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FLORISTIC SURVEY OF CRAWFORD AND CHEROKEE COUNTIES IN
SOUTHEAST KANSAS:
AN EVALUATION OF CHANGE OVER FIVE DECADES

A Thesis Submitted to the Graduate School in Partial Fulfillment of the Requirements for
the
Degree of Master of Science

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Pittsburg State University

Pittsburg, Kansas

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SOUTHEAST KANSAS:
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FLORISTIC SURVEY OF CRAWFORD AND CHEROKEE COUNTIES IN
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An Abstract of the Thesis by
Samantha Lauren Young Pryer

This project had two main objectives. The first objective was to document comprehensively the vascular flora of Crawford and Cherokee counties in extreme southeast Kansas. Each county had seen limited collecting in recent decades, though a comprehensive survey had never been done for Cherokee County. PSU student E.S. Gibson summarized the flora for Crawford County in 1963. Fieldwork for the present study occurred mostly in 2014 and 2015. Based on 6500+ newly collected specimens, vouchers from Gibson's study, and taxa documented by *Biota of North America* (BONAP) (Kartesz 2017), 1440 taxa are reported, which includes 33 state and 263 county records. The number of records was significantly more than expected. These results, coupled with other recent floristic studies nationally, indicate that current plant distributions in many parts of North America at the state and county levels are less thoroughly documented than many believe. The second objective was to make a five-decade comparison between the taxa Gibson (1963) reported for Crawford County and the values reported here. Its goal was to document changes in vascular plant diversity and report on native and non-native plant species that have moved into the area. The amount of taxonomic and nomenclatural change that has affected vascular plants in Crawford County was assessed. The total vouchered taxa for Crawford County increased by 32.6%, 24.4% of which were native and 8.1% non-native. In the nomenclatural comparison, a 22.6% change in binomial species names was documented.

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CHAPTER I.

REVIEW OF THE LITERATURE

The collection, documentation, and preservation of dried plants in herbaria dates back to approximately 1570 C.E., when the oldest herbarium was founded in Bologna, Italy.

Today over 3000 herbaria house over 387 million dried plant specimens (Theirs 2018).

Herbaria are dynamic centers of plant information, where large amounts of research and outreach occur. Plant specimens, some of them several hundred years old, continue to be tapped for their wealth of knowledge, and are being used today at an unprecedented rate (Lavoie 2013). Despite the large numbers of specimens in herbaria, the collection of plants continues worldwide for many taxonomic, ecological and conservation reasons, and their continued documentation is of great importance.

An ongoing reason for continued collections is to document plant distributions and diversity in a given area thoroughly, in the discipline known as floristics. Floristics often is underappreciated or criticized, with even some biologists questioning whether the continued collecting is necessary for either identification purposes or for research (Prather et al. 2004; Erter 2000a; Pyke and Ehrlich 2010; Lavoie 2013; Minter et al. 2014). One criticism is that since herbaria collectively already have millions of plants cataloged in their cabinets, why are even more needed? Oliveira et al. (2016: 1233) responded to that concern indirectly by pointing out that shortfalls of knowledge

regarding plant biodiversity occur in three increasingly-recognized categories by ecologists; namely in terms of alpha diversity (the Linnaean Shortfall), the known distributions of species (Wallacean Shortfall), and the “the lack of knowledge of the responses and tolerance of species to abiotic conditions (Hutchinsonian Shortfall).” A second concern voiced occasionally is that plants are collected without regard for population size or potential damage to the ecosystem. Although some field workers have sometimes collected more specimens than necessary, this tendency probably was due to a lack of knowledge of their status, rather than deliberate negligence. Botanists generally recognize damage they could cause potentially and thus collect carefully and ethically. According to Neil Snow (pers. comm., 2018), most botanists today are more focused and deliberate in their collecting activities. Relatively few excesses in collecting occur now among research taxonomists, although the unscrupulous collecting of medicinal plants or those of ornamental interests occurs broadly among non-botanists.

Herbaria are libraries of plant information. Each specimen documents a plant that occurred at a given location and time in history. Herbaria are major resources for research, education, and outreach, and typically are the primary go-to source for information. Winker (1996:704) poignantly stated, “How informative is a library that stops acquiring books?” Likewise, herbaria can accurately reflect changing plant distributions throughout the decades only if floristic surveys, which are akin to census-taking of plants, occur periodically.

The specimens collected and accessioned into a herbarium during a floristic survey are the primary data used to answer basic and in applied scientific questions. These specimens contain biodiversity data that lead to results that are verifiable and

repeatable (Page et al. 2015; Holmes et al. 2016; James et al. 2018) for as long as they are maintained.

Several papers recently summarized the use and importance of herbarium specimens (Funk 2004; Chapman 2005; Funk 2006; Bebbier et al. 2010; Culley 2013; Lavoie 2013; James et al. 2018), although too many uses exist to review in detail here. Speaking broadly, specimens are used widely in taxonomic (e.g., Snow et al. 2015; Chen et al. 2018), ecological (Beauvais et al. 2017; Wen et al. 2017; Willis et al. 2017; Gallinat et al. 2018), and biodiversity studies (Osmundson et al. 2013; Carrington et al. 2017; Gâteblé et al. 2018).

More specifically, herbarium specimens are used to reconstruct population trends for rare and declining plants and assess the status of potentially threatened species (Farnsworth and Ogurcak 2006; Case et al. 2007; Van den Eynden et al. 2008; Rivers et al. 2011; Lavoie 2013; Nualart et al. 2017). They also help identify areas that merit conservation protection (Callmander et al. 2007; da Costa and de Faria 2008; Murray-Smith et al. 2008; Droissart et al. 2011; Carrington et al. 2017). Herbarium specimens are used to study the origin, hosts, distribution, and prevalence of plant pathogens (Fraile et al. 1997; Ristaino et al. 2001; Malmstrom et al. 2007; Hood et al. 2010) and insect outbreaks (Lees et al. 2011), some of which may be agriculturally important. They are used to assess the impact of climate change (Gomez-Mendoza and Arriaga 2007; Loarie et al. 2008; Davis et al. 2015; Jones et al. 2018; Willis et al. 2017; Hufft et al. 2018) and different types of pollution (Shotbolt et al. 2007; Foan et al. 2010; Wilson et al. 2009; Bonal et al. 2011). They also are used to track the spread, impact, and distribution of invasive and non-native plant species (Woods et al. 2005; Arunaud et al. 2016; McGeoch

et al. 2016). Many other uses could be cited, but there is no way to anticipate all of the potential questions that might be answered using specimens in the future.

In addition, specimen data are summarized in the form of checklists, taxonomic revisions and monographs, and regional floras. Their basis for the generation of state or country level Floras are one of their biggest contributions. These Floras are comprehensive written summaries of plants from a given area that include identification keys, detailed species descriptions, and often distribution maps and at least some (if not numerous) illustrations.

The production of Floras and monographs depend on floristic surveys to inform them of which species to include, and to provide specimens from which taxonomists write identification keys and descriptions. The periodic publication of state or regional surveys continues to be a common practice for botanical research (Robinson 1880; Higley and Raddin 1891; Piper 1906). Several Floras or partial Floras (Haddock and Freeman 2015) have been published for Kansas (Maus 1928; Fraser 1931; Weber 1932; Gates 1940; McGregor 1948; Gibson 1963; Kapp 1965; Ross and Hall 1939; Freeman and Hulbert 1995). Numerous floristic surveys are published yearly around the world and in the United States. Those in the U.S.A. published during the current decade include: Legler (2010); Diamond (2011); Campbell and Seymour (2012); Barger et al. (2013); Singhurst et al. (2014); Alexander et al. (2014); Barger (2015); Braun and Bornstein (2016); Boyd and Preusser (2016); McNair et al. (2016); Orozco (2016); McBride (2016); Hoagland and Buthod (2017); and Snow et al. (2017). Floristic surveys, which typically involve intensive amounts of surveying over one or more years, are considered

to be the most efficient way of documenting a regional flora and their results can be used in many ways.

Floristic surveys address many questions, including the most basic: How many species are present in an area, how common are they, and where specifically do they occur geographically and ecologically? These surveys allow us to make determinations about a species' frequency across a landscape and help determine which ones are rare and in need of conservation (see references above). In addition, they sometimes enable biologists to determine that species once thought to be rare are in fact more common than initially believed (Ertter 2000a,b). With such knowledge, conservation resources can be diverted to the areas of greatest need.

Regional surveys and their resulting Floras are essential to land managers and policy makers (Ertter 2000a,b). The proper management of land, available funding and support for research and conservation, and current legislation relies on what is known about the biodiversity of that area. For example, current floristic data allow land managers to make informed and strategic plans to manage and maintain properties in the most effective and ethical way possible. This can include protecting areas that harbor threatened or endangered plants or habitat types, or by managing invasive plant species (Snow et al. 2017). It is much easier and less expensive to document the diversity and distributions of species with intensive fieldwork than paying for costly ecological mitigation after destruction. In areas of high biodiversity and large human populations such as California, ecological mitigation cost can be thousands of dollars per acre (N. Snow, pers. comm. 2018).

One of the most important outcomes of floristic work is the discovery of new species. There is a common misconception, even among some biologists, that little or nothing new is left to discover in the U.S.A., but plenty of recent work contradicts this misperception (Prather et al. 2004 b; Snow et al. 2017). For example, one or more new species recently have been described for the following genera from the following states: *Spiranthes* (Orchidaceae) from Florida (Pace et al. 2017); *Lobelia* (Campanulaceae) from Florida (Spaulding et al. 2016); *Stachys* (Lamiaceae) from Tennessee (Floden 2016); *Matelea* (Apocynaceae) from Texas (McDonnell and Fishbein 2016); and *Isoetes* (Isoetaceae) from Mississippi (Schafran et al. 2016). Others include: *Monarda* (Lamiaceae) from Tennessee (Floden 2015); *Lysimachia* (Primulaceae) from Tennessee (Estes et al. 2015); *Stachys* (Lamiaceae) from South Carolina (Nelson and Rayner 2015); *Lomatium* (Apiaceae) from Idaho (McNeil 2014); and *Nerisyrenia* (Brassicaceae) and *Phlox* (Polemoniaceae) from New Mexico (Alexander et al. 2014; Legler 2011), to name just a few. Nearly twenty years ago, Ertter (2000b) indicated that the rate of discovery of new plant taxa in North America has remained constant and showed no signs of slowing. This large number of recently published species since then confirms the rate of discovery in the U.S.A. continues to be steady. A complete absence of floristics work would prevent the discovery of new species, most of which today have relatively narrow overall distributions.

Unfortunately, the view that little if anything is left to discover has contributed to a well-documented decline of plant collecting and the support for such studies, as well as a decrease in the number of taxonomic experts, over a period of approximately forty years (Prather et al. 2004 a,b; Pyke and Ehrlich 2010; Gardener et al. 2014). Nearly

fifteen years ago, Prather et al. (2004 a,b) called attention to the decline of plant collecting in the United States. They sampled 71 herbaria across the U.S.A., including the T.M. Sperry Herbarium at Pittsburg State University, representing 84,001 specimens, to determine the decade(s) of peak collecting activity. Across the U.S.A. overall, the 1930s was the most active decade for collecting. This means that some specimen data is almost 90 years old. They also attempted to determine when collecting activity started to decline. Of the 71 herbaria sampled, only the Rocky Mountain Herbarium (RM) at the University of Wyoming, under the direction of Dr. Ronald L. Hartman, showed a marked increase in plant collecting since the 1970s, and especially during and after the 1980s to the current time. This anomalous figure reflected Hartman's career-long commitment to better document the relatively poorly sampled regions in (mostly) the Rocky Mountain region (of which there were many), and to a lesser extent more inland areas.

When data from RM were excluded, the overall herbarium collecting activity peaked in the 1960s and never recovered (Prather et al. 2004 a,b). Again, this makes much of the plant distributional data in North America over 50 years old. The older specimens remain important for research purposes. However, plant distributions are known to change through time, sometimes drastically, so older specimens (by themselves) may not accurately reflect the distribution of plant species on the current landscape.

Others also have expressed concern over the decline in collecting for both plant and animals (Cotterill 1995; Winker 1996; Ertter 2000a,b; Funk and Morin 2000; Norris et al. 2001; Funk 2006; Boakes et al. 2010; Lavoie et al. 2012; Taylor 2014). Although plant collecting in the past fifty years surged notably in some tropical regions (Prather et

al. 2004b), given focused studies generally carried out by or headquartered at major herbaria (and where new initiatives sometimes have top-down government support), the trend for decreased rates of collections in the U.S.A. overall remains unchanged (Prather et al. 2004 a,b; Boakes et al. 2010; Lavoie et al. 2012; Lavoie 2013; Taylor 2014). The perceived importance of newly acquired specimens remains quite low and therefore support and funding for such projects is typically limited (Prather et al. 2004; Pyke and Ehrlich 2010). No federal government funding agency in the U.S.A. offers grants in support of floristics research, although in some areas, especially on public lands in the western U.S.A., the Bureau of Land Management (U.S. Department of the Interior) and U.S. Forest Service (U.S. Department of Agriculture) have provided ad hoc summer funding to document plant distributions, mostly to graduate students working on thesis projects.

In the absence of current or recent collecting, it is impossible to draw conclusions about changes in species composition, the effectiveness of conservation efforts, patterns and rates of range contractions and expansions, know with confidence current species distribution data, or understand diversity patterns across landscapes and time.

The nationwide slowdown in collecting leaves science with only a snapshot of history and lacking in current or accurate data. This is particularly important when discussing species distributions. As the results of this study corroborate, it is well documented that our knowledge of current species distributions in the U.S.A. in many cases is somewhat to grossly deficient (Diggs et al. 1999; Charlet 2000; Ertter 2000a; Yatskievych and Raveill 2001; Prather et al. 2004b; Taylor 2014).

For example, the known flora for North Central Texas in 1980 was 1550 taxa (Mahler 1988). With publication of *Shinners and Mahler's Illustrated Flora of North Central Texas* (Diggs et al. 1999) the total increased to 2376, or by approximately 53.3%. Notably, significant levels of plant collecting occurred during the development of the project in North Central Texas, in part because of dramatic a resurgence of collecting due to the founding of the Botanical Research Institute of Texas in Fort Worth (N. Snow, pers. comm. 2018). As a second example, the production of two editions of the *Jepson Manual* (Baldwin & Goldman 2012) resulted in an increase of known species diversity by 26%. A more local example is the *Flora of Missouri* Project (Yatskievych 1999, 2006, 2013), which added 125 previously unreported native taxa and 338 added to the known total taxa for Missouri. Recent work in Oklahoma reported over 100 county records and 4 verified state records from an area of only ca. 1022 hectares (Snow et al. 2017). This study also reports nearly three-dozen new taxa previously undocumented for Kansas, and over 260 county records. Given that plant distributions are not static, ongoing floristic work helps document the range expansions and contractions, as well as find species that might have been missed with previous work.

Digitizing and databasing efforts by herbaria worldwide make data from herbarium specimens available to researchers around the globe. Novel research questions, including large-scale studies, can now be investigated with access to such a vast amount of baseline data provided by globalization efforts (Holmes et al. 2016; Herberling et al. 2017; Willis et al. 2017; James et al. 2018). In addition, new technologies are being developed to data mine the treasure trove of herbarium specimens and discover associations that were unknown and out of reach using current methods (Landrum and

Lafferty 2015). Damages to Earth's ecosystems due to global change, large-scale habitat health, the distribution of disease vectors, and the impact and spread of invasive species can now be studied on a large scale (Delisle et al. 2003; IPCC 2014; McGeoch et al. 2016; Soltis 2017; Willis et al. 2017; James et al. 2018).

However, with the surge of technology, some workers have begun to question whether there remains a need to collect physical specimens in a digital age (Clifford et al. 1990; Minter et al. 2014). In particular, some question the need for physical collections and believe instead that high quality photographs would serve the same purpose and cost much less to preserve and curate. Photographs certainly have their place in research, particularly in documenting living material and (with plants) the colors of flowers and fruits. Digital images also help document habitat and growth patterns of the plant. However, in some cases it is difficult if not impossible to accurately identify a plant from a picture. For example, the characters critical for making an accurate identification are often extremely small or hidden. Sometimes seeds and florets need to be dissected to see such characters. Magnification often is necessary to observe them. One local example is seen in the difference between the grasses *Schedonorus pratense* and *Schedonorus arundinacea*, the latter of which has a few tiny hairs on the auricles of the leaf sheath, which are critical for making a correct identification. The hairs normally are observable only under magnification and typically would be difficult or impossible to see in a photograph.

In addition, when in the field for whatever taxonomic or ecological reasons, a collector oftentimes does not know what characters on a plant specimen are required for identification. Some plants need fruits, flowers, basal leaves, or root systems to be

collected for confident identifications (Radford et al. 1974: 390–395). Roots and rhizomes would not be visible in a photograph of a living specimen. A physical specimen can be compared to other specimens in a herbarium and subjected to magnification and dissection when necessary. Collected specimens can be used later in comparative studies to better understand infraspecific variation and write better descriptions. Many specimens also can be sampled for DNA sequencing, even hundreds of years later (although some also have that degrades within a few years) and used in numerous types of study (Kress et al. 2005; Ames and Spooner 2008; Särkinen et al. 2012; Besnard et al. 2014; Gutaker and Burbano 2017). Herbarium specimens can be used to track evolutionary changes by combining not only phenological data, but also phenotypic and genotypic changes across populations and time (Besnard et al. 2014). Images do have value, but material that is properly preserved has far more.

In summary, herbarium specimens hold immense amounts of biodiversity data. As stated above, specimens are being used more now than any time in history (Pyke and Ehrlich 2010). For example, Lavoie (2013) recently documented 382 papers that used herbarium specimens to document biogeographical patterns or environmental changes between 1933–2012. Of the papers examined in the study, 71 % had been published since 2000, and 50% since 2005 (or about 2-3 papers per month). Given the amount of research being done and in such varied fields, we can only imagine what specimens collected today might reveal in the future. Prather et al. (2004b) perhaps summarized it best:

“Specimens are the very basis of... taxonomic science, and as such provide the foundation of nomenclature, the basis for identification, the common reference for

communication, the vouchers for floras, and the tools for teaching. All fields of biological science from systematics and evolution to ecology and even physiology and molecular biology are ultimately dependent on collections, not just for application of names, but as the basis for referencing all aspects of biodiversity.”

CHAPTER II

INTRODUCTION

Floristic Survey:

Crawford and Cherokee counties, located in the southeastern corner of Kansas (Figure 1), contain about half of the known vascular plant flora for the state (Kartesz 2017). Despite the relatively high diversity, few focused studies have rigorously documented the flora in this region. Each county has seen only limited collecting in recent years. H.A. Stephens, working from the University of Kansas, collected over 90,000 specimens across the Great Plains in the 1960s and 70s, including southeast Kansas, which were summarized in *Atlas of the Flora of the Great Plains* (Barker & Barkley 1977) and later in *Flora of The Great Plains* (GPFA 1986). However, a comprehensive floristic survey has never been done for Cherokee county and only one was done for Crawford County (Gibson 1963).

The flora of southeast Kansas is relatively diverse for several reasons. Bordered by Missouri to the east and Oklahoma to the south, this region includes the ecotone between eastern deciduous forest to prairie. Here also the geology changes dramatically and rapidly from south to north. The Ozark Plateau in the southeastern corner in Cherokee county contains mixed deciduous oak hickory forests and the region's oldest bedrock, a Mississippian limestone. The rest of Cherokee county and about half of Crawford County include Pennsylvanian bedrock in the Cherokee lowlands, where old

surface coal mines are prevalent alongside of prairies. The northeast to southwest diagonal half of Crawford County contains the Osage Cuestas. These are parallel ridges in the landscape that contain gentle slopes on the west side and steeper slopes to the east, and that alternate between shale and limestone (Buchanan 2010). Given the transition of major vegetation types and the diversity of geological substrates, and that southeast Kansas has the state's highest average annual precipitation, it is no surprise that a diverse flora occurs in this region.

The first attempt at documenting the flora of southeast Kansas was done by Leland J. Gier (1931) in his publication *A preliminary Key to the Herbaceous Dicotyledons of the Cherokee Strip of Southeast Kansas*, which included only about 200 species. The *Flora of Kansas* (Gates 1940) and *A Manual of the Flowering Plants of Kansas* (Barkley 1968) were the first two comprehensive attempts at documenting the flora of the state. Twenty years later the first edition of *Flora of The Great Plains* (GPFA 1986) was published, which includes southeast Kansas. In the most recent surveying work, the Kansas Biological Survey collected a few natural area sites in Cherokee county in 2005 (Loring et al. 2005), but collection coverage was limited. A master's thesis at Pittsburg State University study focused on the systematics of Vitaceae (Kirkpatrick 1973) and another covered Crawford State Park located in Crawford County (Ross & Hall 1939). Although little extensive collecting has been done, southeast Kansas has had sporadic collections made throughout the years by many botanists and citizen scientists. Their collections are housed in several herbaria, including the T.M. Sperry Herbarium, Kansas State University Herbarium, McGregor Herbarium (University of Kansas), H.A.

Stevens Herbarium at Emporia State University, the Wichita State Herbarium, and Missouri Botanical Garden.

Crawford County Comparison

Earl S. Gibson (1963) completed the only comprehensive survey of Crawford County in his *Vascular Flora of Crawford County, Kansas*, in which he reported all taxa known and hypothesized to occur in the county. His study serves as the basis to comparison the taxonomic diversity changes between 1963 and 2018, a period of 55 years. Plant distributions are known to change over time for many different reasons, including climate change, introductions via seed contamination, and naturalization. Therefore, it was expected that the flora for Crawford County had changed to some degree, given that plant distributions change constantly and non-native taxa continue to migrate. That southeast Kansas is a transition zone between two major ecozones makes it likely that taxa new to the area have moved in since Gibson (1963) completed his work. The purpose of this component of the thesis was to document changes in native and non-native plant species during the 55-year interval.

The data from Gibson (1963) also are used to compare the degree of nomenclatural changes that have impacted a local flora in 55 years. Accepted taxonomic names and classifications are always changing and probably always will as new information, species, and technologies are found or developed. Taxonomists are always working to describe new species and solve taxonomic problems, which will be reflected in the names accepted and reported. For example, phylogenetic analyses based on revisionary taxonomic work and DNA sequence data have been available for nearly thirty

years. The Angiosperm Phylogeny Group (APG IV 2016) has updated accepted plant family circumscriptions and names to reflect strictly monophyletic groups. These classifications have been adopted in many herbaria worldwide, including the T.M. Sperry Herbarium at PSU (Chase and Reveal 2009; Vorontsova and Simon 2012; APG IV: Angiosperm Phylogeny Group, 2016).

These two comparisons – those of taxonomic species present, and of the names used to recognize the species – are of interest given that taxonomic revisions for many genera have been published since 1963, and hundreds of generic concepts have changed, particularly in some of the larger families such as Poaceae and Asteraceae. New county and/or state records, coupled with significant changes in taxonomic concepts and botanical nomenclature, greatly impact the number of recognized taxa and their associated synonymy.

Study Objectives

This study had two main objectives. The first was to generate a modern checklist of the vascular flora for both Crawford and Cherokee counties based on recent fieldwork and vouchered herbarium specimens. The second objective was to compare the modern checklist of Crawford County to that of Gibson (1963). By so doing, a summary of the changes from over five decades can be made. This is of interest because such time-oriented floristic or nomenclatural comparisons are rarely published (e.g., Vorontsova and Simon 2012).

Study Area:

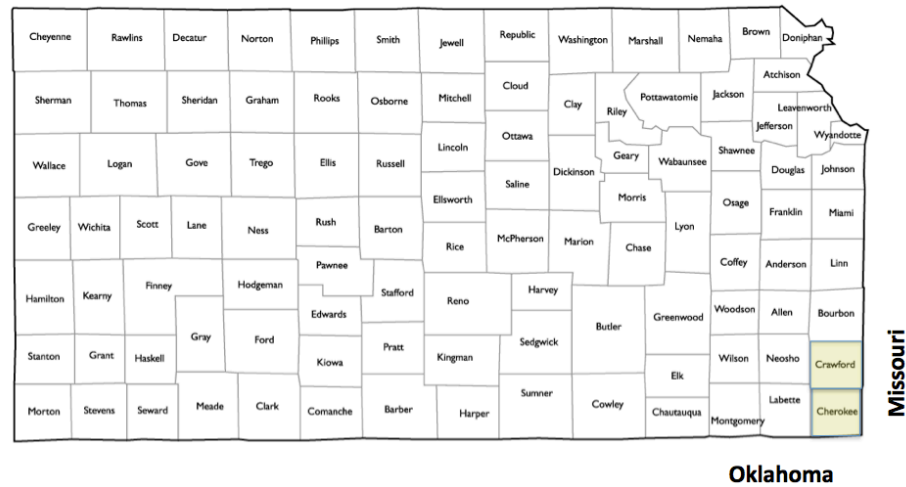


Figure 1: Kansas County Map. Crawford and Cherokee counties are located in the extreme southeast corner of Kansas along the border of Missouri. Cherokee county is bordered by Oklahoma to the south.

Climate:

Southeast Kansas is located in the center of the U.S.A. in a humid continental climactic region, where there is considerable disparity of temperature in the seasons. The summers tend to be hot and winters typically having at least one or several (often protracted) spells of freezing weather. The region can experience weather extremes such as severe thunderstorms, ice storms, and tornados.

Based on data obtained from the National Oceanic and Atmospheric Association (NOAA) weather station (GHCND:USC00141740) in Columbus, KS, the average annual precipitation for Southeast Kansas is approximately 117cm (46 inches), with an average temperature of 14°C (57 °F) (NCDC). The average minimum temperature was -3.33°C

(26°F) and an average maximum temperature of 31°C (88°F). These averages summarize annual data between 1981–2010. Because of the region's relatively flat topography, weather does not vary considerably across the sampling area, and thus only one weather station is cited.

Geography:

Southeast Kansas is a transition area from eastern deciduous forests in the east towards tall grass prairies in its western portion. It comprises three main physiographic regions (Figure 2). Cherokee County contains a triangle of approximately 129 km² of the Ozark Plateau (Buchanan 2010) in its southeastern corner. Its remainder includes the Cherokee Lowlands (Buchanan 2010), which also extend through half of Crawford County. The Osage Cuestas comprise the approximate northern half of Crawford County. Strip pits from surface coal mining that ended in the 1970s are also prevalent throughout the two counties (Buchanan 2010). These physiographic regions are known by other names. The US Geological Survey published a map of Kansas, wherein the Ozark Plateau is referred to as the Springfield Plateau and the Cherokee Lowlands are known as the Cherokee Plains (Chapman et al. 2001)

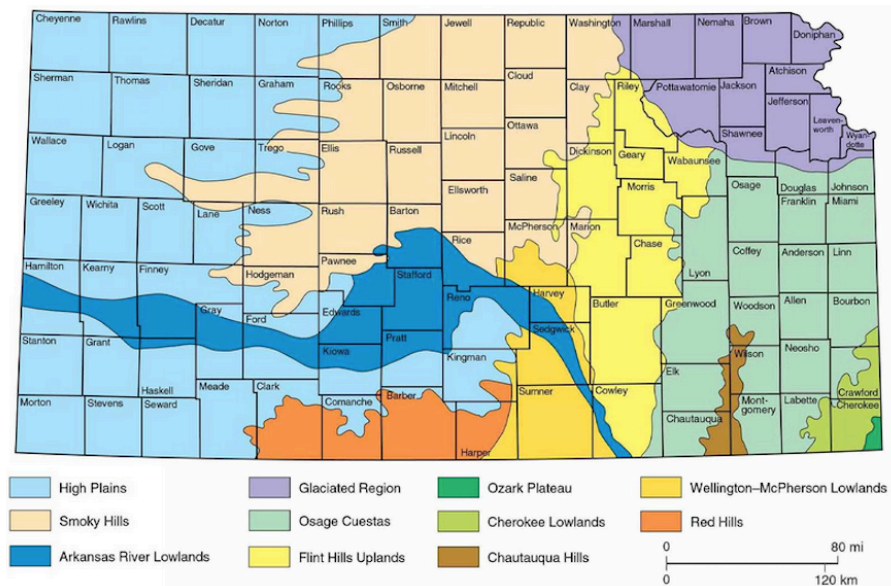


Figure 2. Physiographic Map of Kansas (Kansas Geological Survey map)

Ozark plateau:

The small thumbprint of the Ozark Plateau in southeast Cherokee County is the oldest sediment exposed in Kansas and was formed in the Mississippian era, about 320–360 million years ago (Figure 2) (Buchanan 2010). At that time seas covered the land and carved out tunnels in the rock. The Ozark Plateau bedrock comprises primarily limestone with chert and flint embedded. The chert bedrock is much harder to erode than limestone and so the softer minerals have been eroded down. Higher elevations are covered with this weathered cherty limestone gravels and soils (Buchanan 2010).

Cherokee lowlands:

The Cherokee Lowlands make up most of Cherokee County and extend up into about half of Crawford County (Figure 2). They contain Pennsylvanian shale and sandstone bedrocks. During the Pennsylvanian era, seas and swamps covered Kansas. This region

was on the edge of the seas, where vast swamps could be found. Detritus from the plant material settled in the bottom and later became coal veins (Buchanan 2010). These have been extensively mined in the Cherokee Lowlands. Spoil banks and strips of watery pits are common in the landscape.

Osage cuestas:

The Osage Cuestas make up the other half of Crawford County and a small tract in the northwest corner of Cherokee county (Figure 2). The cuestas are parallel ridges in the landscape that contain gentle slopes on the west side and steeper slopes to the east (Figure 3). These alternate between shale and limestone (Buchanan 2010). The highest elevations in the region occur on the Osage Cuestas.

Land use:

Evidence of past mining is prevalent across Crawford and Cherokee counties. The most visible evidence is the strip pits, which were allowed to become small (but sometimes deep) artificial ponds or lakes, made from strip mining coal and dot much of the landscape today. Coal mining activities dwindled in southeast Kansas in the 1970's after legislation passed to start regulating mining companies and cleanup and eventually cease (Brady 2018).

Prior to 1969, coal companies would extract the coal from the ground and leave the overburden barren with no attempt at surface reclamation. In 1969 the State of Kansas passed the Mined-Land Conservation and Reclamation Act, Kansas Statute Annotated 49-401 et. seq. The Act requires coal companies to obtain permits and follow

reclamation guidelines, as well as submit to monthly monitoring (Kansas Department of Health and Environment: Regulatory Program 2018). In addition, in 1977 the Surface Mining Control and Reclamation ACT (SMCRA) passed, which laid down federal guidelines for coal companies (Kansas Department of Health and Environment: Abandoned Mine Land Program 2018). Companies were required to reclaim the land, meaning they must refill the holes dug for the mines with the soil they extracted and replant the area. The reclamation processing, at least in theory, was monitored closely. Today it is common to find both reclaimed and un-reclaimed mine land in the area.

Most lands with public access areas in southeast Kansas are former strip mines that are now overseen by Kansas Wildlife Parks and Tourism. A total of 47 Mined Land Wildlife Areas occur throughout Crawford and Cherokee counties, which total approximately 14,500 acres (KDWPT pamphlet). Strip pits that were either un-reclaimed or too deep to fill are now filled with water and stocked with fish. Many of these mined areas are currently used for public recreation, with hunting and fishing being the most common uses.

Lead and zinc were common ores extracted through underground mining in the Ozark Plateau. These were mined extensively in Galena in Cherokee County and surrounding areas from 1870–1970. Over 2.9 million tons of zinc and 650 thousand tons of lead were extracted from Kansas during that interval (McCauley et al. 1983). To obtain these ores, the cherty rock common to the Ozark Plateau was crushed and deposited in large piles known as chat piles, which still dot the landscape along the southern border of Kansas (Buchanan 2010). Chat piles are heavily contaminated with lead, zinc, and cadmium. They contribute to significant heavy metal contamination in southern Cherokee

county Kansas, southwest Missouri, and northeast Oklahoma (Beyer et al. 2004; Schmitt et al. 2006; Angelo et al. 2007; Merwe et al. 2011; Manders and Aber 2014).

Now that the mining has passed, farming is the most common land use in southeast Kansas. Most of the region has either been tilled for cropland or used for grazing cattle. The most commonly grown crops are corn, wheat, soybeans, sorghum, red clover, and fescue grasses (*Festuca* and *Schedonorus*) for hay.

Soils:

Silt loams are the most common soils in the Cherokee Lowlands of Cherokee and Crawford counties. By far the most common of these is called the Parsons silt loam. Loams and silty clay loams occur in much lower quantities throughout the region (Web Soil Survey 2016).

Silt loams also dominate the Osage Cuestas, particularly in the northwest corner of Crawford County, where they comprise over 90% of the soil types, but overall the Parsons silt loam is the most common throughout. However, the Parsons silt loam is less abundant than in the Cherokee Lowlands because the cuestas have considerable diversity of soil types, including silt loams, silty clay loams, and silty clays. The center of Crawford County contains the Zaar silty clay, whereas the northeastern corner contains more silty clay loams (Web Soil Survey 2016).

Silt loams are the dominant soil type in the Ozark Plateau in Cherokee County. Of these, the Clarksville very cherty silt loam and Nixa very gravelly silt loam are most prevalent. The rest of the Ozark Plateau is composed of a variety of silt loams, and silty clays typically are absent (Web soil Survey 2016).

CHAPTER III.

MATERIALS AND METHODS

Collecting and processing

Plant specimens were collected from early spring through fall in 2014 and 2015, with a few additional collections in the winter months and in the early spring of 2016. Each county is about the same size. Crawford County is approximately 1541 km² (595 mi²) and Cherokee County is ca. 1533 km² (592 mi²) making a total surveying area of ca. 3074 km² (1187 mi²).

“Intelligent meandering”, a term used of late by some field botanists in western North America (Legler 2010), was the approach this study used to document vascular plants. The author and occasional helpers would visit all habitat types and physiographic regions throughout the growing season. At each collecting site I would meander across the area looking for plant species not previously collected. This method provides the best chance at finding the highest percentage of known and novel taxa. The more experience a botanist has in a given area recognizing different plant taxa and changes in landscape, the more effective intelligent meandering becomes as a technique.

The general procedure involved entire days spent collecting plants. Plants with easily obtainable roots were removed using a mason’s hammer. Cuttings of woody plants of up to ca. 35 cm long were taken from the branch tips. Specimens were placed in

plastic bags according to their collecting location and then on ice in large coolers upon return to the vehicle. Plants remained on ice overnight in coolers before pressing the next day. During the first season, one to several duplicates was collected for most specimens. The following year far less duplicates were collected.

At the lab specimens were sorted by location and prepared for pressing. Most roots were rinsed and trimmed as necessary. Larger plants were trimmed to fit onto herbarium sheets. Following standard procedures, the specimens were folded in newspaper and pressed in a plant press. Presses were dried on herbarium driers for 1-6 days depending on the moisture content of the plants. The wooden, 6-foot driers used 100-Watt incandescent light bulbs lining their bottom to dry the plants. After drying the specimens were sorted by family and then genus. Once sorted they were placed in separate folders and organized by family. All specimens were frozen at ca. -20°C for one week before entering the Sperry Herbarium.

Each physiographic region (ecoregion) was sampled at least once a month, with the Cherokee Lowlands and Osage Cuestas being collected more frequently than the Ozark Plateau given their much greater presence on the landscape. Collecting typically alternated between Crawford and Cherokee counties in a given week to two-week period to augment the probability of collecting whatever was flowering or fruiting at a given time in each county. This was subject to change depending on weather conditions.

When collecting known rare species, such as the orchid *Platanthera lacera*, if fifteen or more individuals were observed, then one specimen was taken as a reference for the T.M. Sperry Herbarium. If greater than thirty plants was observed, then two plants were taken, one each for the T.M. Sperry Herbarium and for exchange material. If the

population exceeded ca. 100 plants then three were collected for exchange and research purposes. To minimize pressure on the populations, most sampled orchids were removed at the apex of the root crown rather than being removed completely from the ground.

