A STUDY OF THE FLOWERING PLANTS OF TULSA COUNTY, OKLAHOMA, EXCLUSIVE OF THE GRASSES, SEDGES, AND RUSHES

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ABSTRACT

A taxonomic study of the flowering plants of Tulsa County, Oklahoma, exclusive of the grasses, sedges, and rushes, was made from 1955 to 1959. A total of 585 species, representing 99 families and 335 genera, were identified and are on file in the herbarium of the University of Tulsa. The largest families in order of number of species are: Compositae [Asteraceae], 110 species; Leguminosae [Fabaceae], 50 species; Euphorbiaceae, 22 species; Cruciferae [Brassicaceae], 21 species; Rosaceae, 19 species; Scrophulariaceae [Linderniaceae, Orobanchaceae, Phrymaceae, Plantaginaceae, Scrophulariaceae], 18 species; Labiateae [Lamiaceae], 16 species; Polygonaceae, 16 species; and Onagraceae, 15 species. The number of plants found is comparable to similar collections in Muskogee County by Little (1938) and in Pontotoc County by McCoy (1958). The plant list of Tulsa County may be increased by further study.

Editor's Note: Where nomenclature has been updated using ITIS-Integrated Taxonomic Information Service (http://www.itis.gov), the revised name is in brackets [ ], as are other updates.

INTRODUCTION

Statement of Problem

A taxonomic study of the flowering plants of Tulsa County, Oklahoma, exclusive of the grasses, sedges, and rushes, was initiated by the author in the spring of 1956. One hundred twenty-five plants were collected from April 21 through November 7. Intensive field work began March 1, 1957, with 700 plants collected through November 17. Additional collections were made in 1958 and 1959. A total of 828 specimens were collected. Most plants were taken in triplicate for the herbaria of the University of Tulsa, the University of Oklahoma, and Oklahoma State University. An attempt was made to collect all plants at anthesis, but fruiting specimens were also collected whenever possible. Classification of the oaks was not attempted without the acorns. All plants were identified and pressed by the author. A few additional specimens on file in the herbarium of the University of Tulsa have been included in the list of species. Classification of the plants was established through the use of all available manuals applicable to the area, through references in *Rhodora*, and comparison with specimens at the Bebb Herbarium at the University of Oklahoma and the herbarium of Oklahoma State University. Some plants, collected at flowering time, lacked diagnostic varietal

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characteristics, and in such cases the variety name was omitted. Whenever possible, the nomenclature as given in *Gray's Manual of Botany*, 8th ed., has been followed. In a few cases in which reference material was not available for the checking of varieties and only one variety was listed for Oklahoma, the varietal designations were taken from Waterfall (1952a).

Physical Aspects of Tulsa County

Tulsa County is located in northeastern Oklahoma (Figure 1). The northern border of the county is approximately 40 mi [64.37 km] south of the Kansas line and its eastern border is about 70 mi [112.65 km] west of the Arkansas line. The county has a total area of 593 mi^2 [1535.86 km^2] and is included in Tps 16–22 N, Rs 10–14 E, Indian Meridian (Figure 2). It extends north and south 39 mi [62.76 km] and east and west from 10.5–15 mi [16.9–24.14 km], exclusive of an arm 6 mi [9.66 km] wide, which extends 15 mi [24.14 km] westward from the central portion (see Figure 2). The city of Tulsa occupies 43.5 mi^2 [112.67 km^2] and has a population of 265,000 people.

The elevation varies from 550 ft [167.64 m] in the bed of the Arkansas River at the southeast corner of the county to slightly more than 950 ft [289.56 m] at points northwest of Turley and 6 mi [9.66 km] west of Sand Springs. The greatest local topographic relief is approximately 300 ft [91.44 m]. The portion of the county east of a line drawn north-south through the city of Tulsa is generally of low relief. The underlying rock is mainly shale with intermittent slopes supported by beds of sandstone or limestone which dip westward at a rate of 40 ft [12.19 m] to the mile. These slopes rise eastward until they are terminated by east-facing escarpments. The portion of the county west of the city of Tulsa is deeply dissected by streams with narrow valleys. An exception is the broad valley of the Arkansas River. The drainage of Tulsa County is by the Arkansas River and its tributaries, although Bird Creek and the Caney River are tributaries of the Verdigris River whose waters reach the Arkansas River east of the boundaries of Tulsa County. All of the large streams are muddy.

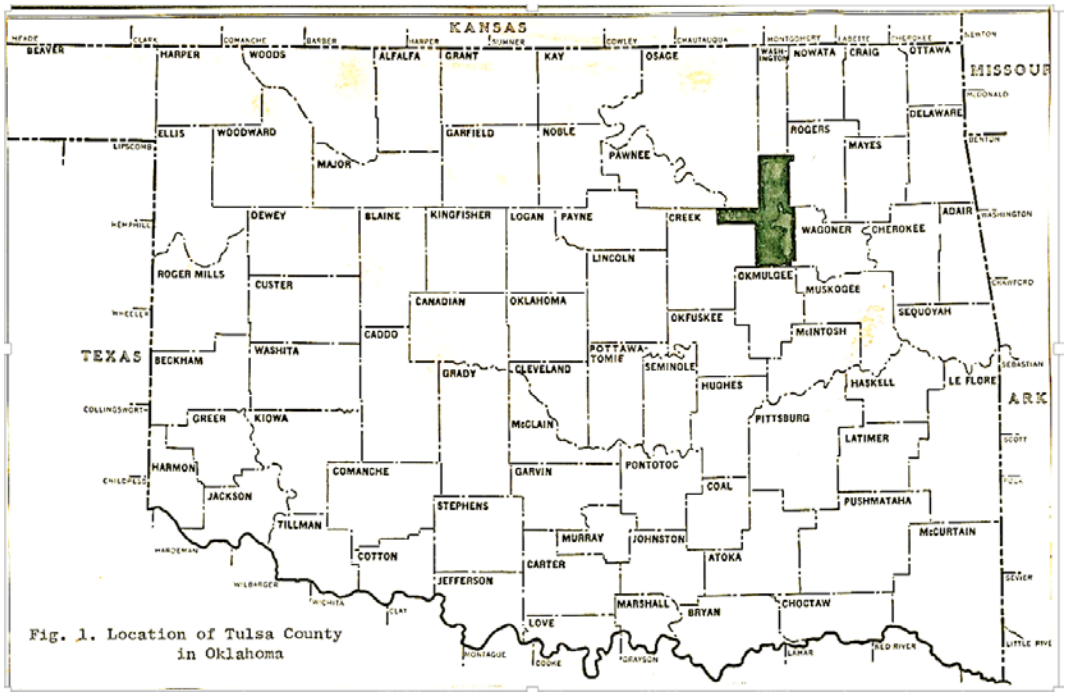

Figure 1 Location of Tulsa County in Oklahoma

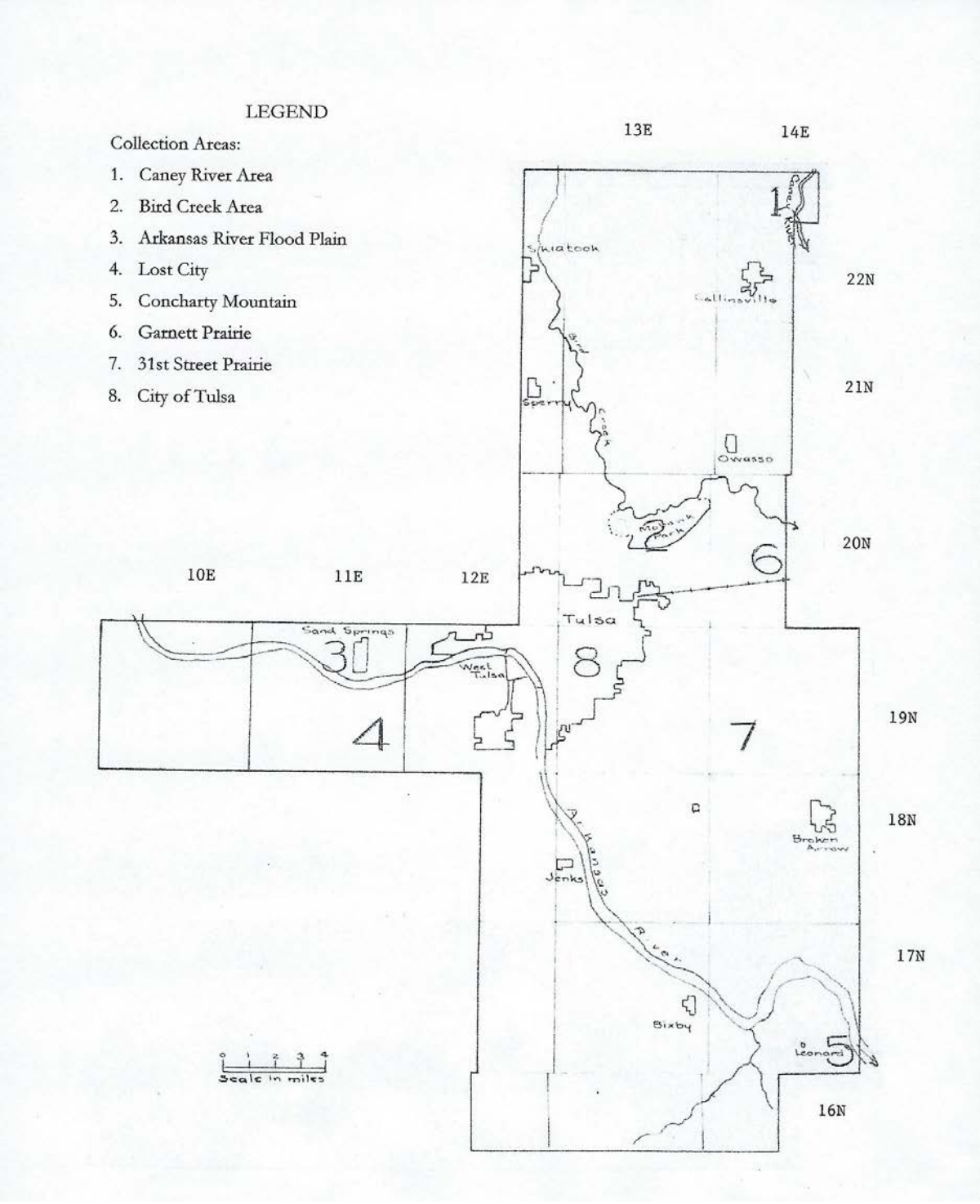

Figure 2 Map of collection areas, Tulsa County, Oklahoma [Map by J. M. Clark]

