pseudognaphalium obtusifolium (L.) Hilliard & Burtt. Kees 234. Common; RPF, LPF, OHF, OG, FG.

Pyrrhopappus carolinianus (Walter) DC. Common; OG, LPF.

Rudbeckia hirta L. var. *pulcherrima* Farwell. OID: 25681303; S.B. Jones & F. Renfrey 12810 (MISS). Common; OG, FG, LPF, RPF, OHF, OBF, R, U.

Rudbeckia laciniata L. Asteraceae. Kees 12; OID: 18611365. Common; R, DTF.

Silphium integrifolium Michx. var. *integrifolium*. Kees 270; OID: 27598709. Rare; WTF, on roadbank.
Smallanthus uvedalia (L.) Mack. Kees 33; OID: 18520386. Uncommon; OBF, OHF, MF.
Solidago altissima L. var *pluricephala* M.C. Johnston. Common; OG, LPF, RPF, FG.
Solidago arguta Aiton *var. boottii* (Hook.) Palmer & Steyermark. OID: 30577087, 28330156; L.C. Temple 3819 (MISS). Common; LPF, OHF.
Solidago caesia L. var. *zedia* R.E. Cook & Semple. OID: 62859401, 62831782. Common; R, DTF, MF.
Solidago gigantea Aiton. Kees 25; OID: 32140632. Common; FG, OG, R, RPF.
Solidago odora Aiton. Common; RPF, LPF, OHF.
Solidago rugosa var. *celtidifolia* (Small) Fernald Kees 317; OID: 31453471. Common; FG.
Solidago rugosa Mill. var. *aspera* (Aiton) Fernald. Kees 322; OID: 33628417. Common; OHF, LPF, RPF, OBF.
Solidago salicina Elliott. SNRG4. Kees 356; OID: 18611359. Locally common; AS, WTF.
* *Sonchus asper* (L.) Hill. Rare; OG.
Symphyotrichum adnatum (Nutt.) G.L. Nesom. SNRG4. Rare; XPF, LPF.
Symphyotrichum concolor (L.) G.L. Nesom var. *concolor*. Kees 247; OID: 36263158, 62860386. Uncommon; OHF.
Symphyotrichum dumosum (L.) G.L. Nesom var. *dumosum*. OID: 34631089; Gordon 656 (MMNS). Common; FG, OG.
Symphyotrichum lateriflorum (L.) Löve & Löve var. *lateriflorum*. Kees 361; OID: 34631023. Common; DTF, WTF, R, OG, RPF, LPF.
Symphyotrichum ontarionis (Wiegand) G.L. Nesom var. *ontarionis*. Kees 352; OID: 36263135. Rare; DTF, OG.
Symphyotrichum patens (Aiton) G.L. Nesom var. *patens*. OID: 41557394. Common; LPF, RPF, OHF.
Symphyotrichum pilosum (Willd.) G.L. Nesom var. *pilosum*. Kees 326; OID: 34631063. Common; OG, FG.
Symphyotrichum praealtum (Poir.) G.L. Nesom var. *subasper*. OID: 34631051; L.C. Temple 7979. Common; FG, OG.
Symphyotrichum racemosum (Elliott) G.L. Nesom var. *subdumosum* (Wiegand) Nesom. Kees 360; OID: 34631034. Rare; OG.
Symphyotrichum undulatum (L.) G.L. Nesom. Kees 331; OID: 34631076. Rare; LPF
Verbesina virginica L. var. virginica. OID: 81116716. Rare; OHF.
Verbesina walteri Shinners. S3S4G4; watch list species. Kees 296; OID: 31453491. Rare; OG.
Vernonia gigantea (Walter) Trelease. S.B. Jones 14482. Common; FG, OG, R, DTF, BTF.
Xanthium strumarium L. Rare; roadside.
* *Youngia japonica* (L.) DC. Kees 1063. Common; U.

Berberidaceae
** *Nandina domestica* Thunb. C.L. Magee 3 (MISSA). Common; RPF, LPF, MF, OBF, DTF.
Podophyllum peltatum L. Kees 45; OID: 39805519. Common; WTF, DTF, MF.

Betulaceae
Carpinus caroliniana Walter var. *caroliniana*. Gordon 113 (MMNS). Common; DTF, R, MF, LPF, RPF.
Ostrya virginiana (Mill.) K. Koch. OID: 28331396, 104432141; A.S.Bradburn 78381 (CLEMS). Common; MF, OBF, LPF, DTF.

Bignoniaceae
Bignonia capreolata L. OID: 40563770. Common; RPF, LPF, OBF.
Campsis radicans (L.) Seemann ex. Bureau. S.B. Jones & F. Renfrey 12856 (MISS). Common; DTF.

Boraginaceae
Andersonglossum virginianum (L.) J.J. Cohen. Kees 373; OID: 40563501. Rare; MF.
Lithospermum tuberosum Rugel ex DC. SNRG4. Kees 396; OID: 40563488. Rare; MF.
Lithospermum virginianum L. Kees 684; 54117443. Rare; LPF.
Myosotis macrosperma Engelm. Kees 69. Common; OG, DTF.

Brassicaceae
Cardamine bulbosa (Schreb. ex Muhl.) Britton, Sterns, & Poggenb. Kees 48; OID: 39949575. Common; WTF.
Cardamine pensylvanica Brassicaceae. OID: 39949575. Common; R, U.
Raphanus raphanistrum L. var *raphanistrum*. H.M. Sullivan 06-1206 (MMNS). Common; OG.

Campanulaceae
Lobelia appendiculata DC. S3S4G5; watch list species. Kees 89; OID: 42642641, 23027214. Common; LPF, RPF, OG.
Lobelia cardinalis L. Common; AS, BS, R.
Lobelia puberula Michx. OID: 27599989; Gordon 652. Common; FG, LPF, OHF.
Triodanis biflora (Ruíz & Pavon) Greene. Uncommon; OG.
Triodanis perfoliata (L.) Nieuwland. Kees 61; OID: 41556533. Common; OG, RPF.
* *Wahlenbergia marginata* (Thunb.) DC. OID: 41557180. Rare; XPF, U.