Geo-coordinates and elevations were taken for each collecting location using the IOS app, Elevation for Real (EFR), which is produced by homedatasheet.com INC. It uses the USGS web service to provide GPS coordinates for locations with a horizontal confidence radius of 5 m. Sometimes Google Earth™ would be consulted back at the lab if the mobile device was not working or within reach. Comparing this app to Google Earth and another GPS devices used in the herbarium, EFR gave the same reading as the others mentioned with 5 decimal places.

Biases in plant collecting are well documented throughout herbarium collections (Daru et al. 2017). Since southeast Kansas has little elevational change, elevational bias does not apply to our region. Biases that do apply include collection through just the dominant growing seasons, collections near roads and herbaria, spatial bias, and over-representation of collections by a relatively few collectors. Not all of biases can be completely avoided. For example, southeast Kansas mostly is laid out in 1 x 1 mile road grid. Most previous collections are within approximately 100 meters from a road.

To reduce some of the temporal and limited-collector biases, my collections were spaced out throughout the growing season, including some collections made in winter where most plants in this region are dormant. Collections from this project add at least one more significant collector – meaning more than a few hundred specimens – to southeast Kansas (and to the T.M. Sperry Herbarium). This project, with its 6500+ collections, thereby reduces the overshadowing of the only other two prolific collectors

(arbitrarily here of one thousand or more collections) of southeast Kansas: T.M. Sperry and the veterinarian Dr. Holland (from Erie, KS). Stated another way, when fully accessioned and integrated, the specimens from this project will represent slightly over 9% of the holdings of the Sperry Herbarium overall (N. Snow, pers. comm., 2018), but likely they will represent at least 25 percent of collections from Crawford and Cherokee counties, and thereby reduce biases that can come from having only a few ‘heavy hitting’ collectors from a given geographical area.

In order to mitigate some of the spatial sampling bias, an important goal of the study was to collect on private properties, which includes most land in Crawford and Cherokee counties. Many if not most such properties are rarely if ever visited by botanists. Collecting on private property is necessary to maximize geographical and ecological coverage and to maximize the chances of finding all taxa. Therefore, a considerable effort was made to gain access to private properties for collecting purposes, particularly those that were less disturbed and which included prairies, rivers, creeks, floodplains, or rocky outcrops. Access to these properties occurred largely in the spring of 2015. In total, 2816 collections (43.3%) were made on private property. Many landowners allowed access to their properties for scientific research. However, given that more properties and acreage were made available than could be completely surveyed, collecting efforts focused on areas that looked more diverse or different from previously visited localities.

Identification of plant specimens

The three-volume revised *Steiermark's Flora of Missouri* (Yatskievych 1999, 2006, 2013) was the primary authority for making identifications, though secondary identification sources were consulted as needed. With few exceptions, taxonomic names and ranks followed the online version of *Biota of North America* (BONAP; Kartesz 2017), which provides the accepted nomenclature for genera, species, and infraspecific North American taxa as currently curated in the T.M. Sperry Herbarium. The T.M. Sperry Herbarium follows the familial classification of the Angiosperm Phylogeny Group IV (APG IV, 2016) (Snow 2013).

Secondary sources used for identification or confirmation included several volumes of *Flora of North America* (FNA 2016), *Flora of the Great Plains* (GPFA 1986), and *Shinners and Mahler's Illustrated Flora of North Central Texas* (Diggs et al. 1999). Several genera relied on *Flora of North America* (FNA 2016) including *Bromus* (Pavlick and Anderton 2007), *Muhlenbergia* (Peterson 2003), and *Amaranthus* (Mosyakin and Robertson (2003). Of particular note, the treatment in *Flora of North America* was used for the identification of the grass genus *Dichanthelium* (Freckmann & Lelong 2003), but I report the names as recognized by Kartesz (2017). This genus is particularly difficult to identify with a high degree of confidence given that the specific and infraspecific boundaries are still elusive and each taxonomic treatment varies considerably from others. Revisions are still underway (e.g., Thomas 2015; Thomas pers. comm., 2018) and the taxonomic boundaries of some taxa will likely change again.

In the relatively few cases listed below the taxonomic names or ranks were modified from Kartesz (2017) and/or from APG IV (2016), including:

Acer (maple trees) is maintained in Aceraceae based on the work of (Buerki et al. 2010), as opposed to its inclusion in Sapindaceae by Kartesz (2017) and APG IV (2016).

Fumariaceae are placed in Papaveraceae as per APG IV (2016), instead of Fumariaceae (Kartesz 2017).

Bromus commutatus and *Bromus racemosus* (Poaceae) are recognized as distinct following *Flora of North America* (Palvick and Anderton 2007) and Yatskievych (1999) keep these species separated, whereas Kartesz (2017) united them.

Kartesz (2017) recognizes some quadrimorphs, as for example in *Symphyotrichum lanceolatum* (Asteraceae). However, the T.M. Sperry Herbarium does not recognize varieties within subspecies based on the ontological aversion of the Curator (Snow) of recognizing two hierarchical levels of variation within a species, when populations within a species themselves are not expected to be hierarchical (Snow 1997). Therefore, whereas Kartesz (2017) recognizes taxa using both levels, I followed the taxonomy of Yatskievych (2006) in recognizing only subspecies.

Kartesz (2017) recognizes *Prunus munsoniana* and *Prunus rivularis* (Rosaceae). The most recent taxonomic treatment in *Flora of North America* (Rohrer 2014) combines these, recognizing only *P. rivularis*, with the belief that *P. munsoniana*

is merely a larger morphotype of *P. rivularis*. The data supporting the treatment in *Flora of North America* follows that of the phylogenetic work of Rohrer et al. (2008).

Analysis:

All specimen data were entered into an ExcelTM database using DarwinCore data standards (Wieczorek et al. 2012). These data soon will be uploaded to Symbiota (operated by Arizona State University; Gries et al. 2014) and be available through the portal of the *Consortium of Northern Great Plains Herbaria* (<http://ngpherbaria.org/portal/profile/index.php?refurl=/portal/index.php?>) and other online aggregators such as the Global Biodiversity Information Facility (GBIF 2018) in Copenhagen (<http://www.gbif.org/>), the only global database that attempts to collate data from all biological collections worldwide. Thus far about data from approximately 500 specimens have been uploaded.

To confirm all specimens tentatively identified in this project as state and county records, the currently accepted names and synonyms (Kartesz 2017) were checked against several sources. For example, all taxa were checked against online specimen data available from Kansas State University Herbarium and the McGregor Herbarium (University of Kansas). In addition, all names and potential synonyms were checked against Gibson (1963). For state records, specimens were identified initially by myself and double-checked by the thesis advisor (Snow). All possible first reports of state records, except for easily identified specimens, were confirmed using material in the Missouri-Illinois reference collection at the Missouri Botanical Garden during separate

trips in March of 2016 and January of 2017, and by Snow on visits in February and November of 2017. State records also confirmed using comparative material at McGregor Herbarium at University of Kansas in March 2018.

For county records, specimens not listed by currently accepted names or synonyms in the sources listed above, are being accepted as county records and reported as such in this manuscript. All authors reporting state or county records tacitly understand that there may be specimens within other herbaria that represent some of the county records listed. However, given that they are not reported in any of our regional or national sources, they are considered the first official report for such taxa.

As stated above, the T.M. Sperry Herbarium mostly follows the taxonomic concepts of Kartesz (2017), given that he reports the most currently vouchered data from the most sources. For several reasons, no attempt was made for this thesis to determine *when* a taxon first was collected in Kansas. First, the identity of every specimen for each species would have to be re-confirmed (minimally) at Kansas State University, University of Kansas, Emporia State University, Pittsburg State University, Wichita State University, Missouri Botanical Garden, and the New York Botanical Garden, the lattermost of which has most of the earliest collections made by North American collectors in our region.

This level of effort is never achievable in any practical sense, as is widely understood by plant taxonomists (e.g., Snow et al. 2017). Second, in several cases it was not possible to identify specimens to their variety or subspecies. For example, mature fruits of *Arenaria serpyllifolia* (Caryophyllaceae) are necessary to determine the variety, but since many previously collected specimens at PSU and other institutions lacked mature fruit, determinations to the correct variety were not possible.

Reporting

All specimens collected for this work are deposited in the T.M. Sperry Herbarium at Pittsburg State University. Collection numbers include those by the author (*Pryer 1–6425*, including later modifications of adding the suffix *a* and *b*, when multiple taxa were collected for the same specimen number, making a total of 6497). Some collections of Neil Snow were relevant specifically to this project (*Snow 10,736–10,776; 10,785–10,786; 10974; and 10,980*).

This work follows the standards for floristics research proposed by Palmer and Richardson (2012) with regards to the categories of information (and their levels of detail) deemed critical by these authors.

Taxonomic Comparison with the Results of Gibson

Since Gibson (1963) completed the first survey for Crawford County, his specimen data were added for a full list of taxa for Southeast Kansas. The initial plan had been to add the taxa he reported (Gibson 1963) directly to the final list of taxa for Crawford County after updating the names he reported with current nomenclature. However, as explained below, that course of action was modified.

The names of the taxa listed in his work were added into an ExcelTM database. Gibson did report binomial names as well as infraspecific names for some taxa. In cases where he reported both, only the taxa that included the infraspecific names were used in order to reduce redundancy. Nomenclatural queries to BONAP (2018) were used to find the most current name for each taxon. Some taxa were lumped in with others, resulting in

duplicate taxa being reported. Thus, all duplicates were removed and the list of updated nomenclature was generated. It reflects the list of taxa with names he would have reported today, if he had access to today's taxonomic and nomenclatural concepts.

Even accounting for updates in taxonomic and nomenclatural concepts, it eventually became apparent that Gibson's list could not be added directly to the existing list consisting of taxa reported by Kartesz and myself. Gibson reported taxa that neither Kartesz nor myself had reported for either county, which I could not confirm with voucher specimens. In addition, some taxa were well outside of their known geographical ranges. Only vouchered taxa were added to the overall list. An attempt to find all taxa in question within the herbarium was made in order to confirm their identifications. This included any taxa not reported for the state of Kansas, not reported for Crawford county, or those considerably outside of their known distribution. Any specimens that were identified incorrectly were annotated and re-filed accordingly. All names where specimens had been misidentified were updated with correct information in the database, and a new list of vouchered specimens for Gibson was generated. This list is the one used to add Gibson's name to collectors in the overall list of taxa present in both counties. Taxa for which a specimen could not be located are not included in the overall list or numbers for the county, however they are listed separately (**Appendix B: Table 7**).

Nomenclatural Comparison with the Results of Gibson

This part of the study focused on the nomenclature used by Gibson and compared it with names used today, to see how 55 years of changing nomenclature has impacted a local flora.

Gibson's list thus was entered into a database. BONAP (2017) nomenclatural queries were used to determine the current accepted name of each taxa. As with the taxonomic comparison, only the taxa that included the infraspecific names were used when both binomial and infraspecific names were reported separately. As with the taxonomic comparison, all misidentified specimens were updated in the database. This resulted in some duplicate names being removed for the comparison.

In most cases it was clear which name Gibson (1963) would have used. In total, 73 taxa were not included in the comparison. In some cases, the specimen could not be re-identified or could not be located. In other cases, the current accepted taxon name was known, but there was not way to be certain of the name Gibson would have used. This left 852 taxa for nomenclatural comparison.

CHAPTER IV.

RESULTS AND DISCUSSION: FLORA

Taxonomic summary

A total of 1439 unique taxa were found for Crawford (1182) and Cherokee (1275) counties combined based on this project, in addition to vouchered reports from Gibson (1963) and Kartesz (2017). Over 6400 specimens were collected for this project, resulting in 1068 vouchered taxa. The remaining 373 include vouchered specimens from Gibson's work (1963), held in T.M. Sperry Herbarium and those reported in BONAP (Kartesz 2017). Of the 1068 vouchered taxa collected during this project, 500 are reported for the Ozark Plateau, 587 for the Osage Cuestas, and 828 for the Cherokee Lowlands.

The totals include 147 families and 590 genera. Angiosperms make up 98.1% of the taxa with 1411 taxa, 135 families, 571 genera. Ferns and Fern Allies make up 1.7% (10 Families; 16 Genera; 25 taxa) and Gymnosperms 0.2% (2 Families; 3 Genera; 4 taxa) of the overall taxa. A summary of the taxa is listed in **Appendix 2: Table 1**. Of the 1439 taxa, 1188 (82.5%) taxa are considered native to the U.S.A. (Kartesz 2017). Asteraceae and Poaceae were tied as the largest families with 185 taxa, representing 12.8% of the taxa overall. The next largest families and overall percentages comprising the top 10 families were Cyperaceae (92, 6.4%), Fabaceae (92, 6.4%), Rosaceae (50, 3.5%),

Brassicaceae (41, 2.8%), Lamiaceae (40, 2.8%), Apiaceae (30, 2.1%), Plantaginaceae (28, 1.9%), and Ranunculaceae (28, 1.9%).

The five largest families collectively comprise 42% of the taxa. These five families typically comprise a large percentage of the flora in similar floristic studies in the U.S.A. (Gibson 1963; Snow 1994; Schiebout et al. 2008; Legler 2010). The top ten genera make up 13% of the taxa. The top genera are in descending order: *Carex* (55 taxa), *Symphyotrichum* (20), *Solidago* (15), *Dichanthelium* (15), *Juncus* (15), *Euphorbia* (15), *Quercus* (15), *Asclepias* (14), *Viola* (14), and *Desmodium* (13). See Appendix 1, the Annotated Checklist for the complete list of taxa (**Appendix D**).

Non-native and invasive taxa

Non-natives are represented by 252 taxa and comprise 17.5% of the total. Of the total 1439 taxa, 56 (3.9%) are considered noxious by various state agencies (**Appendix A: Table 4**). The noxious taxa are spread across 13 families and 30 genera. Twenty are considered native and 36 non-native. Convolvulaceae had the highest number with 13 noxious taxa. The Cherokee Lowlands had the most noxious taxa recorded with 40. This is not surprising since the Cherokee Lowlands is where most of the strip mining and crop farming occur in the counties. Twenty-eight noxious taxa were recorded for the Osage Cuestas and 16 for the Ozark Plateau.

The large amount of non-natives and invasive species in the area was expected due to the enormous amount of historical disturbance on the landscape. Most of the land throughout both counties either has been mined or used for farming. Historically, southeast Kansas was mostly native tall-grass prairie, however native prairie occurs now

only in small remnant patches, such as the O'Malley Prairies owned by Pittsburg State University, and some patches owned by individuals. Roadsides in southeast Kansas can also hold remnant prairie patches where adjacent fields have been tilled for crops. Gibson (1963) noted that he expected a majority of the prairies he surveyed would disappear, and those in existence then probably mostly have disappeared. Much of his collecting was from the far northwest corner of Crawford County, but most of that area now has been tilled under with few patches of native plants remaining. What remains may be converted in less than 10 years time. Many of the prairie patches left in southeast Kansas are rarely, if ever burned and invasive non-native species including fescue grasses (*Schedonorus* and *Festuca*; Poaceae) and ox-eye daisy (*Leucanthemum*; Asteraceae) are now increasing. Non-burned tall-grass prairie also quickly becomes woody in the absence of fire, and in many areas of southeast Kansas native cedar (*Juniperus virginiana*; Cupressaceae) and green ash (*Fraxinus americana*; Oleaceae) quickly take over. If the prairies are not tilled under, the absence of anthropogenic fire will eventually cause many to disappear. There is hope for a few plots, though, as some landowners take great pride in their prairies.

Callery Pear (*Pyrus calleryana*; Rosaceae), better known as Bradford Pear, was observed and collected naturalizing throughout both counties and is being reported here as a county record for both Crawford and Cherokee. It is a native to China and was first imported to the United States in 1917 for experiments to help combat fire blight in the native pear, *Pyrus communis* (Culley and Hardiman 2007). It has since become a common landscape tree due to its fast growth and beauty throughout the season. However, it is now an invasive species across the eastern half of the U.S.A. It has also been reported in California and Utah. Missouri Department of Conservation, Kansas

Department of Wildlife Parks and Tourism, Kansas Wildlife Federation, the New York State Urban Forestry Department and others are calling for people to stop planting this pear tree, despite its beauty. Efforts in several states, including Kansas, are being made to remove the invasive when it is found to be naturalizing, as it chokes out native trees.

Rare and species of special concern

Many taxa are rare in their distribution in Kansas according to BONAP (Kartesz 2017). A total of 193 (13.4%) taxa (**Appendix A: Table 5**) are reported. They are distributed across 64 families and 135 genera. Of the rare taxa, 92 are recorded for Crawford County and 179 for Cherokee County. Only 93 of the 193 taxa were located and vouchered during recent fieldwork. Of those vouchered for this project, 56 were collected in the Ozark Plateau, 47 in the Cherokee Lowlands, and 17 in the Osage Cuestas. It is not surprising that Cherokee County boasts the most rare taxa for the state, given that a small sliver of the Ozark Plateau is found in the southeast corner. Its particular limestone bedrock occurs nowhere else in Kansas and high plant fidelity is found on calcareous substrates (Yatskievych 1999). The Cherokee Lowlands is also only a small portion of the geology for the state and makes up most of Cherokee County.

Mead's milkweed (*Asclepias meadii*; Apocynaceae) and western prairie fringed orchid (*Platanthera praeclara*; Orchidaceae) are federally listed as Threatened. Their historical ranges extend into southeast Kansas. *Asclepias meadii* has been reported for most of the eastern border of Kansas, including Crawford County. *Platanthera praeclara* has been reported in several of the northeastern counties in Kansas and Crawford County. Despite considerable effort to locate any specimens of these plants, none were found in

either county during this survey. The state of Kansas does not report any plants as species of concern, threatened, or endangered outside of federal listings.

New records for Kansas

A much higher than expected number of state and county records were discovered during this study. A total of 263 county records for Crawford and Cherokee counties are reported, 159 and 104 respectively. These records are represented by 234 unique taxa. Of those, 68 taxa are non-native and 166 are native. Six of the county records are listed as noxious in the state and one of the state records is listed as noxious in surrounding states. Twenty-four of the taxa are listed as rare for the state, 18 of which are new county records for Crawford County and 6 for Cherokee County.

Thirty-three taxa are confirmed for Kansas here for the first time (**Appendix A: Table 3**), representing 21 families and 32 genera. Of these, 21 are considered native, representing a 1.5% increase in known native taxa for the state. Only 12 non-native taxa are reported, representing a 0.9% increase for the state. One of those, *Allium vineale* subsp. *compactum* is considered noxious in surrounding states.

This study documented *Viola affinis*, as a potential state record, though this specimen requires additional confirmation and is not listed as a state or county record. However, it is listed in the overall count of taxa vouchered and is listed as *Viola affinis* “vel aff.” (a standard Latin abbreviation used in systematics meaning “with [morphological] affinities towards”).

Other taxa including *Solanum sarrachoides*, *Eragrostis pilosa* var. *pilosa*, and *Allium vineale* subsp. *compactum* would be considered state records according to

BONAP (Kartesz 2017). However, many specimens of each have been located in T.M. Sperry Herbarium (Pittsburg State University) and R.L. McGregor Herbarium (University of Kansas- KU). In the case of *Eragrostis* and *Allium*, the infraspecific taxa designation is not recognized at R.L. McGregor Herbarium, but was observed among specimens seen there in person (pers. obsv., March 2018). Given so many specimens of each of these taxa, they are not designated as state records, as they have clearly been present for a long time and show only a discrepancy in taxonomic concepts.

Range expansions

Several surprising range expansions were noted. *Stellaria neglecta* (Caryophyllaceae) previously was known most closely from Newton County, Arkansas (ca. 200 km).

Although my identifications first confirmed this taxon in Kansas, this expansion also was noted regionally for work in Ottawa County, Oklahoma (Snow et al. 2017). Interestingly, *Stellaria neglecta* had been recorded only in eleven counties across the U.S.A. (Kartesz 2017). Not surprisingly, because this non-native species has been reported only infrequently across the country, most Floras do not include *S. neglecta* as an option.

Stellaria neglecta looks almost identical morphologically to *S. media*, the common chickweed that occurs across the U.S.A. However, it differs by its conical tubercles on the mature seeds, in contrast to the hemispherical tubercles of *S. media*. This study revealed that *S. neglecta* is quite common in Crawford and Cherokee counties, as was found for Ottawa County, Oklahoma (Snow et al. 2017). Specimens collected for this project and those for Oklahoma (Snow et al. 2017) make up almost half of the collections made of *Stellaria*. It likely is common in the surrounding areas as well.

The second surprising range expansion was that of the non-native *Ficaria verna* subsp. *calthifolia* (Ranunculaceae), with the closest record being St. Louis County, Missouri (ca. 400 km) on the far eastern side of Missouri. Most documented occurrences for the species, including all of the recognized subspecies, are along the eastern coast, with a sparse occurrence into the Midwest. Nesom (2008) has reported the species as naturalizing in Texas, and later noted (Nesom 2015) that the population continues to grow locally. It was first introduced to the U.S.A. in the 19th century as a garden ornamental (Post et al. 2009). The specimens collected in Kansas were growing abundantly on a private property in Cherokee County. The owner remembers the plant as being common on his property throughout most of his lifetime and did not plant it himself (Anonymous, pers. comm.). Its origin in Kansas is unknown, though it is quite clearly naturalizing on that property and is abundant in areas that are neither landscaped nor mowed. It should be pointed out that Post et al. (2009) indicate that *Ficaria verna* and its several subspecies are likely to naturalize where introduced in New England. They did expect that it is possible for persistence in Kansas in low irrigated areas or wetlands, though unirrigated areas of Kansas usually are too arid for such a species to persist. Southeast Kansas has more average annual precipitation than the rest of the state, and this could lead to the species being more likely to become naturalized regionally. The area where these specimens were found was low-lying and moist. The Cherokee Lowlands may provide a good place for this plant to naturalize even more extensively.

The specimen of *Ficaria verna* subsp. *calthifolia* (Ranunculaceae) was taken to Missouri Botanical Garden and compared to material in their Missouri-Illinois Reference collection. It keyed out well using *Flora Europaea* (Tutin 1964), except that the achenes

were not hirsute (although they also were not fully mature). It did match the couplet stating that the “basal sinus of the leaves narrow” quite well, indicating subspecies *calthifolia*. That volume of *Flora Euopaea* (1964) is now 54 years old and writing for the treatment for Ranunculaceae may have been completed several years before the Flora was published (which is typical). However, Post et al. (2009) published a treatment of *Ficaria* in the U.S.A. that included a key to the subspecies of *Ficaria verna* that are present in the county. The specimen keys out well using Post et al. (2009), as the leaves are crowded at the base, not on elongated stems, and are no larger than 4 x 4 cm.

Catalpa ovata (Bignoniaceae) was collected in a pasture in Crawford County. The specimen was a small tree not planted by the owner, but which subsequently was cut down during haying season. A dense patch of suckering shoots was observed the following year in the same place. The last I spoke to the owner, no additional eradication measures were planned (Anonymous, pers. comm.). *Catalpa ovata* has been recorded for 12 states, mostly northern New England states, such as New York, Pennsylvania, and Rhode Island. It also has been reported in Minnesota and Wisconsin. The closest records to Kansas are Boone (ca. 300 km) and Crawford (ca. 325 km) counties in Missouri. It was reported in one county of Nebraska, but has since been considered eradicated from the state (Kartesz 2017).

The records here of *Allium vineale* subsp. *compactum* (Alliaceae) are unsurprising, but its presence is noteworthy. It is considered noxious in surrounding states. This taxon has been reported only in 4 states and 8 counties nationwide (Kartesz 2017), though some of that may be due to taxonomic confusion. *Allium vineale* subsp. *vineale* is widespread throughout the eastern half of the U.S.A., and likely some if not

many of those collections are subspecies *compactum*; moreover, some herbaria may not recognize this taxa at the infraspecific level. For instance, both subspecies were observed in the T.M. Sperry Herbarium and R.L. McGregor Herbarium (University of Kansas). However, the R.L. McGregor Herbarium currently does not recognize subspecies of this taxon.

Leucojum aestivum subsp. *aestivum* (Amaryllidaceae) was also a surprising find as well as a significant range expansion, with the closest record being in Boone County, Missouri (ca. 300 km). It appears to be rather common in some of the southern states, including Louisiana and Alabama, as well having a spotty distribution on the east coast and some occurrences in California and one county in Oregon. The specimens were growing abundantly along a small creek bed in Schlanger Park in Pittsburg, Kansas. Well over 100 plants were observed, and it was clear this was not a planting purposefully made by the city. These plants were hidden in the trees, not out for the public to enjoy.

Salvia farinacea (Lamiaceae) was found on a mined land wildlife area, growing in an area where it would have been unlikely to have been planted purposefully. Several plants were observed in the area. The closest record is Delaware County, Oklahoma (ca. 100 km). This taxon has a limited distribution in the U.S.A., mostly persisting in southern arid areas such as Texas and New Mexico, with records in 7 counties in Oklahoma, 3 in Louisiana, and 2 in Florida. It has been reported and labeled as adventive in Ohio and Connecticut. One specimen was found for Kansas in the R. L. McGregor Herbarium (*Holland 5857*, Neosho County, KS September 4, 1987), though it was listed as a “under cultivation”. This is the first report of the taxa being present outside of cultivation for the state.

Callicarpa americana (Lamiaceae) was a surprising find as well. It has been reported in four counties in Missouri and is listed as rare for the state in BONAP (Kartesz 2017). This taxa is common in the southern portion of the U.S.A., and here is at the end of its northern range. It has been reported slightly farther north in Virginia and Maryland. The closest records regionally are Taney County, Missouri (ca. 170 km), Washington County, Oklahoma (ca. 150 km), and Washington County, Arkansas (ca. 160 km).

Quercus michauxii (Fagaceae) has a southeastern distribution in the U.S.A. The closest previous record is Carroll County, Arkansas (ca. 150 km). It is surprising to find it in Kansas, where it now represents the northwestern extent of its known range. The farthest west it has been reported is Canadian County, Oklahoma, however this county is an outlier.

Extirpated Taxa

Nineteen taxa are considered extirpated from Kansas according to Kartesz (2017) (**Appendix A: Table 2**). However, of those, I collected 4 and Gibson reported 2 more. Because I collected some of the taxa previously considered extirpated in Kansas, all taxa listed as extirpated are included in the tallies and the Annotated Checklist. It is likely that these taxa are quite rare in Kansas, but not gone.

Exclusions

A few taxa encountered but excluded from the tallies are likely remnants from plantings, where no evidence of naturalizing was observed. They are included in the Annotated Checklist and here, but excluded in numerical tallies. The purpose is to note their

presence on the landscape, given that future workers may encounter them. These include: *Castanea mollissima*, *Crocus vernus*, *Chaenomele speciosa*, and *Forsythia suspensa*. Likewise, Gibson (1963) also reported *Broussonetia papyrifera*, *Cornus foemina*, *Viburnum rafinesquianum*, and *Ziziphus jujuba*, which are considered likely plantings, are also removed from overall tallies.

Identification notes

Plantago lanceolata (Plantaginaceae) does key well in the *Steyermark's Flora of Missouri* (Yatskievych 2013). However, it keys well in the *Flora of Nebraska* (Kaul et al. 2011). Many specimens of *P. lanceolata* have bracts that are conspicuously hairy on the midrib, not just the margins. Yatskievych (2013) uses this to separate the species, and *P. lanceolata* will fall out in the wrong part of the key.

Two specimens of *Cyperus lupulinus* (Pryer 5104 and 5666) (Cyperaceae) show a similar discrepancy when trying to identify subspecies. Both specimens have only 3 florets, which would indicate subsp. *macilentus*, but their scales are 4.0 mm and 3.3 mm respectively, which would indicate subsp. *lupulinus*. For this reason, no subspecific designation is given for those. Other specimens showed no discrepancy.

Kartesz (2017) lists *Coreopsis grandiflora* var. *harveyana* (Asteraceae) as being common in the state of Kansas. However, none of the identification materials used for this project, including *Steyermark's Flora of Missouri*, *Flora of North America*, or *Flora of the Great Plains*, provide identification information for varieties. Therefore, I report *Coreopsis grandiflora* without any varietal designations. Likewise for *Lindernia dubia* (Linderniaceae), no source provided a key to identify the infraspecific taxa, although

Kartesz (2017) lists *Linderna dubia* var. *anagallidea*. These taxa therefore, are only listed as the species without any varietal designation. Only the species is included in the overall tallies.

As noted in the Methods section, this work follows the Flora of North America treatment and only reports *Prunus rivularis* (Rosaceae), and not *Prunus munsoniana*, although it should be noted that if they were to be treated separately, both species would have been reported.

One specimen of *Juncus brachycarpus* (Pryer 1830) (Juncaceae) appears to have vegetative bulblets growing from the inflorescence. If so, to my knowledge, this is the first case reported of apomixis occurring in *Juncus* (Grant 1981). The appearance may also be evidence of a fungal endophyte. Fungal endophytes are found more commonly on grasses, though one case was reported for *Juncus effusus* in New Hampshire (Kilpatrick et al. 1961). Clay (1990) suggested that this was probably a case of host range expansion, given that there has only been one other case reported in rushes. One other possibility, and maybe a more likely one, is that the appearance of apomixis is evidence of a gall caused by a psyllid (Patch 1916; Hodkinson 1984; Wier 1986). These galls at maturity have a much different appearance than what is present in this specimen, however it may just be in the early stages of growth.

Finally, I was unable to identify a few specimens of *Desmodium* (Fabaceae) to species since their flowers were much larger than any listed in the identification sources. Though this may be a simple identification, they may also be of interest to someone working with the genus as they may represent a range expansion. These specimens were

identified simply as *Desmodium* sp. (Pryer numbers 1742, 2202, 2412, 2053, 3050, and 3197).

Flora Conclusion

This work represents the first intensive floristic survey ever for Cherokee County and the first comprehensive survey completed for Crawford County in 55 years. The state of Kansas boasts 2302 unique taxa across 163 families and 853 genera (Kartesz 2017). Well over half (63%) of that biodiversity occurs in southeast Kansas. Cherokee county alone reports over half of the known biodiversity in the state with 1275 taxa reported, including those added from this work.

Regional plant collecting in most areas of North America has been in decline since the 1990s (Prather et al. 2004 a,b), despite the fact specimens are being used now more than ever before (Pyke and Ehrlich 2010; Lavoie 2013). Since the *Flora of the Great Plains* publication in 1986 (GPFA 1986), documenting what was known to occur 30 years ago and the extensive work by H.A. Stevens in the 1960s and 70s, relatively few focused collecting efforts have attempted to document plant distributions more recently in the Midwest, with none in southeast Kansas. There is still a persisting notion that we already know what plants occurs in our backyards, but this study suggests otherwise.

Prior to this survey, a total of 1169 unique vascular plant taxa (species, subspecies, and varieties) had been verified for Cherokee Co. and 919 for Crawford Co. (Kartesz 2017), for a total of 1439 of taxa for southeast Kansas. This work increased that value by 18.3% overall and 9.1% for Cherokee county and 22.3% for Crawford County. These percentages reflect the 33 state records, and 263 county records for Crawford and

Cherokee counties. The large number of state and county records is substantially higher than expected.

The higher than expected number of records mirrors the recent results for a relatively small portion of Ottawa County, Oklahoma (Snow et al. 2017), wherein the known number of taxa was increased by 11.2%, and which included 4 confirmed state records and 100 county records. (Note: One reported state record subsequently was re-identified and shown not to be a state record.) These studies in Kansas and Oklahoma challenge any assumption that the current distributions of plant species in the Midwest are well known. Other recent similar works across the nation (Schiebout et al. 2008; Legler 2010, Charboneau 2013) clearly show that continued floristic work is absolutely necessary to document the changing flora.

In addition to documenting the flora, specimens collected for this project significantly impact the T.M. Sperry Herbarium at Pittsburg State University. Georeferenced specimens are the most for data mining in other studies (e.g., James et al. 2018). For this work, I collected 6497 specimens. These data all will be uploaded to Symbiota (operated by Arizona State University; Gries et al. 2014) and be available through the portal of the Consortium of Northern Great Plains Herbaria. All specimens from this project are georeferenced. Of the approximately 64,500 specimens presently in the T.M. Sperry Herbarium, 5332 specimen records (only ca. 8.3%) are databased, and of these, only 34% are georeferenced as of 19 April 2018 (N. Snow, pers. comm.). With the addition of my specimens to the herbarium, the number of georeferenced specimens for the herbarium will increase considerably, and importantly, these will reflect modern collections.

Current floras, such as this, are essential for land managers and policy makers to make informed decision regarding the use of land and legal protections granted to rare species (e.g., Snow et al. 2017). In addition, new specimen data can be used in myriad ways for ecological, genetic, and taxonomic studies (Funk 2004; Chapman 2005; Bebbber et al. 2010; Pyke and Ehrlich 2010; Culley 2013; Lavoie 2013; James et al. 2018), especially since the data is available online.

CHAPTER V.

RESULTS AND DISCUSSION: GIBSON COMPARISON

Comparison of Gibson's list of taxa for Crawford County with the Current List

A direct comparison of the list of taxa exactly as Gibson (1963) reported them and the current list for Crawford County was not possible. After examining his data (Gibson 1963), it was apparent that some taxa would have represented significant range expansions that even today are unlikely for Kansas. It thus was necessary to re-identify specimens associated with questionable distribution records. In addition, upon trying to confirm questionable taxa, it became apparent that voucher specimens were lacking for some of the taxa reported (Gibson 1963).

Although many reported taxa were based on collections that Gibson made, many others were based on other sources. These include specimens in the T.M. Sperry Herbarium, records from *The Flora of Kansas* (Gates 1940), lists that his advisor Sperry provided from Sperry's work in the area, specimens identified by L.J. Gier in the herbarium of William Jewell College in Liberty, Missouri, and reports from Kansas made by R.L. McGregor at the University of Kansas, W.H. Horr (Horr and McGregor 1949), and other published reports.

Given the several known and some potentially unknown sources of information, it is not possible to determine with certainty how many taxa were based on voucher

specimens versus those that Gibson only believed were likely to occur in Crawford County. Gibson (1963) generally did state in his list the sources for each taxon; however, locating and confirming the identification of his vouchers (when known) for each taxon was beyond the scope of this project. Moreover, it likely is no longer possible to confirm them all, given the passage of over five decades and the numerous taxonomic and nomenclatural changes that have occurred in the interim. For instance, Gates (1940), from which many of his reports were based, indicated that some specimens he cited were in the hands of private collections. Gates (1940) is 78 years old at the time of this writing, and although it is possible that these specimens do exist and the records are correct, relocating all vouchers for this project was not possible. Therefore, only the taxa for which a voucher could be found and examined is included in the numerical and nomenclatural comparisons.

Another challenge with the comparisons arose with numerous misidentified vouchers, which required correcting to make meaningful comparisons. As state above, it was not surprising that some specimens were misidentified, because all Floras have sections where the keys and descriptions are challenging to use, based on how they are written, difficult taxonomic boundaries of the taxa themselves, or both. In addition, the older a Flora, the more likely it had inaccuracies and did not account for all taxa currently present in a given area. Finally, the T.M. Sperry Herbarium was considerably smaller in the early 1960s with much less comparative material available for Gibson to view during his identifications.

Taxa considered as non-naturalized ornamentals, including *Broussonetia papyrifera*, *Cornus foemina*, *Prunus persica*, *Viburnum rafinesquianum*, and *Ziziphus jujuba*, were left in Gibson's list of accepted nomenclature and used in the nomenclatural comparison, since he reported their presence and future workers may wish to be aware of their potential presence. In other words, whereas these taxa are removed from the present tallies and taxonomic comparisons, they are included in the Annotated Checklist.