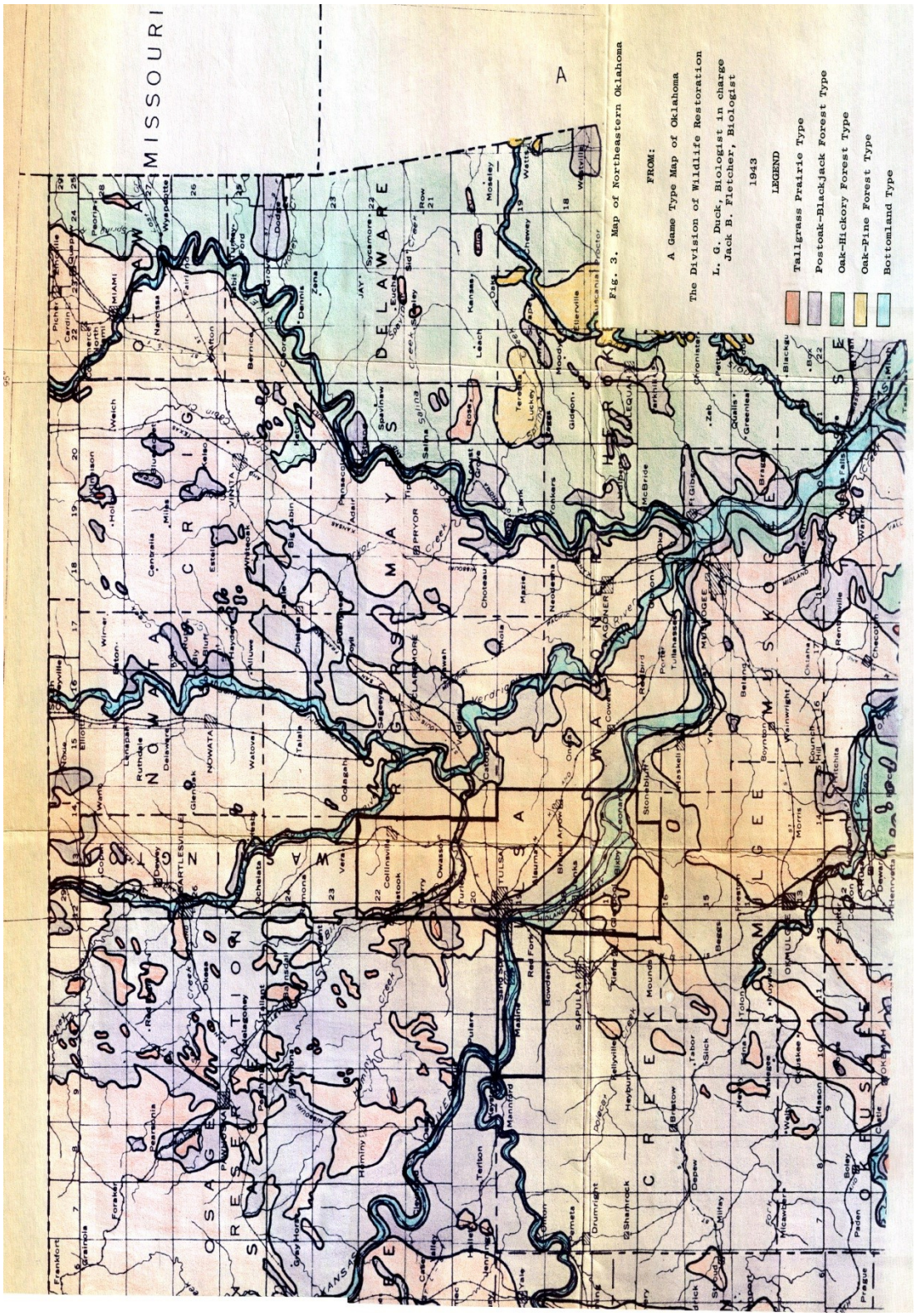

Figure 3 Map of northeastern Oklahoma [Reproduced in 2017 with the help of Michael Larson, Coordinator, Department of Geography Cartography Services, Oklahoma State University]

Climate

The climate of Tulsa County may be described as continental as there are no large water surfaces or mountains to affect climatic conditions. Data for 49 years, 1905–1955 inclusive, from the climatological records of the United States Department of Commerce Weather Bureau, located at the Tulsa Municipal Airport, indicate the average growing season is 219 days. The longest growing season on record, 258 days, occurred in 1907. The shortest season, 178 days, was in 1921. The average date of the last freezing temperature, 32° F [0ºC] or lower, in the spring is March 28 with the latest occurrence on record being April 20, 1953. The average date of the first freezing temperature in the fall is November 2, and the earliest occurrence on record is October 8, 1952. The temperature may frequently climb to 100º F [37.78ºC] or more in July, August, and September, the highest on record being 112º F [44.44ºC] in July 1954. The high temperatures are usually accompanied by low humidity and high evaporation. ZeroºF [-17.78ºC] temperatures may be experienced for a few days in January, February, and occasionally in March. The lowest temperature recorded in the 49 year period was -8ºF [-22.22ºC] in January 1947.

The mean annual rainfall is 37.16 in [94.39 cm]. The lowest annual precipitation recorded during the 1905–1955 period was 24.07 in [61.14 cm] in 1910, and the highest, 62.82 in [159.56 cm], was recorded in 1915. Rainfall is greatest in the spring months and least in the winter months. Records for the 49-year period show an average of 5.23 in [13.28 cm] of rainfall in May, 4.71 in [11.96 cm] in June, and 4.18 in [10.62 cm] in April. February averages 1.59 in [4.04 cm]; January, 1.74 in [4.42 cm]; and December, 1.83 in [4.65 cm]. Snowfall is slight and remains on the ground for a very short time.

Of particular interest are the collection years of 1956 and 1957. Unfortunately, the summary data from the weather bureau does not include these years. Some information, not in summary form, is available, however. In 1956, the growing season was 253 days in length with the last spring freeze occurring on March 20 and the first fall freeze on November 28. In 1957, the growing season was 223 days in length with the last spring freeze occurring on April 14 and the first fall freeze on November 23. The freeze of April 14 did much damage, particularly to the oaks, which formed few acorns. The precipitation of 23.24 in [59.03 cm] in 1956 was the lowest ever recorded in Tulsa County. In sharp contrast, the precipitation in 1957 measured 46.50 in [118.11 cm] with 9.80 in [24.89 cm] in May, 8.74 in [22.2 cm] in April, and 7.25 in [18.42 cm] in June.

Prevailing surface winds are southerly except during the months of December, January, and February. Sudden drops in temperature may accompany rapid change in wind direction in winter and spring.

Ecology

The major portion of Tulsa County is located in the Tall Grass Prairie region by Duck and Fletcher (1943; Figure 3). The long westward arm and the southeastern portion are in the Post Oak-Blackjack area. This type of vegetation also borders the alluvial flood plains of the streams. The ecological description given by Blair and Hubbell (1938) coincides with that given by Duck and Fletcher although they name the grassland the Cherokee Prairie Biotic District and the woodland the Osage Savannah Biotic District. Bruner (1931) sets the flood plain vegetation apart as a separate plant community. His description of the woody species of the flood plains of central Oklahoma is typical of that of Tulsa County as observed by the author.

Blair and Hubbell further describe the Cherokee Biotic District as an extension of the grasslands of eastern Kansas and western Missouri. The area is essentially

composed of shale soils and limestone escarpments. The vegetation of the shale soils is described as composed of big bluestem (*Andropogon gerardii*), little bluestem (*A. scoparius* [*Schizachyrium scoparium* (Michx.) Nash]), Indian grass (*Sorghastrum nutans)*, and switchgrass (*Panicum virgatum*). Representative forbs associated with the grasses are false indigo (*Baptisia leucophaea*), blazing stars (*Liatris punctata* and *L. aspera*), starwort (*Aster ericoides* [*Symphyotrichum ericoides* (L.) G.L. Nesom]), sunflower (*Helianthus mollis*), and sage (*Salvia azurea*). Recent collections of blazing stars on the prairie in Tulsa County are *Liatris aspera*, *L. angustifolia*, *L. mucronata* [*L. punctata* var. *mucronata* (DC.) B.L. Turner], and *L. pycnostachya*. *L. squarrosa* was found in the wooded sandstone area and was not common. Blair and Hubbell described areas where the sod had been destroyed and is replaced by crabgrass (*Digitaria sanguinalis*, windmill grass (*Chloris verticillata*), and weeds such as broom-snakeroot (*Gutierrezia dracunculoides* [*Amphiachyris dracunculoides* (DC.) Nutt.]) and croton (*Croton capitatus*). On the limestone escarpments is found a mixture of tall grasses and shorter grasses such as side-oats grama (*Bouteloua curtipendula*), buffalo grass (*Buchloe dactyloides* [*Bouteloua dactyloides* (Nutt.) J.T. Columbus]), and silver beardgrass (*Andropogon saccharoides* [*Bothriochloa laguroides* (DC.) Herter]). Forbs are blue false indigo (*Baptisia minor* [*Baptisia australis* (L.) R. Br. var. *minor* (Lehm.) Fernald]), stone-crop (*Sedum pulchellum*), gaillardia (*Gaillardia pulchella*), prickly pears (*Opuntia humifusa* and *O. tortispina*), and yucca (*Yucca glauca*). Widely scattered groves of small persimmon trees (*Diospyros virginiana*) dot the prairie, and persimmon and indigo bush (*Amorpha fruticosa*) may be found along the small prairie drains. The present author noted that areas with outcropping rocks frequently are covered with thickets of Chickasaw plum (*Prunus angustifolia*) and rough-leaved dogwood (*Cornus drummondii*). American elm (*Ulmus americana*), hawthorn (*Crataegus* spp.) and wooly buckthorn (*Bumelia lanuginosa* [*Sideroxylon lanuginosum* Michx.]) are found along the larger drains. Bruner describes the eastern grassland as subclimax since it occurs in an area with potential forest climate. He further states that the forest has not developed because of the recurrence of prairie fires, but forest areas are increasing with the settlement of the area and the cessation of fires.

The Osage Savannah District is an area underlain by sandstone and is described by Blair and Hubbell as an open woodland with post oak (*Quercus stellata*), blackjack (*Q. marilandica*), and black hickory (*Carya texana*) as the dominant vegetation. Grasses in this association are of the prairie type, mainly bluestems. Shrubs are sumacs (*Rhus glabra* and *R. copallina*) and coralberry (*Symphoricarpos orbiculatus*). On the north-facing slopes and the flood plains, a more mesic type of vegetation, similar to that of the Ozark area, will be found. Blair and Hubbell list red spotted oak (*Quercus shumardii*) as dominant in an association with redbud (*Cercis canadensis*), juneberry (*Amelanchier arborea*), and winged elm (*Ulmus alata*). Grasses conspicuous in this situation are spangle grass (*Uniola latifolia* [*Chasmanthium latifolium* Michx.]), wild rye (*Elymus canadensis*), and Japanese chess (*Bromus japonica*). The present author observed that chestnut oak (*Quercus muehlenbergii*), green ash (*Fraxinus pennsylvanica* var. *integerrima* [*Fraxinus pennsylvanica* Marsh. var. *lanceolata* (Borkh.) Sarg.]), white ash (*F. americana*), big-tree plum (*Prunus mexicana*), deciduous holly (*Ilex decidua*), and shrubs: black-haw (*Viburnum rufidulum*), fragrant sumac (*Rhus aromatica*), and poison ivy (*R. toxicodendron* [*Toxicodendron radicans* (L.) Kuntze]) occur with the red oaks, redbud, and juneberry on the north-facing slopes. In densely wooded areas are found wild-oat grass (*Danthonia spicata*), low twining legumes such as milk-pea (*Galactia volubilis*), wild bean (*Strophostyles*

leiosperma), and beggars ticks (*Desmodium glutinosum*).