Cannabaceae
Celtis laevigata Willd. C. Havran 1302 (MISS). Common; RPF, DTF.

Caprifoliaceae
** *Lonicera japonica* Thunberg. S.B. Jones 12857 (MISS). Common throughout.
Lonicera sempervirens L. OID: 40563698; H.M. Sullivan 06-1203 (MMNS). Uncommon; OBF, OHF, MF, LPF.
Valerianella radiata (L.) Dufresne. Kees 64. Common; OG.

Caryophyllaceae
Stellaria media (L.) Vill. OID: 104204623. Common; U.

Chenopodiaceae
Dysphania ambrosioides (L.) Mosyakin & Clemants. Kees 683; OID: 65834677. Rare; R.

Cistaceae
Crocanthemum carolinianum (Walter) Spach. OID: 40563715. Common; XPF, OHF.
Lechea mucronata Raf. Kees 177; OID: 31453519. Common; OHF, XPF, LPF, RPF.
Lechea tenuifolia Michx. OID: 49845702. Common; LPF, RPF.

Convolvulaceae
Cuscuta gronovii Willd. ex Roemer. Kees 318; OID: 34509881. Uncommon; R.
Dichondra caroliniensis Michx. S.B. Jones 4382; OID: 104204548. Common; OG, U.
Ipomoea cordatotriloba Dennst. var. *cordatotriloba*. Kees 327. Common; OG.
Ipomoea pandurata (L.) G.F.Mey. OID: 49845800. Common; FG, R, DTF.
* *Jacquemontia tamnifolia* (L.) Griseb. Common; RPF.

Cornaceae
Benthamidia florida (L.) Spach. OID: 39949934. Common; OHF, OBF, LPF.

Cucurbitaceae
Cayaponia quinqueloba (Raf.) Shinners. Kees 209; OID: 28330337. Rare; R.

Droseraceae

Drosera brevifolia Pursh. OID: 39949723. Rare; XPF.

Ebenaceae

Diospyros virginiana L. J. Hughes 213 (MISS). Common; OG, LPF, RPF.

Ericaceae

Gaylussacia dumosa (Andrews) Torr. & A. Gray. OID: 49846734. Rare; OHF.

Oxydendrum arboreum (L.) DC. OID: 28330569; L.C. Temple 7982 (MISS). Common; OHF, OBF.

Rhododendron canescens (Michx.) Sweet. Kees 44; OID: 39949857. Common; R, AS, LPF, DTF, OBF, MF, BTF.

Rhododendron serrulatum (Small) Millais. Kees 670; OID: 81116922. Rare; AS.

Vaccinium arboreum Marsh. var. *arboreum*. OID: 104204354; S.B. Jones & F. Renfrey 12768 (MISS). Common; LPF, RPF, OHF, OBF, FG.

Vaccinium arboreum Marsh. var. *glaucescens* (Greene) Sargent. OID: 42641251. Common; LPF.

Vaccinium elliottii Chapm. OID: S.B. Jones & F. Renfrey 12778 (MISS). Common; LPF, RPF, OHF, DTF.

Vacciniium fuscatum Aiton. OID: 62831818. Uncommon; AS.

Vaccinium stamineum L. v*ar. sericeum* (C. Mohr) D.B. Ward. Kees 81; OID: 25694635. Common; LPF, OHF, OBF.

Vaccinium stamineum L. var. *stamineum*. S.B. Jones & F. Renfrey 12770 (MISS). Common; LPF, OHF, OBF

Euphorbiaceae

Acalypha gracilens A. Gray. Kees 259. Common; OG, U.

Acalypha rhomboidea Raf. Kees 263. Common; OG, U.

Acalypha virginica Wall. L.C. Temple 10010 (MMNS). Common; OG, U.

Croton glandulosus L. var. *septentrionalis* Müller of Argau. Kees 271. Common; LPF, disturbed soil.

Croton willdenowii G.L. Webster. Kees 202; OID: 28330132. Locally common; LPF

Croton lindheimeri (Engelm. & A. Gray) Alph. Wood. L.C. Temple 9982 (MISS). Common; RPF, LPF, OG, disturbed soil throughout.

Ditrysinia fruticosa (W. Bartram) Govaerts & Frodin. OID: 28331415. Common; DTF, BTF, LPF, MF.

Euphorbia nutans Lag. OID: 62860464. Uncommon; XPF.

Euphorbia maculata L. Common; OG, U.

Euphorbia pubentissima Michx. Kees 167; OID: 28330101. Common; LPF, OHF, OBF.

Tragia cordata Michx. OID: 47339225. Uncommon; OBF, MF.

Tragia smallii Shinners. OID: 47339258. Rare; OHF.

** *Triadica sebifera* (L.) Small. Common; DTF, OG, R, RPF.

Fabaceae

* *Albizia julibrissin* Durazzini. N. Hammill 45 (VSC). Rare; DTF, OG, RPF.

Centrosema virginianum (L.) Benth. Kees 181. Common; FG, OG.

Chamaecrista nictitans (L.) Moench var. *nictitans* Kees 306. Common; OG, LPF, RPF.

Chamaecrista fasciculata (Michx.) Greene var. *fasciculata*. Kees 307. Common; OG, LPF, RPF, XPF.

Clitoria mariana L. var. *mariana*. Kees 278; OID: 25681454. Common; FG, OG, LPF, OHF

Desmodium canescens (L.) DC. Kees 199; OID: 28471340. Rare; OG.

Desmodium ciliare (Muhl ex Willd.) DC. Kees 267; OID: 60143737. Common; OG, LPF, OHF.

Desmodium glabellum (Michx.) DC. Kees 283; OID: 47409235. Common; LPF, RPF, OHF, OBF.

Desmodium laevigatum (Nutt.) DC. OID: 60143784. Rare; OHF.

Desmodium lineatum DC. Kees 334. Common; XPF, LPF, OG, OHF.

Desmodium nuttallii (Schindl.) B.G. Schub. OID: 60143296. Rare; XPF

Desmodium obtusum (Muhl ex Willd) DC. Kees 402; OID: 60143760. Common; OHF, LPF.