Finally, Gibson (1963: 697) reported *Cyanus segetum* (reported by Gibson as *Centaurea cyanus*; Asteraceae) based on a specimen in the Sperry Herbarium, but no specimens have been located that could have been the basis for that report, including specimens that might have been re-identified at a later time. Three specimens were collected in the 1970s and thus is included in the Annotated Checklist and overall tallies for the county, but since a specimen that Gibson (1963) would have cited has not been found, it was left out of the comparisons below.

Taxonomic Comparison and Discussion

Gibson (1963) reported 1047 taxa (949 species) for Crawford County. It was necessary to try and re-examine 214 of the taxa due to potential discrepancies, as described above in the Methods. Many were difficult to find, given that some surely had been re-identified in the past 55 years. I searched the respective families and potentially similar genera at the Sperry Herbarium to find specimens that Gibson would have cited. After these searches, voucher specimens for 50 taxa (**Appendix B: Table 7**) could not be located and 91 others were misidentified (**Appendix C: Table 8**). Since it was impossible to re-examine the 50

missing specimens, they have been removed from the taxonomic and nomenclatural comparisons and the overall list of taxa present for Crawford County.

I annotated all misidentified specimens and updated the list of taxa Gibson would have reported given the current (updated) identifications (**Appendix D**). Seven of the potentially misidentified specimens could not be re-identified given their condition. For example, some were based merely on sterile twigs, others were missing key diagnostic characters needed for identification, and some specimens of *Rubus* lacked either or both the floricanes and primocanes that are necessary for identification.

After reworking the specimens and updating the list, Gibson (1963) would have reported 852 taxa using the nomenclature available to him at that time. This total reflects the removal of all missing vouchers and updated misidentifications. Not surprisingly, taxonomic concepts have changed significantly in the interim 55 years, and many names used by Gibson (1963) are no longer recognized, or the taxa have been synonymized with other taxa. Based on taxa and nomenclature used today, 798 unique taxa are recognized using *Steyermark's Flora of Missouri* (Yatskievych 1999, 2006, 2013). This updated figure is the one used for the taxonomic comparison below. In other words, the comparisons made for taxonomic purposes are made between the current list and the updated nomenclature that Gibson (1963) would have used if he were working today. Current nomenclature, nativity, and rarity are based on BONAP (Kartesz 2017).

Gibson (1963) reported 108 families and 419 genera; today he would have reported 122 families and 419 genera. The most species-rich families reported by Gibson (1963) were Asteraceae (121 taxa), Poaceae (93), Fabaceae (59), Cyperaceae (50) and Rosaceae (36). Modified for today, his largest families for Crawford County would be

Asteraceae (163 taxa), Poaceae (156), Cyperaceae (79), Fabaceae (77) and Rosaceae (38). The most species-rich genera today would be *Carex* (46), *Juncus* (15), *Symphyotrichum* (14), *Solidago* (13), and *Asclepias* and *Euphorbia* (tied at 12 each).

Based on current fieldwork, reports provided by BONAP (Kartesz 2017), and vouchered specimens of Gibson and others, I report 1182 unique taxa for Crawford County. This value represents a 32.6% increase from the 798 confirmed taxa of Gibson (1963). Of the 1182 taxa, 963 are considered native to North America and 220 as non-native; or ca. 81.6% native and 18.4% non-native. Gibson (1963) reported 674 native and 124 non-native taxa; or, ca. 84.5% native and 15.5% non-native taxa. These new reports reflect a 24.4% increase in native taxa and 8.1% increase in non-native taxa. Gibson also reported 37 noxious and 41 rare. An additional 16 noxious taxa (a 1.4% increase) and 57 rare taxa (a 4.8% increase) are reported here. A side-by-side comparison is listed in **Appendix C: Table 6**.

Not surprisingly, the flora for Crawford County has changed considerably in 55 years time with a 32.6% increase in total vouchered taxa as well as a 24.4% increase in native taxa since 1963. Some increase in known taxa is to be expected in our region since it is a transition zone between native tallgrass prairie and eastern deciduous forest. This environmental convergence will certainly be a point where range expansions are more likely. Anthropogenic landscape changes dominate Crawford County. As such, an increase in non-native taxa was more expected than the increase natives, with a little over 8.1% and an added 16 noxious taxa. These large percentages, however, are unfortunately indicative of a flora that has seen a drop in plant collecting and highlights the necessity

for continued fieldwork through the decades. Without such work, there is no way to know with confidence species distributions or document range expansions or contractions.

Floras should present data that are verifiable and repeatable. However, they are only repeatable if the vouchers can be found and re-examined and the nomenclature tracked. This study highlights the need for all floras to cite where vouchers collected for a project are deposited, where added specimen data originates, and the nomenclatural authorities used. These small changes make the data obtained from a flora repeatable for future work.

Nomenclatural Comparison and Discussion

It is important to stress that taxonomic and nomenclatural comparisons are different, thus resulting in different numbers.

Gibson (1963) relied primarily on *Gray's Manual of Botany* (Fernald 1950) but stated that other sources were consulted freely. Given that the T.M. Sperry Herbarium was organized (Sperry 1951) following the then-current *Gray's Manual of Botany*, Fernald (1950) clearly was his source of nomenclature (Gibson 1963).

The 50 missing vouchers (see above) were removed from this comparison. As for the 91 misidentifications, most were taxa Gibson had already reported in his list, so the name he would have used was not in question. Given that the other names were not in his list, they were compared to *Gray's Manual of Botany* (Fernald 1950) to determine what name Gibson would have used, if possible. Many genera have seen taxonomic revisions in the past 55 years, including names recognized today that were not used in 1963. For example, a specimen Gibson identified as *Amaranthus torreyi* was re-identified as

Amaranthus tuberculatus. *Amaranthus torreyi* is not an old name for this taxon, and *A. tuberculatus* was not reported in *Gray's Manual*. Therefore, it is unknown what name should be attributed to this specimen in the nomenclatural comparison. Given such discrepancies and the fact that some specimens that could not be re-identified as stated above, sixteen names could not be tracked back to the name Gibson would have used with any confidence, and as such have been removed from the nomenclatural comparison.

Though Gibson (1963) reported 1047 unique taxa (949 species), after re-identifications and the absence of vouchers for certain taxa, only 852 taxa could be confidently reported as taxa Gibson (1963) would have recognized using nomenclature from *Gray's Manual of Botany* (Fernald 1950). These 852 were used to make this nomenclatural comparison.

The changes were tallied for genus, specific epithet, infraspecific taxa changes, and a Latinized binomial (combined generic and specific epithet changes). The number of infraspecific names that were removed or added also were tallied. This resulted in 110 generic changes, 93 changes in specific epithet, and 167 infraspecific changes. For the infraspecific taxa, 92 were removed, 51 added, and the remaining 24 were simply changes.

Excluding familial and infraspecific taxa changes, a combined 193 changes occurred at the genus and level of specific epithet, resulting in a 22.6% change in accepted Latinized binomial species names. This is consistent with the findings in a similar study of accepted species names in the grass family, Poaceae, where 10.56% and 9.89% of the names had been changed for the family based on two different databases

and 16.89% and 18.09% for two well-studied tribes in Poaceae (Vorontsova & Simon 2012). As per personal communication by those two authors with others, 7–10% names of conifers and 10–20% names of ferns are expected to also have changed (Vorontsova & Simon 2012).

Following the methodology of phylogenetic systematics, plant families now mostly have been reconfigured to reflect monophyletic groups (APG IV). Familial changes were not tallied given the significant changes of The Angiosperm Phylogeny Group (Chase & Reveal 2009; Vorontsova & Simon 2012; APG IV: Angiosperm Phylogeny Group, 2016). In general, the number of recognized families has increased with successive versions of APG classifications.

In contrast, generic-level monophyletic classifications are lacking for many angiosperm genera. Ongoing and future research leading to monophyletic generic classifications will continue for many years henceforth. Revisionary work leading to monophyletic genera typically results in changes in generic and (often) species delimitations, and ultimately many of the accepted Latinized binomials and the names that floristic workers report. The name changes also impact those reported in databases and anyone who uses such data. Cross-walking nomenclature from different databases or printed sources remains a challenge in some fields, but also reflects more current and (hopefully) accurate representations of evolutionary history and classification.

Herbaria too have a responsibility to continually update specimens to reflect current accepted classifications and nomenclature. A failure to do so has consequences for those who use the herbarium to study plants or confirm identifications. The figure of nearly one quarter of the Latinized binomials changing in 55 years time on the small flora

of Crawford County is suggestive of the significant curatorial efforts needed in the T.M. Sperry Herbarium (and all herbaria) to make their organization and nomenclature reflect currently accepted classifications. Ongoing curation is necessary for any herbarium to stay current and provide the best resource possible for research and outreach. The estimates of name changes reported here and by Vorontsova and Simon (2009) will help curators and collections managers to plan realistically when assessing the time needed to update curatorial standards.

CHAPTER VI.

FUTURE WORK

No attempt was made in this work to determine why the reported flora of Crawford County changed over 55-years time. Additional analyses will be needed to tease out potential causes. One potential avenue of research would be to look at the climatic and land use changes that may have impacted species distributions in the area. In particular, the phenological data recorded on these specimens may be used to determine how flowering and fruiting times have changed through the years.

As for modern floristic work, more refined studies focusing on mined land areas may be useful. It is often perceived that mined lands in our area are so disturbed that the floral biodiversity is relatively low and that native taxa are not likely to occur on them as frequently. The use of floristic quality assessments, analyses of species richness, and the production of lists of taxa occurring on mined land areas would be useful to managers of these areas.

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APPENDIX

Appendix A: Flora Tables

Table I. Summary Table: Taxa reported herein for Cherokee and Crawford counties Kansas

	Number of Families	Number of Genera	Total number of taxa	Native	Non-Native
Ferns & Fern Allies	10	16	25	25	0
Gymnosperms	2	3	4	4	0
Angiosperms	135	572	1411	1159	252

Table II. Extirpated Taxa: Taxa reported as extirpated by Kartesz (2017) from Kansas. This indicates the reports found in this study (Pryer Voucher), those by Gibson (1963) (Gibson Voucher), and the historical record reports (Kartesz 2017) Those shown with an asterisk (*) are county records.

Taxa	Pryer Voucher	Gibson Voucher	Historical Kansas County Reports
<i>Astragalus crassicaarpus</i> var. <i>trichocalyx</i> *	Crawford		Cherokee
<i>Clitoria mariana</i>			Cherokee, Douglas, Linn, Miami, Wyandotte
<i>Crataegus coccinioides</i>			Cherokee, Riley
<i>Dichantheium boscii</i>			Cherokee, Montgomery
<i>Endodeca serpentaria</i>			Cherokee
<i>Hydrangea arborescens</i>			Cherokee
<i>Juncus validus</i> *	Crawford		Cherokee, Chautauqua, Harvey
<i>Krigia biflora</i>			Cherokee
<i>Myriopteris tomentosa</i>			Cherokee
<i>Phacelia gilioides</i>		X	Allen, Bourbon, Cherokee, Cowley, Crawford, Labette, Montgomery
<i>Pteridium aquilinum</i> var. <i>pseudocaudatum</i>			Cherokee
<i>Pycnanthemum albescens</i>			Cherokee
<i>Rumex hastatulus</i>			Cherokee, Chautauqua, Woodson
<i>Silene regia</i>			Cherokee, Douglas
<i>Silene virginica</i>		X	Crawford
<i>Spiranthes lucida</i> *	Cherokee		Cloud
<i>Thalictrum dioicum</i> *	Cherokee		Doniphan, Miami
<i>Trifolium carolinianum</i>	Cherokee		Cherokee

Table III. State Records: Records for the state of Kansas and the counties in which they were collected.

Family	Species Name	County collected	Nativity
Altingiaceae	<i>Liquidambar styraciflua</i>	Cherokee; Crawford	Native
Amaryllidaceae	<i>Leucojum aestivum</i> subsp. <i>aestivum</i>	Crawford	Non-Native
	<i>Narcissus poeticus</i>	Crawford	Non-Native
Aquifoliaceae	<i>Ilex opaca</i> var. <i>opaca</i>	Crawford	Native
Araliaceae	<i>Hedera helix</i>	Crawford	Non-Native
Asteraceae	<i>Euthamia leptocephala</i>	Crawford	Native
	<i>Fleischmannia incarnata</i>	Cherokee	Native
	<i>Solidago arguta</i> var. <i>caroliniana</i>	Cherokee	Native
Bignoniaceae	<i>Catalpa ovata</i>	Crawford	Non-Native
Blechnaceae	<i>Woodwardia areolata</i>	Crawford	Native
Boraginaceae	<i>Myosotis macrosperma</i>	Crawford	Native
Brassicaceae	<i>Cardamine hirsuta</i>	Cherokee; Crawford	Non-Native
	<i>Erysimum capitatum</i>	Crawford	Native
Caryophyllaceae	<i>Arenaria serpyllifolia</i> var. <i>tenuoir</i>	Cherokee	Non-Native
	<i>Stellaria neglecta</i>	Cherokee; Crawford	Non-Native
Cyperaceae	<i>Carex amphibola</i>	Crawford	Native
	<i>Scirpus cyperinus</i>	Crawford	Native
Fabaceae	<i>Desmodium viridiflorum</i>	Cherokee	Native
	<i>Lespedeza frutescens</i>	Cherokee	Native
Fagaceae	<i>Quercus falcata</i>	Cherokee	Native
	<i>Quercus michauxii</i>	Cherokee	Native
Hypericaceae	<i>Hypericum gymnanthum</i>	Crawford	Native
Juncaceae	<i>Juncus secundus</i>	Crawford	Native
Lamiaceae	<i>Callicarpa americana</i>	Crawford	Native
	<i>Salvia farinacea</i>	Crawford	Native
Pinaceae	<i>Pinus taeda</i>	Cherokee	Native
Poaceae	<i>Bromus sterilis</i>	Cherokee; Crawford	Non-Native
	<i>Elymus riparius</i>	Cherokee; Crawford	Native
	<i>Microstegium vimineum</i>	Cherokee	Non-Native
	<i>Sorghum bicolor</i> subsp. <i>drummondii</i>	Cherokee	Non-Native
Ranunculaceae	<i>Ficaria verna</i> subsp. <i>calthifolia</i>	Cherokee	Non-Native
Rhamnaceae	<i>Rhamnus japonica</i>	Crawford	Non-Native
Salicaceae	<i>Populus deltoides</i> subsp. <i>deltoides</i>	Crawford	Native

Table IV. Noxious Taxa: Taxa considered noxious in the state of Kansas and the counties in which they are reported in this work. Those shown with (*) are county records.

Taxa	Nativity	Reported County
<i>Abutilon theophrasti</i>	Non-Native	Crawford, Cherokee
<i>Aegilops cylindrica</i>	Non-Native	Crawford, Cherokee,
<i>Alliaria petiolata</i> *	Non-Native	Crawford
<i>Allium canadense</i> var. <i>canadense</i>	Native	Crawford, Cherokee
<i>Allium canadense</i> var. <i>lavendulare</i>	Native	Crawford, Cherokee
<i>Allium canadense</i> var. <i>mobliense</i>	Native	Crawford, Cherokee
<i>Allium sativum</i>	Non-Native	Crawford, Cherokee
<i>Allium stellatum</i> *	Native	Crawford, Cherokee
<i>Allium vineale</i>	Non-Native	Crawford, Cherokee
<i>Allium vineale</i> subsp. <i>compactum</i> *	Non-Native	Crawford, Cherokee
<i>Allium vineale</i> subsp. <i>vineale</i>	Non-Native	Crawford, Cherokee
<i>Brassica juncea</i>	Non-Native	Crawford
<i>Brassica nigra</i>	Non-Native	Crawford
<i>Brassica rapa</i> var. <i>rapa</i> *	Non-Native	Crawford
<i>Bromus racemosus</i>	Non-Native	Crawford, Cherokee
<i>Bromus secalinus</i>	Non-Native	Crawford, Cherokee
<i>Calystegia macounii</i> *	Native	Cherokee
<i>Calystegia sepium</i> subsp. <i>angulata</i> *	Native	Crawford, Cherokee
<i>Calystegia silvatica</i> subsp. <i>fraterniflora</i>	Native	Crawford, Cherokee
<i>Carduus nutans</i>	Non-Native	Crawford, Cherokee
<i>Cirsium arvense</i>	Non-Native	Crawford
<i>Cirsium vulgare</i>	Non-Native	Crawford, Cherokee
<i>Convolvulus arvensis</i>	Non-Native	Crawford, Cherokee
<i>Cuscuta cuspidata</i>	Native	Crawford, Cherokee
<i>Cuscuta glomerata</i>	Native	Crawford, Cherokee
<i>Cuscuta gronovii</i>	Native	Crawford, Cherokee
<i>Cuscuta polygonorum</i>	Native	Crawford, Cherokee
<i>Cynanchum laeve</i>	Native	Crawford, Cherokee
<i>Daucus carota</i>	Non-Native	Crawford, Cherokee
<i>Elymus repens</i> *	Non-Native	Crawford, Cherokee
<i>Erysimum repandum</i>	Non-Native	Crawford, Cherokee
<i>Fallopia convolvulus</i>	Non-Native	Crawford, Cherokee
<i>Ipomoea coccinea</i>	Non-Native	Crawford
<i>Ipomoea hederacea</i>	Native	Crawford, Cherokee

<i>Ipomoea lacunosa</i>	Native	Crawford, Cherokee
<i>Ipomoea pandurata</i>	Native	Crawford, Cherokee
<i>Ipomoea purpurea</i>	Non-Native	Crawford, Cherokee
<i>Lespedeza cuneata</i>	Non-Native	Crawford, Cherokee
<i>Leucanthemum vulgare</i>	Non-Native	Crawford, Cherokee
<i>Plantago lanceolata</i>	Non-Native	Crawford, Cherokee
<i>Pueraria montana</i> var. <i>lobata</i>	Non-Native	Crawford, Cherokee
<i>Rosa multiflora</i>	Non-Native	Crawford, Cherokee
<i>Rumex acetosella</i>	Non-Native	Crawford, Cherokee
<i>Rumex altissimus</i>	Native	Crawford, Cherokee
<i>Rumex crispus</i> subsp. <i>cirsus</i>	Non-Native	Crawford, Cherokee
<i>Rumex obtusifolius</i>	Non-Native	Cherokee
<i>Rumex patientia</i>	Non-Native	Cherokee
<i>Rumex pulcher</i>	Non-Native	Crawford, Cherokee
<i>Setaria faberi</i>	Non-Native	Crawford, Cherokee
<i>Sinapis arvensis</i>	Non-Native	Crawford, Cherokee
<i>Solanum carolinense</i> var. <i>carolinense</i>	Native	Crawford, Cherokee
<i>Solanum elaeagnifolium</i>	Native	Cherokee
<i>Solanum ptychanthum</i>	Native	Crawford, Cherokee
<i>Sorghum halepense</i>	Non-Native	Crawford, Cherokee
<i>Tanacetum vulgare</i>	Non-Native	Crawford
<i>Thlaspi arvense</i>	Non-Native	Crawford, Cherokee
<i>Xanthium strumarium</i>	Non-Native	Crawford, Cherokee

Appendix B. Gibson comparison tables

Table V. Crawford County Summary:
Taxonomic summary of data for Gibson and Pryer

	Gibson	Pryer
Families	122	132
Genera	419	518
Total number of taxa	798	1182
Native taxa	674	963
Non-Native taxa	124	220
Noxious taxa	37	53
Rare taxa	41	98

Table VI. Missing Vouchers for Gibson Gibson specimens that could not be located for comparison.* *Salix alba* specimens are obviously horticultural plantings.

Family	Name Reported by Gibson	Current Accepted Name
Alismataceae	<i>Echinodorus cordifolius</i>	<i>Echinodorus cordifolius</i>
Apocynaceae	<i>Asclepias amplexicaulis</i>	<i>Asclepias amplexicaulis</i>
	<i>Asclepias auriculata</i>	<i>Asclepias auriculata</i>
Cactaceae	<i>Neomammillaria similis</i>	<i>Escobaria missouriensis</i>
Caryophyllaceae	<i>Arenaria lateriflora</i>	<i>Moehringia lateriflora</i>
	<i>Cerastium arvense</i>	<i>Cerastium arvense</i>
	<i>Cerastium virgatum</i>	<i>Cerastium virgatum</i>
Asteraceae	<i>Aster laevis</i> forma <i>beckwithiae</i>	<i>Symphyotrichum laeve</i>
	<i>Cirsium discolor</i>	<i>Cirsium discolor</i>
	<i>Coreopsis tripteris</i>	<i>Coreopsis tripteris</i>
	<i>Crepis capillaris</i>	<i>Crepis capillaris</i>
	<i>Eupatorium maculatum</i>	<i>Eupatorium maculatum</i>
Cucurbitaceae	<i>Lagenaria vulgaris</i>	<i>Lagenaria vulgaris</i>
Cyperaceae	<i>Carex flaccosperma</i>	<i>Carex flaccosperma</i>
	<i>Cyperus lancastricensis</i>	<i>Cyperus lancastricensis</i>
	<i>Rhynchospora corniculata</i>	<i>Rhynchospora corniculata</i>
Euphorbiaceae	<i>Crotonopsis elliptica</i>	<i>Croton michauxii</i> var. <i>ellipticus</i>
	<i>Euphorbia stictospora</i>	<i>Euphorbia stictospora</i>
Fagaceae	<i>Quercus michauxii</i>	<i>Quercus michauxii</i>
Poaceae	<i>Echinochloa crus-galli</i>	<i>Echinochloa crus-galli</i>
	<i>Eragrostis multicaulis</i>	<i>Eragrostis pilosa</i> var. <i>pilosa</i>
	<i>Eragrostis pilosa</i>	<i>Eragrostis pilosa</i>
	<i>Muhlenbergia asperifolia</i>	<i>Muhlenbergia asperifolia</i>
	<i>Sphenopholis nitida</i>	<i>Sphenopholis nitida</i>
Haloragaceae	<i>Myriophyllum pinnatum</i>	<i>Myriophyllum pinnatum</i>

Juglandaceae	<i>Carya glabra</i>	<i>Carya glabra</i>
Lamiaceae	<i>Lycopus asper</i>	<i>Lycopus asper</i>
	<i>Physostegia intermedia</i>	<i>Physostegia intermedia</i>
	<i>Scutellaria incana</i>	<i>Scutellaria incana</i>
Fabaceae	<i>Dalea alopecuroides</i>	<i>Dalea leporina</i>
	<i>Petalostemum pulcherrimum</i>	<i>Dalea compacta</i> var. <i>pubescens</i>
	<i>Psoralea tenuiflora</i> var. <i>floribunda</i>	<i>Orbexilum pedunculatum</i> var. <i>psoralioides</i>
Lentibulariaceae	<i>Utricularia vulgaris</i>	<i>Utricularia macrorhiza</i>
Melanthiaceae	<i>Zigadenus nuttallii</i>	<i>Toxicoscordion nuttallii</i>
Linaceae	<i>Linum virginianum</i>	<i>Linum virginianum</i>
Lythraceae	<i>Ammannia auriculata</i>	<i>Ammannia auriculata</i>
Onagraceae	<i>Jussiaea decurrens</i>	<i>Jussiaea decurrens</i>
	<i>Oenothera serrulata</i>	<i>Oenothera serrulata</i>
Polygonaceae	<i>Polygonum erectum</i>	<i>Polygonum erectum</i>
Rhamnaceae	<i>Rhamnus cathartica</i>	<i>Rhamnus cathartica</i>
Rubiaceae	<i>Galium verum</i>	<i>Galium verum</i>
	<i>Houstonia caerulea</i> forma <i>albiflora</i>	<i>Houstonia caerulea</i>
Salicaceae	<i>Salix alba</i> var. <i>calva</i>	<i>Salix alba</i> *
	<i>Salix alba</i> var. <i>vitellina</i>	<i>Salix alba</i> *
Sapindaceae	<i>Koeleruteria paniculata</i>	<i>Koeleruteria paniculata</i>
Phrymaceae	<i>Mimulus ringens</i>	<i>Mimulus ringens</i> var. <i>ringens</i>
Plantaginaceae	<i>Penstemon albidus</i>	<i>Penstemon albidus</i>
	<i>Penstemon grandiflorus</i>	<i>Penstemon grandiflorus</i>
	<i>Veronica officinalis</i>	<i>Veronica officinalis</i>
Solanaceae	<i>Solanum interius</i>	<i>Solanum interius</i>

Appendix C: Mis-Identified Taxa

Table VII. Mis-Identified Taxa: Ninety-one specimens were incorrectly identified by Gibson. This table shows the name originally reported by Gibson in 1963 and the current name that would be accepted if that identification were correct, if possible. The final column gives the current identification.

Current Family	Name fide Gibson	Current Name fide Gibson	Current Names: based on New IDs
Acanthaceae	<i>Ruellia caroliniensis</i>	<i>Ruellia caroliniensis</i>	<i>Ruellia humilis</i>
Adoxaceae	<i>Viburnum recognitum</i>	<i>Viburnum recognitum</i>	<i>Viburnum</i>
Agavaceae	<i>Yucca filamentosa</i>	<i>Yucca filamentosa</i>	<i>rafinesquianum</i>
Alismataceae	<i>Sagittaria cuneata</i>	<i>Sagittaria cuneata</i>	<i>Yucca flaccida</i>
	<i>Sagittaria rigida</i>	<i>Sagittaria rigida</i>	<i>Sagittaria brevirostra</i>
Alliaceae	<i>Allium drummondi</i>	<i>Allium drummondi</i>	<i>Sagittaria ambigua</i>
			<i>Allium canadense</i> var. <i>mobilen</i>
Amaranthaceae	<i>Amaranthus torreyi</i>	<i>Amaranthus arenicola</i>	<i>Amaranthus tuberculatus</i>
	<i>Chenopodium boscianum</i>	<i>Chenopodium berlandieri</i> var. <i>boscianum</i>	<i>Chenopodium standleyanum</i>
	<i>Corispermum nitidum</i>	<i>Corispermum welshii</i>	<i>Veronica arvensis</i>
Anacardiaceae	<i>Rhus radicans</i> var. <i>rydbergii</i>	<i>Toxicodendron rydbergii</i>	<i>Toxicodendron radicans</i> subsp. <i>negundo</i>
	<i>Rhus radicans</i> var. <i>vulgaris</i>	<i>Toxicodendron rydbergii</i>	<i>Toxicodendron radicans</i> subsp. <i>negundo</i>
	<i>Thaspium pinnatifidum</i>	<i>Thaspium pinnatifidum</i>	<i>Thaspium trifoliatum</i> var. <i>aureum</i>
Apiaceae	<i>Thaspium trifoliatum</i> var. <i>flavum</i>	<i>Thaspium trifoliatum</i> var. <i>aureum</i>	<i>Polytaenia nuttallii</i>
	<i>Torilis japonica</i>	<i>Torilis japonica</i>	<i>Torilis arvensis</i> subsp. <i>arvensis</i>
	<i>Antennaria plantaginifolia</i>	<i>Antennaria plantaginifolia</i>	<i>Antennaria neglecta</i>
Asteraceae	<i>Aster tradescantii</i>	<i>Symphyotrichum tradescantii</i>	<i>Symphyotrichum lanceolatum</i>
	<i>Aster vimineus</i> var. <i>subdumosus</i>	<i>Symphyotrichum racemosum</i>	<i>Symphyotrichum pilosum</i>
	<i>Erigeron pulchellus</i>	<i>Erigeron pulchellus</i>	<i>Erigeron tenuis</i>
	<i>Helianthus microcephalus</i>	<i>Helianthus microcephalus</i>	<i>Helianthus strumosus</i>
	<i>Krigia virginica</i>	<i>Krigia virginica</i>	<i>Nothocalais cuspidata</i>
	<i>Lactuca ludoviciana</i>	<i>Lactuca ludoviciana</i>	<i>Sonchus asper</i>
	<i>Solidago tenuifolia</i> var. <i>pycnocephala</i>	<i>Solidago tenuifolia</i> var. <i>pycnocephala</i>	<i>Euthamia gymnospermoides</i>
	<i>Sonchus oleraceus</i>	<i>Sonchus oleraceus</i>	<i>Sonchus arvensis</i>
	<i>Thelesperma trifidum</i>	<i>Thelesperma filifolium</i> var. <i>filifolium</i>	<i>Coreopsis grandiflora</i>
	<i>Tragopogon pratensis</i>	<i>Tragopogon pratensis</i>	<i>Tragopogon dubius</i>
	<i>Vernonia altissima</i>	<i>Vernonia altissima</i>	<i>Vernonia arkansana</i>
	<i>Arenaria stricta</i>	<i>Minuartia michauxii</i>	<i>Minuartia patula</i>
Caryophyllaceae	<i>Cerastium nutans</i>	<i>Cerastium fastigiatum</i>	<i>Cerastium brachypodum</i>

Commelineaceae	<i>Tradescantia virginiana</i>	<i>Tradescantia virginiana</i>	<i>Tradescantia hirsutiflora</i>
Convolvulaceae	<i>Cuscuta campestris</i>	<i>Cuscuta campestris</i>	<i>Cuscuta pentagona</i> var. <i>pentagona</i>
Cornaceae	<i>Cornus racemosa</i> <i>Cornus stolonifera</i>	<i>Cornus racemosa</i> <i>Cornus stolonifera</i>	<i>Cornus foemina</i> Could not re-identified
Cupressaceae	<i>Juniperus communis</i>	<i>Juniperus communis</i>	<i>Juniperus virginiana</i>
Cyperaceae	<i>Carex albolutescens</i> <i>Carex amphibola</i> <i>Carex crawei</i> <i>Carex emoryi</i> <i>Carex hystricina</i> <i>Carex lupuliformis</i> <i>Carex lurida</i> <i>Carex rosea</i> <i>Carex stipata</i> <i>Eleocharis olivacea</i>	<i>Carex albolutescens</i> <i>Carex amphibola</i> <i>Carex crawei</i> <i>Carex emoryi</i> <i>Carex hystricina</i> <i>Carex lupuliformis</i> <i>Carex lurida</i> <i>Carex rosea</i> <i>Carex stipata</i> <i>Eleocharis olivacea</i>	<i>Carex brevior</i> <i>Carex grisea</i> <i>Carex blanda</i> <i>Carex shortiana</i> <i>Carex frankii</i> <i>Carex lupulina</i> <i>Carex lupulina</i> <i>Carex radiata</i> <i>Carex oklahomensis</i> <i>Eleocharis compressa</i>
Euphorbiaceae	<i>Acalypha gracilens</i> <i>Croton lindheimeri</i> <i>Euphorbia chamaesyce</i> <i>Euphorbia heterophylla</i> <i>Euphorbia vermiculata</i> <i>Tragia urticifolia</i>	<i>Acalypha gracilens</i> <i>Croton lindheimeri</i> <i>Euphorbia prostrata</i> <i>Euphorbia heterophylla</i> <i>Euphorbia vermiculata</i> <i>Tragia urticifolia</i>	<i>Acalypha monoccocca</i> <i>Croton capitatus</i> <i>Euphorbia humistrata</i> <i>Euphorbia dentata</i> <i>Euphorbia nutans</i> <i>Tragia betenicifolia</i>
Fabaceae	<i>Astragalus racemosus</i> <i>Schrankia microphylla</i>	<i>Astragalus racemosus</i> <i>Schrankia nuttallii</i>	<i>Astragalus canadensis</i> <i>Mimosa nuttalli</i>
Hypericaceae	<i>Hypericum ellipticum</i> <i>Hypericum punctatum</i> var. <i>pseudomaculatum</i> <i>Monarda punctata</i> var. <i>lasiodonta</i>	<i>Hypericum ellipticum</i> <i>Hypericum pseudomaculatum</i> <i>Monarda citriodora</i>	<i>Hypericum sphaerocarpaceum</i> <i>Hypericum punctatum</i> <i>Monarda citriodora</i>
Lamiaceae	<i>Pycnanthemum virginianum</i>	<i>Pycnanthemum virginianum</i>	<i>Pycnanthemum tenuifolium</i>
Najadaceae	<i>Najas flexilis</i>	<i>Najas flexilis</i>	<i>Najas guadalupensis</i>
Onagraceae	<i>Oenothera biennis</i> var. <i>hirsutissima</i>	<i>Oenothera elata</i> var. <i>hirsutissima</i>	<i>Oenothera villosa</i>
Orchidaceae	<i>Habenaria blephariglottis</i> <i>Spiranthes cernua</i> var. <i>ochroleuca</i>	<i>Platanthera blephariglottis</i> <i>Spiranthes ochroleuca</i>	<i>Platanthera praeclara</i> <i>Spiranthes cernua</i>
Orobanchaceae	<i>Gerardia aspera</i> <i>Gerardia skinneriana</i>	<i>Agalinis aspera</i> <i>Agalinis skinneriana</i>	<i>Agalinis fasciculata</i> <i>Agalinis fasciculata</i>
Papaveraceae	<i>Corydalis aurea</i>	<i>Corydalis aurea</i>	<i>Corydalis micrantha</i>
Plantaginaceae	<i>Callitriche palustris</i> <i>Plantago purshii</i> <i>Plantago rhodosperma</i>	<i>Callitriche palustris</i> <i>Plantago patagonica</i> <i>Plantago rhodosperma</i>	<i>Callitriche heterophylla</i> var. <i>heterophylla</i> <i>Plantago virginica</i> <i>Plantago virginica</i>
Poaceae	<i>Diarrhena americana</i> <i>Muhlenbergia sylvatica</i> <i>Panicum agrostoides</i> var. <i>condensum</i> <i>Setaria glauca</i> <i>Sporobolus poiretii</i>	<i>Diarrhena americana</i> <i>Muhlenbergia sylvatica</i> <i>Panicum agrostoides</i> var. <i>rigidula</i> <i>Setaria glauca</i> <i>Sporobolus poiretii</i>	<i>Diarrhena obovata</i> <i>Muhlenbergia schreberi</i> <i>Coleataenia rigidula</i> subsp. <i>rigidula</i> <i>Setaria parviflora</i> <i>Sporobolus compositus</i>
Polygonaceae	<i>Polygonum aviculare</i>	<i>Polygonum aviculare</i>	<i>Polygonum aviculare</i>

Portulacaceae	var. <i>littorale</i> <i>Portulaca parvula</i>	var. <i>littorale</i> <i>Portulaca halimoides</i>	subsp. <i>depressum</i> <i>Portulaca pilosa</i>
Ranunculaceae	<i>Delphinium exaltatum</i>	<i>Delphinium exaltatum</i>	<i>Delphinium tricornis</i>
Rhamnaceae	<i>Rhamnus lanceolata</i>	<i>Rhamnus lanceolata</i>	<i>Rhamnus japonica</i>
Rosaceae	<i>Crataegus calpodendron</i>	<i>Crataegus calpodendron</i>	
	var. <i>globosa</i> <i>Crataegus dispessa</i>	var. <i>globosa</i> <i>Crataegus dispessa</i>	Could not re-identified
	<i>Potentilla canadensis</i>	<i>Potentilla canadensis</i>	Could not re-identified
	<i>Prunus americana</i> var. <i>lanata</i>	<i>Prunus mexicana</i>	<i>Prunus americana</i>
	<i>Pyrus angustifolia</i>	<i>Pyrus angustifolia</i>	Could not re-identified
	<i>Rosa rubifolia</i>	<i>Rosa ferruginea</i>	<i>Rosa setigera</i>
	<i>Rubus argutus</i>	<i>Rubus argutus</i>	Could not re-identified
	<i>Rubus nefrens</i>	<i>Rubus nefrens</i>	Could not re-identified
	<i>Rubus ostryifolius</i>	<i>Rubus ostryifolius</i>	Could not re-identified
Rubiaceae	<i>Galium boreale</i>	<i>Galium boreale</i>	<i>Galium obtusum</i>
Sapindaceae	<i>Aesculus glabra</i> var. <i>sargentii</i>	<i>Aesculus glabra</i> var. <i>glabra</i>	<i>Aesculus glabra</i> var. <i>arguta</i>
Smilacaceae	<i>Smilax rotundifolia</i>	<i>Smilax rotundifolia</i>	<i>Smilax hispida</i>
Solanaceae	<i>Physalis lanceolata</i>	<i>Physalis lanceolata</i>	<i>Physalis pumila</i>
	<i>Solanum nigrum</i>	<i>Solanum nigrum</i>	<i>Solanum americanum</i>
Verbenaceae	<i>Verbena braziliensis</i>	<i>Verbena braziliensis</i>	<i>Verbena hastata</i>
Violaceae	<i>Viola affinis</i>	<i>Viola affinis</i>	<i>Viola nephrophylla</i>
	<i>Viola cucullata</i>	<i>Viola cucullata</i>	<i>Viola sororia</i>

Appendix D. Annotated Checklist of Crawford and Cherokee counties, Kansas

The Checklist is organized by spore-bearing plants (Ferns and Fern-Allies), Gymnosperms, and Angiosperms. Families and taxa are arranged alphabetically. Common names are provided and located after the taxon authors. Common names following Kartesz (2017). Taxa reported as rare, noxious, or adventive in the State of Kansas (following Kartesz 2017), are noted in bold. State and county records are noted in bold. Voucher numbers for both state and county records are also provided. Additional commentary is provided for some taxa. The taxon's distribution is included for state records and rare taxa. For the purposes of this list, if the taxa has been reported 0-20 counties in the combined surrounding states (Missouri, Oklahoma, and Arkansas), it is considered rare in surrounding areas. If the taxon has been reported from 21+ counties in surrounding states, it is considered common in surrounding areas. Additional commentary is provided when pertinent.