The woody vegetation of the flood plains of Tulsa County consists of black willow (*Salix nigra*), cottonwood (*Populus deltoides*), sycamore (*Platanus occidentalis*), American elm (*Ulmus americana*), slippery elm (*U. rubra*), silver maple (*Acer saccharinum*), pecan (*Carya illinoensis* [*Carya illinoinensis* (Wangenh.) K. Koch]), red oaks (*Quercus rubra* and *Q. shumardii*), and the ashes. Pin oak (*Q. palustris*) is found at Mohawk Park on the Bird Creek flood plain. River birch (*Betula nigra*) and black walnut (*Juglans nigra*) were noted but are not prominent. Occasional black walnut trees were seen on all the major flood plains. River birches were observed on the Bird Creek flood plain and along a small tributary of the Arkansas River. Buttonbush (*Cephalanthus occidentalis*) and American elder (*Sambucus canadensis* [*Sambucus nigra* L. ssp. *canadensis* (L.) R. Bolli]) may be found along the streams. Common vines are trumpet vine (*Campsis radicans*), poison ivy (*Rhus radicans* [*Toxicodendron radicans*]), green briar (*Smilax bona-nox*), and members of the grape family: woodbine (*Parthenocissus quinquefolia* and *Ampelopsis cordata*) and grapes (*Vitis aestivalis* Michx. var. *argentifolia* and *V. vulpina*). Among the herbaceous plants are the rank growing composites which flower in late summer. Representative of these are ragweed (*Ambrosia trifida*), frost weed (*Verbesina virginica*), wingstem (*Actinomeris alternifolia* [*Verbesina alternifolia* (L.) Britton ex Kearney]), bearsfoot (*Polymnia uvedalia* [*Smallanthus uvedalia* (L.) Mack. ex Small]), green-stemmed Joe-Pye-weed (*Eupatorium purpureum* [*Eutrochium purpureum* (L.) E.E. Lamont]), white snakeroot (*E. rugosum* [*Ageratina altissima* (L.) King & H. Rob. var. *altissima*]), cup-plant (*Silphium perfoliatum*), goldenrods (*Solidago* spp.), and asters (*Aster* [*Symphyotrichum*] spp.).

Man and his domestic animals are of ecological significance in Tulsa County. With the fast growing population of the city of Tulsa and the consequent construction of homes, industries, and highways, many of the indigenous plants are being destroyed. As the periphery of the city increases, more suburban homes and shopping centers are being built. Prairie areas are replaced by homes with mowed lawns; small streams are routed through conduits and covered, destroying the habitat of plants with high moisture requirement. Construction of water reservoirs and dams, currently the Keystone Dam on the Arkansas River, destroys much of the lowland vegetation. Limestone quarries to satisfy the increased need for concrete are destroying the Garnett Prairie, northeast of Tulsa. In the remaining farming areas, over-grazing and trampling by domestic animals, particularly in drouth years, has effected the replacement of many native grasses and legumes by undesirable weeds. A rapid increase in the urban aspect of Tulsa County is evident.

COLLECTION AREAS

Caney River Area

Definite collection areas which might produce a variation in the flora due to ecological differences were established and visited regularly. The Caney River area, located in the northeastern corner of the county and two and one-half miles [4.02 km] northeast of Collinsville, T 22 N, R 14 E, [Indian Meridian] (see Figure 2; Figure 4), consists of alluvium deposited on sandstone and shale. Of special interest are the wooded area surrounding an ox bow lake and the vegetation on the east-facing slope of the sandstone escarpment west of the Caney River. Difficulty was encountered in collecting vernal specimens due to excessive flooding of the Caney River. Specimens located here and not found by the author elsewhere in the county are *Dicentra cucullaria*, *Paronychia canadensis*, *Staphylea trifolia*, *Forestiera acuminata*, *Myosurus minimus*, *Heliotropium indicum*, and *Abutilon theophrasti*.

Bird Creek Area

The Bird Creek area, located at T 20 N, R 13 E, [Indian Meridian] (see Figure 2), consists of alluvium and forms the north boundary of Mohawk Park. This area is of particular interest because of the undisturbed areas designated as wildflower and bird sanctuaries. Species collected here and not found elsewhere in the county are *Quercus palustris*, *Lindera benzoin*, *Dentaria laciniata* [*Cardamine concatenata* (Michx.) Sw.], *Impatiens capensis*, *Phryma leptostachya, Sicyos angulatus*, and *Lysimachia ciliata*. In general, there is much similarity between the plants of the Bird Creek area and the Caney River area. The only specimens of *Asimina triloba* and *Campanula americana* var. *illinoensis* were found in these two areas.

Arkansas River Flood Plain

The Arkansas River flood plain, characterized by alluvial sands shifted by a variable volume of water and wind, enters the county at Keystone, T 19 N, R 10 E, [Indian Meridian], extends east and southeastwardly and leaves the county at T 17 N, R 14 E (see Figure 2; Figure 5). Among the species collected on the sandflats of the river bed and bank in August during the drouth of 1956 are *Dalea lanata*, *Cycloloma atriplicifolium*, *Chenopodium murale*, and *Urtica dioica*. *Chenopodium murale* is listed in Waterfall (1952a) with the notation "none seen." *Urtica dioica*, a perennial urtica, had not been previously collected in Oklahoma. The only other known Oklahoma collection of this species was made by C. S. Wallis in 1957 in the Ozark area.

Lost City Area

Escarpments, created by the Arkansas River flowing over westward dipping beds of unequal hardness, are made up of the more resistant limestones and sandstones. Of these is the area known as Lost City, which is south of the Arkansas River, slightly east of Sand Springs in T 19 N, R 11 E, [Indian Meridian], on a road called Scenic Drive, an extension of West 21 Street (see Figure 2; Figure 6). Massive bluffs of Hogshooter Limestone face north and provided a favorite collecting area. *Cotinus obovatus*, *Celastrus scandens*, *Aquilegia canadensis* var. *latiscula*, *Ribes odoratum* [*Ribes aureum* Pursh var. *villosum* DC.], and *Zigadenus nuttallii* [*Toxicoscordion nuttallii* (A. Gray) Rydb.] are among the plants located here and not collected elsewhere in the county.

Concharty Mountain Area

In the southeast corner of the county, south of the Arkansas River flood plain and southeast of Leonard, T 17 N, R 14 E, [Indian Meridian], is located the north-facing slope of Concharty Mountain [(Figure 7)]. The mountain is underlain by sandstone and has a relief of about 300 feet [91.44 m]. Plants collected here and not found elsewhere in the county are *Saxifraga texana* [*Micranthes texana* (Buckley) Small], *Lonicera flava*, *Ascyrum hypericoides* var. *multicaule* [*Hypericum hypericoides* (L.) Crantz ssp. *multicaule* (Michx. ex Willd.) N. Robson], *Gerardia grandiflora* var. *cinerea* [*Aureolaria grandiflora* (Benth.) Pennell], *Pycnanthemum tenuifolium*, and *Centunculus minimus* [*Anagallis minima* (L.) E.H.L. Krause].

Prairie Areas

Prairie areas [(Figures 8, 9)] which were visited regularly are: Garnett Prairie, located two miles [3.22 km] north and two miles east of the traffic circle on State Highway 33 in T 20 N, R 14 E [Indian Meridian] (see Figure 2); a section of the Saint Louis-San Francisco Railroad right-of-way located one and one-half miles [2.41 km] north and two miles east of the traffic circle in T 20 N, R 14 E, [Indian Meridian] (see Figure 2); and an area known as the 31st Street Prairie, six miles [9.66 km] east of Harvard Avenue on 31st Street, T 19 N, R 14 E [Indian Meridian] (see Figure 2). All the above are underlain by the Oolagah Limestone. These afford a wealth of specimens typical of the

Tall Grass Prairie region. The area known as Garnett Prairie is currently about to be destroyed by the encroachment of a commercial plant for crushing limestone. The railroad right-of-way was not burned, mowed, or trampled by domestic animals during the collection period. The 31st Street Prairie was annually mowed on about July 20. Prominent among the plant families represented are the Compositae [Asteraceae], Leguminosae [Fabaceae], Cruciferae [Brassicaceae], Euphorbiaceae, and Labiatae [Lamiaceae]. Plants collected in the Garnett Prairie area, including the railroad right-of-way, and not found elsewhere are *Eriogonum longifolium*, *Cucurbita foetidissima*, *Isanthus brachiatus* [*Trichostema brachiatum* L.], *Hybanthus linearis* [*Hybanthus verticillatus* (Ortega) Baill.], and *Nama hispidum*.

Other Collection Areas

No attempt was made to visit other collection areas regularly, but roadside ditches and bordering fields traversed coincidental to traveling to collection sites were kept under observation. Occasional trips were taken to the areas west of Sand Springs, north of the Arkansas River to the Osage County line; southwest of Sand Springs, south of the Arkansas River to an area near the Creek County line; and south of Bixby to the Okmulgee County line. Some weeds from Tulsa city streets and lawns were collected. Of these is a small plant, *Veronica hederaefolia* [*Veronica hederifolia* L.], which had not previously been collected in Oklahoma. *Gray's Manual* (Fernald 1950) lists the range of this plant as New York and Ohio to North Carolina. The plant was found under a mulberry tree which was a favorite feeding place for migratory birds.

SUMMARY OF SPECIES

The list of plants of Tulsa County consists of 99 families made up of 335 genera and 585 species. The largest families in order of number of species are: Compositae [Asteraceae], 53 genera and 110 species; Leguminosae [Fabaceae], 33 genera and 50 species; Euphorbiaceae, 7 genera and 22 species; Cruciferae [Brassicaceae], 16 genera and 21 species; Rosaceae, 9 genera and 19 species; Scrophulariaceae [Linderniaceae, Orobanchaceae, Phrymaceae, Plantaginaceae, Scrophulariaceae], 12 genera and 18 species; Labiatae [Lamiaceae], 13 genera and 16 species; Polygonaceae, 4 genera and 16 species; and Onagraceae, 4 genera and 15 species. Twenty-eight families are represented by one species each.

Figure 4 Caney River Area. The flood plain forest is in the background. *Polygonum longistylum* [*Persicaria bicornis* (Raf.) Nieuwl.] covers a recently flooded field in the foreground.

Figure 5 Sand Flats of the Arkansas River. Photograph was taken in October, 1957. The river recedes after spring flooding, and large quantities of sand are deposited in the channel.

Figure 6 Lost City Area. Massive blocks of Hogshooter Limestone rise above the Arkansas River flood plain and provide a north-facing habitat.

Figure 7 Concharty Mountain. The north-facing slope of the mountain rises 300 feet [91.44 m] above the Arkansas River flood plain.

Figure 8 Forbs of the Tall Grass Prairie Area. In the foreground is the composite, *Liatris aspera*, which measures 4 ft [1.22 m] in height and is common on the Tall Grass Prairie. A flood plain forest is visible in the background.

Figure 9 Garnett Prairie Area. The rock outcrop is the Oolagah Limestone. Cactus (*Opuntia macrorhiza*) and flameflower (*Talinum calycinum* [*Phemeranthus calycinus* (Engelm.) Kiger]) are rooted between the rocks.

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APPENDIX

List of Species Found in Tulsa County

Editor's Note: Where nomenclature has been updated using ITIS–Integrated Taxonomic Information Service (http://www.itis.gov), the revised name is in brackets [ ]. Unless otherwise indicated, the numbers in parentheses following the species are the collection numbers of the author.