Desmodium paniculatum (L.) DC. Kees 216. Common; F G, DTF, R, MF.

Desmodium rotundifolium DC. Kees 273; OID: 40563784. Common; OG, LPF.

Desmodium viridiflorum (L.) DC. Kees 325; OID: 35747990. Uncommon; LPF.

Crotalaria sagittalis L. 1,3 Kees 173 31453459

Erythrina herbacea L. OID: 18520432. Uncommon; LPF, OHF, MF.

Galactia regularis (L.) Britton, Sterns, & Poggenb. Kees 308. Common; FG.

Galactia volubilis (L.) Britton, Sterns, & Poggenb. var. *volubilis*. Kees 309. Common; FG.

Gleditsia triacanthos L. Rare; RPF, OG.

Hylodesmum glutinosum (Muhl ex Willd.) H. Ohashi & R. R. Mill. OID: 45609991; J.D.Ray Jr. 8381 (MISSA). Uncommon; MF.

Hylodesmum nudiflorum (L.) H. Ohashi & R.R. Mill. Kees 174. Uncommon; MF, OHF.

Kummerowia striata (Thunb.) Schindl. Common; OG.

Lathyrus hirsutus L. Kees 147. Common; OG.

Lespedeza capitata Michx. Kees 341; OID: 25681355. Rare; FG.

** *Lespedeza cuneata* (Dumont-Cours.) G. Don. Common; RPF, OG, FG, R.

Lespedeza procumbens Michx. Kees 274. Common; LPF, OHF, RPF.

Lespedeza virginica (L.) Britton, Sterns, & Poggenb. Kees 304; OID: 45610001. Common; OHF, XPF, LPF.

* *Medicago arabica* (L.) Huds. Kees 1112; OID: 104204509. Rare; U.

Mimosa microphylla Dryand. OID: 42641470. Common; OHF, XPF, LPF, OG.

Orbexilum pedunculatum (Mill.) Rydb. OID: 42641321, 41556585. Locally common; LPF, OBF.

Rhynchosia reniformis DC. OID: 62860505. Rare; XPF.

Rhynchosia tomentosa (L.) Hook. & Arn. Kees 252; OID: 32140715. Uncommon; OHF, XPF, LPF.

* *Senna obtusifolia* (L.) H.S. Irwin & Barneby. Kees 172. Locally common; OG, U.

Sesbania herbacea (Mill.) McVaugh. Common; R.

Sesbania vesicaria (Jacquin) Elliott. Uncommon; R.

* *Sesbania punicea* (Cavanilles) Bentham. OID: 45608881. Uncommon; R.

Strophostyles umbellata (Muhl. ex Willd.) Britton, Sterns & Poggenb. Kees 277; OID: 32509317. Common; LPF, OHF

Stylosanthes biflora (L.) Britton, Sterns, & Poggenb. Gordon 1209 (MMNS). Common; LPF, RPF.

Tephrosia spicata (Walter) Torr. & A. Gray. Kees 145; OID: 49845595. Common; OHF, XPF, LPF.

Tephrosia virginiana (L.) Pers. Kees 262; OID: 45610014. Common; OHF, XPF.

* *Trifolium campestre* Schreb. Common; OG.

* *Trifolium dubium* Sibth. Common; OG.

* *Trifolium incarnatum* L. R. Kerr 12 (MISSA). Rare; OG.

* *Trifolium pratense* L. MISSA013743. Rare; OG.

* *Trifolium repens* L. Kees 1079. Uncommon; OG, U.

* *Vicia grandiflora* Scop. Common; OG

* *Vicia sativa* L. ssp. *nigra* (L.) Erh. S.B. Jones & C. Jones 4376 (MISS). Common; OG.

* *Vicia tetrasperma* (L.) Schreb. Kees 380. Common; OG.

* *Vicia villosa* Roth ssp. *varia* (Host) Corb. S.B. Jones & F. Renfrey 12823. Common; OG.

Fagaceae

Fagus grandifolia Ehrh. var. *caroliniana* (Loudon) Fernald & Rehder. OID: 38202299. Common to dominant; MF, OBF, BTF, DTF, OHF.

* *Quercus acutissima* Carruth. Rare; OG.

Quercus alba L. Common to dominant; OBF, MF, OHF, WTF, DTF, LPF.

Quercus coccinea Muench. OID: 42641454, 67328982; Nolan Burris, Robert A. Stewart II s.n. (DSC). Uncommon; OBF, OHF.

Quercus falcata Michx. S.B. Jones & F. Renfrey 12840 (MISS). Common; OHF, LPF, XPF, OBF.

Quercus hemisphaerica Bartram ex Willd. Kees 43; OID: 37247689. Rare; OHF.

Quercus laurifolia Michx. Kees 366; OID: 37212725. Locally common to dominant; DTF.

Quercus marilandica Muench. var. *marilandica*. OID: 32509450; S.B. Jones & F. Renfrey 2838 (MISS). Locally common; XPF.

Quercus michauxii Nutt. Kees 319; OID: 67329011. Locally common; DTF, WTF, BTF.

Quercus nigra L. OID: 104205098; S.B. Jones & F. Renfrey 12779 (MISS). Common throughout.

Quercus pagoda Raf. S.B. Jones & F. Renfrey 112772 (GA). Common; DTF, WTF, OG, MF.

Quercus stellata Wagenh. OID: 104203777; S.B. Jones & F. Renfrey 12839 (MISS). Common; OHF, LPF, XPF, OBF.

Quercus velutina Lam. OID: 104432504; S.B. Jones & F. Renfrey 12772 (MISS). Uncommon; OHF, LPF.

Gelsemiaceae

Gelsemium sempervirens (L.) St. Hilaire. OID: 104205011; K.L. Gordon 15 (MMNS). Common; LPF, RPF, OHF.

Gentianaceae

Gentiana villosa L. Kees 919; OID: 32509366. Rare; OG, LPF, OHF, OBF.

Sabatia angularis (L.) Pursh. Kees 198; OID: 52096026, 49845972. Rare; OG, OHF.

Geraniaceae

Geranium carolinianum L. OID: 104204646; S.B. Jones & C. Jones 4375 (MISS). Uncommon; OG, U.