In some cases, Gibson (1963) did not recognize infraspecific taxa in some groups. For these, when two or more infraspecific taxa are recognized today, an additional name is placed in the list to indicate that Gibson did collect the species, but it is unknown what taxa he would have reported. In these cases, only the taxon with varieties or subspecies are included in numerical tallies in the results. Additional collectors data are included for some taxa.

LEGEND

! – Collected by Pryer

G- Collected by Gibson

K- Reported by Kartesz

CH- Cherokee County

OC- collected in the Osage Cuestas

OP- collected in the Ozark Plateau

CL- collected in the Cherokee Lowlands

CRW- Crawford County

Example:

Taxon name Authors - Common Name. Counties collected [Collectors]. Nativity. **Notes including rare, noxious, extirpated, or adventive.** Physiographic region. **Record** (*vouchers*). Additional commentary.

FERNS AND FERN ALLIES

Aspleniaceae (Spleenwort Family)

Asplenium platyneuron (L.) B.S.P. - Ebony Spleenwort. CH [!, K], CRW [!, K, G].

Native. OP, OC, CL.

Asplenium resiliens Kunze - Black-Stem Spleenwort. CH [K] Native.

Asplenium rhizophyllum L. - Walking Fern. CH [!, K], CRW [G]. OP.

Blechnaceae (Chain Fern Family)

Woodwardia areolata (L.) T. Moore - Netted Chain Fern. CRW [!]. Native. CL. **State Record** (Pryer 1462). Collected on a mined land in Crawford County. Abundant with hundreds of fronds present. This taxon is considered rare in the state of Missouri, with the closest records in Barton and Lawrence counties. It is common

in the southeastern and eastern portion of the United States, including Arkansas where it has been reported in all but two counties.

Cystopteridaceae (Bladder Fern Family)

Cystopteris protrusa (Weatherby) Blasdel - Lowland Bladder Fern. CH [!, K], CRW [!, K]. Native. OP, CL.

Cystopteris tennesseensis Shaver. - Tennessee Bladder Fern. CH [!, K], CRW [!, K]. Native. OP, OC, CL.

Dennstaedtiaceae (Bracken Fern Family)

Pteridium aquilinum var. *pseudocaudatum* (Clute) Heller. - CH [K]. Native. **Extirpated.**
The most recent specimen located was made on August 21, 1949 (*R.L. McGregor* 3863) and is located at McGregor Herbarium, University of Kansas.

Dryopteridaceae (Wood Fern Family)

Dryopteris marginalis (L.) A. Gray - Marginal Wood Fern. CH [K]. Native.

Polystichum acrostichoides (Michx.) Schott - Christmas Fern. CH [!, K], CRW [K]. Native. **Rare.** OP. Reported from nine counties in Kansas. Common throughout the eastern United States and surrounding states.

Onocleaceae (Sensitive Fern Family)

Onocle sensibilis L. - Sensitive Fern. CRW [G]. Native.

Ophioglossaceae (Adder's-Tongue Family)

Botrypus virginianus (L.) Holub - Rattlesnake Fern. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Ophioglossum engelmannii Prantl - Limestone Adder's-Tongue. CH [K], CRW [K]. Native.

Sceptridium dissectum (Spreng.) Lyon - Cut-Leaf Grape Fern. CH [K], CRW [!, K]. Native. CL.

Pteridaceae (Maidenhair Fern Family)

Adiantum pedatum L. - Northern Maidenhair. CH [K], CRW [K,]. Native.

Argyrochosma dealbata (Pursh) Windham - Powdery False Cloak Fern. CH [K], CRW [K, G]. Native.

Myriopteris alabamensis (Buckl.) Grusz & Windham. - Alabama Lip Fern. CH [K]. Native.

Myriopteris gracilis Fée. - Slender Lip Fern. CH [K]. Native.

Myriopteris lanosa (Michx.) Grusz & Windham. - Hairy Lip Fern. CH [!, K]. Native. **Rare.** OP. Reported from seven counties in Kansas. Common in surrounding states.

Myriopteris tomentosa (Link) Fée - Woolly Lip Fern. Native. **Extirpated.**

Pellaea atropurpurea (L.) Link. - Purple-Stem Cliffbrake. CH [!, K], CRW [!, K]. Native. OP, OC.

Pellaea glabella Mett. ex Kuhn subsp. *glabella* - Smooth Cliffbrake. CH [K], CRW [K, G]. Native. Gibson did not recognize subspecies of this taxon.

Polypodiaceae (Polypody Fern Family)

Pleopeltis polypodioides (L.) Andrews & Windham var. *michauxiana* (Weatherby)
Andrews & Windham. - Resurrection Fern. CH [!]. Native. Rare. OP. **Cherokee
County Record** (*Pryer 5097, Pryer 5648*).

Thelypteridaceae (Maiden Fern Family)

Phegopteris hexagonoptera (Michx.) Fée. - Broad Beech Fern. CH [K]. Native.
Extirpated.

Woodsiaceae (Cliff Fern Family)

Woodsia obtusa (Spreng.) Torr. - Blunt-Lobe Cliff Fern. CRW [G]. Gibson did not
identify his specimens to subspecies.

Woodsia obtusa (Spreng.) Torr. subsp. *obtusa* - Blunt-Lobe Cliff Fern. CH [!, K], CRW
[!, K]. Native. OP, CL.

Woodsia obtusa (Spreng.) Torr. subsp. *occidentalis* Windham. - Blunt-Lobe Cliff Fern.
CH [K], CRW [!, K]. Native. OC.

GYMNOSPERMS

Cupressaceae (Cypress Family)

Juniperus virginiana L. var. *virginiana* - Eastern red-cedar. CH [!, K], CRW [!, K, G].
Native. OC, CL.

Taxodium distichum (L.) L.C. Rich. var. *distichum* - Southern Bald-Cypress. CRW [!, K].
Native. Adventive. CL. Gibson originally listed *Taxodium distichum*, however his
specimens were young *Juniperus virginiana* var. *virginiana*.

Pinaceae (Pine Family)

Pinus banksiana Lamb. - Jack Pine. CRW [!, K]. Native. Adventive. CL.

Pinus taeda L. - Loblolly Pine. CH [!]. Native. CL. **State Record** (*Pryer 3755*). The
specimen was taken from an older large tree in the middle of a mined land. No
obvious human establishments were nearby. This taxon is mostly found in the
southeastern United States. It has been reported in southern Oklahoma and most
of Arkansas, with a few scattered reports in Missouri. The closest report is from
Polk County, Missouri.

ANGIOSPERMS

Acanthaceae (Acanthus Family)

Dicliptera brachiata (Pursh) Spreng. - Branched Foldwing. CH [!, K], CRW [!, K, G].
Native. OP, OC, CL.

Justicia americana (L.) Vahl. - American Water-Willow. CH [!, K], CRW [!, K, G].
Native. OP, OC.

Ruellia humilis Nutt. - Fringe-Leaf Wild Petunia. CH [!, K], CRW [!, K, G]. Native. OP,
OC, CL.

Ruellia strepens L. - Limestone Wild Petunia. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Aceraceae (Maple Family)

Acer floridanum (Chapman) Pax - Florida Maple. CH [K]. Native.

Acer negundo L. var. *negundo* - Ash-Leaf Maple. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Acer saccharinum L. - Silver Maple. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Acer saccharum Marsh. var. *saccharum* - Sugar Maple. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Acoraceae (Calamus Family)

Acorus calamus L. - Single-Vein Sweetflag. CH [K], CRW [K, G]. Non-Native.

Adoxaceae (Muskroot Family)

Sambucus nigra L. subsp. *canadensis* (L.) R. Bolli - Black Elder. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Viburnum prunifolium L. - Smooth Blackhaw. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Viburnum rufidulum Raf. - Rusty Blackhaw. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Agavaceae (Century-Plant Family)

Camassia angusta (Engelm. & A. Gray) Blank. - Prairie Camas. CH [K], CRW [!, K]. Native. OC, CL.

Camassia scilloides (Raf.) Cory. - Atlantic Camas. CH [K], CRW [!, K, G]. Native. OC, CL.

Yucca arkansana Trel. - Arkansas Yucca. CH [K], CRW [K]. Native. Rare.

Yucca flaccida Haw. - Weak-Leaf Yucca. CH [!, K], CRW [!, K, G]. Native. Adventive. OP, CL.

Yucca glauca Nutt. - Soapweed Yucca. CH [!]. Native. CL. **Cherokee County Record** (Pryer 4959).

Alismataceae (Water-Plantain Family)

Alisma subcordatum Raf. American Water-Plantain. CH [!, K], CRW [K, G]. Native. CL.

Alisma triviale Pursh. Northern Water-Plantain. CR [!]. Native. CL. **Crawford County Record** (Pryer 2118).

Echinodorus berteroi (Spreng.) Fassett. - Upright Burrhead. CH [!], CR [K]. Native. CL. **Cherokee County Record** (Pryer 5566).

Echinodorus cordifolius (L.) Griseb. - Creeping Burrhead. CH [!, K]. Native. OP, CL.

Sagittaria ambigua J.G. Sm. - Kansas Arrowhead. CH [K]. CRW [K, G]. Native. **Rare**.

Reported in eleven counties in Kansas. Considered rare across its distribution and reported in only five states: Kansas, Oklahoma, Missouri, Illinois, and Indiana. Most common in surrounding areas.

Sagittaria brevirostra Mackenzie & Bush. - Short-Beak Arrowhead. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Sagittaria calycina Engelm. - Hooded Arrowhead. CH [K], CR [K, G]. Native.
Sagittaria graminea Michx. - Grass-Leaf Arrowhead. CH [K].
Sagittaria latifolia Willd. - Duck-Potato. CH [K, G]. Native.

Alliaceae (Onion Family)

Allium canadense L. var. *canadense* - Meadow Garlic. CH [!], CRW [!], K]. Native
Noxious. CL.
Allium canadense L. var. *lavendulare* (Bates) Ownbey & Aase. - Meadow Garlic. CH [!],
 K], CRW [!], K]. Native **Noxious.** CL.
Allium canadense L. var. *mobile* (Regel) Ownbey. - Meadow Garlic. CH [!], K], CRW
 [!], K, G]. Native. **Noxious.** OC, CL.
Allium sativum L. - Cultivated Garlic. CH [!], K], CRW [!], K, G]. Non-Native. **Noxious.**
 CL.
Allium stellatum Fraser ex Ker-Gawl. - Autumn Onion. CH [!], CRW [!], K]. Native.
Noxious. OP, OC, CL. **Cherokee County Record** (*Pryer 1205, Pryer 1623*).
Allium vineale L. subsp. *compactum* (Thuill.) Coss. & Germ. - Crow Garlic. CH [!],
 CRW [!]. Non-Native. **Noxious.** OP, CL.
Allium vineale L. subsp. *vineale* - Crow Garlic. CH [!], K], CR [K]. Non-Native.
Noxious. OC.
Nothoscordum bivalve (L.) Britt. - Crowpoison. CH [!], K], CRW [!], K, G]. Native. OP,
 OC, CL.

Altingiaceae (Sweet-Gum Family)

Liquidambar styraciflua L. - Sweet-Gum. CH [!], CRW [!]. Native. CL. **State Record**
 Cherokee County Vouchers (*Pryer 3744, Pryer 3863*) Crawford County Voucher
 (*Pryer 6117*). Naturalizing and prevalent on mined land areas in Cherokee County
 and occasional in Crawford County. Abundant in southeastern United States,
 including the 4-state region. Reported in all but four counties in Arkansas and
 scattered in Oklahoma and Missouri. The closest record being Benton County,
 Arkansas. One specimen was located in McGregor Herbarium, University of
 Kansas for Douglas County, Kansas (*C. Morse s.n.*; October 2007).

Amaranthaceae **Amaranth Family**

Amaranthus albus L. - Tumbleweed. CH [K], CRW [K, G]. Native.
Amaranthus blitoides S. Wats. Mat. - Amaranth. CH [K], CRW [K]. Native.
Amaranthus hybridus L. - Smooth Amaranth. CH [K], CRW [K, G]. Non-Native.
Amaranthus retroflexus L. - Red-Root. CH [K], CRW [!], K, G]. Non-native. CL.
Amaranthus spinosus L. - Spiny Amaranth. CH [K], CRW [!], G]. Native. Adventive. CL.
Amaranthus tuberculatus (Moq.) Sauer. - Rough-Fruit Amaranth. CH [!], K], CRW [!], K,
 G]. Native. OP, OC, CL.
Bassia scoparia (L.) A.J. Scott. - Mexican-Fireweed. CH [K], CRW [K]. Non-Native.
Chenopodium simplex (Torr.) S. Fuentes, Uotila & Borsch. - Giant-Seed Mock
 Goosefoot. CH [K], CRW [!], K]. Native. OC, CL.
Chenopodium album L. var. *album*. - Lamb's-Quarters. CH [!], K], CRW [K]. Non-
 Native. CL.

Chenopodium album L. var. *missouriense* (Aellen) I.J. Bassett & C.W. Crompton. - Lamb's-Quarters. CRW [!]. Native. OC. **Crawford County Record** (Pryer 6032).
Chenopodium berlandieri Moq. var. *bushianum* (Aellen) Cronq. - Pit-Seed Goosefoot. CRW [!]. Native. OC. **Crawford County Record** (Pryer 2820).
Chenopodium berlandieri Moq. var. *zschackii* (J. Murr) J. Murr - Pit-Seed Goosefoot. CH [K]. Native.
Chenopodium pratericola Rydb. - Desert Goosefoot. CH [!, K], CR [!]. Native. OC, CL. **Crawford County Record** (Pryer 6033).
Chenopodium standleyanum Aellen. - Standley's Goosefoot. CH [!, K], CRW [!, K, G]. Native. OP, CL.
Chenopodium strictum Roth. - Lake-Flowering Goosefoot. CH [!]. Native. Adventive. OP. **Cherokee County Record** (Pryer 6364).
Cycloloma atriplicifolium (Spreng.) Coult. - Winged-Pigweed. CH [K]. Native.
Dysphania ambrosioides (L.) Mosyakin & Clemants. - Mexican-Tea. CH [K], CR [K]. Non-Native.
Froelichia floridana (Nutt.) Moq. var. *campestris* (Small) Fern. - Plains Snake-Cotton. CH [K], CRW [!]. Native. CL. **Crawford County Record** (Pryer 5333).
Froelichia gracilis (Hook.) Moq. - Slender Snake-Cotton. CH [K]. CRW [K]. Native.
Iresine rhizomatosa Standl. - Juda's-Bush. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Amaryllidaceae (Daffodil Family)

Leucojum aestivum L. subsp. *aestivum*. - Summer Snowflake. CRW [!]. Non-Native. CL. **State Record** (Pryer 27). Abundant and naturalized in Shlanger Park Pittsburg, KS along creek banks. Scattered distribution across the country, mostly in the southern and eastern states. No collections reported from Oklahoma and only one, Boone County, from Missouri. This is the closest record.
Narcissus poeticus L. - Poet's Narcissus. CRW [!]. Non-Native. CL. **State Record** (Pryer 41). Common throughout the county. This taxon has an eastern distribution, with the exception of Oregon and Washington. It has been reported in counties throughout Missouri and Arkansas, but not in Oklahoma. The closest report is in Newton County, Missouri. One specimen was located at McGregor Herbarium, University of Kansas for Douglas County, Kansas (C.C. Freeman 20037; April 2004).
Narcissus pseudonarcissus L. - Common Daffodil. CR [!]. Non-Native. CL. **Crawford County Record** (Pryer 25).

Anacardiaceae (Sumac Family)

Rhus aromatica Ait. - Fragrant Sumac. CRW [G]. Gibson did not recognize varieties of this taxon at the time of publication.
Rhus aromatica Ait. var. *aromatica*. - Fragrant Sumac. CH [!, K], CRW [!]. Native. OC, CL. **Crawford County Record** (Pryer 80, Pryer 4349)
Rhus aromatica Ait. var. *serotina* (Greene) Rehd. - Fragrant Sumac. CH [!], CRW [!, K]. Native. OC, CL. **Cherokee County Record** (Pryer 932, Pryer 4007).
Rhus copallinum L. - Winged Sumac. CH [!, K], CRW [!, K, G]. Native. OP, CL.
Rhus glabra L. - Smooth Sumac. CH [!, K], CRW [!, K]. Native. OP, OC, CL.

Toxicodendron pubescens P. Mill. - Eastern Poison-Oak. CH [K]. Native. **Rare**. Reported from only two counties in Kansas, but common in surrounding states. Found mostly in the southeastern portion of the United States.

Toxicodendron radicans (L.) Kuntze subsp. *negundo* (Greene) Gillis. - Eastern Poison Ivy. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Toxicodendron radicans (L.) Kuntze subsp. *pubens* (Engelm. ex S. Wats.) Gillis. - Eastern Poison Ivy. CH [!], CRW [!]. Native. OP, CL. **Crawford County Record** (Pryer 1818). **Cherokee County Record** (Pryer 1303).

Annonaceae (Custard-Apple Family)

Asimina triloba (L.) Dunal - Common Pawpaw. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Apiaceae (Carrot Family)

Ammoselinum butleri (Engelm. ex S. Wats.) Coult. & Rose. - Butler's Sand-Parsley. CH [K], CRW [K]. Native.

Anethum graveolens L. Dill. CRW [K]. Non-Native.

Chaerophyllum procumbens (L.) Crantz var. *procumbens*. - Spreading Chervil. CH [!, K], CRW [!, K, G]. Native. OP, CL. Gibson did not recognize varieties of this taxon.

Chaerophyllum tainturieri Hook. - Hairy-Fruit Chervil. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Cicuta maculata L. - Spotted Water-Hemlock. CRW [G]. Gibson collection. He did not recognize varieties for this taxon.

Cicuta maculata L. var. *angustifolia* Hook. - Spotted Water-Hemlock. CH [K]. Native.

Cicuta maculata L. var. *bolanderi* (S. Wats.) G. Mulligan. - Spotted Water-Hemlock. CH [K], CRW [!, K]. Native. CL.

Cicuta maculata L. var. *maculata*. - Spotted Water-Hemlock. CH [K], CRW [!, K]. Native. CL.

Conium maculatum L. - Poison-Hemlock. CH [!, K], CRW [!, K]. Non-native. OC, CL.

Cryptotaenia canadensis (L.) DC. - Canadian Honewort. CH [K], CRW [K, G]. Native.

Daucus carota L. - Queen Anne's-Lace. CH [!, K], CR [!, K, G]. Non-Native. **Noxious**. OC, CL.

Daucus pusillus Michx. - American Wild Carrot. CH [K]. Native. **Rare**. Reported from six counties in Kansas and common in surrounding states.

Erigenia bulbosa (Michx.) Nutt. - Harbinger-of-Spring. CH [K], CRW [K, G]. Native. **Rare**. Reported from four counties in Kansas. Common in Missouri and Arkansas, but considered rare in Oklahoma.

Eryngium leavenworthii Torr. & A. Gray. - Leavenworth's Eryngo. CR [!, K, G]. Native. OC.

Eryngium prostratum Nutt. ex DC. - Creeping Eryngo. CH [K]. Native. **Rare**. Reported in one county in Kansas, though this is the most northwestern report this taxon. Common in surrounding states.

Eryngium yuccifolium Michx. var. *yuccifolium*. - Button Eryngo. CH [!, K], CRW [!, K]. Native. OP, CL.

Limnoscium pinnatum (DC.) Mathias & Constance. - Tansy Dogshade. CH [K]. Native.

Lomatium foeniculaceum (Nutt.) Coult. & Rose subsp. *daucifolium* (Torr. & A. Gray) Theobald. - Carrot-Leaf Desert-Parsley. CRW [!, K]. Native. OC.

Osmorhiza claytonii (Michx.) C.B. Clarke. - Hairy Sweet-Cicely. CH [!]. CRW [!]. Native. OC, CL. **Crawford County Record** (Pryer 993, Pryer 1326, Pryer 2007, Pryer 2222). **Cherokee County Record** (Pryer 515b).

Osmorhiza longistylis (Torr.) DC. - Aniseroot. CH [K], CRW [!, K, G]. Native. OP, CL.

Perideridia americana (Nutt. ex DC.) Reichenb. - Eastern Yampah. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Polytaenia nuttallii DC. - Nuttall's Prairie-Parsley. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Ptilimnium capillaceum (Michx.) Raf. - Herbwilliam. CRW [G]. Native.

Ptilimnium nuttallii (DC.) Britt. - Laceflower. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Sanicula canadensis L. var. *canadensis*. - Canadian Black-Snakeroot. CH [!, K], CRW [!, K]. Native. OP, OC, CL.

Sanicula odorata (Raf.) K.M. Pryer & L.R. Phillippe. - Clustered Black-Snakeroot. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Spermolepis inermis (Nutt. ex DC.) Mathias & Constance. - Red River Scaleseed. CH [K], CRW [K]. Native.

Taenidia integerrima (L.) Drude. - Yellow-Pimpernel. CH [!, K], CRW [!]. Native. OP, OC. **Crawford County Record** (Pryer 5429).

Thaspium barbinode (Michx.) Nutt. - Hairy-Joint Meadow-Parsnip. CH [!, K], CRW [K]. Native. OP.

Torilis arvensis (Huds.) Link subsp. *arvensis* - Spreading Hedge-Parsley. CH [!, K], CRW [!, K, G]. Non-native. OC, CL.

Zizia aurea (L.) W.D.J. Koch. - Golden Alexanders. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Apocynaceae (Dogbane Family)

Amsonia tabernaemontana Walt. var. *salicifolia* (Pursh) Woods. - Eastern Bluestar. CH [!, K], CRW [K, G]. Native. **Rare**. OP. Reported in five counties in Kansas and common in surrounding states.

Amsonia tabernaemontana Walt. var. *tabernaemontana*. - Eastern Bluestar. CH [!, K], CRW [K]. Native. **Rare**. OP. Reported in four counties in Kansas, but common in surrounding states.

Apocynum cannabinum L. - Indian-Hemp. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Apocynum × *floribundum* Greene (pro sp.) - CH [K]. Native.

Asclepias amplexicaulis Sm. - Claspig Milkweed. CH [K]. Native.

Asclepias incarnata L. subsp. *incarnata* - Swamp Milkweed. CH [!, K], CRW [!, K, G]. Native. CL. Gibson did not recognize subspecies of this taxon.

Asclepias longifolia Michx. subsp. *hirtella* (Pennell) B.L. Turner - Long-Leaf Milkweed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Asclepias meadii Torr. ex A. Gray - Mead's Milkweed. CRW [K]. Native. **Rare**. Reported in twelve counties in Kansas. This taxon is considered rare across its distribution, which includes: Kansas, Missouri, Wisconsin, Illinois, and Indiana.

Asclepias purpurascens L. - Purple Milkweed. CH [!, K], CRW [!, K, G]. Native. OP, OC.

Asclepias quadrifolia Jacq. - Four-Leaf Milkweed. CH [!, K]. Native. **Rare**. OP. Only reported in Cherokee County, Kansas, but common in surrounding states.

Asclepias stenophylla A. Gray - Slim-Leaf Milkweed. CH [K], CRW [K, G]. Native.

Asclepias subverticillata (A. Gray) Vail. - Horsetail Milkweed. CRW [!]. Native. CL.

Crawford County Record (Pryer 2600, Pryer 2626).

Asclepias sullivantii Engelm. ex A. Gray - Prairie Milkweed. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Asclepias syriaca L. - Common Milkweed. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Asclepias tuberosa L. subsp. *interior* Woods. - Butterfly Milkweed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL. Gibson did not recognize varieties of this taxon.

Asclepias verticillata L. - Whorled Milkweed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Asclepias viridiflora Raf. Green. - Comet Milkweed. CH [K], CRW [!, K, G]. Native. OC, CL.

Asclepias viridis Walt. Green. - Antelope-Horn. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Cynanchum laeve (Michx.) Pers. - Honeyvine. CH [K], CRW [!, K, G]. Native. **Noxious**. OC.

Gonolobus suberosus (L.) R. Br. var. *granulatus* (Scheele) Krings & Q.Y. Xiang. - Angular-Fruit Anglepod. CH [!, K], CRW [G]. Native. **Rare**. OP. Only reported in Cherokee County, Kansas, but common in surrounding states.

Matelea decipiens (Alexander) Woods. - Oldfield Milkvine. CH [!, K]. Native. **Rare**. OP. Reported in two counties in Kansas and common in surrounding states.

Vinca minor L. - Lesser Periwinkle. CR [K]. Non-native.

Aquifoliaceae (Holly Family)

Ilex decidua Walt. - Deciduous Holly. CH [!, K], CRW [!, K, G]. Native. CL.

Ilex opaca Ait. var. *opaca* - American Holly. CRW [!]. Native. CL. **State Record** (Pryer 3456). Older tree located at the bottom of a slew in a mined land wildlife area. Where this specimen was growing, it was unlikely to have been purposefully planted. This taxon is common throughout the southeastern United States, with scattered records throughout the southern half of Missouri. This taxon is considered rare in Oklahoma and common throughout Arkansas. The closest record is in Craig County, Oklahoma and Greene County, Missouri.

Araceae (Arum Family)

Arisaema dracontium (L.) Schott var. *dracontium* - Greendragon. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Arisaema triphyllum (L.) Schott subsp. *triphyllum* - Jack-in-the-Pulpit. CH [K], CRW [!, K, G]. Native. OC.

Lemna aequinoctialis Welw. - Lesser Duckweed. CRW [K]. Native.

Lemna minor L. - Common Duckweed. CH [!, K], CRW [!, G]. Native. OP, OC, CL.

Lemna minuta Kunth. - Least Duckweed. CH [!]. Native. OP. **Cherokee County Record** (Pryer 188, Pryer 5778, Pryer 5783a).

Lemna obscura (Austin) Daubs. - Little Duckweed. CH [K]. Native.
Lemna perpusilla Torr. - Minute Duckweed. CH [!, K], CRW [!, K]. Native. OP, CL.
Spirodela polyrhiza (L.) Schleid. - Common Duckmeat. CH [!, K], CRW [K]. Native. OP.
Wolffia brasiliensis Weddell. - Brazilian Watermeal. CH [K]. Native. **Rare**. Reported in ten counties in Kansas and scattered across the state. Common in surrounding states, but with scattered distribution.
Wolffia columbiana Karst. - Columbian Watermeal. CH [K].

Araliaceae (Ginseng Family)

Hedera helix L. - English Ivy. CRW [!]. Non-native. CL. **State Record** (*Pryer 6413*). Abundant in a reclaimed mined land that is now used as a public walking area. This taxon has a wide distribution in the United States. It has scattered reports in Missouri and Arkansas and none in Oklahoma. The closest report is from McDonald County, Missouri. One specimen was located at McGregor Herbarium, University of Kansas for Douglas County, Kansas (*C. Morse s.n.*; December 2007).

Aristolochiaceae (Birthwort Family)

Asarum canadense L. - Canadian Wild Ginger. CH [!, K], CRW [G]. Native. OP.
Endodeca serpentaria (L.) Raf. - Virginia-Snakeroot. CH [K]. Native.
Isotrema tomentosum (Sims) Huber. - Woolly Pipevine. CH [!]. Native. CL.

Asparagaceae (Asparagus Family)

Asparagus officinalis L. - Asparagus. CH [K], CRW [!, K, G]. Non-native. CL.

Asteraceae (Aster Family)

Achillea millefolium L. - Common Yarrow. CH [!, K], CRW [!, K, G]. Native. OC, CL.
Ageratina altissima (L.) King & H.E. Robins. var. *altissima* - White Snakeroot. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.
Ambrosia artemisiifolia L. - Annual Ragweed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.
Ambrosia bidentata Michx. - Lance-Leaf Ragweed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.
Ambrosia psilostachya DC. - Perennial Ragweed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.
Ambrosia trifida L. - Great Ragweed. CH [!, K], CRW [!, K, G]. Native. OC, CL.
Amphiachyris dracunculoides (DC.) Nutt. - Prairie Broomweed. CH [K], CRW [!, K, G]. Native. OC.
Antennaria neglecta Greene. - Field Pussytoes. CH [!, K], CRW [!, K, G]. Native. OP, CL.
Antennaria parlinii Fern. subsp. *fallax* (Greene) Bayer & Stebbins. - Parlin's Pussytoes. CH [!, K], CRW [K]. Native. OP.
Anthemis cotula L. - Stinking Chamomile. CH [K], CRW [K, G]. Non-native. OC, CL.
Arctium minus (Hill) Bernh. - Lesser Burdock. CH [K], CRW [!, K, G]. Non-native. OC, CL.

Arnoglossum atriplicifolium (L.) H.E. Robins. - Pale Indian-Plantain. CH [K], CRW [!, K]. Native. OC.

Arnoglossum plantagineum Raf. - Groove-Stem Indian-Plantain. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Artemisia ludoviciana Nutt. subsp. *ludoviciana* - White Sagebrush. CRW [!, G]. Native. OC.

Artemisia mexicana Willd. ex Spreng. - Mexican Wormwood. CH [K], CRW [K]. Native.

Astranthium ciliatum (Raf.) Nesom. - Fringed Western Daisy. CRW [G]. Native.

Bidens aristosa (Michx.) Britt. - Bearded Beggarticks. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Bidens bipinnata L. - Spanish-Needles. CH [!, K], CRW [!, K, G]. Native. OC, OP, CL.

Bidens cernua L. - Nodding Burr-Marigold. CRW [!]. Native. OC. **Crawford County Record** (Pryer 3650).

Bidens frondosa L. - Devil's-Pitchfork. CH [!, K], CRW [!, K]. Native. OP, CL.

Boltonia asteroides (L.) L'Hér. var. *latisquama* (A. Gray) Cronq. - White Doll's Daisy. CH [!, K], CRW [!, K, G]. Native. CL.

Boltonia asteroides (L.) L'Hér. var. *recognita* (Fern. & Grisc.) Cronq. - White Doll's Daisy. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Bradburia pilosa (Nutt.) Semple - Soft Bradbury-Bush. CH [!, K], CRW [G]. Native. OP.

Brickellia eupatorioides (L.) var. *corymbulosa* (Torr. & A. Gray) Shinnery
- Shinnery False Boneset. CH [K], CRW [!, K, G]. Native. OC, CL.

Brickellia eupatorioides (L.) var. *texana* (Shinnery) Shinnery - Shinnery False Boneset. CH [K], CRW [!, K]. CL.

Carduus nutans L. - Nodding Plumeless-Thistle. CH [!, K], CRW [!, K, G]. Non-native. CL.

Chaetopappa asteroides (Nutt.) DC. var. *asteroides* - Arkansas Leastdaisy. CH [K]. Native. **Rare**. Reported in six counties in Kansas. Common in Oklahoma and Texas, but rare in Missouri.

Cichorium intybus L. - Chicory. CH [K], CRW [!, K, G]. Non-native. OC, CL.

Cirsium altissimum (L.) Spreng. - Tall Thistle. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Cirsium arvense (L.) Scop. - Canadian Thistle. CR [K]. Non-native. **Noxious**.

Cirsium discolor (Muhl. ex Willd.) Spreng. - Field Thistle. CH [!], CRW [!]. Native. OC, CL. **Cherokee County Record** (Pryer 5887), **Crawford County Record** (Pryer 2354, Pryer 2416, Pryer 2550, Pryer 2660, Pryer 2708, Pryer 2908, Pryer 3557, Pryer 3622).

Cirsium undulatum (Nutt.) Spreng. - Wavy-Leaf Thistle. CH [K], CRW [K]. Native.

Cirsium vulgare (Savi) Ten. - Bull Thistle. CH [!, K], CRW [!, K]. Non-Native. **Noxious**. OC, CL.

Conoclinium coelestinum (L.) DC. - Blue Mistflower. CH [!, K], CRW [K, G]. Native. OP.

Coreopsis grandiflora Hogg ex Sweet. - Large-Flower Tickseed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL. *Flora of North America* and *Steiermark's Flora of Missouri* do not recognize varieties for this species and so all of the specimens collected during this project are not identified to infraspecific level. Kartesz

(2017) reports *Coreopsis grandiflora* Hogg ex Sweet var. *harveyana* (A. Gray) in both counties.

Coreopsis lanceolata L. - Lance-Leaf Tickseed. CH [!]. Native. **Rare**. OP, CL.
Cherokee County Record (*Pryer 372, Pryer 3162*). Reported in eight counties in Kansas and common in surrounding states.

Coreopsis palmata Nutt. - Stiff Tickseed. CH [!, K], CRW [K]. Native. OP.

Coreopsis pubescens Ell. var. *pubescens* - Star Tickseed. CH [K], CRW [K]. Native.
Rare. Reported in two counties in Kansas and common in surrounding areas.

Coreopsis tinctoria Nutt. var. *tinctoria* - Golden Tickseed. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Coreopsis tripteris L. - Tall Tickseed. CH [K]. Native. **Rare**. Reported in six counties in Kansas and common in surrounding states.

Crepis capillaris (L.) Wallr. - Smooth Hawk's-Beard. CRW [K]. Non-Native.

Cyanus segetum Hill. - Garden Cornflower. CH [*P.H. Ireland s.n.*, May 19, 1966; *Roxy Blessant 1*, May 9, 1985], CRW [*John D. Smith s.n.*, April 30, 1974; *Ian Sangster 52*, April 25, 1976; *J.J. Williams 132*, May 5, 1978]. Non-Native. OP, CL. Gibson reported this taxon by the older name *Centaurea cyanus* L.

Dracopis amplexicaulis (Vahl) Cass. - Claspig-Coneflower. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Dyssodia papposa (Vent.) A.S. Hitchc. - Fetid-Marigold. CH [K], CRW [K, G]. Native.

Echinacea angustifolia DC. - Blacksamson. CH [!, K], CRW [G]. Native. OP.

Echinacea pallida (Nutt.) Nutt. var. *pallida* - Pale Purple-Coneflower. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Echinacea purpurea (L.) Moench. - Eastern Purple-Coneflower. CH [K], CRW [!]. Native. **Rare**. CL. **Crawford County Record** (*Pryer 5323*). Reported from 3 counties in Kansas (including this report) and common in surrounding area.

Eclipta prostrata (L.) L. - False Daisy. CH [!, K], CRW [K, G]. Native. OC, CL.