MONOCOTYLEDONEAE

Typhaceae
Typha latifolia L. (414)

Zosteraceae [Potamogetonaceae]
Potamogeton diversifolius Raf. (Kelting 1038A)

Alismataceae
Echinodorus cordifolius (L.) Griseb. (626)
Echinodorus rostratus (Nutt.) Engelm. [*Echinodorus berteroi* (Spreng.) Fassett] (482)
Sagittaria graminea Michx. (458)
Sagittaria platyphylla (Engelm.) J.G. Sm. (619)

Araceae
Arisaema atrorubens (Ait.) Blume [*Arisaema triphyllum* (L.) Schott.] (236)
Arisaema dracontium (L.) Schott. (214)

Lemnaceae [Araceae]
Lemna minor L. (666)
Spirodela polyrhiza (L.) Schleid (667)

Commelinaceae
Commelina communis L. var. *ludens* (Miguel) Clarke [*Commelina communis* L.] (23)
Commelina erecta L. var. *angustifolia* (Michx.) Fern. [*Commelina erecta* L.] (375)
Tradescantia occidentalis (Britt.) Symth (241)
Tradescantia ohiensis Raf. (321)

Pontederiaceae
Heteranthera limosa (Sw.) Willd.

Liliaceae
Allium canadense L. var. *hyacinthoides* (Bush) Ownbey [Amaryllidaceae] (908)
Allium drummondii Regel [Amaryllidaceae] (Barclay unnumbered)
Camassia scilloides (Raf.) Cory [Asparagaceae] (219)
Erythronium albidum Nutt. var. *mesochoreum* (Knerr) Rickett [*Erythronium mesochoreum* Knerr] (129)
Nothoscordum bivalve (L.) Britton [Amaryllidaceae] (166)
Polygonatum canaliculatum (Muhl.) Pursh [*Polygonatum biflorum* (Walter) Elliott] [Asparagaceae] (315)
Smilax bona-nox L. [Smilacaceae] (662)

Smilax herbacea L. [Smilacaceae] (396A, 562, 873)
Yucca glauca Nutt. var. *glauca* [*Yucca glauca* Nutt.] [Asparagaceae] (280)
Zigadenus nuttallii Gray [*Toxicoscordion nuttallii* (A. Gray) Rydb.] [Melanthiaceae] (240)

Amaryllidaceae
Cooperia drummondii Herb. [*Zephyranthes chlorosolen* (Herb.) D. Dietr.] (568, 641, 981, 983)
Hypoxis hirsuta (L.) Coville (216, 228)

Iridaceae
Nemastylis geminiflora Nutt. (243)
Sisyrinchium angustifolium Mill. (245)
Sisyrinchium campestre Bickn. (Kelting 1007)

Orchidaceae
Spiranthes cernua (L.) Richards (355, 671, 720)

DICOTYLEDONEAE

Salicaceae
Populus deltoides Marsh. [*Populus deltoides* W. Bartram ex. Marshall] (775, 885)
Salix interior Rowlee (110, 883)
Salix nigra Marsh. [*Salix nigra* Marshall] (792, 885)

Juglandaceae
Carya cordiformis (Wang.) K. Koch (689)
Carya illinoensis (Wang.) K. Koch [*Carya illinoinensis* (Wang.) K. Koch] (515)
Carya texana Buckl. var. *texana* [*Carya texana* Buckl.] (866)
Juglans nigra L. (727)

Corylaceae [Betulaceae]
Betula nigra L. (729)

Fagaceae
Quercus macrocarpa Michx. (733)
Quercus marilandica Muench. (716)
Quercus muehlenbergii Engelm. (875, 880)
Quercus palustris Muench. (664)
Quercus prinoides Willd. (Kelting 1008A)
Quercus rubra L. (665, 732, 798)
Quercus shumardii Buckl. var. *shumardii* [*Quercus shumardii* Buckl.] (724, 725)
Quercus shumardii Buckl. var. *schneckii* (Britton) Sarg. [*Quercus shumardii* Buckl.] (723)
Quercus stellata Wang. var. *stellata* [*Quercus stellata* Wang.] (874)
Quercus velutina Lam. (728)

Ulmaceae
Celtis laevigata Willd. var. *laevigata* [*Celtis laevigata* Willd.] [Cannabaceae] (100, 869, 871)
Ulmus alata Michx. (135)

Ulmus americana L. (130)
Ulmus rubra Muhl. (138)

Moraceae
Morus rubra L. (789)

Urticaceae
Laportea canadensis (L.) Wedd. (551)
Parietaria pennsylvanica Muhl. [*Parietaria pensylvanica* Muhl. ex Willd.] (311)
Urtica chamaedryoides Pursh (397)
Urtica dioica L. (95)

Loranthaceae [Santalaceae]
Phoradendron flavescens (Pursh) Nutt. [*Phoradendron serotinum* ssp. *serotinum* (Raf.) M.C. Johnst.] (757)

Aristolochiaceae
Aristolochia tomentosa Sims (249)

Polygonaceae
Eriogonum annuum Nutt. (498)
Eriogonum longifolium Nutt. (572)
Polygonum aviculare L. var. *aviculare* [*Polygonum aviculare* L.] (113, 373, 508A)
Polygonum convolvulus L. [*Fallopia convolvulus* (L.) Á. Löve] (372)
Polygonum cristatum Engelm. & Gray [*Fallopia scandens* (L.) Holub] (613, 661)
Polygonum hydropiperoides Michx. var. *hydropiperoides* [*Persicaria hydropiperoides* (Michx.) Small] (486, 602, 734)
Polygonum hydropiperoides Michx. var. *bushianum* Stanford [*Persicaria hydropiperoides* (Michx.) Small] (621)
Polygonum lapathifolium L. [*Persicaria lapathifolia* (L.) Gray] (628, 636, 685)
Polygonum longistylum Small [*Persicaria bicornis* (Raf.) Nieuwl.] (527, 714)
Polygonum pennsylvanicum L. var. *pennsylvanicum* [*Persicaria pensylvanica* (L.) M. Gómez] (611)
Polygonum punctatum var. *punctatum* [*Persicaria punctata* (Elliott) Small] (462)
Polygonum tenue Michx. (674)
Rumex altissimus Wood (268)
Rumex crispus L. (317)
Rumex hastatulus Baldw. (863)
Tovara virginiana (L.) Raf. [*Persicaria virginiana* (L.) Gaertn.] (554, 633)

Chenopodiaceae [Amaranthaceae]
Chenopodium album L. (756)
Chenopodium ambrosioides L. var. *ambrosioides* [*Dysphania ambrosioides* (L.) Mosyakin & Clemants] (687)
Chenopodium hybridum L. var. *gigantospermum* (Aellen) Rouleau [*Chenopodium simplex* (Torr.) Raf.] (519)
Chenopodium leptophyllum Nutt. [*Chenopodium leptophyllum* (Moq.) Nutt. ex S. Watson] (27)
Chenopodium murale L. (107)
Cycloloma atriplicifolium (Spreng) Coult. (96)
Salsola kali L. var. *tenuifolia* Tausch [*Salsola tragus* L.] (15)

Amaranthaceae
Acnida tamarascina (Nutt.) Wood [*Amaranthus tuberculatus* (Moq.) J.D. Sauer] (625)
Amaranthus hybridus L. (700)
Amaranthus palmeri S. Wats. (750)
Froelichia floridana (Nutt.) Moq. var. *campestris* (Small) Fern. [*Froelichia floridana* (Nutt.) Moq.] (125, 593)
Froelichia gracilis (Hook.) Moq. (52)
Iresene rhizomatosa Standl. [*Iresine rhizomatosa* Standl.] (637)

Nyctaginaceae
Mirabilis albida (Walt.) Heimerl. (92, 410)
Mirabilis nyctaginea (Michx.) MacM. (289, 578, 857)

Phytolacaceae
Phytolacca americana L. (737)

Aizoaceae [Molluginaceae]
Mollugo verticillata L. (369)

Portulacaceae
Claytonia virginica L. [Montiaceae] (154)
Portulaca mundula I.M. Jtn. [*Portulaca pilosa* L.] (102, 359)
Portulaca oleracea L. (85)
Talinum calycinum Engelm. [*Phemeranthus calycinus* (Engelm.) Kiger] [Montiaceae] (345)
Talinum parviflorum Nutt. [*Phemeranthus parviflorus* (Nutt.) Kiger] [Montiaceae] (Barclay unnumbered)

Caryophyllaceae
Arenaria patula Michx. [*Minuartia patula* (Michx.) Mattf.] (189)
Arenaria stricta Michx. var. *texana* Robinson [*Minuartia michauxii* (Fenzl) Farw.] (293)
Cerastium brachypodum (Engelm.) Robinson [*Cerastium brachypodum* (Engelm. ex A. Gray) B.L. Rob.] 168, 173, 186, 190)
Cerastium viscosum L. [*Cerastium glomeratum* Thuill.] (172)
Paronychia canadensis (L.) Woods (384)
Paronychia fastigata (Raf.) Fern. (503)
Silene antirrhina L. (209)
Silene stellata (L.). Ait. f. var. *scabrella* (Niewl.) Palm. & Steyerm. [*Silene stellata* (L.) Ait. f.] (50, 53)
Stellaria media (L.) Cyrill (991)
Stellaria nuttallii T. & G. [*Minuartia drummondii* (Shinners) McNeill] (247, 258)

Nymphaceae [Nymphaeaceae]
Nelumbo lutea (Willd.) Pers. [Nelumbonaceae] (607)
Nymphea tuberosa Paine [*Nymphaea odorata* Aiton ssp. *tuberosa* (Paine) Wiersema & Hellq.] (496)

Ranunculaceae
Anemone caroliniana Walt. (163, 164)
Aquilegia canadensis L. var. *latiscula* (Greene) Munz [*Aquilegia canadensis* L.] (237)
Clematis pitcheri T. & G. [*Clematis pitcheri* Torr. & A. Gray] (68, 387)

Delphinium virescens Nutt. var. *virescens* [*Delphinium carolinianum* Walter ssp. *virescens* (Nutt.) R.E. Brooks] (11)
Isopyrum biternatum (Raf.) T & G. [*Enemion biternatum* Raf.] (Kelting 1004)
Myosurus minimus L. (204)
Ranunculus abortivus L. var. *abortivus* [*Ranunculus abortivus* L.] (183)
Ranunculus fascicularis Muhl. var. *fascicularis (155, 199)*
Thalictrum dasycarpum Fisch.& Lall. var. *hypoglaucum* (Rydb.) Boivin [*Thalictrum dasycarpum* Fisch. & Lall.] (54)

Berberidaceae
Podophyllum peltatum L. (787)

Menispermaceae
Cocculus carolinus (L.) DC. (437)
Menispermum canadense L. (648, 657)

Annonaceae
Asimina triloba Dunal [*Asimina triloba* (L.) Dunal] (224, 390, 653, 788)

Lauraceae
Lindera benzoin (L.) Blume var. *pubescens* (Palmer and Steyerm.) Rehd. [*Lindera benzoin* (L.) Blume] (559)
Lindera benzoin (L.) Blume var. undetermined [*Lindera benzoin* (L.) Blume] (769)

Papaveraceae
Argemone intermedia Sweet [*Argemone polyanthemos* (Fedde) G.B. Ownbey] (248)
Corydalis crystallina Engelm. (207)
Corydalis micrantha (Engelm.) Gray [*Corydalis micrantha* (Engelm. ex A. Gray) A. Gray] (181)
Dicentra cucullaria (L.) Bernh. (208, 778)