Geranium dissectum L. OID: 42641266.

Hamamelidaceae

Hamamelis virginiana L. var. *virginiana*. L.C. Temple 7981. Common; OHF, OBF, MF, LPF.

Hydrangeaceae

Hydrangea barbara (L.) G. Schultz. OID: 18546719. Common; AS, WTF, MF, R.

Hydrangea quercifolia Bartram. OID: 18610191. Uncommon; MF, OHF.

Hypericaceae

Hypericum crux-andreae (L.) Crantz. Kees 281; OID: 59380024. Uncommon; LPF, RPF.

Hypericum drummondii (Grev. & Hook.) Torr. & A. Gray. Kees 339; OID: 49845736. Common; RPF, LPF, XPF.

Hypericum gentianoides (L.) Britton. Kees 340; OID: 49845818. Common; RPF, LPF, XPF.

Hypericum hypericoides (L.) Crantz. Kees 225. Common; LPF, XPF, RPF, OHF, OBF, DTF, R.

Hypericum mutilum L. OID: 28330368; Gordon 1214 (MMNS). Common; DTF, R, OG, BS

Hypericum punctatum Lam. Kees 275; OID: 32140657. Common; R, OG, W.

Hypericum walteri J.F. Gmel. Kees 246. Common; BS, R, W.

Iteaceae

Itea virginica L. Kees 16. Common; R, AS, BS, W, WTF, DTF, BTF.

Juglandaceae

* *Carya illinoinensis* (Wagenh.) K. Koch. Uncommon; OG, RPF.

Carya pallida (Ashe) Engl. & Graebn. OID: 45608942, 42642451; S.B. Jones & F. Renfrey 12851 (MISS). Common; OHF, OBF, XPF.

Carya tomentosa (Poir.) Nutt. OID: 45608903; S.B. Jones & F. Renfrey 12850 (MISS). Common; OHF, OBF, XPF, LPF, MF.

Lamiaceae

* *Ajuga reptans* L. Rare; U.

Callicarpa americana L. OID: 104203720; S.B. Jones & F. Renfrey 12771. Common; LPF, XPF, OHF, OBF.

* *Clinopodium gracile* (Bentham) Kuntze. Kees 203. Common; DTF, OG.

Collinsonia canadensis L. Kees 338; OID: 60143377. Rare; OHF.

Collinsonia punctata Elliott. S1G3; tracked species. OID: 32509301. Locally common; OBF, OHF, MF.

Collinsonia tuberosa Michx. S3S4G3; watch list species. Kees 688; OID: 81116837. Rare; MF.

* *Glechoma hederacea* L. Rare; U.

Hedeoma hispida Pursh. Common; OG

Hyptis alata (Raf.) Shinners var. *alata*. Kees 291. Common; R, AS, LPF.

* *Lamium amplexicaule* L. S.B. Jones & C. Jones 4382A (MISS). Rare; OG, U.

* *Lamium purpureum* L. OID: 104204536. Rare; U.

Lycopus virginicus L. Kees 36. Common; W, BS, R.

Monarda fistulosa L. var. *mollis* (L.) Benth. Kees 30; OID: 49845669. Common; OG, OHF, OBF, LPF, RPF.

Monarda punctata L. var *punctata*. Kees 282; OID: 58960911. Uncommon; XPF.

* *Perilla frutescens* (L.) Britton. Kees 268. Common; OG, U, DTF, on disturbed soil.

Physostegia angustifolia Fernald. Kees 87; OID: 25594423. Rare; OG.

Prunella vulgaris L. var. *lanceolata* (W. Barton) Fernald. Kees 68. Common; OG, U, FG, DTF, RPF, LPF.

Pycnanthemum albescens Torr. & A. Gray. Kees 297; OID: 19783365. Common; OHF, OBF, MF, LPF.

Pycnanthemum tenuifolium Schrad. Kees 28; OID: 18567760. Common; OG, FG.

Salvia azurea Michx. ex Lam. var. *azurea*. OID: 60143850, 58960786. Locally common; OHF.

Salvia lyrata L. Common; S.B. Jones & C. Jones 4374. OG, U, DTF, RPF, LPF, OHF.

Scutellaria elliptica var. *hirsuta*. OID: 45608690. Common; OHF, OBF.

Scutellaria integrifolia L. Kees 125; OID: 45608743. Common; LPF, RPF, OHF, FG, OG.

Trichostema dichotomum L. Kees 315; OID: 33628400. Common; RPF, LPF, U, OG.

Lentibulariaceae

Utricularia gibba L. Kees 1190; OID: 104159004. Rare; R.

Linaceae

Linum medium (Planch.) Britton var. *texanum* (Planchon) Fernald. Kees 129; OID: 25681465.

Linum striatum Walter. Kees 305. Rare; DTF, WTF.

Linderniaceae

Lindernia dubia (L.) Pennell. Kees 49. Common; WTF, AS, R, BS.

Micranthemum umbrosum (J.F. Gmel.) Blake. Kees 1189; OID: 104157423. Rare; R.

Loganiaceae

Mitreola petiolata (J.F. Gmel.) Torr. & A. Gray. Kees 217; OID: 49845102. Uncommon; FG, R.

Mitreola sessilifolia (J.F. Gmel.) G. Don. OID: 52095972; Rare; RPF.

Spigelia marilandica (L.) L. Kees 314; OID: 42642499. Common; OBF, MF, OHF.

Lythraceae

* *Cuphea carthagenensis* (Jacq.) J.F Macbride. Kees 206; OID: 28330301. Common; FG, OG, U, W, R.

Malvaceae

Modiola caroliniana (L.) G. Don. Kees 1107; Rare; U.

Sida rhombifolia L. var. *rhombifolia*. Kees 160. Uncommon; U, OG.

Mazaceae

* *Mazus pumilus* (Burman f.) Steenis. Kees 1159. Rare; U.

Melastomataceae

Rhexia mariana L. var. *mariana*. Kees 150. Common; FG.

Rhexia virginica L. Kees 261; OID: 32140742. Rare; LPF, DTF.