Elephantopus carolinianus Raeusch. - Carolina Elephant's-Foot. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Erigeron annuus (L.) Pers. - Eastern Daisy Fleabane. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Erigeron canadensis L. - Canadian Horseweed. CH [!, K], CRW [!, K, G]. Non-Native. OP, CL.

Erigeron divaricatus Michx. - Dwarf Horseweed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Erigeron philadelphicus L. var. *philadelphicus* - Philadelphia Fleabane. Native. OC, CL.

Erigeron pulchellus Michx. var. *pulchellus* - Robin's-Plantain. CH [!, K]. Native. **Rare**. OP. Reported in Cherokee County, Kansas and common in surrounding states.

Erigeron strigosus Muhl. ex Willd. var. *strigosus* - Prairie Fleabane. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Erigeron tenuis Torr. & A. Gray - Slender-Leaf Fleabane. CH [!, K], CRW [!, G]. Native. **Rare**. OP, OC, CL. Reported in five counties in Kansas and common in surrounding areas.

Eupatorium altissimum L. - Tall Thoroughwort. CH [!, K]. CRW [!, K, G]. Native. OP, OC, CL.

- Eupatorium perfoliatum* L. - Common Boneset. CH [!], K], CRW [!], K, G]. Native. OP, CL.
- Eupatorium serotinum* Michx. - Late-Flowering Thoroughwort. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.
- Eurybia hemispherica* (Alexander) Nesom - Prairie Wood-Aster. CH [!], K], CRW [K, G]. Native. OP, CL.
- Euthamia graminifolia* (L.) Nutt. - Flat-Top Goldentop. CH [!], CRW [!]. Native. **Rare.** CL. **Cherokee County Record** (Pryer 2937, Pryer 3386, Pryer 3686), **Crawford County Record** (Pryer 3700a, Pryer 6112, Pryer 6229). Reported in three counties in Kansas, including this report. Considered rare in Oklahoma and scattered throughout Missouri. Common in the northeastern United States.
- Euthamia gymnospermoides* Greene. - Texas Goldentop. CH [!], K], CRW [!], K, G]. Native. CL.
- Euthamia leptcephala* (Torr. & A. Gray) Greene ex Porter & Britt. - Bushy Goldentop. CR [!]. Native. CL. **State Record.** Crawford County Voucher (Pryer 1908). This taxon has a southern distribution in the United States and has been reported throughout Arkansas. It is considered rare in Oklahoma and only recorded in three southern counties and few counties in Missouri. The closest record is in Jasper County, Missouri.
- Eutrochium purpureum* (L.) E. Lamont var. *holzingeri* (Rydb.) E. Lamont. - Sweet-Scented Joe-Pye-Weed. CH [K], CRW [!], K]. Native. OC, CL.
- Eutrochium purpureum* (L.) E. Lamont var. *purpureum* - Sweet-Scented Joe-Pye-Weed. CH [!], K], CRW [G]. Native. OP.
- Fleischmannia incarnata* (Walt.) King & H.E. Robins. - Pink Slender-Thoroughwort. CH [!]. Native. OP, CL. **State Record.** Cherokee County Voucher (Pryer 3103, Pryer 3692b, Pryer 3916). This taxon has a southern distribution in the United States. It is scattered throughout Arkansas, eastern Oklahoma, and southern Missouri. The closest records are Ottawa County, Oklahoma and Newton County, Missouri.
- Gaillardia pulchella* Foug. var. *pulchella* - Firewheel. CH [!], CRW [!], K]. Native. OC, CL. **Cherokee County Record** (Pryer 923, Pryer 3102, Pryer 4987).
- Galinsoga parviflora* Cav. var. *parviflora* - Gallant-Soldier. CH [K], CRW [K]. Non-Native.
- Galinsoga quadriradiata* Ruiz & Pavón - Shaggy-Soldier. CH [K], CRW [G]. Non-Native.
- Gamochaeta argyrinea* Nesom - Silvery Everlasting. CH [!], K]. Native. **Rare.** OP. Reported in only Cherokee County, Kansas. This taxon is rare in Missouri as well with reports from only two counties. However, it is common in Oklahoma and Arkansas.
- Gamochaeta purpurea* (L.) Cabrera. - Spoon-Leaf Purple Everlasting. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.
- Grindelia lanceolata* Nutt. var. *lanceolata* - Narrow-Leaf Gumweed. CH [K], CRW [!], K, G]. Native. OC, CL.
- Helenium amarum* (Raf.) H. Rock var. *amarum* - Yellowdicks. CH [!], K], CRW [K, G]. Native. Adventive. OP, CL.
- Helenium autumnale* L. - Autumn Sneezeweed. CH [K], CRW [K]. Native.

Helianthemum flexuosum Raf. - Purple-Head Sneezeweed. CH [!, K], CRW [!, K, G]. Native. **Rare**. OP, CL. Reported in six counties in Kansas and common in surrounding states.

Helianthus annuus L. - Common Sunflower. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Helianthus grosseserratus Martens. - Saw-Tooth Sunflower. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Helianthus hirsutus Raf. - Whiskered Sunflower. CH [!, K], CRW [K]. Native. OP, CL.

Helianthus × *kellermanii* Britt. (pro sp.). - CRW [K]. Native.

Helianthus maximiliani Schrad. - Maximilian Sunflower. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Helianthus mollis Lam. - Ashy Sunflower. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Helianthus pauciflorus Nutt. subsp. *pauciflorus* - Stiff Sunflower. CH [K], CRW [K, G]. Native.

Helianthus petiolaris Nutt. subsp. *petiolaris* - Prairie Sunflower. CH [!, K]. CRW [!]. Native. OC, CL. **Crawford County Record** (*Pryer 1395, Pryer 2536, Pryer 2539, Pryer 2716, Pryer 2878, Pryer 2879, Pryer 3311, Pryer 3312, Pryer 3397, Pryer 3581, Pryer 6286*).

Helianthus salicifolius A. Dietr. - Willow-Leaf Sunflower. CH [!, K], CRW [!, K, G]. Native. OC.

Helianthus strumosus L. - Pale-Leaf Woodland Sunflower. CH [!, K], CRW [!, G]. Native. **Rare**. OP, OC.

Helianthus tuberosus L. - Jerusalem-Artichoke. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Heliopsis helianthoides (L.) var. *scabra* (Dunal) Fern. - Sweet Smooth Oxeye. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Hieracium gronovii L. - Queendevil. CH [!, K], CRW [K]. Native. **Rare**. OP. Reported from nine counties in Kansas, but common in surrounding states.

Hieracium longipilum Torr. ex Hook. - Hairy Hawkweed. CH [K], CRW [!, K, G]. Native. CL.

Hieracium scabrum Michx. - Rough Hawkweed. CH [K]. Native. **Rare**. Reported only from Cherokee County, Kansas. This taxon is also considered rare in Oklahoma and Arkansas, but common in Missouri.

Hymenopappus scabiosaeus L'Hér. var. *corymbosus* (Torr. & A. Gray) B.L. Turner - Carolina Woollywhite. CH [K], CRW [K]. Native.

Ionactis linariifolia (L.) Greene. - Flax-Leaf Ankle-Aster. CH [K]. Native. **Rare**. Reported only from Cherokee County, Kansas; considered rare in Oklahoma, but common in Missouri and Arkansas.

Iva annua L. - Annual Marsh-Elder. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Iva asperifolia Less. var. *angustifolia* (Nutt. ex DC.) B.L. Turner - Pensacola Marsh-Elder. CH [K]. Native. **Rare**. Reported in three counties in Kansas. Rare in surrounding areas, though considered common for the state of Oklahoma.

Krigia cespitosa (Raf.) Chambers var. *cespitosa* - Weedy Dwarf-Dandelion. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Krigia dandelion (L.) Nutt. - Potato Dwarf-Dandelion. CH [K], CRW [!, K, G]. Native. OC, CL.

Krigia occidentalis Nutt. - Western Dwarf-Dandelion. CH [K], CRW [G]. Native. **Rare**.
Reported in five counties in Kansas and common in Missouri and Oklahoma;
considered rare in Arkansas but with a southern distribution statewide.

Lactuca canadensis L. - Canadian Blue Lettuce. CH [!, K], CRW [!, K, G]. Native. OP,
OC, CL.

Lactuca floridana (L.) Gaertn. - Woodland Lettuce. CH [!, K], CRW [!, K, G]. Native.
OP, OC, CL.

Lactuca saligna L. - Willow-Leaf Lettuce. CH [K], CRW [!, K]. Non-Native. CL.

Lactuca serriola L. - Prickly Lettuce. CH [!, K], CRW [!, K, G]. Non-Native. CL.

Leucanthemum vulgare Lam. - Ox-Eye Daisy. CH [!, K], CRW [!, K, G]. Non-Native.
Noxious. OC, CL.

Liatris aspera Michx. - Tall Gayfeather. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Liatris hirsuta Rydb. - Calcareous Gayfeather. CH [!, K]. Native. OP.

Liatris punctata Hook. var. *mucronata* (DC.) B.L. Turner - Dotted Gayfeather. CH [!, K],
CRW [!, G]. Native. OP, OC, CL. Gibson reported *Liatris punctata*, and did not
recognize variations within this taxon at the time of his thesis. I did verify that his
specimens are in fact var. *mucronata*.

Liatris punctata Hook. var. *punctata* - Dotted Gayfeather. CRW [K]. Native.

Liatris pycnostachya Michx. var. *pycnostachya* - Cat-Tail Gayfeather. CH [!, K], CRW
[!, K, G]. Native. OP, CL. Gibson reported *Liatris pycnostachya* and did not
recognize variations within this taxon at the time of his thesis.

Marshallia caespitosa Nutt. ex DC. var. *caespitosa* - Puffballs. CH [K]. Native.

Matricaria chamomilla L. - Wild Chamomile. CRW [K, G]. Non-Native.

Matricaria discoidea DC. - Pineapple-Weed. CH [!]. Native. CL. **Cherokee County
Record (Pryer 645).**

Nabalus asperus (Michx.) Torr. & A. Gray - Rough Rattlesnake-Root. CH [K], CRW [!,
K, G]. Native. CL.

Nothocalais cuspidata (Pursh) Greene - Wavy-Leaf Prairie-Dandelion. CRW [G]. Native.

Packera glabella (Poir.) C. Jeffrey - Cress-Leaf Groundsel. CH [K], CRW [!, K, G].
Native. **Rare**. Reported in ten counties in Kansas and common in surrounding
states.

Packera obovata (Muhl. ex Willd.) W.A. Weber & A. Löve - Round-Leaf Groundsel. CH
[!, K], CRW [!, K, G]. Native. OP, OC, CL.

Packera plattensis (Nutt.) W.A. Weber & A. Löve - Prairie Groundsel. CH [!, K], CRW
[!, K]. Native. OP, CL.

Parthenium integrifolium L. - Wild Quinine. CH [!, K]. Native. OP, CL.

Pluchea camphorata (L.) DC. - Plowman's-Wort. CRW [!, K]. Native. **Rare**. CL.
Reported in three counties in Kansas, but common in surrounding area. Found
mostly in southern regions including Oklahoma and Arkansas.

Polymnia canadensis L. - White-Flower Leafcup. CH [K]. Native.

Pseudognaphalium obtusifolium (L.) Hilliard & Burt subsp. *obtusifolium* - Blunt-Leaf
Rabbit-Tobacco. CH [K], CRW [!, K, G]. Native. OP, CL.

Pyrrhopappus carolinianus (Walt.) DC. - Carolina Desert-Chicory. CH [!, K], CRW [!,
K, G]. Native. OP, OC, CL.

Ratibida columnifera (Nutt.) Woot. & Standl. - Red-Spike Mexican-Hat. CH [!, K], CRW
[!, K, G]. Native. CL.

Ratibida pinnata (Vent.) Barnh. - Gray-Head Mexican-Hat. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.

Rudbeckia grandiflora (Sweet) K. C. Gmel. ex DC. var. *grandiflora* - Rough Coneflower. CH [K], CRW [!], K]. Native. **Rare**. CL. Reported in four counties in Kansas, but common to the south in Oklahoma and Arkansas; considered rare in Missouri.

Rudbeckia hirta L. var. *hirta* - Black-Eyed-Susan. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL. Gibson did not recognize varieties for this taxon.

Rudbeckia laciniata L. var. *laciniata* - Green-Head Coneflower. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL. Gibson did not recognize varieties for this taxon.

Rudbeckia subtomentosa Pursh - Sweet Coneflower. CH [K], CRW [!], K, G]. Native. CL.

Rudbeckia triloba L. var. *triloba* - Brown-Eyed-Susan. CH [!], K], CRW [!], K]. Native. OP, OC, CL.

Senecio hieraciifolius L. var. *hieraciifolius* - American Burnweed. CH [!], K], CRW [!], K, G]. Native. OP, CL.

Silphium integrifolium Michx. var. *integrifolium* - Entire-Leaf Rosinweed. CH [K], CRW [!], K, G]. Native. OC, CL. Gibson did not recognize varieties for this taxon.

Silphium integrifolium Michx. var. *laeve* Torr. & A. Gray Entire-Leaf Rosinweed. CH [K]. Native.

Silphium laciniatum L. - Compassplant. CH [!], K], CRW [!], K, G]. Native. OC, CL.

Silphium perfoliatum var. *perfoliatum* - Cup-Plant. CH [!], K], CRW [!], K, G]. Native. OC, CL. Gibson did not recognize varieties for this taxon.

Smallanthus uvedalia (L.) Mackenzie ex Small - Bear's-Foot. CH [K]. Native. **Rare**. Only reported from Cherokee County, Kansas, but common in surrounding states.

Solidago altissima L. var. *altissima* - Tall Goldenrod. CH [!], CRW [!], K]. Native. OC, CL. **Crawford County Record** (Pryer 2588, Pryer 2691, Pryer 2711, Pryer 2851, Pryer 2936, Pryer 2944, Pryer 3310, Pryer 3315, Pryer 3385, Pryer 3394, Pryer 3535, Pryer 3555, Pryer 3615, Pryer 5893, Pryer 5921, Pryer 6069, Pryer 6098, Pryer 6232). Gibson did not recognize varieties for this taxon.

Solidago altissima L. var. *gilvocanescens* (Rydb.) Semple - Tall Goldenrod. CH [!], CRW [!], K, G]. Native. OC, CL. **Cherokee County Record** (Pryer 5855). Gibson recognized an older name for this taxon, *Solidago canadensis* var. *gilvocanescens*.

Solidago arguta Ait. var. *boottii* (Hook.) Palmer & Steyermark - Atlantic Goldenrod. CH [!], K]. Native. **Rare**. OP. Reported from Cherokee County, Kansas, but common in the surrounding areas.

Solidago arguta Ait. var. *caroliniana* A. Gray - Atlantic Goldenrod. CH [!]. Native. OP. **State Record**. Cherokee County Voucher (Pryer 6303). This taxon has a southeastern distribution in the United States. It has been reported in several southern counties in Missouri and has not been reported in either Arkansas or Oklahoma. The closest record is Barry County, Missouri.

Solidago delicatula Small - Smooth Elm-Leaf Goldenrod. CH [K]. CRW [!], K]. Native. OP, CL.

Solidago gigantea Ait. - Late Goldenrod. CH [!], K]. CRW [!], K, G]. Native. OP, OC, CL.

Solidago missouriensis Nutt. - Missouri Goldenrod. CH [!], K], CRW [!], K, G]. Native. OP, CL.

Solidago nemoralis Ait. var. *longipetiolata* (Mackenzie & Bush) Palmer & Steyermark
A. Gray - Goldenrod. CH [!], CRW [!], G]. Native. OP, CL. **Cherokee County Record** (Pryer 3015, Pryer 6347).

Solidago nemoralis Ait. var. *nemoralis* A. Gray - Goldenrod. CH [!], K], CRW [!], K]. Native. OP, OC, CL.

Solidago petiolaris Ait. var. *angusta* (Torr. & A. Gray) Gray - Downy Ragged Goldenrod. CH [!], K], CRW [K]. Native. OP.

Solidago radula Nutt. - Western Rough Goldenrod. CH [!], K], CRW [!]. Native. CL. **Crawford County Record** (Pryer 3434).

Solidago rigida L. subsp. *rigida* - Hard-Leaf Flat-Top-Goldenrod. CH [K], CRW [!], K]. Native. OC, CL. Gibson did not recognize subspecies for this taxon.

Solidago speciosa Nutt. var. *rigidiuscula* Torr. & A. Gray - Showy Goldenrod. CH [K], CRW [K, G]. Native.

Solidago ulmifolia Muhl. Ex Willd. var. *ulmifolia* - Elm-Leaf Goldenrod. CH [!], K], CRW [K, G]. Native. Gibson did not recognize varieties for this taxon.

Sonchus arvensis L. - Field Sow-Thistle. CRW [G]. Non-Native.

Sonchus asper (L.) Hill - Spiny-Leaf Sow-Thistle. CH [!], K], CRW [!], K, G]. Non-Native. OP, OC, CL.

Sonchus oleraceus L. - Common Sow-Thistle. CRW [!]. Non-Native. CL. **Cherokee County Record** (Pryer 1137).

Symphyotrichum x amethystinum (Nutt.) Nesom - CRW [G]. Native. Gibson recognized this taxon by an older name, *X Aster amethystinus* forma *leucos*.

Symphyotrichum anomalum (Engelm.) Nesom - Many-Ray American-Aster. CH [!], K]. Native. **Rare**. OP. Reported in two counties in Kansas, but common in surrounding areas.

Symphyotrichum cordifolium (L.) Nesom - Common Blue American-Aster. CH [!], CRW [!]. Native. OP, OC. **Crawford County Record** (Pryer 6273). **Cherokee County Record** (Pryer 2961, Pryer 3228).

Symphyotrichum drummondii (Lindl.) Nesom var. *drummondii* - Drummond's American-Aster. CH [!], K], CRW [!], K, G]. Native. OP, CL.

Symphyotrichum drummondii (Lindl.) Nesom var. *texanum* (Burgess) Nesom - Drummond's American-Aster. CH [!], CRW [!]. Native. OP, OC, CL. **Cherokee County Record** (Pryer 2959, Pryer 2968, Pryer 2987, Pryer 3189, Pryer 6293, Pryer 6315), **Crawford County Record** (Pryer 6164, Pryer 6173, Pryer 6277).

Symphyotrichum ericoides (L.) Nesom var. *ericoides* - White Heath American-Aster. CH [!], K], CRW [!], K, G]. Native. OC, CL. Gibson did not recognize varieties for this taxon. He reported *Aster ericoides*.

Symphyotrichum lanceolatum (Willd.) Nesom subsp. *interior* (Wieg.) Nesom - White Panicked American-Aster. CH [!], K], CRW [!]. Native. OP, CL. **Crawford County State Record** (Pryer 6408).

Symphyotrichum lanceolatum (Willd.) Nesom subsp. *lanceolatum* - White Panicked American-Aster. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.

Symphyotrichum lateriflorum (L.) A. & D. Löve - Farewell-Summer. CH [K]. Native. **Rare**. Reported from four counties in Kansas but common in surrounding states.

Symphyotrichum novae-angliae (L.) Nesom - New England American-Aster. CH [K]. Native.

Symphyotrichum oblongifolium (Nutt.) Nesom - Aromatic American-Aster. CH [K], CRW [!, K]. Native. CL.

Symphyotrichum ontarionis (Wieg.) Nesom var. *ontarionis* - Ontario American-Aster. CH [K], CRW [K, G]. Native.

Symphyotrichum oolentangiense (Riddell) Nesom - Sky-Blue American-Aster. CH [!, K], CRW [!, K]. Native. OP, CL.

Symphyotrichum parviceps (Burgess) Nesom - Small-Head American-Aster. CH [K]. Native.

Symphyotrichum patens (Ait.) Nesom var. *patens* - Late Purple American-Aster. CH [!, K]. Native. OP.

Symphyotrichum patens (Ait.) Nesom var. *patentissimum* (Lindl. ex DC.) Nesom - Late Purple American-Aster. CH [!, K], CRW [K]. Native. OP.

Symphyotrichum pilosum (Willd.) Nesom var. *pilosum* - White Oldfield American-Aster. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Symphyotrichum praealtum (Poir.) Nesom var. *praealtum* - Willow-Leaf American-Aster. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Symphyotrichum turbinellum (Lindl.) Nesom - Smooth Violet Prairie American-Aster. CH [!, K]. Native. **Rare**. OP. Only reported from Cherokee County, Kansas, but common in surrounding states.

Symphyotrichum urophyllum (Lindl. ex DC.) Nesom - White Arrow American-Aster. CH [K], CRW [!]. Native. CL. **Crawford County Record** (Pryer 3539).

Tanacetum vulgare L. - Common Tansy. CRW [K]. Non-Native. **Noxious**.

Taraxacum erythrospermum Andr. ex Bess. - Red-Seed Dandelion. CH [K], CRW [K, G]. Non-Native.

Taraxacum officinale G.H. Weber ex Wiggers - Common Dandelion. CH [!, K], CRW [!, K, G]. Native. CL.

Tragopogon dubius Scop. - Meadow Goat's-Beard. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Verbesina alternifolia (L.) Britt. ex Kearney - Wingstem. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Verbesina encelioides (Cav.) Benth. & Hook. f. ex A. Gray - Golden Crownbeard. CRW [!]. Native. CL. **Crawford County Record** (Pryer 3877).

Verbesina helianthoides Michx. - Gravelweed. CH [!, K], CRW [!, K, G]. Native. **Rare**. OP, CL. Reported in six counties in Kansas and common in surrounding states.

Verbesina virginica L. - White Crownbeard. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Vernonia arkansana DC. - Arkansas Ironweed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Vernonia baldwinii Torr. - Western Ironweed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Vernonia fasciculata Michx. - Prairie Ironweed. CH [!, K], CRW [K, G]. Native. CL.

Vernonia gigantea (Walt.) Trel. ex Branner & Coville - Giant Ironweed. CH [K]. Native. **Rare**. Reported in three counties in Kansas, but common in surrounding states.

Vernonia missurica Raf. Missouri Ironweed. CH [K], CRW [!, K, G]. Native. **Rare**. CL. Reported in four counties in Kansas, but common in surrounding states.

Xanthium strumarium L. - Rough Cocklebur. CH [!, K], CRW [!, K, G]. Native. **Noxious**. OC, CL.

Balsaminaceae (Touch-Me-Not Family)

Impatiens capensis Meerb. - Spotted Touch-Me-Not. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Impatiens pallida Nutt. - Pale Touch-Me-Not. CH [!, K], CRW [K, G]. Native. OP.

Berberidaceae (Barberry Family)

Podophyllum peltatum L. - May-Apple. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Betulaceae (Birch Family)

Alnus serrulata (Ait.) Willd. - Brookside Alder. CH [K]. Native.

Betula nigra L. - River Birch. CH [!, K], CRW [!, K, G]. Native. OP, CL. Plant observed in Crawford County but not collected.

Corylus Americana Marsh. - American Hazelnut. CH [K], CRW [!, K, G]. Native. OC.

Ostrya virginiana (P. Mill.) K. Koch - Eastern Hop-Hornbeam. CH [K], CRW [K]. Native.

Bignoniaceae (Trumpet-Creeper Family)

Campsis radicans (L.) Seem. ex Bureau - Trumpet-Creeper. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Catalpa bignonioides Walt. - Southern Catalpa. CH [!], CRW [!, G]. Native. **Adventive.** CL. **Cherokee County Record** (*Pryer 4956, Pryer 4963, Pryer 5041*)

Catalpa ovata G. Don - Chinese Catalpa. CRW [!]. Non-Native. CL. **State Record.** Crawford County Voucher (*Pryer 2085*). One tree located in the middle of a hay field and suckering. Present two years in a row. Reported from few counties nationwide, in mostly northeastern states. Reported only from two counties in Missouri, Boone and Crawford. The Missouri records are the closest reports.

Catalpa speciosa Warder ex Engelm. - Northern Catalpa. CH [K], CRW [!, K, G]. Native. **Adventive.** OC, CL.

Boraginaceae (Borage Family)

Buglossoides arvensis (L.) I.M. Johnston - Corn-Gromwell. CH [!, K], CRW [!, K, G]. Non-Native. OP, CL.

Ellisia nyctelea (L.) L. - Aunt Lucy. CH [K], CRW [!, K, G]. Native. OP, CL.

Hackelia virginiana (L.) I.M. - Johnston Beggar's-Lice. CH [K], CRW [!, K, G]. Native. OC.

Heliotropium indicum L. - Indian Heliotrope. CH [!, K], CRW [!, K, G]. Native. **Adventive.** OP.

Heliotropium tenellum (Nutt.) Torr. - Pasture Heliotrope. CRW [!, K, G]. Native. OC.

Hydrophyllum virginianum L. var. *virginianum* - Shawnee-Salad. CH [K], CRW [K, G]. Native. Gibson did not recognize varieties of this taxon.

Lithospermum canescens (Michx.) Lehm. - Hoary Puccoon. CH [K], CRW [K, G]. Native.

Lithospermum incisum Lehm. - Fringed Gromwell. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Lithospermum occidentale (Mackenzie) Weakley, Witsell & D. Estes - Western Marbleseed. CRW [!, K, G]. Native. OC.

Myosotis macrosperma Engelm. - Large-Seed Forget-Me-Not. CRW [!]. Native. CL. **State Record.** Crawford County Vouchers (*Pryer 598, Pryer 987, Pryer 4223, Pryer 4270*). This taxon is common throughout the south and eastern United States, including the 4-State region. The closest reports are Barton and Jasper counties, Missouri.

Myosotis verna Nutt. - Spring Forget-Me-Not. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Phacelia gilioides Brand - Brand's Scorpion-Weed. CH [K], CRW [K, G]. Native.

Phacelia hirsuta Nutt. - Fuzzy Scorpion-Weed. CH [K], CRW [!, K, G]. Native. OC.

Brassicaceae (Mustard Family)

Alliaria petiolata (Bieb.) Cavara & Grande - Garlic-Mustard. CRW [!]. Non-Native. **Noxious.** OC, CL. **Crawford County Record** (*Pryer 4261, Pryer 4313, Pryer 4541*).

Arabidopsis thaliana (L.) Heynh. - Thalecress. CH [K]. Non-Native.

Arabis pycnocarpa M. Hopkins var. *adpressipilis* M. Hopkins - Hairy Eared Rockcress. CH [K]. Native. **Rare.** Only reported from Cherokee County, Kansas, but common in Missouri; considered rare in Arkansas and has not been reported in Oklahoma.

Barbarea vulgaris Ait. f. - Garden Yellow-Rocket. CH [!, K], CRW [!, K, G]. Non-Native. OC, CL.

Borodinia canadensis (L.) P. J. Alexander & Windham - Sicklepod. CH [K], CRW [K, G]. Native.

Borodinia dentata (Raf.) P. J. Alexander & Windham - Short's False Rockcress. CH [!, K]. Native. OP.

Borodinia laevigata (Muhl. ex Willd.) P. J. Alexander & Windham - Smooth False Rockcress. CH [K], CRW [!, K]. Native. **Rare.** OP, OC. Reported in three counties in Kansas, but common in surrounding states.

Borodinia missouriensis (Greene) P. J. Alexander & Windham - Green False Rockcress. CH [!, K]. Native. **Rare.** OP. Only reported in Cherokee County, Kansas, but common in surrounding states.

Brassica juncea (L.) Czern. - Chinese Mustard. CRW [G]. Non-Native. **Noxious.**

Brassica nigra (L.) W. D. J. Koch - Black Mustard. CRW [G]. Non-Native. **Noxious.**

Brassica rapa L. var. *rapa* Rape (Canola). CRW [!]. Non-Native. **Noxious.** CL. **Crawford County Record** (*Pryer 100, Pryer 110, Pryer 4257*).

Camelina microcarpa Andr. ex DC. - Little-Pod False Flax. CH [K], CRW [K, G]. Non-Native.

Capsella bursa-pastoris (L.) Medik. - Shepherd's-Purse. CH [!, K], CRW [!, K, G]. Non-Native. OC, CL.

Cardamine bulbosa (Schreb. ex Muhl.) B. S. P. - Bulbous Bittercress. CH [K]. Native. **Rare.** Reported from five counties in Kansas, but common in surrounding states.

Cardamine concatenata (Michx.) Sw. - Cut-Leaf Toothwort. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Cardamine hirsuta L. - Hairy Bittercress. CH [!], CRW [!]. Non-Native. OP, OC. **State Record.** Cherokee County Vouchers (*Pryer 4116, Pryer 4128, Pryer 4207, Pryer 4208*). Crawford County Record (*Pryer 4053, Pryer 4066*). This taxon is scattered throughout the United States and most common throughout the southeast. It is commonly reported in the 4-state region. The closest reports are from Barry County, Missouri and Osage County, Oklahoma.

Cardamine parviflora L. - Sand Bittercress. CH [!], CRW [!], K, G]. Native. OC, CL.

Cardamine pensylvanica Muhl. ex Willd. Quaker Bittercress. CH [K], CRW [G]. Native.

Chorispora tenella (Pallas) DC. - Crossflower. CRW [!]. Non-Native. OC. **Crawford County Record** (*Pryer 4857*).

Descurainia pinnata (Walt.) Britt. subsp. *brachycarpa* (Richards.) Detling - Western Tansy-Mustard. CH [!], CRW [!], G]. Native. OP, OC, CL. **Crawford County Record** (*Pryer 556, Pryer 4291, Pryer 4334, Pryer 4391, Pryer 4514, Pryer 4515, Pryer 4567*).

Draba brachycarpa Nutt. ex Torr. & A. Gray - Short-Pod Whitlow-Grass. CH [!], K], CRW [!], K, G]. Native. OC, CL.

Draba cuneifolia Nutt. ex Torr. & A. Gray var. *cuneifolia* - Wedge-Leaf Whitlow-Grass. CH [K], CRW [!], K, G]. Native. OC. Gibson did not recognize varieties of this taxon.

Draba reptans (Lam.) Fern. - Carolina Whitlow-Grass. CH [K], CRW [!], G]. Native. OC.

Erysimum capitatum (Dougl. ex Hook.) Greene - Sand-Dune Wallflower. CRW. Native. **State Record.** Collected in 1998 along the roadside of Highway 160. Crawford County Voucher (*Timme 15028*). This taxon is common in western states and adventive in the Great Plains region. The closest report is Benton County, Arkansas, Barry County, Missouri, and Rogers County, Oklahoma.

Erysimum repandum L. - Spreading Wallflower. CH [K], CRW [!], K, G]. Non-Native. **Noxious.** OC, CL.

Hesperis matronalis L. - Mother-of-the-Evening. CH [!], CRW [!], K]. Native. OC, CL. **Cherokee County Record** (*Pryer 629*).

Iodanthus pinnatifidus (Michx.) Steud. - Purple-Rocket. CH [K], CRW [!], K, G]. Native. CL.

Lepidium campestre (L.) Ait. f. - Cream-Anther Field Pepperwort. CH [!], CRW [!]. Non-Native. **Cherokee County Record** (*Pryer 433*), Crawford County Record (*Pryer 4271, Pryer 4507*).

Lepidium densiflorum Schrad. - Miner's Pepperwort. CH [!], K], CRW [!], K, G]. Native. OC.

Lepidium virginicum L. subsp. *virginicum* - Poorman's-Pepperwort. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.

Microthlaspi perfoliatum (L.) F.K. Mey. - Perfoliate-Pennycress. CRW [!], K]. Non-Native. OC, CL.

Nasturtium officinale Ait. f. - Watercress. CH [K]. Non-Native.

Physaria gracilis (Hook.) O'Kane & Al-Shehbaz subsp. *gracilis* - Spreading Bladderpod. CRW [!], G]. Native. CL.

Planodes virginica (L.) Greene - Virginia Winged Rockcress. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.

Rorippa palustris (L.) Bess. subsp. *palustris* - Bog Yellowcress. CH [!, K], CRW [!]. Native. OP, OC, CL. **Crawford County Record** (*Pryer 592, Pryer 602, Pryer 4550*).

Rorippa sessiliflora (Nutt.) A.S. Hitchc. - Stalkless Yellowcress. CH [!, K], CRW [!, K]. Native. CL.

Rorippa sinuata (Nutt.) A.S. Hitchc. - Spreading Yellowcress. CRW [K]. Native.

Selenia aurea Nutt. - Golden Selenia. CH [K], CRW [K, G]. Native

Sinapis alba L. - White-Mustard. CRW [*Snow 10769*]. Non-Native. CL.

Sinapis arvensis L. - Corn-Mustard. CH [K], CRW [K]. Non-Native. **Noxious**.

Sisymbrium altissimum L. - Tall Hedge-Mustard. CRW [G]. Non-Native.

Sisymbrium officinale (L.) Scop. - Hedge-Mustard. CH [K], CRW [!, K, G]. CL.

Thlaspi arvense L. - Field Pennycress. CH [!, K], CRW [!, K, G]. Non-Native. **Noxious**. OC, CL.

Butomaceae (Flowering-Rush Family)

Butomus umbellatus L. - Greater Flowering-Rush. CH [K]. Non-Native.

Cabombaceae (Watershield Family)

Brasenia schreberi J.F. Gmel. - Watershield. CH [K]. Native. **Rare**. Reported in two counties in Kansas, but common in surrounding states.

Cactaceae (Cactus Family)

Opuntia humifusa (Raf.) Raf. - Devil's-Tongue. CRW [!, K, G]. Native. OC.

Opuntia macrorhiza Engelm. - Twist-Spine Prickly-Pear. CH [K], CRW [!, K] Native. CL.

Campanulaceae (Bellflower Family)

Campanulastrum americanum (L.) - Small American-Bellflower. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Lobelia appendiculata A. DC. - Pale Lobelia. CH [K], CRW [K]. Native. **Rare**. Reported in five counties in Kansas; not known from Missouri but common in Oklahoma and Arkansas.

Lobelia cardinalis L. - Cardinal-Flower. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Lobelia inflata L. Indian-Tobacco. CH [!, K], CRW [!]. Native. **Rare**. CL. **Crawford County Record** (*Pryer 1473, Pryer 1603a*). Reported in nine counties in Kansas, including this report; common in surrounding states.

Lobelia siphilitica L. - Great Blue Lobelia. CH [K], CRW [!, K, G]. Native. OC.

Lobelia spicata Lam. - Pale-Spike Lobelia. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Triodanis holzingeri McVaugh Holzinger's - Venus'-Looking-Glass. CH [K], CRW [K]. Native.

Triodanis lamprosperma McVaugh - Prairie Venus'-Looking Glass. CH [K]. Native. **Rare**. Reported in three counties in Kansas; common in Oklahoma and Arkansas, but rare in Missouri.

Triodanis leptocarpa (Nutt.) Nieuwl. - Slim-Pod Venus'-Looking-Glass. CH [!, K]. Native. CL.

Triodanis perfoliata (L.) Nieuwl. subsp. *biflora* (Ruiz & Pavón) Lammers - Claspingleaf Venus'-Looking-Glass. CH [K], CRW [K, G]. Native.

Triodanis perfoliata (L.) Nieuwl. subsp. *perfoliata* - Claspingleaf Venus'-Looking-Glass. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Cannabaceae (Hemp Family)

Celtis laevigata Willd. - Sugar-Berry. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Celtis occidentalis L. - Common Hackberry. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Celtis tenuifolia Nutt. - Dwarf Hackberry. CH [K], CRW [K, G]. Native.

Humulus lupulus L. - Common Hop. CRW [K, G]. Non-Native.

Caprifoliaceae (Honeysuckle Family)

Lonicera flava Sims - Yellow Honeysuckle. CH [K]. Native. **Rare**. Reported in four counties in Kansas, but common in surrounding states.

Lonicera japonica Thunb. - Japanese Honeysuckle. CH [!, K], CRW [!, K, G]. Non-Native. OC, CL.

Lonicera maackii (Rupr.) Maxim. - Amur Honeysuckle. CH [!], CRW [!, G]. Non-Native. CL. **Cherokee County Record** (*Pryer 186, Pryer 3746, Pryer 3938, Pryer 3961, Pryer 4005*).