Cruciferae [Brassicaceae]
Brassica nigra (L.) Koch (227)
Camelina microcarpa Andrz. [*Camelina microcarpa* DC.] (188, 215)
Capsella bursa-pastoris (L.) Medic. (201)
Cardamine parviflora L. var. *arenicola* (Britt.) O.E. Schulz [*Cardamine parviflora* L.] (160)
Cardamine pennsylvanica Muhl. [*Cardamine pensylvanica* Muhl. ex Willd.] (784)
Conringia orientalis (L.) Dumort. (167)
Dentaria laciniata Muhl. [*Cardamine concatenata* (Michx.) Sw.] (772)
Descurainia pinnata (Walt.) Britt. [*Descurainia pinnata* (Walter) Britton] (146)
Draba brachycarpa Nutt. [*Draba brachycarpa* Nutt. ex Torr & A. Gray] (174)
Draba cuneifolia Nutt. var. *cuneifolia* [*Draba cuneifolia* Nutt. var. *cuneifolia* Nutt. ex Torr. & A. Gray] (147)
Draba reptans (Lam.) Fern. var. *reptans* [*Draba reptans* (Lam.) Fernald] (127, 156)
Erysimum asperum DC. (212, 231, 570)
Erysimum repandum L. (170)
Iodanthus pinnatifidus (Michx.) Steud. (649)
Lepidium densiflorum Schrad. (257)
Lepidium virginicum L. (865)
Lesquerella gracilis (Hook.) Wats. var. *repanda* (Nutt.) Payson [*Physaria gracilis* (Hook.) O'Kane & Al-Shehbaz ssp. *nuttallii* (Torr. & A. Gray) O'Kane & Al-Shehbaz] (165, 232)

Rorippa sessiliflora (Nutt.) Hitchc. (627)
Selenia aurea Nutt. (148)
Sibara virginica (L.) Rollins [*Planodes virginica* (L.) Greene] (131, 161)
Thlaspi arvense L. (779)

Crassulaceae
Sedum nuttallianum Raf. [*Sedum nuttallii* Torr. & E. James ex Eaton] (906)
Sedum pulchellum Michx. (260)

Saxifragaceae
Penthorum sedoides L. [Penthoraceae] (574, 616)
Ribes odoratum Wendland f. [*Ribes aureum* Pursh var. *villosum* DC.] [Grossulariaceae] (158)
Saxifraga texana Buckl. [*Micranthes texana* (Buckley) Small] (194)

Platanaceae
Platanus occidentalis L. (758)

Rosaceae
Agrimonia pubescens Wallr. (663)
Agrimonia rostellata Wallr. (416, 589)
Amelanchier arborea (Michx. f.) Fern. [*Amelanchier arborea* (Michx. f) Fernald] (144)
Crataegus mollis (T. & G.) Scheele [*Crataegus mollis* (Torr. & A. Gray) Scheele] (790)
Crataegus reverchonii Sarg. var. undetermined (856)
Fragaria virginiana Duchesne (795)
Geum canadense Jacq. var. *camporum* (Rydb.) Fern. & Weath. [*Geum canadense* Jacq.] (309, 596)
Geum vernum (Raf.) T & G. [*Geum vernum* (Raf.) Torr. & A. Gray] (794)
Prunus americana Marsh. [*Prunus americana* Marshall] (773)
Prunus angustifolia Marsh. var. undetermined [*Prunus angustifolia* Marshall var. undetermined] (150)
Prunus gracilis Engelm. & Gray [*Prunus gracilis* Engelm. & A. Gray] (Kelting 1008)
Prunus hortulana Bailey (791)
Prunus mexicana Wats. [*Prunus mexicana* S. Watson] (137, 140, 141, 142)
Prunus serotina Ehrh. (867, 887)
Rosa arkansana Porter var. *suffulta* (Greene) Cockerell [*Rosa arkansana* Porter] (474)
Rosa carolina L. (288, 404, 742)
Rosa setigera Michx. var. *tomentosa* T. & G. [*Rosa setigera* Michx.] (36)
Rubus mollior Bailey [*Rubus pensylvanicus* Poir.] (868)
Sanguisorba annua Nutt. [*Poteridium annuum* (Nutt.) Spach.] (287)

Leguminosae [Fabaceae]
Acacia angustissima (Mill.) Kuntze var. *hirta* (Nutt.) Robinson (Latting 101)
Amorpha canescens Pursh var. *canescens* [*Amorpha canescens* Pursh] (37)
Amorpha canescens Pursh var. *glabrata* Gray [*Amorpha canescens* Pursh] (722)
Amorpha fruticosa L. var. *fruticosa* (448)
Amphicarpa bracteata (L.) Fern. var. *bracteata* [*Amphicarpaea bracteata* (L.) Fernald var. *bracteata*] (658)
Astragalus canadensis L. (470)
Astragalus caryocarpus Ker [*Astragalus carassicarpus* Nutt. var. *crassicarpus*] (*297)*
Astragalus nuttallianus DC. var. *nuttallianus* [*Astragalus nuttallianus* DC.] (286)

Baptisia leucantha T. & G. [*Baptisia lactea* (Raf.) Thieret var. *lactea*] (41)
Baptisia leucophaea Nutt. var. *leucophaea* [*Baptisia leucophaea* Nutt.] (859)
Baptisia minor Lehm. [*Baptisia australis* (L.) R. Br. var. *minor* (Lehm.) Fernald] (255)
Cassia fasciculata Michx. [*Chamaecrista fasciculata* (Michx.) Greene var. *fasciculata*] (362, 426)
Cassia marilandica L. [*Senna marilandica* (L.) Link.] (526)
Cassia nictitans L. [*Chamaecrista nictitans* (L.) Moench var. *nictitans*] (466, 595)
Cercis canadensis L. var. *canadensis* (786)
Clitoria mariana L. (531)
Crotalaria sagittalis L. (379)
Dalea lanata Spreng. (101)
Desmanthus illinoensis (Michx.) MacM. (43, 400)
Desmodium canescens (L.) DC. (523, 582, 654)
Desmodium glutinosum (Muhl.) Wood [*Desmodium glutinosum* (Muhl.) Alph. Wood] (408)
Desmodium illinoense Gray [*Desmodium illinoense* A. Gray] (407)
Galactia volubilis (L.) Britt. var. *mississippiensis* Vail [*Galactia volubilis* (L.) Britton] (473, 533, 754)
Gleditsia triacanthos L. (884)
Glycyrrhiza lepidota (Nutt.) Pursh (478)
Gymnocladus dioica (L.) Koch (391, 759)
Indigofera leptosepala Nutt. [*Indigofera miniata* Ortega] (374)
Lathyrus pusillus Ell. [*Lathyrus pusillus* Elliott] (259)
Lespedeza stuevei Nutt. var. *angustifolia* Britt. [*Lespedeza X neglecta* Mack. & Bush (pro sp.)] (598, 753)
Lespedeza violacea (L.) Pers. (620)
Medicago hispida Gaertn. [*Medicago polymorpha* L.] (318)
Medicago sativa L. (465)
Melilotus alba Desv. [*Melilotus albus* Medik.] (26)
Melilotus officinalis (L.) Lam. (16)
Neptunia lutea (Leavenw.) Benth. (442)
Petalostemum candidum (Willd.) Michx. [*Dalea candida* Michx. ex Willd.] (38)
Petalostemum multiflorum Nutt. [*Dalea multiflora* (Nutt.) Shinners] (488)
Petalostemum purpureum (Vent.) Rydb. [*Dalea purpurea* Vent.] (24)
Prosopis juliflora (Swartz) DC. var. *torreyana* Benson [*Prosopis glandulosa* Torr. var. *torreyana* (L.D. Benson) M.C. Johnson] (440, 973)
Psoralea esculenta Pursh [*Pediomelum esculentum* (Pursh) Rydb.] (294)
Psoralea tenuiflora Pursh [*Psoralidium tenuiflorum* (Pursh) Rydb.] (273, 337, 463)
Robinia pseudo-acacia L. (860)
Schrankia nuttallii (DC.) Standl. [*Mimosa nuttallii* (DC. ex Britton & Rose) B.L. Turner] (7)
Sesbania exaltata (Raf.) Cory [*Sesbania herbacea* (Mill.) McVaugh] (89, 561, 631)
Strophostyles helvola (L.) Ell. [*Strophostyles helvola* (L.) Elliott] (109, 475, 495)
Strophostyles leiosperma (T. & G.) Piper [*Strophostyles leiosperma* (Torr. & A. Gray) Piper] (108, 468)
Stylosanthes biflora (L.) BSP. var. *hispidissima* (Michx.) Pollard & Ball [*Stylosanthes biflora* (L.) Britton, Sterns & Poggenb.] (46)
Tephrosia virginiana (L.) Pers. var. *holosericea* (Nutt.) T. & G. [*Tephrosia virginiana* (L.) Pers. var. *holosericea* (Nutt.) Torr. & A. Gray] (22)
Trifolium repens L. (735)
Vicia micrantha Nutt. [*Vicia minutiflora* D. Dietr.] (780)
Vicia villosa Roth. (300)

Linaceae
Linum lewisii Pursh var. *pratense* Norton [*Linum pratense* (Norton) Small] (217, 346)
Linum medium (Planch.) Britton var. *texanum* (Planch.) Fern. [*Linum medium* (Planch.) Britton var. *texanum* (Planch.) Fernald] (328)
Linum sulcatum Riddell (45, 298, 423)

Oxalidaceae
Oxalis europaea Jord. var. *europaea* [*Oxalis stricta* L.] (690)
Oxalis stricta L. (483)
Oxalis violacea L. var. *violacea* [*Oxalis violacea* L.] (4)

Geraniaceae
Geranium carolinianum L. (19)

Zygophyllaceae
Kallstroemia intermedia Rydb. *[Kallstroemia parviflora* Norton] (116)
Tribulus terrestris L. (39)

Rutaceae
Xanthoxylum americanum Mill. [*Zanthoxylum americanum* Mill.] (145)

Simaroubaceae
Ailanthus altissima (Mill.) Swingle (Kelting 1050)

Polygalaceae
Polygala incarnata L. (301, 348, 406)

Euphorbiaceae
Acalypha gracilens Gray var. *gracilens* [*Acalypha gracilens* A. Gray] (86)
Acalypha ostryaefolia Riddell [*Acalypha ostryifolia* Riddell] (87, 492)
Acalypha rhomboidea Raf. (493)
Acalypha virginica L. (312)
Cnidoscolus texanus (Muell. Arg.) Small (361)
Croton capitatus Michx. (93)
Croton glandulosus L. var. *septentrionalis* Muell. Arg. [*Croton glandulosus* L.] (78, 487)
Croton monanthogynus Michx.
Crotonopsis linearis Michx. [*Croton michauxii* G.L. Webster] (464)
Euphorbia chamaesyce L. [A misidentification, as this species does not occur in North America.] (119)
Euphorbia corollata L. var. *corollata* [*Euphorbia corollata* L.] (82, 405)
Euphorbia dentata Michx. (60, 73, 447)
Euphorbia dictyosperma Fisch. & Mey. [*Euphorbia spathulata* Lam.] (262)
Euphorbia heterophylla L. (411, 550)
Euphorbia hexagona Nutt. [*Euphorbia hexagona* Nutt. ex Spreng.] (103, 686)
Euphorbia maculata L. (83)
Euphorbia marginata Pursh (608)
Euphorbia missurica Raf. var. *calcicola* (Shinners) Waterfall [*Euphorbia missurica* Raf.] (99, 120, 565)
Euphorbia serpens HBK. [*Euphorbia serpens* Kunth] (104, 684)