Meliaceae

* *Melia azedarach* L. Kees 343. Uncommon; OG, R, RPF.

Moraceae

Morus rubra L. OID:42642548; S.B. Jones & F. Renfrey 12765 (MISS). Rare; LPF.

Myricaceae

Morella cerifera (L.) Small. OID: 104204048; S.B. Jones & F. Renfrey 12752 (MISS). Common; FG, LPF, RPF.

Nyssaceae

Nyssa biflora Walter. Kees 13; OID: 28330801. Common; AS, WTF, BTF.

Nyssa sylvatica Marsh. S.B. Jones & F. Renfrey 12760 (MISS). Common; OBF, OHF.

Oleaceae

Cartrema americana (L.) Nesom. Kees 42; OID: 28330609. Uncommon; OHF.

Chionanthus virginicus L. OID: 41557287. Uncommon; OHF.

Fraxinus americana L. Kees 232. Rare; DTF.

** *Ligustrum lucidum* Aiton. OID: 104205122. Common; RPF, LPF.

** *Ligustrum sinense* Lour. OID: 104205128; C.L. Magee 2 (MISSA). Common throughout.

Onagraceae

Ludwigia alternifolia L. OID: 28330320; S.B. Jones, Jr. 14481 (MISS). Common; FG, RPF, LPF, OHF, U.

Ludwigia decurrens Walter. Kees 221. Common; R

Ludwigia glandulosa Walter. Kees 292. Common; R.

Ludwigia hirtella Raf. OID: 49846010; S.B. Jones with Fred Renfrey 12800 (MISS). Common; FG, U.

Ludwigia linearis Water var. *puberula* Engelm. & A. Gray. OID: 58960877. Rare; RPF.

Ludwigia palustris (L.) Elliott. Kees 335. Common; R.

Oenothera biennis L. Kees 330. Common; LPF, RPF.

Oenothera laciniata Hill. OID: 41556545; LPF, RPF.

Orobanchaceae

Agalinis fasciculata (Elliott) Raf. Kees 324; OID: 60143134. Common; OG, FG

Agalinis obtusifolia Raf. OID: 60142980. Rare; OHF.

Agalinis pulchella Pennell. OID: 60143076. Rare; OHF.

Agalinis purpurea (L.) Pennell. OID: 60142887; P.J. Barbour 1623 (LSU). Common; OHF, LPF.

Agalinis tenuifolia (Vahl) Raf. Kees 321; OID: 33628545, 62860383. Common; LPF, OHF, XPF.

Aureolaria grandiflora (Benth.) Pennell var. *serrata* (Benth.) Pennell. Kees 289; OID: 60143159, 33628554. Locally common; OHF, OBF.

Buchnera floridana Gandog. Kees 151; OID: 60143151

Epifagus virginiana (L.) W. Barton. Kees 37; OID: 18547735. Common; OBF, MF, BTF, DTF.

Pedicularis canadensis L. OID: 60143202. Rare; OBF.

Oxalidaceae

Oxalis colorea (Small) Fedde. OID: 39949727. Rare; OHF.

* *Oxalis debilis* Kunth. OID: 39949966. Common; U.

Oxalis dillenii Jacq. Kees 21, Kees 55. Common; U, OG.

Oxalis florida Salisbury. Kees 382; OID: 41556933. Common; OHF, OBF, U.

Oxalis violacea L. Kees 51; OID: 39949706. Common; OBF, OHF.

Oxalis species 1 (<*O. violacea*). OID: 60143798. Locally common; OHF.

Passifloraceae

Passiflora incarnata L. S.B. Jones & F. Renfrey 12793 (MISS). Common; OG.

Passiflora lutea L. Kees 18. Rare; OBF.

Penthoraceae

Penthorum sedoides L. J.D.Ray Jr. 5414 (MISSA). Rare; R.

Phrymaceae

Mimulus alatus Aiton. Kees 219. Common; R.

Phryma leptostachya L. OID: 53493356; James D Ray 5986 (MISSA, USMS). Uncommon; MF.

Phyllanthaceae

Phyllanthus caroliniensis Walter. Common; R, U.

* *Phyllanthus urinaria* L. ssp. *urinaria*. OID: 104204446. Common; U.

Phytolaccaceae

Phytolacca americana L. Common; U.

Plantaginaceae

Linaria texana Scheele. OID: 40563330. Common; FG.

Mecardonia acuminata (Walter) Small var. *acuminata*. Kees 286; OID: 32509409. Common; FG.

Gratiola floridana Nutt. S1G4; tracked species. OID: 81124253. Rare; WTF, R.

Penstemon laxiflorus Pennell. OID: 41557195. Uncommon; XPF, OHF.

Plantago aristata Michx. Kees 88; OID: 25681274. Common: U, OG.

* *Plantago lanceolata* L. Rare; OG.

Plantago virginica L. OID: 42641007. Common; OG.

Sophronanthe pilosa (Michx.) Small. OID: 47409299. Rare; OHF.

Platanaceae

Platanus occidentalis L. Rare; DTF, R.

Polemoniaceae

Phlox divaricata L. ssp. *laphamii* (A.W. Wood). OID: 81123864; 40563910. Rare; MF, OBF.

Phlox pilosa L. var *pilosa*. OID: 39949937. Common; OHF, LPF.

Polygalaceae

Asemeia grandiflora (Walter) Small. OID: 47409377. Locally common; OHF.

Polygala boykinii Nutt. var. *boykinii*. S3S4G4; watch list species. Kees 127, Kees 146; OID: 42642586, 25681286. Locally common; OG, LPF, OHF.

Polygala incarnata L. OID: 42641480. Common; OG, OHF, LPF.

Polygala mariana Mill. Kees 180; OID: 27599083. Common; LPF, XPF, RPF, OHF, OBF.

Polygala nana (Michx.) DC OID: 40563685, 42641350. Uncommon; OHF, XPF, LPF.

Polygonaceae

* *Persicaria longiseta* (Bruijn) Kitag. Kees 186. Rare; U.

Persicaria punctata (Elliott) Small. Kees 152; OID: 47339669, 27187519. Uncommon; R, DTF, WTF.