Lonicera sempervirens L. - Trumpet Honeysuckle. CH [K], CRW [!, K, G]. Native. **Rare**. CL. Reported in four counties in Kansas; common in surrounding areas but considered adventive in Missouri.

Symphoricarpos orbiculatus Moench - Coral-Berry. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Triosteum angustifolium L. - Yellow-Fruit Horse-Gentian. CH [K]. Native. **Rare**. Reported from only Cherokee County, Kansas; common in surrounding areas, except for Oklahoma, where the nearest reports are from southern counties.

Triosteum perfoliatum L. - Feverwort. CH [K], CRW [G]. Native.

Caryophyllaceae (Pink Family)

Agrostemma githago L. - Common Corncockle. CRW [G]. Non-Native.

Arenaria serpyllifolia L. - Thyme-Leaf Sandwort. CH [!, K], CRW [!, K, G]. Non-Native. Gibson did not recognize varieties of this taxon. Identification of varieties depends on seeds. If the specimen is too young, it is impossible to state which variety you have. Therefore, some of my specimens lack a varietal designation.

Arenaria serpyllifolia L. var. *serpyllifolia* - Thyme-Leaf Sandwort. CH [!, K], CRW [!, K]. Non-Native. OP, OC, CL.

Arenaria serpyllifolia L. var. *tenuior* Mert. & W.D.J. Koch - Thyme-Leaf Sandwort. CH [!]. Non-Native. OP. **State Record**. Cherokee County Vouchers (*Pryer 4965, Pryer 5125*). This taxon has scattered reports. It has been reported throughout Missouri, the Northwestern half of Arkansas, and none from Oklahoma. Reports come from many bordering Missouri counties.

Cerastium brachypetalum Desportes ex Pers. A. Gray - Mouse-Ear Chickweed. CH [!, K], CRW [!]. Non-Native. OP, OC, CL. **Crawford County Record** (*Pryer 4078, Pryer 4336, Pryer 4337, Pryer 4537, Pryer 4556, Pryer 4575*).

Cerastium brachypodum (Engelm. ex A. Gray) B.L. Robins. - Short-Stalk Mouse-Ear Chickweed. CH [K], CRW [!, K, G]. Native. OC.

Cerastium fontanum Baumg. subsp. *vulgare* (Hartman) Greuter & Burdet - Common Mouse-Ear Chickweed. CH [!, K]. CRW [!, K]. Non-Native. OP, OC, CL.

Cerastium glomeratum Thuill. - Sticky Mouse-Ear Chickweed. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Cerastium nutans Raf. var. *nutans* - Nodding Mouse-Ear Chickweed. CH [K], CRW [K]. Native.

Cerastium pumilum W. Curtis - European Mouse-Ear Chickweed. CH [!, K]. CRW [!]. Non-Native. OP, OC. **Crawford County Record** (*Pryer 4456, Pryer 4458, Pryer 4497, Pryer 4587, Pryer 4765*).

Dianthus armeria L. - Deptford Pink. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Gypsophila elegans Bieb. - Showy Baby's-Breath. CRW [K]. Non-Native.

Holosteum umbellatum L. - Jagged-Chickweed. CRW [!, K]. Non-Native. OC.

Minuartia patula (Michx.) Mattf. - Pitcher's Stitchwort. CH [K]. CRW [!, K, G]. Native. OP, OC, CL.

Paronychia fastigiata (Raf.) Fern. var. *fastigiata* - Hairy Forked Nailwort. CH [K], CRW [!, K]. Native. OC.

Sagina decumbens (Ell.) Torr. & A. Gray subsp. *decumbens* - Trailing Pearlwort. CH [K], CRW [Snow 10775]. Native.

Saponaria officinalis L. - Bouncing-Bett. CH [K], CRW [!, K, G]. Non-Native. OP, CL.

Scleranthus annuus L. - Annual Knawel. CH [K], CRW [!, K]. Non-Native. OC.

Silene antirrhina L. - Sleepy Catchfly. CH [K], CRW [!, K, G]. Native. OP, OC, CL.

Silene regia Sims - Royal Catchfly. CH [K]. Native. **Extirpated**. The most recent specimen was found at McGregor Herbarium, University of Kansas, made on July 24, 1995 (*K.M. Highfill s.n.*).

Silene stellata (L.) Ait. f. - Widow's-Frill. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Silene virginica L. - Fire-Pink. CRW [K, G]. Native.

Stellaria media (L.) Vill. - Common Chickweed. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Stellaria neglecta Weihe - Greater Chickweed. CH [!], CRW [!]. Non-Native. OP, OC, CL. **State Record**. Cherokee County vouchers (*Pryer 4054, Pryer 4159, Pryer 4196, Pryer 4964*). Crawford County vouchers (*Pryer 33, Pryer 49, Pryer 64, Pryer 127, Pryer 4069, Pryer 4070, Pryer 4231, Pryer 4232, Pryer 4268, Pryer 4316, Pryer 4373, Pryer 4533, Pryer 4584*). Abundant in both counties. This taxon has been reported in few counties nationwide, including one in Arkansas, three in Missouri, and one in Oklahoma. The closest report is from Ottawa County, Oklahoma.

Celastraceae (Bittersweet Family)

Celastrus orbiculatus Thunb. - Asian Bittersweet. CRW [!]. Non-Native. CL. **Crawford County Record** (*Pryer 337, Pryer 3283, Pryer 3458*).

Celastrus scandens L. - American Bittersweet. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Elaeodendron fortunei Turcz. - Winter-Creeper. CH [!, K] CRW [!]. Non-Native. CL.
Crawford County Record (Pryer 2245).

Euonymus alatus (Thunb.) Sieb. - Winged Spindletree. CH [K], CRW [!]. Non-Native.
CL. **Crawford County Record** (Pryer 6412).

Euonymus atropurpureus Jacq. var. *atropurpureus* - Eastern Wahoo. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL. Gibson did not recognize varieties of this taxon.

Ceratophyllaceae (Hornwort Family)

Ceratophyllum demersum L. - Coon's-Tail. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Cistaceae (Rock-Rose Family)

Lechea mucronata Raf. - Hairy Pinweed. CH [K]. Native. **Rare**. Reported in eight counties in Kansas, but common in surrounding states.

Lechea tenuifolia Michx. - Narrow-Leaf Pinweed. CH [!, K], CRW [G]. Native. OP.

Cleomaceae (Spider-Flower Family)

Polanisia dodecandra (L.) DC. subsp. *trachysperma* (Torr. & A. Gray) Iltis - Red-Whisker Clammyweed. CH [K]. Native.

Colchicaceae (Autumn-Crocus Family)

Uvularia grandiflora Sm. - Large-Flower Bellwort. CH [!, K]. Native. **Rare**. Reported in five counties in Kansas, but common in Missouri and Arkansas; considered rare in the Oklahoma.

Commelinaceae (Spiderwort Family)

Commelina communis L. - Asiatic Dayflower. CH [!, K], CRW [!, K, G]. Non-Native. OC, CL.

Commelina diffusa Burm. f. var. *diffusa* - Climbing Dayflower. CH [!, K]. Native. **Rare**. OP. CL. Reported in ten counties in Kansas, but common in surrounding states.

Commelina erecta L. - White-Mouth Dayflower. CH [!, K], CRW [!]. Native. OP, OC, CL. **Crawford County Record** (Pryer 1994, Pryer 5939, Pryer 5956, Pryer 5968)

Commelina virginica L. - Virginia Dayflower. CH [K], CRW [!]. Native. CL. **Crawford County Record** (Pryer 3240).

Tradescantia bracteata Small - Long-Bract Spiderwort. CH [K], CRW [!, G]. Native. OC.

Tradescantia hirsutiflora Bush - Hairy-Flower Spiderwort. CH [K], CRW [G]. Native.

Tradescantia ohiensis Raf. - Bluejacket. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Convolvulaceae (Morning-Glory Family)

Calystegia macounii (Greene) Brummitt - Macoun's False Bindweed. CH [!]. Native. **Noxious**. CL. **Cherokee County Record** (PRYER 626b).

Calystegia sepium (L.) R. Br. subsp. *angulata* Brummitt - Hedge False Bindweed. CH [!], CRW [!, G]. Native. **Noxious**. OC. CL. **Cherokee County Record** (Pryer 2446). **Crawford County Record** (Pryer 5754).

Calystegia silvatica (Kit.) Griseb. subsp. *fraterniflora* (Mackenzie & Bush) Brummitt - Short-Stalk False Bindweed. CH [!, K], CRW [!, K, G]. Native. **Noxious.** OP, CL.

Convolvulus arvensis L. - Field Bindweed. CH [!, K], CRW [!, K, G]. Non-Native. **Noxious.** OP, CL.

Cuscuta cuspidata Engelm. - Cusp Dodder. CH [!, K], CRW [!, K, G]. Native. **Noxious.** OP, OC, CL.

Cuscuta glomerata Choisy. - Rope Dodder. CH [K], CRW [K, G]. Native. **Noxious.**

Cuscuta gronovii Willd. ex J.A. Schultes var. *gronovii* - Scaldweed. CH [!, K], CRW [!, K, G]. Native. **Noxious.** OP, OC, CL.

Cuscuta pentagona Engelm. var. *pentagona* - Bush-Clover Dodder. CH [!, K], CRW [!, K, G]. Native. **Rare.** OP, CL. Gibson did not recognize varieties of this taxon. Reported in thirty-nine counties in Kansas, but common in surrounding states. **Noxious.**

Cuscuta polygonorum Engelm. - Smartweed Dodder. CH [K], CRW [!, K, G]. Native. **Noxious.** OC.

Ipomoea coccinea L. - Red-Star. CRW [G]. Non-Native. **Noxious.**

Ipomoea hederacea Jacq. - Ivy-leaf morning-glory. CH [!, K], CRW [!, K, G]. Native. **Noxious.** CL.

Ipomoea lacunosa L. - Whitestar. CH [!, K], CRW [!, K, G]. Native. **Noxious.** OP, OC.

Ipomoea pandurata (L.) G.F.W. Mey. - Man-of-the-earth. CH [!, K], CRW [!, K]. Native. **Noxious.** OC, CL.

Ipomoea purpurea (L.) Roth. - Common morning-glory. CH [!, K], CRW [!, K, G]. Non-Native. **Noxious.** CL.

Cornaceae (Dogwood family)

Cornus drummondii C.A. Mey. - Rough-leaf dogwood. CH [!, K], CH [!, K, G]. Native. OC, CL.

Cornus florida L. - Flowering Dogwood. CH [!, K], CRW [!]. Native. OP, CL. **Crawford County Record** (Pryer 6422).

Cornus obliqua Raf. - Pale Dogwood. CH [K], CRW [K, G]. Native.

Crassulaceae (Stonecrop Family)

Hylotelephium erythrostictum (Miq.) H. Ohba - Garden Annual-Stonecrop. CH [K]. Non-Native.

Sedum pulchellum Michx. - Widow's-Cross. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Sedum sarmentosum Bunge - Stringy Stonecrop. CRW [Snow 10974, G]. Non-Native. CL.

Cucurbitaceae (Cucumber Family)

Citrullus lanatus (Thunb.) Matsumura & Nakai var. *lanatus* - Watermelon. CH [K]. Non-Native.

Cucurbita melopepo L. subsp. *melopepo* - Field Pumpkin. CH [K]. Native. Adventive.

Echinocystis lobata (Michx.) Torr. & A. Gray - Wild Cucumber. CH [K]. Native.

Melothria pendula L. var. *pendula* - Guadeloupe-Cucumber. CH [!]. Native. **Rare.**

Cherokee County Record (Pryer 669, Pryer 3173). Reported in nine counties in

Kansas; This considered rare in Missouri, but common in Oklahoma and Arkansas.

Sicyos angulatus L. - One-Seed Burr-Cucumber. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Cyperaceae (Sedge family)

Bulbostylis capillaris (L.) Kunth ex C.B. Clarke subsp. *capillaris* - Dense-Tuft Hair Sedge. CH [K]. CRW [K]. Native.

Carex aggregata Mackenzie - Glomerate Sedge. CH [K]. CRW [!, K]. Native. OC, CL.

Carex albicans Willd. ex Spreng. var. *albicans* - White-Tinge Sedge. CH [!, K], CRW [K]. Native. OP.

Carex amphibola Steud. - Eastern Narrow-Leaf Sedge. CRW [!]. Native. CL. **State Record.** Crawford County Voucher (*Pryer 1042*). This taxon has been reported throughout the south and eastern states and is common in the 4-state region. The closes reports are from Jasper and Vernon counties, Missouri.

Carex annectens (Bickn.) Bickn. - Yellow-Fruit Sedge. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Carex arkansana (Bailey) Bailey - Arkansas Sedge. CH [K]. Native. **Rare.** Reported in ten counties in Kansas and is rare in surrounding areas.

Carex austrina Mackenzie - Southern Sedge. CH [K]. Native.

Carex bicknellii Britt. - Bicknell's Sedge. CH [!, K], CRW [!, K, G]. Native. OP.

Carex blanda Dewey - Eastern Woodland Sedge. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Carex brevior (Dewey) Mackenzie - Short-Beak Sedge. CH [!, K], CRW [!, K, G]. Native. CL.

Carex bushii Mackenzie. - Bush's sedge. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Carex caroliniana Schwein. - Carolina sedge. CH [!, K]. Native. **Rare.** CL. Reported in three counties in Kansas, but common in surrounding areas.

Carex cephalophora Muhl. ex Willd. - Oval-leaf sedge. CH [!, K], CRW [!]. Native. **Rare.** OP. Reported in seventeen counties in Kansas; rare in Oklahoma but common in both Missouri and Arkansas.

Carex conjuncta Boott. - Soft fox sedge. CH [K]. Native. **Rare.** Reported in eleven counties in Kansas and common in Missouri, but considered rare in Arkansas and known from only two counties in Oklahoma.

Carex corrugata Fern. - Prune-fruit sedge. CH [!, K], CRW [!]. Native. CL. **Crawford County Record** (*Pryer 567, Pryer 568, Pryer 1297*).

Carex crus-corvi Shuttlw. ex Kunze. - Raven-foot sedge. CH [!, K], CRW [!, K, G]. Native. **Rare.** CL. Reported in ten counties in Kansas but common in surrounding states.

Carex davisii Schwien. & Torr. - Davis' sedge. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Carex emoryi Dewey - Emory's Sedge. CH [K]. Native.

Carex festucacea Schukr. ex Willd. - Fescue sedge. CH [K], CRW [!, K, G]. Native.

Rare. CL. Reported in nine counties in Kansas but common in surrounding states.

Carex fissa Mackenzie var. *fissa* - Hammock Sedge. CH [K]. Native. **Rare**. Reported in five counties in Kansas; considered rare in surrounding states, though relatively common in surrounding areas.

Carex flaccosperma Dewey - Thin-Fruit Sedge. CRW [K]. Native. **Rare**. Reported in two counties in Kansas; considered rare Missouri but common in Oklahoma and Arkansas.

Carex frankii Kunth - Frank's sedge. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Carex granularis Muhl. ex Willd. - Limestone-Meadow Sedge. CRW [!, K, G]. Native. OC, CL.

Carex gravida Bailey - Heavy Sedge. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Carex grayi Carey - Gray's Sedge. CH [!, K]. Native. OP, CL.

Carex grisea Wahlenb. - Inflated Narrow-Leaf Sedge. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Carex hirsutella Mackenzie - Fuzzy-Wuzzy Sedge. CH [!, K], CRW [!, G]. Native. **Rare**. OP, CL. Reported in eleven counties in Kansas but common in surrounding states.

Carex hyalinolepis Steud. - Shoreline Sedge. CH [K], CRW [K, G]. Native.

Carex inops subsp. *heliophila* (Mackenzie) Crins - Long-Stolon Sedge. CRW [K]. Native.

Carex jamesii Schwein. - James' Sedge. CRW [!, K]. Native. OC, CL.

Carex leavenworthii Dewey - Leavenworth's Sedge. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Carex lupulina Muhl. ex Willd. - Hop Sedge. CH [!, K], CRW [!, K, G]. Native. CL.

Carex meadii Dewey - Mead's Sedge. CH [K], CRW [!, K, G]. Native. OC.

Carex mesochorea Mackenzie - Midland Sedge. CH [!], CRW [!, K]. Native. **Rare**. OP, CL. **Cherokee County Record** (Pryer 165, Pryer 1207). Reported in ten counties in Kansas, including this report; considered rare in Arkansas and common in Missouri, but not reported for Oklahoma.

Carex microdonta Torr. & Hook. - Little-Tooth Sedge. CH [!], CRW [!, K]. Native. CL.

Carex missouriensis P. Rothr. & Reznicek - Missouri Sedge. CRW [K]. Native.

Carex molesta Mackenzie ex Bright - Troublesome Sedge. CH [!, K], CRW [K]. Native. OP, CL.

Carex muehlenbergii Schkuhr ex Willd. var. *enervis* Boott - Muhlenberg's Sedge. CH [!, K], CRW [!]. Native. **Rare**. OC, CL. **Crawford County Record** (Pryer 302, Pryer 1159, Pryer 4467). Reported in fourteen counties in Kansas, including this report and common in surrounding states.

Carex muehlenbergii Schkuhr ex Willd. var. *muehlenbergii* - Muhlenberg's Sedge. CH [!], CRW [!]. Native. OP, OC. **Cherokee County Record** (Pryer 414, Pryer 412). **Crawford County Record** (Pryer 4650).

Carex normalis Mackenzie - Greater Straw Sedge. CH [K], CRW [!]. Native. OC. **Crawford County Record** (Pryer 723, Pryer 1057, Pryer 4657, Pryer 4846).

Carex oklahomensis Mackenzie - Oklahoma Sedge. CH [K], CRW [K, G]. Native. **Rare**. Reported in four counties in Kansas, but common in surrounding areas; considered rare in Oklahoma but common in Missouri and Arkansas.

Carex oligocarpa Schkuhr ex Willd. - Richwoods Sedge. CRW [!, K]. Native. OC, CL.

Carex opaca (F.J. Herm.) P. Rothr. & Reznicek - CH [!, K], CRW [!, K]. Native. CL.

Carex pellita Muhl. ex Willd. - Woolly Sedge. CRW [!, G]. Native. CL.

Carex radiata (Wahlenb.) Small - Eastern Star Sedge. CH [K], CRW [K, G]. Native. **Rare.** Reported in eight counties in Kansas, but common in Missouri; considered rare in Arkansas.

Carex retroflexa Muhl. ex Willd. - Reflexed Sedge. CH [K], CRW [K]. Native. **Rare.** Reported in seven counties in Kansas, but common in surrounding states.

Carex rosea Schkuhr ex Willd. - Rosy Sedge. CH [K], CRW [!]. Native. **Rare.** CL. **Crawford County Record** (Pryer 616). Reported in nine counties in Kansas, including this report; common in Missouri and Arkansas but rare in Oklahoma.

Carex scoparia Schkuhr ex Willd. - Pointed Broom Sedge. CH [K], CRW [!, K]. Native. CL.

Carex shortiana Dewey - Short's Sedge. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Carex sparganioides Muhl. ex Willd. - Burr-Reed Sedge. CH [!], CRW [!, K]. Native. OP, CL. **Cherokee County Record** (Pryer 420, Pryer 508, Pryer 525, Pryer 949, Pryer 1206, Pryer 1208, Pryer 1210a, Pryer 1218, Pryer 5088).

Carex squarrosa L. - Squarrose Sedge. CH [K], CRW [K, G]. Native. **Rare.** Reported in three counties in Kansas, but common in surrounding areas.

Carex triangularis Boeckl. - Eastern Fox Sedge. CH [K]. Native. **Rare.** Reported in only Cherokee County, Kansas. This taxon is common in Oklahoma and Arkansas, but considered rare in Missouri.

Carex tribuloides Wahlenb. var. *sangamonensis* Clokey - Blunt Broom Sedge. CH [!, K], CRW [!]. Native. CL. **Crawford County Record** (Pryer 994, Pryer 1459, Pryer 1460, Pryer 1461, Pryer 2233, Pryer 2234).

Carex umbellata Schkuhr ex Willd. - Parasol Sedge. CH [K], CRW [K]. Native.

Carex vulpinoidea Michx. - Common Fox Sedge. CH [!, K], CRW [K, G]. Native. CL.

Cyperus acuminatus Torr. & Hook. ex Torr. - Taper-Tip Flat Sedge. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Cyperus echinatus (L.) Wood - Globe Flat Sedge. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Cyperus erythrorhizos Muhl. - Red-Root Flat Sedge. CH [!, K], CR [!]. Native. OP, OC, CL. **Crawford County Record** (Pryer 2758, Pryer 2759, Pryer 2808, Pryer 3331, Pryer 3453, Pryer 3455).

Cyperus esculentus L. var. *leptostachyus* Boeckl. - Chufa CH [!, K], CRW [!, K]. Native. OP, CL. Gibson did not recognize varieties of this taxon.

Cyperus lupulinus (Spreng.) Marcks subsp. *lupulinus* - Great Plains Flat Sedge. CH [!, K], CRW [!, K]. Native. OP, OC, CL.

Cyperus odoratus L. - Rusty Flat Sedge. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Cyperus pseudovegetus Steud. - Marsh Flat Sedge. CH [!, K], CRW [!, K]. Native. **Rare.** OP, CL. Reported in fifteen counties in Kansas but common in surrounding states.

Cyperus squarrosus L. - Awned Flat Sedge. CH [K], CRW [!, K, G]. Native. OC, CL.

Cyperus strigosus L. - Straw-Color Flat Sedge. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Eleocharis acicularis (L.) Roemer & J.A. Schultes - Needle Spike-Rush. CH [!, K], CRW [!, K, G]. Native. CL.

Eleocharis compressa Sullivant - Flat-Stem Spike-Rush. CH [!], CRW [!, G]. Native. CL.

Eleocharis engelmannii Steud. - Engelmann's Spike-Rush. CH [!, K], CRW [!, K]. Native. OC, CL.

Eleocharis lanceolata Fern. - Dagger-Leaf Spike-Rush. CH [K], CRW [!]. Natie. **Rare**. CL. **Crawford County Record** (Pryer 5494). Reported in six counties in Kansas, including this report; common in Oklahoma and Arkansas but considered rare in Missouri.

Eleocharis obtusa (Willd.) J.A. Schultes - Blunt Spike-Rush. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Eleocharis palustris (L.) Roemer & J.A. Schultes - Common Spike-Rush. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Eleocharis parvula (Roemer & J.A. Schultes) Link ex Bluff. Nees & Schauer - Little-Head Spike-Rush. CRW [!]. Native. OC, CL. **Crawford County Record** (Pryer 2123, Pryer 5492, Pryer 5692).

Eleocharis tenuis (Willd.) J.A. Schultes var. *verrucosa* (Svens.) Svens. - Slender Spike-Rush. CH [K], CRW [!]. Native. **Rare**. OC. **Crawford County Record** (Pryer 2788). Reported in twelve counties in Kansas, but common in surrounding states.

Eleocharis wolfii (A. Gray) A. Gray ex Britt. - Wolf's Spike-Rush. CH [K], CRW [K]. Native. **Rare**. Reported in eight counties in Kansas and common in surrounding areas; considered rare in Oklahoma and Arkansas but common in Missouri.

Fimbristylis annua (All.) Roemer & J.A. Schultes - Annual Fimbr. CH [K], CRW [K]. Native. **Rare**.

Fimbristylis autumnalis (L.) Roemer & J.A. Schultes - Slender Fimbr. CRW [!, K]. Native. **Rare**. CL. Reported in thirteen counties in Kansas but common in surrounding states.

Fimbristylis puberula (Michx.) Vahl var. *puberula* - Hairy Fimbr. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Fimbristylis vahlii (Lam.) Link - Vahl's Fimbr. CH [K], CRW [K]. Native. **Rare**. Reported in nine counties in Kansas but common in surrounding states.

Isolepis carinata Hook. & Arn. ex Torr. - Keeled Lateral-Bulrush. CH [!, K], CRW [K]. Native. OP.

Kyllinga pumila Michx. - Low Spike Sedge. CH [K], CRW [!]. Native. **Rare**. CL. **Crawford County Record** (Pryer 3561, Pryer 5688). Reported in three counties in Kansas, including this report but common in surrounding states.

Rhynchospora harveyi W. Boott var. *harveyi* - Harvey's Beak Sedge. CH [K], CRW [K]. Native. **Rare**. Reported in eight counties in Kansas, but common in the surrounding areas; considered rare in Missouri but common in Oklahoma and Arkansas.

Rhynchospora recognita (Gale) Kral - Coarse Globe Beak Sedge. CH [!, K]. CRW [!]. Native. **Rare**. OP, OC, CL. **Crawford County Record** (Pryer 5289, Pryer 5299). Reported in five counties in Kansas, including this report, but common in surrounding areas.

Schoenoplectus deltarum (Schuyler) Soják - Delta Club-Rush. CH [K], CRW [K]. Native. **Rare**. Reported in four counties in Kansas, but has few reports nationwide and is considered rare wherever it is reported.

Schoenoplectus pungens (Vahl) Palla var. *longispicatus* (Britt.) S.G. Sm. - Three-Square. CH [K]. Native.

Scirpus atrovirens Willd. - Dark-Green Bulrush. CH [K], CRW [!, K, G]. Native. OC.

Scirpus cyperinus (L.) Kunth - Cottongrass Bulrush. CRW [!]. Native. CL. **State Record.** Crawford County Voucher (*Pryer 2597, G. Salsbury s.n.*; February 2014). This taxon is common throughout the eastern United States. It has been reported in most of Arkansas, a large part of Missouri, and a few scattered counties in Oklahoma. The closest reports are from Pawnee County, Oklahoma and Madison County, Arkansas.

Scirpus georgianus Harper - Georgia Bulrush. CH [!, K], CRW [!, K]. Native. OP, CL.

Scirpus pendulus Muhl. - Rufous Bulrush. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Scleria ciliata Michx. - Fringed Nut-Rush. CH [K]. Native. **Rare.** Reported in 9 counties in Kansas, but common in surrounding states.

Scleria pauciflora Muhl. ex Willd. var. *caroliniana* (Willd.) Wood - Few-Flower Nut-Rush. CH [K]. Native. **Rare.** Reported in Cherokee County, Kansas, but common in the surrounding areas; considered rare in Arkansas.

Scleria pauciflora Muhl. ex Willd. var. *pauciflora* - Few-Flower Nut-Rush. CH [K]. Native. **Rare.** Reported in eight counties in Kansas, but common in surrounding areas.

Scleria triglomerata Michx. - Whip Nut-Rush. CH [!, K], CRW [!, K]. Native. OC, CL.

Dioscoreaceae (Yam Family)

Dioscorea polystachya Turcz. - Chinese Yam. CH [!, K], CRW [G]. Non-Native. OP.

Dioscorea villosa L. - Wild Yam. CH [!, K], CRW [K]. Native. OC.

Dipsacaceae (Teasel Family)

Dipsacus fullonum L. - Fuller's Teasel. CRW [!, K]. Non-Native. OC.

Dipsacus laciniatus L. - Cut-Leaf Teasel. CH [!], CRW [!, K]. Non-Native. OC, CL.

Cherokee County Record (*Pryer 3779*).

Droseraceae (Sundew Family)

Drosera brevifolia Pursh - Dwarf Sundew. CH [K]. Native. **Rare.** Reported only from Cherokee County, Kansas and rare in surrounding areas; considered rare in Oklahoma, common in Arkansas, and not yet reported for Missouri.

Ebenaceae (Ebony Family)

Diospyros virginiana L. - Common Persimmon. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Elaeagnaceae (Oleaster Family)

Elaeagnus angustifolia L. - Russian-Olive. CH [K], CRW [G]. Non-Native.

Elaeagnus umbellata Thunb. - Autumn-Olive. CH [!], CRW [!, K]. Non-Native. CL.

Cherokee County Record (*Pryer 183, Pryer 1655, Pryer 3736, Pryer 3865, Pryer 3977, Pryer 4004, Pryer 4010, Pryer 4012, Pryer 4950*).

Equisetaceae (Horsetail Family)

Equisetum hyemale L. var. *affine* (Engelm.) A.A. Eat. - Tall Scouring-Rush. CH [!, K]. Native. OP.

Equisetum ×ferrissii Clute (pro sp.). - CH [K]. Native.

Ericaceae (Heath Family)

Hypopitys monotropa Crantz - Yellow Bird's-Nest. CH [K]. Native. **Rare**. Reported from two counties in Kansas; common in Missouri and Arkansas but rare in Oklahoma.

Vaccinium arboreum Marsh. - Tree Sparkle-Berry. CH [K]. Native. **Rare**. Only reported in Cherokee County, Kansas, but common in surrounding states.

Vaccinium pallidum Ait. - Early Lowbush Blueberry. CH [!, K]. Native. **Rare**. Only reported in Cherokee County, Kansas, but common in surrounding states.

Vaccinium stamineum L. - Deerberry. CH [K]. Native. **Rare**. Only reported in Cherokee County, Kansas, but common in surrounding states.

Euphorbiaceae (Spurge Family)

Acalypha gracilens A. Gray - Slender Three-Seed-Mercury. CH [!], CRW [!]. Native.

Rare. OP, OC, CL. **Cherokee County Record** (Pryer 3109, Pryer 3400, Pryer 5632, Pryer 5819). **Crawford County Record** (Pryer 2147, Pryer 2544, Pryer 6041, Pryer 6258). Only reported in Cherokee County, Kansas, but common in surrounding states.

Acalypha monococca (Engelm. ex A. Gray) L. Mill. & Gandhi - Single-Seed Three-Seed-Mercury. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Acalypha ostryifolia Riddell - Pineland Three-Seed-Mercury. CH [!, K], CRW [!, K]. Native. OP, OC.

Acalypha rhomboidea Raf. - Common Three-Seed-Mercury. CH [!, K], CRW [!, K]. Native. OP, OC, CL.

Acalypha virginica L. - Virginia Three-Seed-Mercury. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Croton capitatus Michx. - Hogwort. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Croton glandulosus L. var. *septentrionalis* Muell.-Arg. - Vente-Connigo. CH [!, K], CRW [!, K, G]. Native. OP, CL. Gibson did not recognize varieties of this taxon.

Croton michauxii G.L. Webster var. *ellipticus* (Willd.) B.W. van Ee & P.E. Berry - Narrow-Leaf Rushfoil. CH [!, K]. Native. OP.

Croton monanthogynus Michx. - Prairie-Tea. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Euphorbia corollata L. - Flowering Spurge. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Euphorbia cyathophora Murr. - Fire-on-the-Mountain. CH [!, K], CRW [K]. Native. OP.

Euphorbia davidii Subils - David's Spurge. CH [K], CRW [!, K]. Non-Native. OP, CL.

Euphorbia dentata Michx. var. *dentata* - Toothed Spurge. CH [!, K], CRW [!, K]. Native. OP, OC, CL.

Euphorbia humistrata Engelm. ex A. Gray - Spreading Sandmat. CH [!, K]. CRW [G]. Native. OP, CL.

Euphorbia glyptosperma Engelm. - Rib-Seed Sandmat. CH [!]. Native. CL. **Cherokee County Record** (Pryer 4029).

Euphorbia maculata L. - Spotted Sandmat. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Euphorbia marginata Pursh - Snow-on-the-Mountain. CH [K], CRW [K]. Native.

Euphorbia missurica Raf. - Prairie Sandmat. CH [K], CRW [K, G]. Native.
Euphorbia nutans Lag. - Eyebane. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.
Euphorbia prostrata Ait. - Prostrate Sandmat. CR [!, K]. Native. CL.
Euphorbia pubentissima Michx. - False Flowering Spurge. CH [K]. Native.
Euphorbia serpens Kunth - Matted Sandmat. CH [K], CRW [!, K, G]. Native. OC, CL.
Euphorbia spathulata Lam. - Warty Spurge. CH [K], CRW [!, G]. Native. OC.
Euphorbia stictospora Engelm. - Slim-Seed Sandmat. CH [!, K]. Native. OP, CL.
Tragia betonicifolia Nutt. - Betony-Leaf Noseburn. CH [!, K], CRW [!, K, G]. Native.
 OC, CL.

Fabaceae (Pea Family)

Acmispon americanus (Nutt.) Rydb. var. *americanus* - American Deerweed. CH [K],
 CRW [!, K, G]. Native. CL.
Albizia julibrissin Durazz. - Silktree. CH [!, K], CRW [!, K]. Native. CL.
Amorpha canescens Pursh - Leadplant. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.
Amorpha fruticosa L. - False Indigo-Bush. CH [!, K], CRW [!, K, G]. Native. OC, CL.
Amphicarpaea bracteata (L.) Fern. var. *bracteata* - American Hog-Peanut. CH [!], CRW
 [!]. Native. OP. **Cherokee County Record** (Pryer 1747, Pryer 6294). **Crawford
 County Record** (Pryer 6157, Pryer 6163).
Apios americana Medik. - Groundnut. CH [K], CRW [K, G]. Native.
Astragalus canadensis L. var. *canadensis* - Canadian Milk-Vetch. CH [K], CRW [!, K].
 Native. CL.
Astragalus crassicaarpus Nutt. var. *crassicaarpus* - Ground-Plum. CH [K], CRW [!, K, G].
 Native. OC.
Astragalus crassicaarpus Nutt. var. *trichocalyx* (Nutt.) Barneby - Ground-Plum. CH [K],
 CRW [!]. Native. OC. **Crawford County Record** (Pryer 1986, Pryer 4808).
Astragalus distortus Torr. & A. Gray var. *distortus* Ozark Milk-Vetch. CH [K], CRW
 [K]. Native.
Baptisia alba (L.) Vent. var. *macrophylla* (Larisey) Isely - White Wild Indigo. CH [!, K],
 CRW [!, K, G]. Native. OP, CL.
Baptisia australis (L.) R. Br. var. *minor* (Lehm.) Fern. - Blue Wild Indigo. CH [K], CRW
 [!, K, G]. Native. OC.
Baptisia bracteata Muhl. ex Ell. var. *leucophaea* (Nutt.) Kartesz & Gandhi - Long-Bract
 Wild Indigo. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.
Baptisia ×*bicolor* Greenm. & Larisey - CR [!]. Native. OC. **Crawford County Record**
 (Pryer 4470, Pryer 4473, Pryer 4505).
Cercis canadensis L. var. *canadensis* - Redbud. CH [!, K], CRW [!, K, G]. Native. OP,
 OC, CL.
Chamaecrista fasciculata (Michx.) Greene var. *fasciculata* - Sleepingplant. CH [!, K],
 CRW [!, K, G]. Native. OP, OC, CL.
Chamaecrista nictitans (L.) Moench var. *nictitans* - Partridge-Pea. CH [!, K]. Native. OP,
 OC.
Clitoria mariana L. - Atlantic Pigeonwings. CH [K]. Native. **Extirpated**.
Colutea arborescens L. - Bladder-Senna. CRW [!, K, G]. Non-Native. CL.
Crotalaria sagittalis L. - Arrow-Head Rattlebox. CH [!, K], CRW [!, K, G]. Native. OP,
 OC, CL.

Dalea candida Michx. ex Willd. var. *candida* - White Prairie-Clover. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Dalea leporina (Ait.) Bullock - Fox-Tail Prairie-Clover. CRW [K]. Native.

Dalea purpurea Vent. - Violet Prairie-Clover. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Desmanthus illinoensis (Michx.) MacM. ex B.L. Robins. & Fern. - Prairie Bundle-Flower. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Desmodium canadense (L.) DC. - Showy Tick-Trefoil. CH [K], CRW [K, G]. Native.

Desmodium canescens (L.) DC. - Hoary Tick-Trefoil. CH [K], CRW [K, G]. Native.

Desmodium ciliare (Muhl. ex Willd.) DC. - Hairy Small-Leaf Tick-Trefoil. CH [K], CRW [!, K, G]. Native. **Rare**. CL. Reported in ten counties in Kansas, but common in surrounding states.