Euphorbia supina Raf. [*Euphorbia maculata* L.] (77, 105)
Stillingia sylvatica L. (276)
Tragia urticifolia Michx. (14)

Callitrichaceae [Plantaginaceae]
Callitriche heterophylla Pursh (Kelting 997)

Anacardiaceae
Cotinus obovatus Raf. (239, 881, 882)
Rhus aromatica Ait. var. undetermined (136)
Rhus aromatica Ait. var. *aromatica* (743)
Rhus copallina L. var. *latifolia* Engler [*Rhus copallinum* L. var. *copallinum*]
Rhus glabra L. (314)
Rhus radicans L. [*Toxicodendron radicans* (L.) Kuntze ssp. *radicans*] (observed)
Rhus toxicodendron L. [*Toxicodendron pubescens* Mill.] (observed)

Aguifoliaceae [Aquifoliaceae]
Ilex decidua Walt. [*Ilex decidua* Walter] (193, 223)

Celastraceae
Celastrus scandens L. (415, 699)
Euonymus atropurpureus Jacq. (436)

Staphyleaceae
Staphylea trifolia L. (203)

Aceraceae [Sapindaceae]
Acer negundo L. var. *negundo* (143)
Acer saccharinum L. (774)

Hippocastanaceae [Sapindaceae]
Aesculus glabra Willd. var. *sargentii* Rehd. [*Aesculus glabra* Willd. var. *glabra*] (185)

Sapindaceae
Sapindus drummondi H. & A. [*Sapindus saponaria* L. var. *drummondii* (Hook. & Arn.) L.D. Benson] (726)
Cardiospermum halicacabum L. (580, 751)

Balsaminaceae
Impatiens capensis Meerburg [*Impatiens capensis* Meerb.] (432)

Rhamnaceae
Ceanothus americanus L. var. *pitcheri* T. & G. [*Ceanothus americanus* L. var. *pitcheri* Torr. & A. Gray] (69)

Vitaceae
Ampelopsis arborea (L.) Koehne (585)
Ampelopsis cordata Michx. (438, 563)
Cissus incisa (Nutt.) Des Moulins [*Cissus trifoliatus* (L.) L.] (500, 547)

Parthenocissus quinquefolia (L.) Planch. (876)
Vitis aestivalis Michx. var. *argentifolia* (Munson) Fern. [*Vitis aestivalis* Michx. var. *bicolor* Deam] (250)
Vitis vulpina L. (870)

Malvaceae
Abutilon theophrasti Medic. (634)
Callirhoe alceoides (Michx.) Gray [*Callirhoe alcaeoides* (Michx.) A. Gray] (233)
Callirhoe involucrata (T. & G.) Gray var. *involucrata* [*Callirhoe involucrata* (Torr. & A. Gray) A. Gray var. *involucrata*] (59)
Hibiscus lasiocarpos Cav. [*Hibiscus moscheutos* L. spp. *lasiocarpos* (Cav.) O.J. Blanch.] (579)
Hibiscus militaris Cav. [*Hibiscus laevis* All.] (522)
Sida spinosa L. (517)
Sphaeralcea angusta (Gray) Fern. [*Malvastrum hispidum* (Pursh) Hochr.] (380, 424)

Guttiferae [Hypericaceae]
Ascyrum hypericoides L. var. *multicaule* (Michx.) Fern. [*Hypericum hypericoides* (L.) Crantz ssp. *multicaule* (Michx. ex Willd.) N. Robson] (467)
Hypericum drummondii (Grev. & Hook.) T. & G. [*Hypericum drummondii* (Grev. & Hook) Torr. & A. Gray] (472, 494, 502)
Hypericum gymnanthum Engelm. & Gray [*Hypericum gymnathum* Engelm. & A. Gray] (670)
Hypericum sphaerocarpum Michx. (31, 381)

Tamaricaceae
Tamarix gallica L. (98)

Cistaceae
Lechea tenuifolia Michx. var. *tenuifolia* [*Lechea tenuifolia* Michx.] (329)

Violaceae
Hybanthus linearis (Torr.) Shinners [*Hybanthus verticillatus* (Ortega) Baill.] (281)
Viola kitaibeliana R. & S. var. *rafinesquii* (Greene) Fern. [*Viola bicolor* Pursh] (151)
Viola missouriensis Greene [*Viola sororia* Willd. var. *missouriensis* (Greene) L.E. McKinney] (152, 153, 793)
Viola pensylvanica Michx. var. *pensylvanica* [*Viola pubescens* Aiton var. *scabriuscula* Torr. & A. Gray] (771)

Viola pensylvanica Michx. var. *leicarpa* (Fern. & Wieg.) Fern. [*Viola pubescens* Aiton var. *scabriuscula* Torr. & A. Gray] (182)
Viola sororia Willd. [*Viola sororia* Willd. var. *sororia*] (770)
Viola triloba Schwein var. *dilatata* (Ell.) Brainerd [*Viola palmata* L.] (197)

Passifloraceae
Passiflora incarnata L. (51, 528)
Passiflora lutea L. var. *glabriflora* Fern. [*Passiflora lutea* L.] (549, 560)

Loasaceae
Mentzelia oligosperma Nutt. [*Mentzelia oligosperma* Nutt. ex Sims] (334, 571)

Cactaceae

Neobessya similis (Engelm.) Br. & Rose [*Escobaria missouriensis* (Sweet) D.R. Hunt var. *missouriensis*] (observed)
Opuntia macrorhiza Engelm. (742A)

Lythraceae

Ammannia auriculata Willd. (81, 421)
Ammannia coccinea Rothb. (703A)
Cuphea petiolata (L.) Koehne [*Cuphea viscocissima* Jacq.] (600)
Lythrum lanceolatum Ell. [*Lythrum alatum* Pursh var. *lanceolatum* (Elliott) Torr. & A. Gray ex Rothr.] (62, 358, 377)
Rotala ramosior (L.) Koehne var. *interior* Fern. & Grisc. [*Rotala ramosior* (L.) Koehne] (552)

Onagraceae

Gaura biennis L. var. *pitcheri* Pickering [*Oenothera filiformis* (Small) W.L. Wagner & Hoch] (74, 497, 545, 640)
Gaura parviflora Dougl. [*Oenothera curtiflora* W.L. Wagner & Hoch] (484)
Gaura suffulta Engelm. [*Oenothera suffulta* (Wngelm.) W. L. Wagner & Hoch] (254, 382)
Gaura tripetala Cav. var. *triangulata* (Buckl.) Munz. [*Oenothera triangulata* (Buckley) W.L. Wagner & Hoch] (339, 383)
Jussiaea decurrens (Walt.) DC. [*Ludwigia decurrens* (DC.) Walter] (581)
Jussiaea repens L. var. *glabrescens* Ktze. [*Ludwigia peploides* (Kunth) P.H. Raven ssp. *glabrescens* (Kuntze) P.H. Raven] (55, 388, 534)
Ludwigia alternifolia L. (490, 577, 614)
Ludwigia palustris (L.) Ell. var. *americana* (DC.) Fern. & Grisc. [*Ludwigia palustris* (L.) Elliott] (434, 573)
Oenothera biennis L. var. *canescens* T. & G. [*Oenothera villosa* Thunb. ssp. villosa] (618)
Oenothera biennis L. var. *hirsutissima* Gray [*Oenothera elata* Kunth. ssp. *hirsutissima* (A. Gray ex S. Watson) W. Dietr.] (601)
Oenothera laciniata Hill var. *laciniata* [*Oenothera laciniata* Hill] (278)
Oenothera linifolia Nutt. (242)
Oenothera rhombipetala Nutt. [*Oenothera rhombipetala* Nutt. ex Torr. & A. Gray] (360)
Oenothera serrulata Nutt. (265, 279)
Oenothera speciosa Nutt. (285)
Oenothera triloba Nutt. (187, 210)

Umbelliferae [Apiaceae]

Ammoselinum butleri (Engelm.) Coult. & Rose [*Ammoselinum butleri* (Engelm. ex S. Watson) J.M. Coult. & Rose] (820)
Bifora americana (DC.) Wats [*Bifora americana* Benth. & Hook. f. ex S. Watson] (290, 338)
Chaerophyllum texanum C. & R. [*Chaerophyllum tainturieri* Hook. var. *tainturieri*] (200)
Cicuta maculata L. (530)
Cynosciadium pinnatum DC. [*Limnosciadium pinnatum* (DC.) Mathias & Constance] (295)
Daucus pusillus Michx. (418)
Eryngium leavenworthii T. & G. [*Eryngium leavenworthii* Torr. & A. Gray] (121)
Eryngium yuccifolium Michx. var. *synchaetum* Gray [*Eryngium yuccifolium* Michx. var. *synchaetum* A. Gray ex J.M. Coult. & Rose] (357)

Lomatium foeniculaceum (Nutt.) Coulter & Rose [*Lomatium foeniculaceum* (Nutt.) J.M. Coulter & Rose] (128, 162)
Polytaenia nuttallii DC. var. *nuttallii* [*Polytaenia nuttallii* DC.] (34)
Ptilimnium nuttallii (DC.) Britton (44, 389)
Sanicula canadensis L. var. *canadensis* (308, 444)
Sanicula gregaria Bicknell [*Sanicula odorata* (Raf.) K.M. Pryer & L.R. Phillippe] (253)
Spermolepis echinata (Nutt.) Heller [*Spermolepis echinata* (Nutt. ex DC.) A. Heller] (325)
Torilis japonicus (Houtt.) DC. [*Torilis japonica* (Houtt.) DC.] (67, 417)
Zizia aurea (L.) Koch (222, 461)

Cornaceae
Cornus drummondii Meyer (271)

Ericaceae
Vaccinium arboreum Marsh. var. *arboreum* [*Vaccinium arboreum* Marsh] (719)

Primulaceae
Androsace occidentalis Pursh (159)
Centunculus minimus L. [*Anagallis minima* (L.) E.H.L. Krause] (323)
Dodecatheon meadia L. [*Primula meadia* (L.) A.R. Mast & Reveal] (176, 251, 252)
Lysimachia ciliata L. (433)
Samolus parviflorus Raf. [*Samolus valerandi* L.] (Kelting 1009)

Sapotaceae
Bumelia lanuginosa (Michx.) Pers. var. *oblongifolia* (Nutt.) R.B. Clark [*Sideroxylon lanuginosum* Michx. var. *oblongifolium* (Nutt.) T.D. Penn] (446)

Ebenaceae
Diospyros virginiana L. var. *virginiana* [*Diospyros virginiana* L.] (905)
Diospyros virginiana L. var. undetermined [*Diospyros virginiana* L.] (741)

Oleaceae
Forestiera acuminata (Michx.) Poir. (777)
Fraxinus americana L. (157)
Fraxinus pennsylvanica Marsh. var. *subintegerrima* [*Fraxinus pennsylvanica* Marshall] (195, 878)
Fraxinus quadrangulata Michx. (139)

Gentianaceae
Sabatia campestris Nutt. (347, 354, 399)

Apocynaceae
Apocynum cannabinum L. var. *cannabinum* [*Apocynum cannabinum* L.] (739)