Persicaria sagittata (L.) H. Gross ex Nakai. Kees 15; OID: 34631144. Common; R.

Persicaria virginiana (L.) Gaertn. Kees 10; OID: 18545655. Common; WTF, DTF.

* *Rumex crispus* L. ssp. *crispus*. Kees 169. Common; OG, U.

Rumex hastatulus Baldwin. Kees 383; OID: 41556489. Locally common; OG.

Rumex pulcher L. Kees 675. Rare; OG, U.

Primulaceae

Centunculus minimus L. OID: 47339169. Rare; RPF.

Lysimachia ciliata L. OID: 47339169; L.C. Temple 10006 (GA). Rare; OBF.

Samolus parviflorus Raf. Kees 76. Common; WTF, R, AS, BS.

Ranunculaceae

Clematis virginiana L. Kees 235. Common; R, U, LPF.

Delphinium carolinianum Walter ssp. *vimineum* (D.Don) M.J. Warnock. Kees 679; OID: 47409448, 38739084. Rare; OHF.

Ranunculus abortivus L. OID: 108994437. Rare; U.

* *Ranunculus muricatus* L. OID: 109044136.

Ranunculus pusillus Poir. Kees 372; OID: 39949621. Rare; DTF, R.

Ranunculus recurvatus Poir. var. *recurvatus*. Kees 313; OID: 34630979. Uncommon; MF, WTF.

* *Ranunculus sardous* Crantz. OID: 40563311. Common; OG, U.

Rhamnaceae

Berchemia scandens (Hill) K. Koch. Kees 52. Uncommon; LPF, OBF.

Ceanothus americanus L. var. *intermedius*. OID: 41557319; S.B. Jones & F. Renfrey 12794 (MISS). Rare; OHF, LPF.

Frangula caroliniana (Walter) A. Gray. Kees 241. Common; LPF, OBF.

Rosaceae

Agrimonia microcarpa Wallr. Kees 223; OID: 58961144. Locally common; OBF, LPF.

Amelanchier arborea (Michx. f.) Fernald. Kees 41; OID: 28330736. Uncommon; DTF, LPF.

Aronia arbutifolia (L.) Pers. OID: 81124279. Uncommon; AS.

Crataegus marshallii Eggl. S.B. Jones & F. Renfrey 12849. Uncommon; OHF, LPF.

Crataegus pulcherrima Ashe. S3S4G4; watch list species. Kees 391; OID: 60143359. Common; OHF.

Crataegus spathulata Michx. Kees 336; OID: 33628500. Rare; OHF.

Malus angustifolia (Alph. Wood) Britt. OID: 28471454; S.B. Jones & C. Jones 4371 (MISS). Common; OG, LPF.

Malus ioensis (Alph. Wood) Britt. Kees 381. Rare; OHF, FG.

* *Potentilla indica* (Andrews) T. Wolfe. Kees OID: 104204597. Common; U, DTF, RPF.

Potentilla simplex Michx. Kees 301.

Prunus angustifolia Marsh. OID: 60143342; J. Hughes 13 (MISS).

* *Prunus caroliniana* Mill. OID: 104204737. Rare; DTF.

Prunus mexicana S. Watson. OID: 39949696, 28471471; S.B. Jones & F. Renfrey 12780 (MISS). Common; OHF, XPF.

Prunus serotina Ehrh. var. *serotina*. OID:102118916; S.B. Jones & F. Renfrey 12754 (MISS). Common; LPF, OHF, OBF.

Prunus umbellata Elliott. OID: 41557415. Rare; XPF.

** *Pyrus calleryana* Decne. Kees 196. Rare; OG.

Rosa carolina L. ssp. *carolina*. OID: 42641289, 28471271; Chris Havran 1530. Common; OHF, LPF.

** *Rosa multiflora* Thunb. ex Murray. OID: 41556712. Uncommon; OG, RPF.

Rubiaceae

Cephalanthus occidentalis L. OID: 27600006. Common; FG, R, BS, W.

Diodia virginiana L. S.B. Jones & F. Renfrey 12811 (MISS). Common; U, W.

Edrastima uniflora (L.) Raf. Kees 290. Common; R.

Galium circaezans Michx. OID: 81123785. Rare; MF.

Galium orizabense Hemsl. ssp. *laevicaule* (Weath. & S.F. Blake) Dempster. OID: 45609958. Rare; MF.

Galium pilosum Aiton. Kees 161; OID: 31075068. Common; FG, OG.

Galium sherardia E.H.L. Krause. Kees 185. Common; OG.

Galium triflorum Michx. OID: 60143230. Rare; OHF.

Galium uniflorum Michx. Kees 124; OID: 26829260. Common; OBF, MF.

Hexasepalum teres (Walter) J.H. Kirkbr. Kees 300. Common; XPF, U.

Houstonia micrantha (Shinners) Terrell. Common; OG.

Houstonia pusilla Schopf. Kees 53. Common; OG.

Mitchella repens L. OID: 19783467. Common; MF, OBF.

Polypremum procumbens L. Kees 363. Common; R, XPF, U.

Salicaceae

Salix nigra Marsh. H.M. Sullivan 06-1205 (MMNS). Common; W, R.

Santalaceae

Phoradendron leucarpum (Raf.) Reveal & M.C. Johnst. Common; RPF, MF, DTF.

Sapindaceae

Acer floridanum (Chapm.) Pax. Kees 7. Rare; OBF.

Acer rubrum L. var. *trilobum* Torr. & A. Gray. Common; RPF, LPF, OBF, OHF, DTF.

Sapotaceae

Sideroxylon lanuginosum Michx. ssp. *lanuginosum*. Kees 358; OID: 40563645, 36256373. Rare; OBF, OHF.

Scrophulariaceae

* *Verbascum thapsus* L. ssp. *thapsus*. L.C. Temple 9987 (MISS). Rare; U.

Solanaceae

* *Datura stramonium* L. K. E. Rogers & J. R. Watson 8486 (MISSA). Rare; RPF.

Solanum carolinense L. var. *carolinense*. OID: 18610190; S.B. Jones & F. Renfrey 12785 (MISS). Common; OG.

Solanum emulans Raf. Kees 678. Rare; U.