Desmodium cuspidatum (Muhl. ex Willd.) DC. ex Loud. - Large-Bract Tick-Trefoil. CH [!, K], CRW [K, G]. Native. OP.

Desmodium glabellum (Michx.) DC. - Dillenius' Tick-Trefoil. CH [!, K], CRW [!, G]. Native. OC, CL.

Desmodium illinoense A. Gray - Illinois Tick-Trefoil. CH [K], CRW [K]. Native.

Desmodium marilandicum (L.) DC. - Smooth Small-Leaf Tick-Trefoil. CH [!, K], CRW [!, K]. Native. OP, CL.

Desmodium obtusum (Muhl. ex Willd.) DC. - Stiff Tick-Trefoil. CH [!, K], CRW [!, G]. Native. OC, CL.

Desmodium paniculatum (L.) DC. - Panicked-Leaf Tick-Trefoil. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Desmodium perplexum Schub. - Perplexed Tick-Trefoil. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Desmodium rotundifolium DC. - Prostrate Tick-Trefoil. CH [K]. Native. **Rare**. Only reported in Cherokee County, Kansas, but common in surrounding states.

Desmodium sessilifolium (Torr.) Torr. & A. Gray - Sessile-Leaf Tick-Trefoil. CH [!, K], CRW [!, K, G]. Native. CL.

Desmodium sp. - Species unidentifiable; flowers much larger than other *Desmodium*.

Desmodium viridiflorum (L.) DC. - Velvet-Leaf-Tick-Trefoil. CH [!]. Native. CL. **State Record**. Cherokee County Voucher (5888). This taxon has been reported throughout the southeastern United States with scattered reports in Oklahoma and Missouri. Considered rare in Missouri, with the closest reports from Barry County, Missouri and Delaware County, Oklahoma.

Galactia regularis (L.) B.S.P. - Eastern Milk-Pea. CH [K], CRW [!, K]. Native. **Rare**. CL. Reported in two counties in Kansas, but common in surrounding states.

Galactia volubilis (L.) Britt. var. *volubilis* - Downy Milk-Pea. CH [K]. Native.

Gleditsia triacanthos L. - Honey-Locust. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Glycyrrhiza lepidota Pursh - American Licorice. CRW [K, G]. Native.

Gymnocladus dioicus (L.) K. Koch - Kentucky Coffeetree. CH [K], CRW [!, K, G]. Native. OC.

Hylodesmum glutinosum (Willd.) H. Ohashi & R. R. Mill - Pointed-Leaf Tick-Clover. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Hylodesmum nudiflorum (L.) H. Ohashi & R. R. Mill - Naked-Flower Tick-Clover. CH [K]. Native. **Rare**. Only reported in Cherokee County, Kansas, but common in surrounding states.

Hylodesmum pauciflorum (Nutt.) H. Ohashi & R. R. Mill - Few-Flower Tick-Clover. CH [!, K]. Native. **Rare**. OP. Reported in two counties in Kansas, but common in Missouri and Arkansas; rare in Oklahoma.

Kummerowia stipulacea (Maxim.) Makino - Korean-Clover. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Kummerowia striata (Thunb.) Schindl. - Japanese-Clover. CH [K], CRW [!, K, G]. Non-Native. OC, CL.

Ladeania lanceolata (Pursh) A.N. Egan & Reveal - Wild Lemonweed. CH [K]. Native.

Lathyrus latifolius L. - Everlasting-Pea. CH [K]. Non-Native.

Lathyrus pusillus Ell. - Tiny Vetchling. CH [K], CRW [K]. Native. **Rare**. Reported in six counties in Kansas; common in Oklahoma but rare in Arkansas and extirpated in Missouri.

Lespedeza capitata Michx. - Round-Head Bush-Clover. CH [K], CRW [K, G]. Native.

Lespedeza cuneata (Dum.-Cours.) G. Don - Chinese Bush-Clover. CH [!, K], CRW [!, K, G]. Non-Native. **Noxious**. OP, CL.

Lespedeza frutescens (L.) Hornem. - Shrubby Bush-Clover. CH [!]. Native. OP. **State Record** (Pryer 1713, Pryer 2947). A number of specimens collected throughout the years are deposited in the T.M. Sperry Herbarium. Common throughout the eastern United States, including the 4-state region. It has been reported in most all bordering Missouri counties.

Lespedeza hirta (L.) Hornem. subsp. *hirta* - Hairy Bush-Clover. CH [!, K]. Native. OP.

Lespedeza procumbens Michx. - Trailing Bush-Clover. CH [K]. Native. **Rare**. Reported in seven counties in Kansas, but common in surrounding states.

Lespedeza repens (L.) W. Bart. - Creeping Bush-Clover. CH [!, K], CRW [!, G]. Native. OP, OC. **Crawford County Record** (Pryer 2760, Pryer 5767).

Lespedeza × *simulata* Mackenzie & Bush (pro sp.) - CRW [!, K]. Native. OC.

Lespedeza stuevei Nutt. - Tall Bush-Clover. CH [K], CRW [K, G]. Native.

Lespedeza violacea (L.) Pers. - Violet Bush-Clover. CH [!, K], CRW [!, K, G]. Native. OP, OC.

Lespedeza virginica (L.) Britt. - Slender Bush-Clover. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Lotus corniculatus L. - Garden Bird's-Foot-Trefoil. CH [!], CRW [!]. Non-Native. CL. **Cherokee County Record** (Pryer 1628, Pryer 4975). **Crawford County Record** (Pryer 582, Pryer 2156, Pryer 2157).

Lotus tenuis Waldst. & Kit. ex Willd. - Narrow-Leaf Bird's-Foot-Trefoil. CRW [!]. Non-Native. CL. **Crawford County Record** (Pryer 3898).

Medicago lupulina L. - Black Medick. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Medicago minima (L.) L. ex Bartalini - Burr Medick. CH [K], CRW [K]. Non-Native.

Medicago sativa L. subsp. *sativa* - Alfalfa. CH [!, K], CRW [!, K, G] Non-Native. CL. Gibson did not recognize subspecies of this taxon.

Melilotus officinalis (L.) Lam. - Yellow Sweet-Clover. CH [!, K], CRW [!, K, G]. Non-Native. OC, CL.

Mimosa nuttallii (DC.) B.L. Turner - Nuttall's Mimosa. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Orbexilum pedunculatum (P. Mill.) Rydb. var. *pedunculatum* - Sampson's-Snakeroot. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Pedimelum esculentum (Pursh) Rydb. - Large Indian-Breadroot. CH [!, K], CRW [!, K]. Native. OC.

Pedimelum tenuiflorum (Pursh) A.N. Egan - Slender-Flower Indian-Breadroot. CH [!, K], CRW [!, K]. Native. OP, OC, CL.

Pueraria montana (Lour.) Merr. var. *lobata* (Willd.) Maesen & S. Almeida - Kudzu. CH [K], CRW [!, K]. Non-Native. **Noxious**. OC.

Robinia hispida L. var. *hispida* - Bristly Locust. CRW [!]. Native. Adventive. OC.

Crawford County Record (Pryer 6426)

Robinia pseudoacacia L. - Black Locust. CH [!, K], CRW [!, K, G]. Native. Adventive. CL.

Securigera varia (L.) Lassen - Purple Crown-Vetch. CH [!, K], CRW [!, K]. Non-Native. OC, CL.

Senna marilandica (L.) Link - Maryland Wild Sensitive-Plant. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Sesbania herbacea (P. Mill.) McVaugh - Peatree. CH [!]. Native. CL. **Cherokee County Record (Pryer 5812)**.

Strophostyles helvola (L.) Ell. - Trailing Fuzzy-Bean. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Strophostyles leiosperma (Torr. & A. Gray) Piper - Slick-Seed Fuzzy-Bean. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Stylosanthes biflora (L.) B.S.P. - Side-Beak Pencil-Flower. CH [!, K], CRW [K, G]. Native. OP.

Tephrosia virginiana (L.) Pers. - Goat's-Rue. CH [!, K], CRW [K, G]. Native. OP.

Trifolium arvense L. - Rabbit-Foot Clover. CH [!]. Non-Native. OP. **Cherokee County Record (Pryer 5108)**.

Trifolium campestre Schreb. - Lesser Hop Clover. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Trifolium carolinianum Michx. - Carolina Clover. CH [!, K]. Native. CL. Was considered **extirpated**.

Trifolium dubium Sibthorp - Suckling Clover. CH [!, K], CRW [!, K, G]. Non-Native. OP, CL.

Trifolium hybridum L. - Alsike Clover. CH [!]. Non-Native. CL. **Cherokee County Record (Pryer 155, Pryer 5556)**.

Trifolium pratense L. - Red Clover. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Trifolium reflexum L. - Buffalo Clover. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Trifolium repens L. - White Clover. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Vicia sativa L. subsp. *nigra* (L.) Ehrh. - Garden Vetch. CH [!]. Non-Native. OP.

Cherokee County Record (Pryer 234, Pryer 4186).

Vicia villosa Roth subsp. *varia* (Host) Corb. - Winter Vetch. CH [K], CRW [!, G]. Non-Native. CL.

Vicia villosa Roth subsp. *villosa* - Winter Vetch. CR [K]. Non-Native.

Wisteria frutescens (L.) Poir. - American Wisteria. CH [K], CRW [G]. Native. Adventive. One previous collection from 1998 in Crawford County (Timme 15108).

Fagaceae (Beech Family)

Castanea mollissima Blume - Chinese Chestnut. CRW [!]. Non-Native. CL.

Quercus alba L. - Northern White Oak. CH [!, K], CRW [!]. Native. OP, CL. **Crawford County Record** (Pryer 5683).

Quercus × *bushii* Sarg. - CH [K]. Native.

Quercus × *deamii* Trel. - CRW [!]. Native. CL. **Crawford County Record** (Pryer 3340).

Quercus × *fernowii* Trel. - CH [K]. Native.

Quercus falcata Michx. - Southern Red Oak. CH [!]. Native. OP. **State Record**.

Cherokee County Voucher (Pryer 3054). This taxon is common throughout the southern and eastern states, including the 4-state region. The closest reports are from Ottawa County, Oklahoma and Barry County, Missouri.

Quercus macrocarpa Michx. var. *macrocarpa* - Burr Oak. CH [!, K], CRW [!, K].

Native. OC, CL. Gibson did not recognize varieties of this taxon.

Quercus marilandica (L.) Muenchh. - Blackjack Oak. CH [!, K]. Native. OP.

Quercus michauxii Nutt. - Swamp Chestnut Oak. CH [!]. Native. OP. **State Record**.

Cherokee County Record (2951). This taxon is common throughout the southeastern United States. In Missouri the distribution is restricted to the southeastern portion of the state. It has only been reported in three counties in Oklahoma and throughout Arkansas. The closest report is from Carroll County, Arkansas.

Quercus muehlenbergii Engelm. - Chinkapin Oak. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Quercus palustris Muenchh. - Pin Oak. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Quercus prinoides Willd. - Dwarf Chinkapin Oak. CH [K], CRW [!]. Native. CL.

Crawford County Record (Pryer 6181).

Quercus rubra L. - Northern Red Oak. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Quercus shumardii Buckl. - Shumard's Oak. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Quercus stellata Wangenh. - Post Oak. CH [!, K], CRW [K, G]. Native. OP.

Quercus velutina Lam. - Black Oak. CH [!, K], CRW [K, G]. Native. OP.

Gentianaceae (Gentian Family)

Gentiana alba Muhl. ex Nutt. - Yellow Gentian. CH [K]. Native. **Rare**. Reported in five counties in Kansas, but common in Missouri; rare in Oklahoma and Arkansas.

Gentiana puberulenta J. - Pringle Downy Gentian. CR [!, K]. Native. CL.

Gentianella quinquefolia (L.) subsp. *occidentalis* (A. Gray) J. Gillett - Small Agueweed. CH [K]. **Rare**. Only reported in Cherokee County, Kansas, but common in Missouri and Arkansas. This taxon has not been reported in the state of Oklahoma.

Sabatia angularis (L.) Pursh - Rose-Pink. CH [!, K], CRW [!, K, G]. Native. **Rare**. OP, CL. Reported in two counties in Kansas, but common in surrounding states.

Sabatia campestris Nutt. - Texas-Star. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Geraniaceae (Geranium Family)

Erodium cicutarium (L.) L'Hér. ex Ait. - Red-Stem Stork's-Bill. CRW [!]. Non-Native.

OC. **Crawford County Record** (*Pryer 4315*).

Geranium carolinianum L. - Carolina Crane's-Bill. CH [!, K], CRW [!, K, G]. Native.
OP, CL.

Geranium maculatum L. - Spotted Crane's-Bill. CH [!, K]. Native. OP.

Geranium pusillum L. - Small-Flower Crane's-Bill. CH [K]. Non-Native.

Grossulariaceae (Currant Family)

Ribes aureum Pursh var. *villosum* DC. - Golden Currant. CH [K], CRW [K]. Native.

Ribes missouriense Nutt. - Missouri Gooseberry. CH [!, K], CRW [!, K, G]. Native. OP,
OC, CL.

Haloragaceae (Water-Milfoil Family)

Myriophyllum aquaticum (Vell.) Verdc. - Parrot's-Feather. CH [!]. Non-Native. CL.

Cherokee County Record (*Pryer 4938*).

Myriophyllum heterophyllum Michx. - Two-Leaf Water-Milfoil. CH [K], CRW [K, G].
Native.

Myriophyllum pinnatum (Walt.) B.S.P. - Cut-Leaf Water-Milfoil. CH [K]. Native.

Myriophyllum sibiricum Komarov - Siberian Water-Milfoil. CH [K], CRW [!, K]. Native.
CL.

Hemerocallidaceae (Day-Lily Family)

Hemerocallis fulva (L.) L. - Orange Day-Lily. CH [!, K], CRW [K]. Non-Native. CL.

Hyacinthaceae (Hyacinth Family)

Muscari botryoides (L.) P. Mill. - Common Grape-Hyacinth. CRW [!, G]. Non-Native.
CL.

Ornithogalum umbellatum L. - Sleepydick. CH [K], CRW [!, K, G]. Native. OC, CL.

Hydrangeaceae (Hydrangea Family)

Hydrangea arborescens L. - Wild Hydrangea. CH [K]. Native. **Extirpated**.

Hydrocharitaceae (Tape-Grass Family)

Elodea canadensis Michx. - Canadian Waterweed. CRW [G]. Native.

Najas guadalupensis (Spreng.) Magnus subsp. *guadalupensis* - Guadalupe Waternymph.
CH [K], CRW [K]. Native. Gibson did not recognize subspecies of this taxon.

Hypericaceae (St. John's-Wort Family)

Hypericum drummondii (Grev. & Hook.) Torr. & A. Gray - Nits-and-Lice. CH [K], CRW
[K, G]. Native.

Hypericum gymnanthum Engelm. & A. Gray - Claspingleaf St. John's-Wort. CRW [!].
Native. CL. **State Record**. Crawford County Voucher (*Pryer 1475*, *Pryer 5508*).

This taxon has been reported in most southern states, including Arkansas and
Missouri, but is considered rare in Oklahoma. The closest reports are from
McDonald and Newton counties, Missouri.

Hypericum hypericoides (L.) Crantz subsp. *multicaule* (Michx. ex Willd.) Robson - St. Andrew's-Cross. CH [!, K]. Native. **Rare**. OP. Reported in two counties in Kansas, but common in surrounding states.

Hypericum mutilum L. - Dwarf St. John's-Wort. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Hypericum perforatum L. - Common St. John's-Wort. CH [!, K], CRW [!, K, G]. Non-Native. OC, CL.

Hypericum punctatum Lam. - Spotted St. John's-Wort. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Hypericum sphaerocarpum Michx. - Round-Seed St. John's-Wort. CH [K], CRW [!, K, G]. Native. OC, CL.

Hypoxidaceae (Yellow Star-Grass Family)

Hypoxis hirsuta (L.) Coville - Eastern Yellow Star-Grass. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Iridaceae (Iris Family)

Belamcanda chinensis (L.) DC. - Blackberry-Lily. CH [!K], CRW [!, K, G]. Non-Native. OC, CL.

Crocus vernus (L.) Hill - Dutch Crocus. CRW [!]. Non-Native. Found in lawns in Pittsburg, Kansas. Considered a planting and not included in the final tallies.

Iris germanica L. - German Iris. CRW [!, G]. Non-Native. CL.

Iris pallida Lam. - Sweet Iris. CRW [!]. Non-Native. OC. **Crawford County Record** (Pryer 4341).

Nemastylis geminiflora Nutt. - Prairie Pleatleaf. CRW [!, K, G]. Native. OC.

Sisyrinchium angustifolium P. Mill. - Narrow-Leaf Blue-Eyed-Grass. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Sisyrinchium campestre Bickn. - Prairie Blue-Eyed-Grass. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Isoetaceae (Quillwort Family)

Isoetes butleri Engelm. - Limestone Quillwort. CH [K], CRW [K]. Native.

Juglandaceae (Walnut Family)

Carya ×brownii Sarg. - CH [K]. Native.

Carya cordiformis (Wangenh.) K. Koch - Bitter-Nut Hickory. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Carya illinoensis (Wangenh.) K. Koch - Pecan. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Carya laciniosa (Michx. f.) G. Don - Shell-Bark Hickory. CH [!, K], CRW [K, G]. Native. CL.

Carya ovata (P. Mill.) K. Koch - Shag-Bark Hickory. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Carya texana Buckl. - Black Hickory. CH [!, K]. Native. **Rare**. OP. Reported in two counties in Kansas, but common in surrounding states.

Carya tomentosa (Lam. ex Poir.) Nutt. - Mockernut Hickory. CH [!, K], CRW [!].
Native. OP, CL. **Crawford County Record** (Pryer 2576)
Juglans nigra L. - Black Walnut. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Juncaceae (Rush Family)

Juncus acuminatus Michx. - Knotty-Leaf Rush. CH [!, K], CRW [!, K, G]. Native. OC, CL.
Juncus antheratus (Wieg.) R.E. Brooks - Kentucky Rush. CH [!, K], CRW [!]. Native. OP, CL. **Crawford County Record** (1451).
Juncus brachycarpus Engelm. - White-Root Rush. CH [!, K], CRW [!, G]. Native. OC, CL.
Juncus brachycephalus (Engelm.) Buch. - Small-Head Rush. CH [!, K]. CRW [!]. Native. OP, OC, CL. **Crawford County Record** (Pryer 670, Pryer 672, Pryer 805, Pryer 846, Pryer 1045, Pryer 1047, Pryer 1048, Pryer 1338, Pryer 1429, Pryer 1524, Pryer 1527, Pryer 1922, Pryer 2080, Pryer 2107, Pryer 2111, Pryer 2128).
Juncus diffusissimus Buckl. - Slim-Pod Rush. CH [!, K], CRW [!, K, G]. Native. CL.
Juncus dudleyi Wieg. - Dudley's Rush. CH [!, K], CRW [!, G]. Native. OC, CL.
Juncus effusus L. subsp. *solutus* (Fern. & Wieg.) Hämet-Ahti - Lamp Rush. CH [!, K], CRW [!, K, G]. Native. CL.
Juncus interior Wieg. var. *interior* - Inland Rush. CH [!, K], CRW [!, K]. Native. OP, OC, CL.
Juncus marginatus Rostk. - Bog Rush. CH [!, K], CRW [!, K, G]. Native. CL.
Juncus nodatus Coville - Stout Rush. CH [!, K], CRW [!]. Native. **Rare**. CL. **Crawford County Record** (Pryer 1538, Pryer 3662). Reported in ten counties in Kansas, including this report, but common in surrounding states.
Juncus scirpoides Lam. - Needle-Pod Rush. CRW [!]. Native. **Rare**. CL. **Crawford County Record** (Pryer 1454). Reported in six counties in Kansas, but common in surrounding states.
Juncus secundus Beauv. ex Poir. - Lopsided Rush. CRW [!]. Native. OC. **State Record**. Crawford County Record (4613). This taxon has been reported throughout the 4-state region. The closest reports are from Barton, Jasper, and McDonald counties Missouri.
Juncus tenuis Willd. - Lesser Poverty Rush. CH [K], CRW [!, K, G]. Native. OC, CL.
Juncus torreyi Coville - Torrey's Rush. CH [!, K], CRW [!, K]. Native. OC, CL.
Juncus validus Coville - Round-Head Rush. CH [K], CRW [!]. Native. CL. **Crawford County Record** (Pryer 662). Was considered **extirpated**.
Luzula bulbosa (Wood) Smyth & Smyth - Bulbous Wood-Rush. CH [!, K]. Native. OP.

Lamiaceae (Mint Family)

Agastache nepetoides (L.) Kuntze - Yellow Giant-Hyssop. CH [!, K], CRW [!, K]. Native. OC, CL.
Ajuga reptans L. - Carpet Bugle. CH [K], CRW [K]. Non-Native.
Blephilia ciliata (L.) Benth. - Downy Pagoda-Plant. CH [K]. Native.
Callicarpa americana L. - American Beauty-Berry. CRW [!]. Native. CL. **State Record**. Crawford County Record (Pryer 3656). From two mature bushes located in the middle of a mined land area in Crawford County, where they were not easily

- accessible and there were no evidence of human establishment. This taxon is common throughout the southeastern United States, including Arkansas and southern Oklahoma. It is considered rare in Missouri. The closest reports are from Pawnee County, Oklahoma and Taney County, Missouri.
- Cunila origanoides* (L.) Britt. - Common Dittany. CH [!, K]. Native. **Rare**. OP. Only reported in Cherokee County, Kansas, but common in surrounding states.
- Glechoma hederacea* L. - Groundivy. CH [!], CRW [!]. Non-Native. OP, CL. **Crawford County Record** (Pryer 51, Pryer 4250), **Crawford County Record** (Pryer 4195).
- Hedeoma hispida* Pursh - Rough False Pennyroyal. CH [!, K], CRW [!, K, G]. Native. OC, CL.
- Hedeoma pulegioides* (L.) Pers. - American False Pennyroyal. CH [K]. Native.
- Lamium amplexicaule* L. - Giraffehead. CH [K], CRW [!, K, G]. Non-Native. OC, CL.
- Lamium purpureum* L. var. *purpureum* - Red Henbit. CH [!, K], CRW [!, K, G]. Non-Native. OC, CL. Gibson did not recognize varieties for this taxon.
- Leonurus cardiaca* L. subsp. *cardiaca* - Motherwort. CH [K]. Non-Native.
- Lycopus americanus* Muhl. ex W. Bart. - Cut-Leaf Water-Horehound. CH [!, K], CRW [!, K, G]. Native. OC, CL.
- Lycopus rubellus* Moench - Taper-Leaf Water-Horehound. CH [K]. Native. **Rare**. Reported in three counties in Kansas, but common in surrounding states.
- Lycopus virginicus* L. - Virginia Water-Horehound. CH [K], CRW [G]. Native.
- Marrubium vulgare* L. - White Horehound. CH [K]. Non-Native.
- Mentha arvensis* L. - American Wild Mint. CH [K], CRW [G]. Native.
- Monarda bradburiana* Beck - Eastern Beebalm. CH [!, K]. Native. **Rare**. OP. Reported in two counties in Kansas, but common in surrounding states.
- Monarda citriodora* Cerv. ex Lag. subsp. *citriodora* - Lemon Beebalm. CRW [!, G]. Native. OC, CL. Gibson did not recognize varieties for this taxon.
- Monarda fistulosa* L. subsp. *fistulosa* - Oswego-Tea. CH [!, K], CRW [!, K, G]. Native. CL. Gibson did not recognize subspecies for this taxon.
- Nepeta cataria* L. - Catnip. CH [K], CRW [!, G]. Non-Native. OC.
- Perilla frutescens* (L.) Britt. var. *frutescens* - Beefsteakplant. CH [!, K], CRW [!, K]. Non-Native. OP, OC, CL.
- Physostegia angustifolia* Fern. - Narrow-Leaf False Dragonhead. CH [!, K], CRW [!, K, G]. Native. **Rare**. OC, CL. Reported in seventeen counties in Kansas, but common in surrounding states.
- Physostegia virginiana* (L.) Benth. subsp. *praemorsa* (Shinners) Cantino - Obedient-Plant. CH [K], CRW [K]. Native.
- Physostegia virginiana* (L.) Benth. subsp. *virginiana* - Obedient-Plant. CH [!], CRW [!]. Native. OP. **Cherokee County Record** (Pryer 1075, Pryer 4973, Pryer 5343b). **Crawford County Record** (Pryer 5305).
- Prunella vulgaris* L. subsp. *lanceolata* (W. Bart.) Hultén - Common Selfheal. CH [!, K], CRW [!, K, G]. Native. OC, CL.
- Pycnanthemum albescens* Torr. & A. Gray - White-Leaf Mountain-Mint. CH [K]. Native. **Extirpated**. The most recent specimen located was collected on August 21, 1949 (R.L. McGregor 3850) for Cherokee County, Kansas. This specimen resides at McGregor Herbarium, University of Kansas.

Pycnanthemum tenuifolium Schrad. - Narrow-Leaf Mountain-Mint. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Pycnanthemum verticillatum (Michx.) Pers. var. *pilosum* (Nutt.) Cooperrider - Whorled Mountain-Mint. CH [!, K]. Native. OP.

Pycnanthemum virginianum (L.) T. Dur. & B.D. Jackson ex B.L. Robins. & Fern. - Virginia Mountain-Mint. CH [K]. Native.

Salvia azurea Michx. ex Lam. var. *grandiflora* Benth. - Azure-Blue Sage. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Salvia farinacea Benth. - Mealy-Cup Sage. CRW [!]. Native. CL. **State Record.** Crawford County Voucher (*Pryer 3901*). Several (10+) plants located on a mined land area next to a strip pit. One specimen was collected in Neosho County, Kansas, but was noted as “under cultivation” (W.W. Holland 5857; September 4, 1987). The specimen is held in the McGregor Herbarium, University of Kansas. This taxon has only been reported in New Mexico, Texas, Louisiana, Oklahoma, Florida, Ohio, and Connecticut. The closest report is from Delaware County, Oklahoma.

Scutellaria incana Biehler - Hoary Skullcap. CH [!, K]. Native. **Rare.** OP. Only reported in Cherokee county; common in Missouri and Arkansas but rare in Oklahoma.

Scutellaria lateriflora L. var. *lateriflora* - Mad Dog Skullcap. CH [!, K], CRW [K]. Native. OP.

Scutellaria ovata Hill subsp. *ovata* - Heart-Leaf Skullcap.

Scutellaria parvula Michx. - Small Skullcap. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Stachys pilosa Nutt. var. *pilosa* - Hairy Hedge-Nettle. CRW [!]. Native. **Rare.** OP. **Crawford County Record** (*Pryer 1334, Pryer 3636*). Reported in six counties in Kansas, but rare in surrounding states and not yet reported for Arkansas.

Stachys tenuifolia Willd. - Smooth Hedge-Nettle. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Teucrium canadense L. var. *canadense* - American Germander. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Teucrium canadense L. var. *occidentale* (A. Gray) McClintock & Epling - American Germander. CRW [!]. Native. CL. **Crawford County Record** (*Pryer 2152*).

Trichostema brachiatum L. - False Pennyroyal. CRW [K, G]. Native.

Lauraceae (Laurel Family)

Lindera benzoin (L.) Blume - Northern Spicebush. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Sassafras albidum (Nutt.) Nees - Sassafras. CH [!, K], CRW [K]. Native. OP.

Lentibulariaceae (Bladderwort Family)

Utricularia gibba L. - Humped Bladderwort. CH [K], CRW [!, K, G]. Native. CL.

Utricularia macrorhiza Le Conte - Greater Bladderwort. CRW [!]. Native. CL.

Crawford County Record (*Pryer 2582*).

Liliaceae (Lily Family)

Erythronium albidum Nutt. - Small White Fawn-Lily. CH [K], CRW [!, K]. Native. CL.

Erythronium mesochoreum Knerr - Midland Fawn-Lily. CH [!, K], CRW [K, G]. Native. CL.

Erythronium rostratum W. Wolf - Yellow Trout-Lily. CH [K]. Native. **Rare**. Only reported in Cherokee County, Kansas, but common in surrounding states.

Lilium michiganense Farw. - Michigan Lily. CH [K], CRW [!, K, G]. Native. **Rare**. Reported in eleven counties in Kansas; common in Missouri and Arkansas but with only one county report in Oklahoma.

Linaceae (Flax Family)

Linum medium (Planch.) Britt. var. *texanum* (Planch.) Fern. - Stiff Yellow Flax. CH [K], CRW [!, K]. Native. **Rare**. CL. Reported in three counties in Kansas but common in surrounding states.

Linum sulcatum Riddell var. *sulcatum* - Grooved Yellow Flax. CH [K], CRW [!, K, G]. Native. OC, CL. Gibson did not recognize varieties of this taxon.

Linum usitatissimum L. - Cultivated Flax. CR [K, G]. Non-Native.

Linderniaceae (False Pimpernel Family)

Lindernia dubia (L.) Pennell - Yellow-Seed False Pimpernel. CH [!, K], CRW [!, K, G]. Native. OP, CL. Variety was not able to be determined. Kartesz (2017) recognizes *Lindernia dubia* (L.) var. *anagallidea* (Michx.) CH [K].

Loasaceae (Blazingstar Family)

Mentzelia albescens (Gillies & Arn.) Griseb. - Wavy-Leaf Blazingstar. CH [K]. Native. Adventive.

Mentzelia oligosperma Nutt. ex Sims - Chickenthief. CH [K]. Native.

Lythraceae (Loosestrife Family)

Ammannia coccinea Rottb. - Valley Redstem. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Ammannia robusta Heer & Regel - Grand Redstem. CH [!, K], CRW [!]. Native. OC, CL. **Crawford County Record** (Pryer 5613).

Cuphea viscosissima Jacq. - Blue Waxweed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Didiplis diandra (Nutt. ex DC.) Wood - Water-Purslane. CH [K], CRW [K, G]. Native. **Rare**. Reported in nine counties in Kansas; common in Missouri but rare in Oklahoma and Arkansas.

Lythrum alatum Pursh Wing-Angle var. *alatum* - Loosestrife. CH [K], CRW [!, K, G]. Native. CL. Gibson did not recognize varieties of this taxon.

Lythrum californicum Torr. & A. Gray - California Loosestrife. CRW [K]. Native.

Rotala ramosior (L.) Koehne - Lowland Toothcup. CH [!, K], CRW [!, K]. Native. OP, CL.

Malvaceae (Mallow Family)

Abutilon theophrasti Medik. - Velvetleaf. CH [K], CRW [!, K, G]. Non-Native. **Noxious**. OC, CL.

Callirhoe alcaeoides (Michx.) A. Gray - Light Poppy-Mallow. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Callirhoe digitata Nutt. - Winecup. CH [K]. Native. **Rare**. Reported in two counties in Kansas but common in surrounding states.

Hibiscus laevis All. - Halberd-Leaf Rose-Mallow. CH [!, K], CRW [K, G]. Native. CL.

Hibiscus moscheutos L. subsp. *lasiocarpus* (Cav.) O.J. Blanchard - Crimson-Eye Rose-Mallow. CH [!, K], CRW [!, K]. Native. OP, CL.

Hibiscus moscheutos L. subsp. *moscheutos* - Crimson-Eye Rose-Mallow. CH [K], CRW [K, G]. Native.

Hibiscus trionum L. - Flower-of-An-Hour. CH [K], CRW [!, K, G]. Native. Non-Native. CL.

Malva neglecta Wallr. - Dwarf Mallow. CH [K], CRW [K, G]. Non-Native.

Malva pusilla Sm. - Low Mallow CH [K]. Non-Native.

Malvastrum angustum A. Gray - Hispid False Mallow. CRW [K]. Native.

Sida spinosa L. - Prickly Fanpetals. CH [!, K], CRW [!, K, G]. Native. Adventive. OC, CL.

Tilia americana L. var. *americana* - American Basswood. CRW [K]. Gibson. Native.

Marsileaceae (Water-Clover Family)

Marsilea quadrifolia L. - European Water-Clover. CH [K]. Non-Native.

Marsilea vestita Hook. & Grev. - Hairy Water-Clover. CH [K]. Native.

Melanthiaceae (False Hellebore Family)

Veratrum virginicum (L.) Ait. f. - Virginia Bunchflower. CRW [K, G]. Native. **Rare**. Reported in seven counties in Kansas; common in Missouri and Arkansas, but rare in Oklahoma.

Melastomataceae (Melastome Family)

Rhexia mariana L. var. *interior* (Pennell) Kral & Bostick Maryland - Meadow-Beauty. CH [!, K], CRW [!, K, G]. Native. **Rare**. Reported in two counties in Kansas but common in surrounding states.

Menispermaceae (Moonseed Family)

Calycocarpum lyonii (Pursh) A. Gray - Cupseed. CH [K]. Native. **Rare**. Reported in three counties in Kansas; common in Missouri and Arkansas but rare in Oklahoma.

Cocculus carolinus (L.) DC. - Carolina Coralbead . CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Menispermum canadense L. - Canadian Moonseed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Molluginaceae (Carpetweed Family)

Glinus lotoides L. - Lotus Sweetjuice. CRW [K]. Non-Native.

Mollugo verticillata L. - Green Carpetweed. CH [!, K], CRW [!, K, G]. Native. Adventive. OC, CL.

Montiaceae (Candy-Flower Family)

Claytonia virginica L. var. *virginica* - Virginia Springbeauty. CH [!], CRW [!], K, G]. Native. OP, OC, CL.

Phemeranthus parviflorus (Nutt.) Kiger - Prairie False Fameflower. CH [K], CRW [!], K, G]. Native.

Moraceae (Mulberry Family)

Fatoua villosa (Thunb.) Nakai - Hairy Crabweed. CRW [!]. Non-Native. CL. **Crawford County Record** (Pryer 2141, Pryer 3246).

Maclura pomifera (Raf.) Schneid. - Osage-Orange. CH [!], K], CRW [!], K, G]. Native. Adventive. OC, CL.

Morus alba L. - White Mulberry. CH [!], K], CRW [!], K, G]. Non-Native. OP, OC, CL.

Morus rubra L. - Red Mulberry. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.

Nelumbonaceae (Lotus-Lily Family)

Nelumbo lutea Willd. - American Lotus. CH [!], K], CRW [!], K]. Native. OP, CL.

Nyctaginaceae (Four-O'clock Family)

Mirabilis albida (Walt.) Heimerl - White Four-O'clock. CH [K], CRW [K, G]. Native.

Mirabilis linearis (Pursh) Heimerl var. *linearis* - Narrow-Leaf Four-O'clock. CRW [!], K]. Native. OC.

Mirabilis nyctaginea (Michx.) MacM. - Heart-Leaf Four-O'clock. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.

Nymphaeaceae (Water-Lily Family)

Nuphar advena (Ait.) Ait. f. subsp. *advena* - Yellow Pond-Lily. CH [K], CRW [!], K]. Native. **Rare**. CL. Reported in six counties in Kansas but common in surrounding states.

Nymphaea odorata Ait. subsp. *odorata* - American White Water-Lily. CH [K], CRW [K, G]. Native. Gibson did not recognize subspecies of this taxon.

Oleaceae (Olive Family)

Forestiera acuminata (Michx.) Poir. - Eastern Swamp-Privet. CH [!], K]. Native. **Rare**. OP. Reported in two counties in Kansas; common in Arkansas and parts of Missouri but rare in Oklahoma.

Forsythia suspensa (Thunb.) Vahl - Weeping Forsythia. CH [!]. Non-Native. CL. Probable planting at an old homestead. Included here for reference, but not included in any tallies.

Fraxinus americana L. - White Ash. CH [K], CRW [K, G]. Native.

Fraxinus pennsylvanica Marsh. - Green Ash. CH [!], K], CRW [!], K, G]. Native. OC, CL.

Fraxinus quadrangulata Michx. - Blue Ash. CH [K], CRW [K]. Native.