Asclepiadaceae [Apocynaceae]
Ampelamus albidus (Nutt.) Britt. [*Cynanchum laeve* (Michx.) Pers.] (485)
Asclepiadora viridis (Walt.) Gray [*Asclepias viridis* Walter] (33)
Asclepias amplexicaulis J.E. Smith (70, 419)

Asclepias auriculata (Engelm.) Holz. [*Asclepias engelmanniana* Woodson] (320) [Probably misidentified; this species does not occur in eastern Oklahoma.]
Asclepias hirtella (Pennell) Woodson (639)
Asclepias incarnata L. (564)
Asclepias speciosa Torr. (972)
Asclepias stenophylla Gray [*Asclepias stenophylla* A. Gray] (42, 398)
Asclepias tuberosa L. (21)
Asclepias verticillata L. (40, 586)
Asclepias viridiflora Raf. var. *viridiflora* [*Asclepias viridiflora* Raf.] (29, 403)
Gonolobus gonocarpus (Walt.) Perry [*Gonolobus suberosus* (L.) R.Br. var. *suberosus]* (58, 597)

Convolvulaceae
Convolvulus arvensis L. (370)
Cuscuta cuspidata Engelm. (982)
Cuscuta gronovii Willd. (652)
Ipomea hederacea (L.) Jacq. var. *integriscula* Gray [*Ipomoea hederacea* Jacq.] (617)
Ipomea lacunosa L. [*Ipomoea lacunosa* L.] (610)
Ipomea pandurata (L.) G.F.W. Mey. [*Ipomoea pandurata* (L.) G.F.W. Mey.] (457)

Polemoniaceae
Phlox divaricata L. var. *laphamii* Wood [*Phlox divaricata* L. ssp. *laphamii* (Alph. Wood) Wherry] (206)
Phlox pilosa L. var. *ozarkana* Wherry [*Phlox pilosa* L. ssp. *ozarkana* (Wherry) Wherry] (10, 270)

Hydrophyllaceae
Ellisia nyctelea L. (205)
Nama hispidum Gray [*Nama hispida* A. Gray] **[Boraginaceae]** (283)
Phacelia gilioides A. Brand (220)
Phacelia hirsuta Nutt. (211)

Boraginaceae
Heliotropium curassavicum L. (97)
Heliotropium indicum L. (385)
Heliotropium tenellum (Nutt.) Torr. (282, 336)
Lithospermum arvense L. [*Buglossoides arvensis* (L.) I.M. Johnst.] (169)
Lithospermum incisum Lehm. (171)
Myosotis verna Nutt. (196, 235)
Onosmodium hispidissimum Mackenzie [*Onosmodium bejariense* DC. ex A. DC. var *hispidissimum* (Mack.) B.L. Turner] (310)

Verbenaceae
Lippia lanceolata Michx. var. *recognita* Fern. & Grisc. [*Phyla lanceolata* (Michx.) Greene] (66)
Lippia nodiflora (L.) Michx. [*Phyla nodiflora* (L.) Greene] (306)
Verbena bracteata Lag. & Rodr. [*Verbena bracteata* Cav. ex Lag. & Rodr.] (363)
Verbena canadensis (L.) Britt. [*Glandularia canadensis* (L.) Nutt.] (72, 425)
Verbena simplex Lehm. (342)
Verbena stricta Vent. (366)
Verbena urticifolia L. var. *urticifolia* (64, 441, 524)

Labiatae [Lamiaceae]
Agastache nepetoides (L.) Kuntze (698)
Hedeoma hispida Pursh (261)
Isanthus brachiatus (L.) BSP. [*Trichostema brachiatum* L.] (569)
Lamium amplexicaule L. (184)
Monarda citriodora Cerv. [*Monarda citriodora* Cerv. ex Lag.(291)
Monarda fistulosa L. var. *mollis* (L.) Benth. (352)
Physostegia angustifolia Fern. [*Physostegia angustifolia* Fernald] (47, 349)
Prunella vulgaris L. var. *lanceolata* (Bart.) Fern. [*Prunella vulgaris* L. ssp. *lanceolata* (W. Bartram) Hultén] (396)
Pycnanthemum tenuifolium Schrad. (469)
Salvia azurea Lam. var. *grandiflora* Benth. (529)
Satureja arkansana (Nutt.) Brig. [*Clinopodium glabrum* (Nutt.) Kuntze] (292)
Scutellaria lateriflora L. (307, 413)
Scutellaria parvula Michx. var. *parvula* (18, 246)
Stachys tenuifolia Willd. (599, 660)
Teucrium canadense L. var. *virginicum* (L.) Eat. [*Teucrium canadense* L. var. *canadense*] (367)

Solanaceae
Datura stramonium L. (35, 612)
Physalis pendula Rydb. [*Physalis angulata* L.] (395)
Physalis pubescens L. (392)
Physalis pumila Nutt. (8)
Physalis subglabrata Mackenz. & Bush [*Physalis longifolia* Nutt. var. *subglabrata* (Mack. & Bush.) Cronquist] (638)
Solanum americanum Mill. (409)
Solanum carolinese L. [*Solanum carolinense* L.] (744, 976)
Solanum elaeagnifolium Cav. (333)
Solanum rostratum Dunal (123, 747)

Scrophulariaceae
Buchnera americana L. [Orobanchaceae] (428)
Castilleja purpurea (Nutt.) G. Don [Orobanchaceae] (230, 244)
Collinsia violacea Nutt. [Plantaginaceae] (179)
Conobea multifida (Michx.) Benth. [*Leucospora multifida* (Michx.) Nutt.] [Plantaginaceae] (378)
Gerardia grandiflora Benth. var. *cinerea* (Pennell) Cory [*Aureolaria grandiflora* (Benth.) Pennell] [Orobanchaceae] (501, 535, 680)
Gerardia heterophylla Nutt. [*Agalinis heterophylla* (Nutt.) Small] [Orobanchaceae] (88, 630, 647)
Gerardia skinneriana Wood [*Agalinis skinneriana* (Alph. Wood) Britton] [Orobanchaceae] (678, 717)
Linaria canadensis (L.) Dumont var. *texana* Pennell [*Nuttallanthus texanus* (Scheele) D.A. Sutton] [Orobanchaceae] (218)
Lindernia anagallidea (Michx.) Pennell [*Lindernia dubia* (L.) Pennell] [Linderniaceae] (386, 420)
Mimulus alatus Ait. [Phrymaceae] (575, 609)
Penstemon cobaea Nutt. [Plantaginaceae] (267)
Penstemon tubaeflorus Nutt. [Plantaginaceae] (275, 313, 504)
Seymeria macrophylla Nutt. [*Dasistoma macrophylla* (Nutt.) Raf.] [Orobanchaceae] (435)
Verbascum thapsus L. (477)

Veronica arvensis L. [Plantaginaceae] (180)
Veronica hederaefolia L. [*Veronica hederifolia* L.] [Plantaginaceae] (132, 134, 175, 864)
Veronica peregrina L. var. *peregrina* [*Veronica peregrina* L.] [Plantaginaceae] (198)
Veronica peregrina L. var. *xalapensis* (HBK.) St. John & Warren [*Veronica peregrina* L.] [Plantaginaceae] (202, 796)
Veronica polita Fries [Plantaginaceae] (126, 133)

Bignoniaceae
Campsis radicans (L.) Seem. [*Campsis radicans* (L.) Seem. ex Bureau] (365)
Catalpa speciosa Warder [*Catalpa speciosa* (Warder) Warder ex Engelm.] (904)

Lentibulariaceae
Utricularia biflora Lam. [*Utricularia gibba* L.] (115)

Acanthaceae
Dicliptera brachiata (Pursh) Spreng. (544)
Justicia americana (L.) Vahl var. *subcoriacea* Fern. [*Justicia americana* (L.) Vahl] (56, 350)
Ruellia humilis Nutt. var. *humilis* [*Ruellia humilis* Nutt.] (5)
Ruellia humilis Nutt. var. *longiflora* (Gray) Fern. [*Ruellia humilis* Nutt.] (376)
Ruellia strepens L. (20, 594)

Phrymaceae
Phryma leptostachya L. (555)

Plantaginaceae
Plantago aristata Michx. (13, 304, 341, 351)
Plantago purshii R. & S. var. *purshii* [*Plantago patagonica* Jacq.] (30, 340)
Plantago pusilla Nutt. (191)
Plantago rugelii Dcne. [*Plantago rugelii* Decne.] (412, 505)
Plantago virginica L. (263)

Rubiaceae
Cephalanthus occidentalis L. var. *occidentalis* [*Cephalanthus occidentalis* L.] (63)
Diodia teres Walt. var. *setifera* Fern. & Grisc. [*Diodia teres* (Walter) Small] (114, 371)
Galium aparine L. (213)
Galium pilosum Ait. var. *puncticulosum* (Michx.) T. & G. [*Galium pilosum* Aiton var. *puncticulosum* (Michx.) Torr. & A. Gray] (327)
Galium virgatum Nutt. (234)
Houstonia minima Beck [*Houstonia pusilla* Schoepf] (149)
Houstonia nigricans (Lam.) Fern. [*Stenaria nigricans* (Lam.) Terrell var. *nigricans]* (266)
Spermacoce glabra Michx. (525)

Caprifoliaceae
Lonicera flava Sims (192)
Sambucus canadensis L. var. *canadensis* [*Sambucus nigra* L. ssp. *canadensis* (L.) R. Bolli] [Adoxaceae] (364)
Symphoricarpos orbiculatus Moench (393)
Viburnum rufidulum Raf. [Adoxaceae] (238)

Valerianaceae
Valerianella radiata (L.) Durf. var. *radiata* [*Valerianella radiata* (L.) Dufr.] (12, 862)

Cucurbitaceae
Cucurbita foetidissima HBK. [*Cucurbita foetidissima* Kunth] (343)
Melothria pendula L. (512, 557)
Sicyos angulatus L. (651)

Campanulaceae
Campanula americana L. var. *illinoensis* (Fresn.) Farw. [*Campanula americana* L.] (553, 632)
Lobelia appendiculata DC. (356)
Lobelia puberula Michx. var. *mineolana* E. Wimm. (672)
Lobelia spicata Lam. var. *leptostachys* (A. DC.) Mack. & Bush [*Lobelia spicata* Lam.] (299)
Specularia biflora (R. & P.) Fisch. & Mey. [*Triodanis perfoliata* (L.) Nieuwl. ssp. *biflora* (Ruiz & Pav.) Lammers] (305)
Specularia leptocarpa (Nutt.) Gray [*Triodanis leptocarpa* (Nutt.) Nieuwl.] (284)
Specularia perfoliata (L.) A. DC. [*Triodanis perfoliata* (L.) Niewl. ssp. *perfoliata*] (17, 274)