Physalis heterophylla Kees 272; OID: 32113356. Rare; U, OBF.

Physalis virginiana Mill. OID: 81124079; S.B. Jones 14464 (MISS). Rare; OBF.

Styracaceae

Halesia diptera Ellis var. *diptera* OID: 28331405; S.B. Jones & C. Jones 4378 (MISS). Common; DTF.

Styrax grandifolius Aiton. Kees 207; OID: 28330644. Uncommon; OHF, OBF.

Symplocaceae

Symplocos tinctoria (L.) L'Heritier. Kees 32. Common; DTF, BTF, MF.

Theaceae

Stewartia malacodendron L. S3S4G4; watch list species. Kees 210; OID: 54117413, 38202290, 28330768. Locally common; MF, OBF, DTF.

Ulmaceae

Ulmus alata Michx. OID: 104204009; S.B. Jones 12769. Common; RPF, LPF, MF, DTF.

Ulmus americana L. var *americana*. Rare; DTF, W.

Urticaceae

Boehmeria cylindrica (L.) Sw. OID: 18544886; J.D. Ray, Jr. 5401 (MISSA, LSU). Common; R, BS, DTF.

Pilea pumila (L.) A. Gray. Kees 681; OID: 65834684. Rare; R, BS.

Verbenaceae

Glandularia canadensis (L.) Nutt. OID: 41556500, 39949918. Rare; RPF.

Verbena halei Small. Kees 194; OID: 52093860, 30577132. Locally common; OG.

** *Verbena brasiliensis* Vell. S.B. Jones & F. Renfrey 12830. Common; OG, FG, RPF.

** *Verbena rigida* Spreng. J.D. Ray Jr. 5379 (MISS). Common; OG, U, OHF.

Violaceae

Viola edulis Spach. OID: 39949600. Common; WTF, MF.

Viola langloisii Greene. OID: 39949606. Common; WTF.

Viola palmata L. var. *palmata*. OID: 39949830. Common; OBF, OHF.

Viola palmata L. var. *triloba* (Schwein.) Ging. OID: 38739585. Rare; OHF.

Viola pedata L. var *pedata*. OID: 38202276, 36263129. Common; XPF,OHF.

Viola primulifolia L. Kees 54. Common; MF, AS, WTF, R.

Viola sororia Willd. Ken L. Gordon 109. Common; MF, R, U.

Viola villosa Walter. OID: 38739778, 39949641. Rare; OHF.

Viola walteri House. OID: 19783494; J.D. Ray Jr. 7823. Common; OBF, OHF, MF, LPF.

Vitaceae

Nekemias arborea (L.) J. Wen & Boggan. Rare; RPF.

Parthenocissus quinquefolia (L.) Planchon. Common; DTF, LPF.

Muscadinia rotundifolia (Michx.) Small var. *rotundifolia*. OID: 104203936; S.B. Jones & F. Renfrey 12764. Common throughout

Vitis aestivalis Michx. var. *aestivalis*. OID: 28329833, 45608669. Common; LPF, OBF.

Vitis cinerea (Engelm. in A. Gray) Engelm. ex Millardet var. *cinerea*. Kees 175; OID: 27599152. Common; R.

Vitis palmata Vahl. Kees 176. Rare; R.

Vitis vulpina L. Rare; LPF.

APPENDIX 1

Full transcription of GLO survey notes in sections intersecting or bordering the main tract of Fair River Farm.

South between sections 16 & 17
40.00 Set ¼ Sec post witness a
Pine 26 in diam N 36 E 22 Chs
Red oak 20 in diam N 45 E 22 Chs
80.00 intersect West of post 26 Chs set
Post at intersection witness a
Red Oak 18in diam N56 W 5 Chs
Red oak 26in diam. N34 W 17 Chs
3rd Rate undulating land timbered
Pine + Oak.

East between sections 16 & 21
39.80 Set ¼ Sec Post in
Pine 18in diam S 88 W 45 Chs
Post oak 10in diam N 72 W31 Chs
65.00 Enter swamp
69.00 Cross branch 25 Chs wide runs N W
78.00 Leave swamp
79.80 To corner of sections 9,10,15 + 16
3rd rate level land Timber
Pine + Oak cane vines
+ briars

East between sections 17 & 20
27.50 Cross the Natchez Trace bears N E
39.97 Establish ¼ section corner on
A Spanish Oak 36in diam.
79.74 To the corner of sections 16,17, 20 + 21
3rd rate undulating land sandy
soil Timber Pine and Oak

North between sections 17 + 18
Set ¼ sec Post witness a
Pine 20 in diam. S43E21 Chs
Pine 26in diam S72 W97 Chs
80.20 To corner of sections 7,8,17&18
3rd rate undulating land Timber
Pine and Oak soil sand

East between sections 7 & 18
40.00 Set ¼ Sec Post witness a
Pine 12in diam S 70 N 26 Chs
Post Oak 20in diam N 40 W 20 Chs
80.00 Intersect North of Post 20 Chs
Set Post at intersection witness a
Post Oak 20in diam N 88 W 34 Chs
Post oak 12in diam N 63 W 35 Chs
3rd rate undulating land Timber
Pine + Oak

East between Sections 8 & 17
39.82 Set ¼ Sec Post Witness a
Hickory 6in diam North 10 Chs
Hickory 6in diam S 54 E 14 Chs
61.50 Cross the Natchez Trace Bears N E
79.64 To corner of sections 8,9,16&17
3rd Rate undulating land
Timber Pine + Oak

South between sections 20 & 21
40.00 Set ¼ Sec post witness a
Red Oak 6in diam N 23 W 34 Chs
Red Oak 12in diam S 81 E 48 Chs
80.00 Intersect West of Post 14 Chs set
Post at intersection witness a
Pine 12in dia N 30 E 21 Chs
Pine 12in dia N 30 E 37 Chs
3rd Rate level land Timber Pine and Oak

East between sections 21 & 28
40.00 Set ¼ Sec Post witness a
Pine 26in diam N 14 E 28 Chs
Pine 26in diam S 5 E 27 Chs
80.00 To corner of sections 21, 22, 27, + 28
3rd Rate Rolling land timber
Pine and Oak