Compositae [Asteraceae]
Achillea lanulosa Nutt. [*Achillea millefolium* L.] (3)
Actinomeris alternifolia (L.) DC. [*Verbesina alternifolia* (L.) Britton ex Kearney] (558)
Ambrosia artemisiifolia L. var. *elatior* (L.) Descourtils [*Ambrosia artemisiifolia* L.] (118, 704)
Ambrosia trifida L. var. *texana* Scheele [*Ambrosia trifida* L.] (683, 746)
Antennaria campestris Rydb. [*Antennaria neglecta* Greene] (776)
Antennaria plantaginifolia (L.) Richards (177)
Aphanostephus skirrobasis (DC.) Trel. (368)
Artemisia caudata Michx. [*Artemisia campestris* L. ssp. *caudata* (Michx.) H.M. Hall & Clem.] (Miller unnumbered) [Probably a misidentification, as this species does not occur in Oklahoma.]
Artemisia ludoviciana Nutt. var. *mexicana* (Willd.) Fern. [*Artemisia ludoviciana* Nutt. ssp. *mexicana* (Willd. ex Spreng.) D.D. Keck] (90, 691, 745)
Aster ericoides L. [*Symphyotrichum ericoides* (L.) G.L. Nesom] (695, 702)
Aster exilis Ell. [*Symphyotrichum subulatum* (Michx.) G.L. Nesom var. *ligulatum* (Shinners) S.D. Sundb.] (75, 76, 622, 677)
Aster oblongifolius Nutt. [*Symphyotrichum oblongifolium* (Nutt.) G.L. Nesom] (701)
Aster ontarionis Wieg. [*Symphyotrichum ontarionis* (Wiegand) G.L. Nesom] (716A, 716B)
Aster patens Ait. var. *gracilis* Hook [*Symphyotrichum patens* (Aiton) G.L. Nesom var. *gracile* (Hook.) G.L. Nesom] (676, 716C, 716D)
Aster praealtus Poir. [*Symphyotrichum praealtum* (Poir.) G.L. Nesom] (708, 709, 710, 713)
Aster sagittifolius Wedemeyer var. *drummondii* (Lindl.) Shinners [*Symphyotrichum drummondii* (Lindl.) G.L. Nesom var. *drummondii*] (697, 711)
Aster simplex Willd. [*Symphyotrichum lanceolatum* (Willd.) G.L. Newsom var. *lanceolatum*] (730)
Aster vimineus Lam. var. *subdumosus* Wieg. [*Symphyotrichum racemosum* (Elliot) G.L. Newsom] (755)
Astranthium integrifolium (Michx.) Nutt. var. undetermined (1, 2)
Bidens bipinnata L. (615)
Bidens frondosa L. (650)
Bidens polylepis Blake (646)
Boltonia latisquama Gray [*Boltonia asteroides* (L.) L'Hér. var. *latisquama* (A. Gray) Cronquist] (506, 635)

Cacalia plantaginea (Raf.) Shinners [*Arnoglossum plantagineum* Raf.] (48)
Centaurea americana Nutt. [*Plectocephalus americanus* (Nutt.) D. Don] (344)
Chrysopsis pilosa Nutt. [*Bradburia pilosa* (Nutt.) Semple] (277)
Cichorium intybus L. (427)
Cirsium discolor (Muhl.) Spreng. (518)
Cirsium undulatum (Nutt.) Spreng. (974)
Coreopsis grandiflora Hogg. var. *grandiflora* (*Coreopsis grandiflora* Hogg ex Sweet.] (264)
Coreopsis tinctoria Nutt. (61)
Echinacea pallida Nutt. (269)
Eclipta alba (L.) Hassk. [*Eclipta prostrata* (L.) L.] (443)
Elephantopus carolinianus Willd. [*Elephantopus carolinianus* Raeusch.] (556, 606)
Erigeron annuus (L.) Pers. (591, 694)
Erigeron canadensis L. [*Conyza canadensis* (L.) Cronquist] (79)
Erigeron philadelphicus L. (861)
Erigeron strigosus Muhl. var. *strigosus* (*Erigeron strigosus* Muhl. ex Willd. var. *strigosus*] (6, 32, 588)
Erigeron strigosus Muhl. var. *beyrichii* (Fisch. & Mey.) T. & G. [*Erigeron strigosus* Muhl. ex Willd. var. *strigosus*] (303)
Erigeron tenuis T. & G. [*Erigeron tenuis* Torr. & A. Gray] (256)
Eupatorium coelestinum L. [*Conoclinium coelestinum* (L.) DC.] (659)
Eupatorium purpureum L. [*Eutrochium purpureum* (L.) E.E. Lamont] (668)
Eupatorium rugosum Houtt. var. undetermined [*Ageratina altissima* (L.) King & H. Rob. var. *altissima*] (655)
Eupatorium serotinum Michx. (80, 604)
Evax prolifera Nutt. [*Diaperia prolifera* (Nutt. ex DC.) Nutt.] (877, 907)
Gaillardia pulchella Foug. (28)
Gnaphalium obtusifolium L. [*Pseudognaphalium obtusifolium* (L.) Hilliard & B.L. Burtt] (673)
Gnaphalium purpureum L. [*Gamochaeta purpurea* (L.) Cabrera] (326)
Grindelia lanceolata Nutt. var. *lanceolata* [*Grindelia lanceolata* Nutt.] (489, 703)
Grindelia squarrosa (Pursh) Dunal var. *squarrosa* [*Grindelia squarrosa* (Pursh) Dunal] (122)
Gutierrezia dracunculoides (DC.) Blake [*Amphiachyris dracunculoides* (DC.) Nutt.]
Happlopappus ciliatus (Nutt.) DC. [*Grindelia ciliata* (Nutt.) Spreng.] (693)
Happlopappus divaricatus (Nutt.) Gray [*Croptilon divaricatum* (Nutt.) Raf.] (476)
Helenium tenuifolium Nutt. [*Helenium amarum* (Raf.) H. Rock var. *amarum*] (696)
Helianthus annuus L. (451, 566)
Helianthus besseyi Bates [*Helianthus tuberosus* L.] (510, 521, 623)
Helianthus hirsutus Raf. var. *hirsutus* (322)
Helianthus hirsutus Raf. var. *trachyphyllus* T. & G. [*Helianthus hirsutus* Raf. var. *trachyphyllus* Torr. & A. Gray] (546, 587, 590)
Helianthus laetiflorus Pers. var. *rigidus* (Cass.) Fern. [*Helianthus pauciflorus* Nutt. var. *pauciflorus*] (430)
Helianthus maximiliani Schrad. (642)
Helianthus mollis Lam. (431)
Helianthus petiolaris Nutt. (499)
Heliopsis helianthoides (L.) Sweet var. *scabra* (Dunal) Fern. [*Heliopsis helianthoides* (L.) Sweet var. *scabra* (Dunal) Fernald] (583)
Heterotheca subaxillaris (Lam.) Britt. & Rusby [*Heterotheca subaxillaris* (Lam.) Britton & Rusby] (106, 592)
Hieracium gronovii L. var. undetermined (319)
Hieracium longipilum Torr. (422)

Hymenopappus corymbosus T. & G. [*Hymenopappus scabiosaeus* L'Hér. var. *corymbosus* (Torr. & A. Gray) B.L. Turner] (9)
Iva ciliata Willd. [*Iva annua* L.] (112, 644)
Krigia dandelion (L.) Nutt. (872)
Kuhnia eupatorioides L. var. *corymbulosa* T. & G. [*Brickellia eupatorioides* (L.) Shinners var. *corymbulosa* (Torr. & A. Gray) Shinners] (645)
Lactuca canadensis L. var. *latifolia* Ktze. [*Lactuca canadensis* L.] (509)
Lactuca scariola L. [*Lactuca serriola* L.] (480)
Liatris angustifolia (Bush) Gaiser [*Liatris punctata* Hook. var. *mucronata* (DC.) B.L. Turner] (Kelting 861H)
Liatris aspera Michx. var. *aspera* [*Liatris aspera* Michx.] (679)
Liatris aspera Michx. var. *intermedia* (Lunell) Gaiser [*Liatris aspera* Michx.] (491)
Liatris mucronata DC. [*Liatris punctata* Hook. var. *mucronata* (DC.) B.L. Turner] (643)
Liatris pycnostachya Michx. (454)
Liatris squarrosa (L.) Michx. var. *glabrata* (Rydb.) Gaiser (718)
Pluchea purpurascens (Sw.) DC. [*Pluchea odorata* (L.) Cass. var. *odorata*] (111)
Polymnia uvedalia L. var. *densipilis* Blake [*Smallanthus uvedalia* (L.) Mack. ex Small] (656)
Pyrrhopappus carolinianus (Walt.) DC. (335, 738)
Pyrrhopappus scaposus DC. [*Pyrrhopappus grandiflorus* (Nutt.) Nutt.] (226, 879)
Ratibida columnifera (Nutt.) W. & S. [*Ratibida columnifera* (Nutt.) Woot. & Standl.] (25)
Rudbeckia amplexicaulis Vahl (57)
Rudbeckia bicolor Nutt. [*Rudbeckia hirta* L. var. *pulcherrima* Farw.] (49, 401)
Rudbeckia triloba L. var. *triloba* (460)
Senecio aureus L. [*Packera aurea* (L.) Á. Löve & D. Löve] (178)
Senecio glabellus Poir. [*Packera glabella* (Poir.) C. Jeffrey] (221)
Senecio plattensis Nutt. [*Packera plattensis* (Nutt.) W.A. Weber & Á. Löve] (229)
Serinia oppositifolia (Raf.) Kuntze [*Krigia caespitosa* (Raf.) K.L. Chambers] (225)
Silphium asperrimum Hook. [*Silphium astericus* L. var. *astericus*] (402, 455)
Silphium laciniatum L. var. *lanciniatum* [*Silphium laciniatum* L.] (450, 567)
Silphium perfoliatum L. (520, 629, 669)
Solidago altissima L. (707, 736)
Solidago bootii Hook. [*Solidago arguta* Aiton var. *boottii* (Hook.) Palmer & Steyerm.] (508)
Solidago canadensis L. var. *canadensis* (624, 712)
Solidago gigantea Ait. var. *leiophylla* Fern. [*Solidago gigantea* Aiton] (511)
Solidago missouriensis Nutt. var. *fasciculata* Holzinger [*Solidago missouriensis* Nutt.] (516, 576, 603)
Solidago mollis Bartl. (675)
Solidago petiolaris Ait. var. *petiolaris* [*Solidago petiolaris* Aiton] (716E)
Solidago petiolaris Ait. var. *wardii* (Britt.) Fern. [*Solidago petiolaris* Aiton] (706)
Solidago rigida L. (692, 740)
Solidago rugosa Mill. var. *celtidifolia* (Small) Fern. [*Solidago rugosa* Mill. ssp. *aspera* (Aiton) Cronquist] (688)
Sonchus asper (L.) Hill (731)
Taraxacum erythrospermum Andrz. [*Taraxacum erythrospermum* Andrz. ex Besser] (785)
Taraxacum officinale Weber [*Taraxacum officinale* F.H. Wigg] (797)
Tragopogon porrifolius L. (888)
Verbesina encelioides (Cav.) B. & H. var. *exauriculata* Robins. & Greenm. [*Verbesina encelioides* (Cav.) Benth. & Hook. f. ex A. Gray] (752)
Verbesina virginica L. (605)
Vernonia baldwinii Torr. var. *interior* (Small) Schub. [*Vernonia baldwinii* Torr.] (84, 445, 471, 507, 514)

Vernonia crinita Raf. [*Vernonia arkansana* DC.] (94, 449, 479)
Xanthium chinense Mill. [*Xanthium strumarium* L.] (715)
Xanthium italicum Mor. [*Xanthium strumarium* L.] (124, 681, 705, 749)
Xanthium pennsylvanicum Wallr. [*Xanthium strumarium* L.] (682, 748)