East between Section 27 + 34
40.03 Set ¼ Sec Post witness a
Post Oak 20in diam S 88 E 42 Chs
Post Oak 20in diam N 85 E 29 Chs
80.06 To corner of sections 26,27,34, + 35
3rd Rate undulating land sandy
Soil Timber Pine and Oak

North between Sections 27 & 28
29.50 Cross the [illegible] Road bears N E
40.00 Set ¼ Sec Post witness a
Red Oak 20in diam S 23 W 40 Chs
Post Oak 20in diam S 40 E 48 Chs
80.00 Intersect at Post set post at
Intersection witness a
Black Oak 16 in diam S 80 W 29 Chs
Chestnut 26 in diam. S 56 E 24 Chs
3rd Rate rolling land Timber
Pine + Oak

East between sections 19 & 30
40.00 Set ¼ Sec Post witnessed a
Red Oak 12in diam S 20 E 109 Chs
Red Oak 40in diam N 63 E 188 Chs
80.00 Intersect South of Post 10 Chs set
Post at intersection witness a
Black Jack 20in diam S48 E 23 Chs
Post Oak 26in diam S64 N 22 Chs
3rd rate undulating land Timber
Pine and Oak undergrowth [illegible; vines or canes?] + briars

East between Sections 20 + 29
00.50 Cross the old Natchez Trace bears N E
39.93 Set ¼ Sec Post witnessed a
Pine 20in diam N 44 E 22 Chs
Pine 20in diam S 12 W 33 Chs
79.86 To corner of sections 20,21,28+29
3rd Rate level land Timber
Pine and Oak
vEast between sections 22 & 27
40.18 Set ¼ Sect Post witnessed a
Sweet Pine 18in diam. S 70 W 28 Chs
Chestnut 20in diam N 34 E 7 Chs
80.36 To corner of Sections 22, 23, 26 & 27
3rd Rate Hilly land Timber
Pine and Oak

North between sections 21 & 22
39.97 Set ¼ Sec Post witness a
Holly 18 in diam S 26 W 36 Chs
Black Oak 41 in diam N 68? E 7 Chs
79.94 Intersect 20 Chs west of Post
Set Post at intersection [illegible] witness a
Red Oak 40in diam S 16 E 68 Chs
White Oak 30in diam S 72 W 73 Chs
3rd Rate Hilly land Timber Pine + Oak

East between sections 15 & 22
3.00 Cross Branch 12 Chs wide runs N E + [illegible]
10.00 Leave Swamp
40.00 Set ¼ Sec Post witness a
Red Oak 20in diam N 35 W 44 Chs
Red Oak 16 in diam S 13 E 23 Chs
80.00 To corner of sections 14,15,22 + 23
3rd Rate undulating land
Timber Pine and Oak

North between sections 15 and 16
35.00 Enter swamp
39.90 Establish ¼ Sec corner Post
In Hickory 6 in diam
65.00 cross branch 20 Chs wide
66.50 Recross Lane runs N E
68.55 Cross Lane runs N W
78.00 Leave Swamp
79.00 Intersect Post [illegible] South 40 Chs
set Post at intersection witness a
Pine 36 in diam S 30 E 18 Chs
Hickory 19 in diam N 25 E 42 Chs
3rd Rate level land Timber
Pine and Oak cane vines + briars

East between sections 10 & 15
40.17 Set ¼ Sec Post witness a
Maple 18in diam N 82 W 33 Chs
Magnolia 18 in diam S 85 W 29 Chs
81.34 To corner of sections 10,11, 14 & 15
3rd Rate undulating land Timber
Pine and Oak + Some Hickory

North between sections 9 & 10
5.00 Enter Swamp
9.50 Cross Branch 25 Chs wide runs N E
23.00 Leave swamp
39.92 Set ¼ Sec Post witnessed a
Pine 10 In diam S 30 E 7 Chs
Red Oak 26 in diam S 61 W 12 Chs
79.84 Intersect west of Post 40 Chs set
Post at intersection witnessed a
Red Oak 20 in diam S 88 E 11 Chs
Red Oak 26 in diam N 51 W 25 Chs
3rd Rate level land Timber
Pine & oak cane vines
+ briars

South between sections 14 & 15
40.06 Set ¼ Sec Post witness a
Hickory 8 in diam S 7?3 W 24 Chs
Pine 30in diam N 61 E 34 Chs
80.13 Intersect at Post set Post at
Intersection witnessed a
Red Oak 20in dia N 20 E 13 Chs
Red Oak 10 in dia N 40 W 9 Chs
3rd Rate undulating land Timber
Pine + Oak

East between sections 14 & 23
39.81 Set ¼ Sec Post Witness a
Pine 30in diam S 87 N 40 Chs
Hickory 6in diam N 43 E 17 Chs
78.00 Enter Reed brake
79.62 To corner of sections 13,14,23&24
3rd Rate Hilly land Timber Pine and Oak Reed vines and briars

ACKNOWLEDGMENTS

Part of this survey was conducted under the employ of the University of North Carolina at Chapel Hill herbarium (NCU). I am grateful to the owners, Gerald E. Kees and Sandra Kees Schumacher, for providing information on the land use history of the property, and Chris Kees (LSU; Fair River Institute owner & director) for helping with the logistical aspects of conducting the inventory. I would like to thank Toby Gray (MSU) for sharing his notes on GLO surveys and contributing scans of the original survey notes for the sections occupied by Fair River Farm, which were not available online. Heather Sullivan (MMNS) provided information on the tracking list and rare species found within the region, and reviewed the paper along with Kevin Philley (USACE). I would also like to thank Jewayne Ritchie for adjusting his hay harvesting schedule to allow for the sampling of fall flora in several interesting grassland remnants. Latimore Smith helped identify useful historic sources and provided helpful comments on the plant communities present on the tract. Finally, I would like to thank Alan Weakley and Derick Poindexter (NCU), and John Michael Kelley for reviewing the manuscript prior to submission and providing much helpful feedback. Heather Sullivan (MMNS) and Kevin Philley (USACE, Vicksburg).

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