Ligustrum obtusifolium Sieb. & Zucc. subsp. *obtusifolium* - Border Privet. CH [K], CRW [!]. Non-Native. CL. **Crawford County Record** (Pryer 734, Pryer 746, Pryer 783, Pryer 2229).

Ligustrum sinense Lour. - Chinese Privet. CH [!], CRW [!]. Non-Native. OP, OC, CL.
Cherokee County Record (Pryer 3169), **Crawford County Record** (Pryer 2744, Pryer 3285, Pryer 3355).

Ligustrum vulgare L. - European Privet. CRW [!], G]. Non-Native. OC.

Syringa vulgaris L. - Common Lilac. CH [!]. Non-Native. CL. Probably originally planted near an old homestead, though obviously naturalizing at this point.
Cherokee County Record (Pryer 4023).

Onagraceae (Evening-Primrose Family)

Circaea canadensis (L.) Hill - Broad-Leaf Enchanter's-Nightshade. CH [K], CRW [!]. Native. OC. **Crawford County Record** (Pryer 1311, Pryer 1322, Pryer 2005, Pryer 5427).

Ludwigia alternifolia L. - Seedbox. CH [!], K], CRW [!], K, G]. Native. OP, CL.

Ludwigia glandulosa Walt. subsp. *glandulosa* - Cylindric-Fruit Primrose-Willow. CH [K]. Native.

Ludwigia palustris (L.) Ell. Marsh - Primrose-Willow. CH [!], K], CRW [!], K, G]. Native. OP, CL.

Ludwigia peploides (Kunth) subsp. *glabrescens* (Kuntze) - Raven Raven Floating Primrose-Willow. CH [!], K], CRW [!], K, G]. Native. CL.

Oenothera biennis L. - King's-Cureall. CRW [K]. Native.

Oenothera curtiflora W.L. Wagner & Hoch - Velvetweed. CRW [G]. Native.

Oenothera filiformis (Small) W.L. Wagner & Hoch - Long-Flower Evening-Primrose. CH [!], K], CRW [!], K, G]. Native. OC, CL.

Oenothera laciniata Hill - Cut-Leaf Evening-Primrose. CH [!], K], CRW [!], K, G]. Native. OC, CL.

Oenothera linifolia Nutt. - Thread-Leaf Evening-Primrose. CH [K], CRW [!], G]. Native. OC.

Oenothera macrocarpa Nutt. subsp. *macrocarpa* - Big-Fruit Evening-Primrose. CH [K], CRW [!], K, G]. Native. OC.

Oenothera speciosa Nutt. - Pinkladies. CH [!], K], CRW [!], K, G]. Native. OC, CL.

Oenothera triloba Nutt. - Stemless Evening-Primrose. CH [!], K], CRW [!], K, G]. Native. CL.

Oenothera villosa Thunb. subsp. *villosa* - Hairy Evening-Primrose. CH [!], K], CRW [!], K]. Native. OP, OC, CL.

Orchidaceae (Orchid Family)

Aplectrum hyemale (Muhl. ex Willd.) Torr. - Adam-and-Eve. CRW [!]. Native.

Calopogon oklahomensis D.H. - Goldman Oklahoma Grass-Pink. CH [K]. Native. **Rare**.
Only reported in Cherokee County, Kansas; in the Midwest south to the Gulf Coast, but considered rare wherever it occurs.

Corallorhiza odontorhiza (Willd.) Poir. - Autumn Coralroot. CH [K], CRW [K]. Native.

Corallorhiza wisteriana Conrad - Spring Coralroot. CH [K]. Native.

Cypripedium parviflorum Salisb. var. *parviflorum* - Yellow Lady's-Slipper. CH [K]. Native.

- Malaxis unifolia* Michx. - Green Adder's-Mouth Orchid. CH [K]. Native. **Rare**. Reported in two counties in Kansas; common in Missouri and Arkansas but rare in Oklahoma.
- Platanthera lacera* (Michx.) G. Don - Green Fringed Orchid. CH [!, K], CRW [!, K]. Native. **Rare**. CL. Reported in eight counties in Kansas; common in Missouri and Arkansas but rare in Oklahoma.
- Platanthera praeclara* Sheviak & Bowles - Great Plains White Fringed Orchid. CRW [K, G]. Native. **Rare**. Federally listed as threatened. Reported in fourteen counties in Kansas. This taxon is considered rare wherever it occurs. It has been reported throughout eastern Missouri and two counties in Oklahoma, but is considered extirpated from the state of Oklahoma.
- Spiranthes cernua* (L.) L.C. Rich. - White Nodding Ladies'-Tresses. CH [K], CRW [!, K, G]. Native. CL.
- Spiranthes lacera* (Raf.) Raf. - Northern Slender Ladies'-Tresses. CH [!, K], CRW [!, K]. Native. CL. Variety could not be determined in Kansas specimens since none of the identification texts used recognized varieties.
- Spiranthes lacera* (Raf.) Raf. var. *gracilis* (Bigelow) Luer - Northern Slender Ladies'-Tresses. CH [K], CRW [K]. Native.
- Spiranthes lucida* (H.H. Eat.) Ames - Shining Ladies'-Tresses. CH [!]. Native. CL. Was considered **extirpated**. **Cherokee County Record** (Pryer 5419).
- Spiranthes magnicamporum* Sheviak - Great Plains Ladies'-Tresses. CH [!, K], CRW [!]. Native. CL. **Crawford County Record** (Pryer 1926, Pryer 3690).
- Spiranthes tuberosa* Raf. - Little Ladies'-Tresses. CH [K]. Native.
- Spiranthes vernalis* Engelm. & A. Gray - Spring Ladies'-Tresses. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Orobanchaceae (Broom-Rape Family)

- Agalinis aspera* (Dougl. ex Benth.) Britt. - Tall False Foxglove. CH [K], CRW [!, K]. Native. CL.
- Agalinis auriculata* (Michx.) Blake - Ear-Leaf False Foxglove. CRW [K]. Native. **Rare**. Reported in eighteen counties in Kansas, but considered rare wherever it is reported. The most concentrated distribution is in Kansas, Missouri, Iowa, and Illinois.
- Agalinis fasciculata* (Ell.) Raf. - Beach False Foxglove. CH [!, K], CRW [!, K, G]. Native. **Rare**. OP, CL. Reported in five counties in Kansas but common in surrounding states.
- Agalinis gattingeri* (Small) Small - Round-Stem False Foxglove. CH [!, K]. Native. OP.
- Agalinis heterophylla* (Nutt.) Small ex Britt. - Prairie False Foxglove. CH [!, K]. Native. **Rare**. OP. Reported in six counties in Kansas; common in Oklahoma and Arkansas but rare in Missouri.
- Agalinis purpurea* (L.) Pennell - Purple False Foxglove. CH [K], CRW [!, K, G]. Native. **Rare**. CL.
- Agalinis skinneriana* (Wood) Britt. - Skinner's False Foxglove. CH [K]. Native.
- Agalinis tenuifolia* (Vahl) Raf. - Slender-Leaf False Foxglove. CH [!, K], CRW [!, K, G]. Native. CL.

Aureolaria grandiflora (Benth.) Pennell var. *serrata* (Torr. ex Benth.) Pennell - Large-Flower Yellow False Foxglove. CH [!, K], CRW [!]. Native. **Rare**. OP, OC.

Crawford County Record (Pryer 2770). Reported in three counties in Kansas, including this report but common in surrounding states.

Buchnera americana L. - American Bluehearts. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Castilleja coccinea (L.) Spreng. - Scarlet Indian-Paintbrush. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Dasistoma macrophylla (Nutt.) Raf. - Mullein-Foxglove. CH [K], CRW [!, K, G]. Native. OC, CL.

Orobanche uniflora L. - Naked Broomrape. CH [K]. Native.

Pedicularis canadensis L. - Canadian Lousewort. CH [!, K], CRW [!, K, G]. Native. OP, OC.

Oxalidaceae (Wood-Sorrel Family)

Oxalis corniculata L. - Creeping Yellow Wood-Sorrel. CH [!, K], CRW [!, G]. Native. Adventive. OP, CL.

Oxalis dillenii Jacq. - Slender Yellow Wood-Sorrel. CH [!, K], CRW [!, K]. Native. OP, OC, CL.

Oxalis stricta L. - Upright Yellow Wood-Sorrel. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Oxalis violacea L. - Violet Wood-Sorrel. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Papaveraceae (Poppy Family)

Corydalis crystallina Engelm. - Mealy Fumewort. CH [K], CRW [K]. Native.

Corydalis flavula (Raf.) DC. - Yellow Fumewort. CH [!, K], CRW [!, K]. Native. OP, CL.

Corydalis micrantha (Engelm. ex A. Gray) A. Gray subsp. *australis* (Chapman) G.B. Ownbey - Small-Flower Fumewort. CH [K], CRW [K, G]. Native.

Corydalis micrantha (Engelm. ex A. Gray) A. Gray subsp. *micrantha* - Small-Flower Fumewort. CRW [!]. Native. CL. **Crawford County Record** (Pryer 92, Pryer 4351, Pryer 4516).

Dicentra cucullaria (L.) Bernh. - Dutchman's-Breeches. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Papaver rhoeas L. - Corn Poppy. CH [K]. Non-Native.

Sanguinaria canadensis L. - Bloodroot. CH [!, K]. Native. OP.

Passifloraceae (Passion-Flower Family)

Passiflora incarnata L. - Purple Passion-Flower. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Passiflora lutea L. - Yellow Passion-Flower. CH [!, K], CRW [K, G]. Native. **Rare**. OP. Reported in four counties in Kansas, but common in surrounding states.

Penthoraceae (Ditch-Stonecrop Family)

Penthorum sedoides L. - Ditch-Stonecrop. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Phrymaceae (Lopseed Family)

Mimulus alatus Ait. - Sharp-Wing Monkey-Flower. CH [K], CRW [!, K, G]. Native. OC, CL.

Phryma leptostachya L. - American Lopseed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Phyllanthaceae (Leaf-Flower Family)

Phyllanthus caroliniensis Walt. subsp. *caroliniensis* - Carolina Leaf-Flower. CH [K], CRW [K]. Native. **Rare**. Gibson did not recognize subspecies of this taxon. Reported in five counties in Kansas but common in surrounding states.

Phytolaccaceae (Pokeweed Family)

Phytolacca americana L. var. *americana* - American Pokeweed. CH [!, K], CRW [!, K, G]. Native. CL. Gibson did not recognize varieties of this taxon.

Plantaginaceae (Plantain Family)

Callitriche heterophylla Pursh subsp. *heterophylla* - Greater Water-Starwort. CH [!, K], CRW [!, K, G]. Native. CL.

Callitriche terrestris Raf. - Terrestrial Water-Starwort. CH [K]. Native. **Rare**. Reported in seven counties in Kansas; common in Missouri and Arkansas but rare in Oklahoma.

Chaenorhinum minus (L.) - Lange Dwarf-Snapdragon. CH [!, K]. Non-Native. OP.

Collinsia violacea Nutt. - Violet Blue-Eyed Mary. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Gratiola neglecta Torr. - Clammy Hedge-Hyssop. CH [!, K], CRW [K, G]. Native. CL.

Gratiola virginiana L. var. *virginiana* - Round-Fruit Hedge-Hyssop. CRW [G]. Native.

Leucospora multifida (Michx.) Nutt. - Narrow-Leaf Paleseed. CH [K], CRW [!, K, G]. Native. OC, CL.

Linaria vulgaris P. Mill. - Greater Butter-and-Eggs. CH [K], CRW [!, K, G]. Native. Non-Native. CL.

Mecardonia acuminata (Walt.) Small var. *acuminata* - Axil-Flower. CH [K]. Native. **Rare**. Only reported in Cherokee County, Kansas; common in Oklahoma and Arkansas but rare in Missouri.

Nuttallanthus canadensis (L.) D.A. Sutton - Oldfield-Toadflax. CH [!], CRW [K]. Native. OP. **Cherokee County Record** (Pryer 5105).

Nuttallanthus texanus (Scheele) D.A. Sutton - Texas-Toadflax. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Penstemon digitalis Nutt. ex Sims - Foxglove Beardtongue. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Penstemon tubiflorus Nutt. var. *tubiflorus* - White Wand Beardtongue. CH [!, K], CRW [!, K, G]. Native. OC, CL. Gibson did not recognize varieties for this taxon.

Plantago aristata Michx. - Large-Bract Plantain. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Plantago elongata Pursh - Prairie Plantain. CH [K]. Native.

Plantago lanceolata L. - English Plantain. CH [!, K], CRW [!, K, G]. Non-Native. **Noxious**. OC, CL.

Plantago major L. - Great Plantain. CH [!, K], CRW [K, G]. Non-Native. OP.
Plantago patagonica Jacq. - Woolly Plantain. CH [K], CRW [K]. Native.
Plantago rhodosperma Dcne. - Red-Seed Plantain. CH [!], CRW [!]. Native. OP, OC.
Cherokee County Record (Pryer 426). Crawford County Record (Pryer 4841, Pryer 4918).
Plantago rugelii Dcne. - Black-Seed Plantain. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.
Plantago virginica L. - Pale-Seed Plantain. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.
Plantago wrightiana Dcne. - Wright's Plantain. CRW [K]. Native.
Veronica agrestis L. - Green Field Speedwell. CH [K], CRW [K]. Non-Native.
Veronica arvensis L. - Corn Speedwell. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.
Veronica peregrina L. subsp. *peregrina* - Neckweed. CH [!, K], CRW [!, K]. Native. OP, OC, CL.
Veronica peregrina L. subsp. *xalapensis* (Kunth) Pennell - Neckweed. CH [!, K], CRW [K, G]. Native. CL.
Veronica polita Fries A. Gray - Field Speedwell. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.
Veronicastrum virginicum (L.) Farw. - Culver's-Root. CH [K]. Native.

Platanaceae (Planetree Family)

Platanus occidentalis L. - American Sycamore. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Poaceae (Grass Family)

Aegilops cylindrica Host - Jointed Goat Grass. CH [K], CRW [K, G]. Non-Native.
Noxious.
Agrostis elliottiana J.A. Schultes - Elliott's Bent. CH [K], CRW [K, G]. Native. **Rare.**
 Reported in eleven counties in Kansas but common in surrounding states.
Agrostis gigantea Roth - Black Bent. CH [K], CRW [!, K, G]. Non-Native. OC.
Agrostis hyemalis (Walt.) B.S.P. - Winter Bent. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.
Agrostis perennans (Walt.) Tuckerman - Upland Bent. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.
Agrostis scabra Willd. - Rough Bent. CH [K]. Native. **Rare.** Only reported in Cherokee County, Kansas, and rare in all surrounding states.
Agrostis stolonifera L. - Spreading Bent. CH [K], CRW [!, K]. Non-Native. CL.
Alopecurus carolinianus Walt. - Tufted Meadow-Foxtail. CH [!, K], CRW [K, G]. Native.
Andropogon gerardi Vitman - Big Bluestem. CH [!, K], CRW [!, K, G]. Native. OC, CL.
Andropogon ternarius Michx. - Split-Beard Bluestem. CH [!, K], CRW [!, K]. Native. OP, CL.
Andropogon virginicus L. var. *virginicus* - Broom-Sedge CH [!, K], CRW [!, K, G]. Native. OC, CL. Gibson did not recognize varieties of this taxon.

Aristida adscensionis L. - Six-Weeks Three-Awn. CH [!]. Native. CL. **Cherokee County Record** (Pryer 5054).

Aristida basiramea Engelm. ex Vasey - Forked Three-Awn. CH [K], CRW [!]. Native. CL. **Crawford County Record** (Pryer 6081).

Aristida dichotoma Michx. var. *curtissii* A. Gray ex S. Wats. & Coult. - Church-Mouse Three-Awn. CH [K], CRW [K]. Native.

Aristida dichotoma Michx. var. *dichotoma* - Church-Mouse Three-Awn. CH [K], CRW [!, K]. Native. CL.

Aristida longespica Poir. var. *geniculata* (Raf.) Fern. - Red Three-Awn. CRW [!]. Native. CL. **Crawford County Record** (Pryer 6089).

Aristida longespica Poir. var. *longespica* - Red Three-Awn. CH [K], CRW [K]. Native.

Aristida oligantha Michx. - Prairie Three-Awn. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Aristida purpurascens Poir. var. *purpurascens* - Arrow-Feather Three-Awn. CH [!, K]. Native. OP, CL.

Aristida ramosissima Engelm. ex A. Gray - S-Curve Three-Awn. CH [!, K]. Native. **Rare**. CL. Only reported in Cherokee County, Kansas but rare in the immediately surrounding area and considered extirpated from Missouri.

Arthraxon hispidus (Thunb.) Makino - Small Carp Grass. CH [K], CRW [!]. Non-Native. CL. **Crawford County Record** (Pryer 3666).

Bothriochloa bladhii (Retz.) S.T. Blake - Australian Beard Grass. CH [!]. Non-Native. OP. **Cherokee County Record** (Pryer 5784).

Bothriochloa ischaemum (L.) Keng - Turkestan Beard Grass. CH [!], CRW [!]. Non-Native. CL. **Cherokee County Record** (Pryer 1622, Pryer 1641). **Crawford County Record** (Pryer 1691, Pryer 3506).

Bothriochloa laguroides (DC.) Herter subsp. *torreyana* (Steud.) Allred & Gould - Silver Beard Grass. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Bouteloua curtipendula (Michx.) Torr. var. *curtipendula* - Side-Oats Grama. CH [!, K], CRW [!, K, G]. Native. OP, CL. Gibson did not recognize varieties of this taxon.

Bouteloua dactyloides (Nutt.) Columbus - Buffalo Grass. CH [!], CRW [!, K]. Native. OC, CL. **Cherokee County Record** (Pryer 899, Pryer 3836, Pryer 3952).

Brachyelytrum erectum (Schreb. ex Spreng.) Beauv. - Bearded Shorthusk. CH [!]. Native. **Rare**. **Cherokee County Record** (Pryer 5642). Reported in four counties in Kansas; common in Missouri and Arkansas but rare in Oklahoma.

Bromus arvensis L. - Field Brome. CH [!, K], CRW [!, K, G]. Non-Native. OC, CL.

Bromus catharticus Vahl var. *catharticus* - Rescue Grass. CRW [!]. Non-Native. OC. **Crawford County Record** (Pryer 5987).

Bromus commutatus L. - Bald Brome. CH [!], CRW [!]. Non-Native. Kartesz (2017) synonymizes this taxon with *Bromus racemosus*.

Bromus hordeaceus L. subsp. *hordeaceus* - Soft Brome. CH [!]. Non-Native. OP. **Cherokee County Record** (Pryer 160, Pryer 5098).

Bromus inermis Leyss. - Smooth Brome. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Bromus latiglumis (Scribn. ex Shear) A.S. Hitchc. - Early-Leaf Brome. CH [K]. Native. **Rare**. Reported in two counties in Kansas; in Missouri and unreported for Oklahoma or Arkansas.

Bromus pubescens Spreng. - Hairy Woodland Brome. CH [!, K], CRW [!, K, G]. Native. OP, OC.

Bromus racemosus L. - Bald Brome. CH [!, K], CRW [!, K]. Non-Native. **Noxious**. OP, OC, CL.

Bromus secalinus L. - Rye Brome. CH [!, K], CRW [K, G]. Non-Native. **Noxious**. OP, CL.

Bromus squarrosus L. - Corn Brome. CH [!]. Non-Native. CL. **Cherokee County Record** (Pryer 942).

Bromus sterilis L. - Poverty Brome. CH [!], CRW [!]. Non-Native. OP, CL. **State Record**. Cherokee county vouchers (Pryer 416, Pryer 434, Pryer 694, Pryer 701, Pryer 703a). Crawford county vouchers (Pryer 797). Reports of this taxon are scattered throughout the states, with many in Missouri. It has been reported in three counties in Oklahoma and a few scattered throughout Arkansas. The closest reports are from Jasper, Newton, and McDonald counties Missouri.

Bromus tectorum L. - Cheat Grass. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Calamagrostis canadensis (Michx.) Beauv. var. *canadensis* - Bluejoint. CH [!], CRW [!]. Native. CL. **Cherokee County Record** (Pryer 1817). **Crawford County Record** (Pryer 2097).

Cenchrus alopecuroides (L.) Thunb. - CRW [Snow 10980]. Non-Native. CL. Snow (2017) reported this correctly as a state record but incorrectly as *Cenchrus atropururoides* (L.) Thunb.

Cenchrus incertus M.A. Curtis - Coastal Sandburr. CRW [G]. Native. **Rare**. Reported in five counties in Kansas, including this report; common in Oklahoma and Arkansas but rare in Missouri.

Cenchrus longispinus (Hack.) Fern. - Innocent-Weed. CH [K], CRW [G, K]. Native.

Chasmanthium latifolium (Michx.) Yates - Indian Wood-Oats. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Chloris verticillata Nutt. Tumble - Windmill Grass. CH [K], CRW [!, K, G]. Native. OC, CL.

Chloris virgata Sw. Feather - Windmill Grass. CRW [!]. Non-Native. CL. **Crawford County Record** (Pryer 6416).

Cinna arundinacea L. - Sweet Wood-Reed. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Coleataenia anceps (Michx.) Soreng - Beaked Cut-Throat Grass. CH [!, K], CRW [!, K]. Native. OP, OC, CL.

Coleataenia rigidula (Bosc ex Nees) LeBlond subsp. *rigidula* - Red-Top Cut-Throat Grass. CH [!, K], CRW [!, K, G]. Native. CL.

Cynodon dactylon (L.) Pers. - Bermuda Grass. CH [!, K], CRW [!, K, G]. Non-Native. CL.

Dactylis glomerata L. subsp. *glomerata* - Orchard Grass. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Danthonia spicata (L.) Beauv. ex Roemer & J.A. Schultes - Poverty Wild Oat Grass. CH [!, K], CRW [K]. Native. OP.

Diarrhena obovata (Gleason) Brandenburg - Hairy Beakgrain. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Dichanthelium acuminatum (Sw.) Gould & C.A. Clark var. *acuminatum* - Tapered Rosette Grass. CH [!, K], CRW [!, K, G]. Native. OP, OC.

Dichanthelium boscii (Poir.) Gould & C.A. Clark - Bosc's Rosette Grass. CH [K]. Native. **Extirpated.**

Dichanthelium clandestinum (L.) Gould - Deer-Tongue Rosette Grass. CH [!, K], CRW [!, G]. Native. OP, OC.

Dichanthelium depauperatum (Muhl.) Gould - Starved Rosette Grass. CRW [!]. Native. CL. **Crawford County Record** (Pryer 1166).

Dichanthelium dichotomum (L.) Gould var. *dichotomum* - Cypress Rosette Grass. CH [!], CRW [!]. Native. OP, OC. **Cherokee County Record** (Pryer 5072, Pryer 5084). **Crawford County Record** (Pryer 4629, Pryer 6111)

Dichanthelium latifolium (L.) Harville - Broad-Leaf Rosette Grass. CH [!, K]. Native. OP.

Dichanthelium laxiflorum (Lam.) Gould - Open-Flower Rosette Grass. CH [K]. Native.

Dichanthelium leibergii (Vasey) Freckmann - Leiberg's Rosette Grass. CH [K]. Native. **Rare.** Reported from six counties in Kansas; rare in Missouri and not yet reported for Oklahoma or Arkansas.

Dichanthelium linearifolium (Scribn. ex Nash) Gould - Slim-Leaf Rosette Grass. CH [!, K], CRW [!, K]. Native. OP, CL.

Dichanthelium malacophyllum (Nash) Gould - Soft-Leaf Rosette Grass. CH [!, K], CRW [!]. Native. CL. **Crawford County Record** (Pryer 1443)

Dichanthelium oligosanthos (J.A. Schultes) Gould - Heller's Rosette Grass. CH [K], CRW [!, K, G]. Native. OC, CL.

Dichanthelium scoparium (Lam.) Gould - Broom Rosette Grass. CH [!, K], CRW [!, G]. Native. OP, OC.

Dichanthelium sphaerocarpon (Ell.) Gould - Round-Seed Rosette Grass. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL. Kartesz (2017) recognizes the varieties *isophyllum* and *sphaerocarpon*, however due to the difficulty in identifying this genus, no specimens were identified to the infraspecific level.

Digitaria ciliaris (Retz.) Koel. - Southern Crab Grass. CH [!, K], CRW [!, K]. Non-Native. OP, OC, CL.

Digitaria cognata (J.A. Schultes) Pilger - Carolina Crab Grass. CRW [!, G]. Native. CL.

Digitaria filiformis (L.) Koel. var. *filiformis* - Slender Crab Grass. CH [K], CRW [K, G]. Native.

Digitaria ischaemum (Schreb. ex Schweig.) Schreb. ex Muhl. - Smooth Crab Grass. CH [!, K], CRW [!, K]. Non-Native. OP, OC, CL.

Digitaria sanguinalis (L.) Scop. - Hairy Crab Grass. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Dinebra panicea (Retz.) P.M. Peterson & N. Snow subsp. *brachiata* (Steudl.) P.M. Peterson & N. Snow - Needle Viper Grass. CH [!], CRW [!, K]. Native. CL. **Cherokee County Record** (Pryer 2490).

Dinebra panicea (Retz.) P.M. Peterson & N. Snow subsp. *mucronata* (Michx.) P.M. Peterson & N. Snow - Needle Viper Grass. CH [K], CRW [K]. Native.

Diplachne fusca (L.) Beauv. ex Roemer & J.A. Schultes subsp. *fascicularis* (Lam.) P.M. Peterson & N. Snow - Bearded Beetle Grass. CRW [!, K]. Native. CL.

Echinochloa colona (L.) Link - Jungle-Rice. CRW [!]. Non-Native. CL. **Crawford County Record** (Pryer 3563).

Echinochloa crus-galli (L.) Beauv. - Large Barnyard Grass. CH [!], CRW [!]. Non-Native. OC, CL. **Cherokee County Record** (Pryer 3767, Pryer 5470). **Crawford County Record** (Pryer 1363b, Pryer 1364, Pryer 1407, Pryer 1496, Pryer 1555, Pryer 1999, Pryer 2667, Pryer 6038).

Echinochloa muricata (Beauv.) Fern. var. *microstachya* Wieg. - Rough Barnyard Grass. CH [!], K], CRW [!]. Native. OC, CL. **Crawford County Record** (Pryer 1407b, Pryer 1496b, Pryer 1689, Pryer 2811, Pryer 5493).

Echinochloa muricata (Beauv.) Fern. var. *muricata* - Rough Barnyard Grass. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.

Eleusine indica (L.) Gaertn. - Indian Goose Grass. CH [!], K], CRW [!], K, G]. Non-Native. OC, CL.

Elymus canadensis L. - Nodding Wild Rye. CH [!], K], CRW [!], K, G]. Native. OC, CL.

Elymus glabriflorus (Vasey) Scribn. & Ball - Southeastern Wild Rye. CH [!], K], CRW [!]. Native. OP, OC, CL. **Crawford County Record** (Pryer 826, Pryer 995, Pryer 996, Pryer 1049, Pryer 1340, Pryer 1448, Pryer 1528, Pryer 1543, Pryer 1692, Pryer 2595). Many references previously did not include this taxon as an option in the key, having it subsumed under other taxa.

Elymus hystrix L. var. *hystrix* - Eastern Bottle-Brush Grass. CH [K]. Native.

Elymus macgregorii R.E. Brooks & J. Campbell - Macgregor's Wild Rye. CH [K]. Native.

Elymus × *maltei* Bowden - CH [K]. Native.

Elymus repens (L.) Gould - Creeping Wild Rye. CH [!], CRW [!]. Non-Native. **Noxious**. CL. **Cherokee County Record** (Pryer 944). **Crawford County Record** (Pryer 822).

Elymus riparius Wieg. - River-Bank Wild Rye. CH [!], CRW [!]. Native. OP, OC, CL. **State Record**. Cherokee county vouchers (Pryer 911, Pryer 1727). Crawford county voucher (Pryer 5198). This taxon has mostly an eastern distribution, with scattered reports in Missouri and Arkansas; not reported for Oklahoma, and with closest reports from Barton, Jasper, and McDonald counties Missouri.

Elymus villosus Muhl. ex Willd. - Hairy Wild Rye. CH [!], K], CRW [!]. Native. OP, OC, CL. **Crawford County Record** (Pryer 1329, Pryer 2072, Pryer 2112).

Elymus virginicus L. var. *virginicus* - Virginia Wild Rye. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.

Eragrostis capillaris (L.) Nees - Lace Grass. CH [!], K], CRW [K, G]. Native. CL.

Eragrostis cilianensis (All.) Vign. ex Janchen - Stink Grass. CH [!], K], CRW [!], K, G]. Non-Native. OC, CL.

Eragrostis frankii C.A. Mey. ex Steud. - Sandbar Love Grass. CH [!], CRW [!]. Native. OP, CL. **Cherokee County Record** (Pryer 2305, Pryer 3004, Pryer 3732). **Crawford County Record** (Pryer 2902).

Eragrostis hypnoides (Lam.) B.S.P. - Teal Love Grass. CH [K], CRW [K]. Native.

Eragrostis intermedia A.S. Hitchc. - Plains Love Grass. CH [!], K], CRW [!], K]. Native. OP, OC, CL.

Eragrostis minor Host - Little Love Grass. CRW [!], G]. Non-Native. OC.

Eragrostis pectinacea (Michx.) Nees ex Jedw. var. *pectinacea* - Purple Love Grass. CH [!], K], CRW [!], K, G]. Native. OC, CL. Gibson did not recognize varieties of this taxon.

Eragrostis pilosa (L.) Beauv. var. *pilosa* - Indian Love Grass. CRW [!]. Native. Adventive. OC.

Eragrostis reptans (Michx.) Nees - Creeping Love Grass. CH [K]. Native.

Eragrostis secundiflora J. Presl subsp. *oxylepis* (Torr.) S.D. Koch - Red Love Grass. CH [!]. Native. CL. **Cherokee County Record** (Pryer 1573).

Eragrostis spectabilis (Pursh) Steud. - Petticoat-Climber. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Eragrostis trichodes (Nutt.) Wood - Sand Love Grass. CRW [K, G]. Native.

Eriochloa contracta A.S. Hitchc. - Prairie Cup Grass. CH [K], CRW [!, K, G]. Native. OC.

Festuca paradoxa Desv. - Clustered Fescue. CH [K], CRW [K]. Native.

Festuca rubra L. subsp. *rubra* - Red Fescue. CH [!], CRW [!, K, G]. Native. Adventive. OP, OC, CL. **Cherokee County Record** (Pryer 1121, Pryer 1226, Pryer 5010, Pryer 5080, Pryer 5375, Pryer 5416).

Festuca subverticillata (Pers.) Alexeev - Nodding Fescue. CH [!, K], CRW [!, K]. Native. OC, CL.

Glyceria striata (Lam.) A.S. Hitchc. - Fowl Manna Grass. CH [K], CRW [!, K, G]. Native. OC, CL.

Holcus lanatus L. - Common Velvet Grass. CH [K], CRW [K]. Non-Native.

Hordeum jubatum L. subsp. *jubatum* - Fox-Tail Barley. CH [!, K], CRW [!, K, G]. Native. CL. Gibsons did not recognize subspecies of this taxon.

Hordeum pusillum Nutt. - Little Barley. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Koeleria macrantha (Ledeb.) J.A. Schultes - Prairie Koeler's Grass. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Leersia lenticularis Michx. - Catchfly Grass. CH [K]. Native. **Rare**. Reported in four counties in Kansas but common in surrounding states.

Leersia oryzoides (L.) Sw. - Rice Cut Grass. CH [!, K], CRW [!, K]. Native. OP, CL.

Leersia virginica Willd. - White Grass. CH [!, K], CRW [!, K]. Native. OC, CL.

Lolium perenne L. subsp. *multiflorum* (Lam.) Husnot - Perennial Rye Grass. CH [!], CRW [!, G]. Non-Native. OC, CL. **Cherokee County Record** (Pryer 936).

Lolium perenne L. subsp. *perenne* - Perennial Rye Grass. CH [!, K], CRW [!, G]. Non-Native. OP, CL.

Lolium temulentum L. subsp. *temulentum* - Poison Darnel. CH [K]. Non-Native.

Melica nitens (Scribn.) Nutt. ex Piper - Three-Flower Melic Grass. CH [!, K], CRW [K, G]. Native. **Rare**. OP. Reported in sixteen counties in Kansas but common in surrounding states.

Microstegium vimineum (Trin.) A. Camus - Japanese Stilt Grass. CH [!]. Non-Native. OP. **State Record**. Cherokee county voucher (Pryer 6318). Reported throughout the eastern United States including scattered reports in Missouri, Arkansas, and Oklahoma. The closest reports are from McDonald and Barry counties Missouri and Delaware County, Oklahoma.

Muhlenbergia bushii Pohl - Nodding Muhly. CH [!, K], CRW [!]. Native. OP, OC. **Crawford County Record** (Pryer 5962, Pryer 5969, Pryer 6007, Pryer 6067, Pryer 6205, Pryer 6255).

Muhlenbergia capillaris (Lam.) Trin. Hair-Awn Muhly. CH [K]. Native.

Muhlenbergia cuspidata (Torr. ex Hook.) Rydb. Stony-Hills Muhly. CH [!], CRW [!]. Native. OP, OC, CL. **Cherokee County Record** (Pryer 6329). **Crawford County Record** (Pryer 6195, Pryer 6253).

Muhlenbergia frondosa (Poir.) Fern. - Wire-Stem Muhly. CH [!, K], CRW [!, K]. Native. OC, CL.

Muhlenbergia glabrifloris Scribn. - Smooth Muhly. CRW [G]. Native.

Muhlenbergia mexicana (L.) Trin. - Mexican Muhly. CH [K], CRW [G]. Native.

Muhlenbergia racemosa (Michx.) B.S.P. - Green Muhly. CRW [!]. Native. CL. **Crawford County Record** (Pryer 3268, Pryer 3368).

Muhlenbergia schreberi J.F. Gmel. - Nimblewill. CH [!, K], CRW [!, K, G]. Native. OP, OC.

Muhlenbergia sobolifera (Muhl. ex Willd.) Trin. - Rock Muhly. CH [!, K]. CRW [!, K]. Native. OP, OC, CL.

Muhlenbergia sylvatica (Torr.) Torr. ex A. Gray - Woodland Muhly. CH [K].

Panicum capillare L. - Common Panic Grass. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Panicum dichotomiflorum Michx. var. *dichotomiflorum* - Fall Panic Grass. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL. Gibson did not recognize varieties of this taxon.

Panicum flexile (Gattinger) Scribn. - Wiry Panic Grass. CH [!, K], CRW [K]. Native. OP.

Panicum philadelphicum Bernh. ex Trin. - Philadelphia Panic Grass. CH [!, K], CRW [!, K]. Native. OP, OC, CL.

Panicum virgatum L. var. *virgatum* - Wand Panic Grass. CH [!, K], CRW [!, K, G]. Native. CL. Gibson did not recognize varieties of this taxon.

Pascopyrum smithii (Rydb.) A. Löve - Western-Wheat Grass. CH [K], CRW [!, K, G]. Native. OC, CL.

Paspalum floridanum Michx. - Florida Crown Grass. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Paspalum laeve Michx. - Field Crown Grass. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Paspalum pubiflorum Rupr. ex Fourn. - Hairy-Seed Crown Grass. OC, CL.

Paspalum repens Berg. var. *fluitans* (Ell.) J. Wipff & S.D. Jones - Horse-Tail Crown Grass. CH [K]. Native.

Paspalum setaceum Michx. - Slender Crown Grass. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Phalaris arundinacea L. - Reed Canary Grass. CH [!]. CRW [!]. Native. CL. **Cherokee County Record** (Pryer 520, Pryer 632). **Crawford County Record** (Pryer 1953, Pryer 2127).

Phalaris canariensis L. - Common Canary Grass. CRW [G]. Non-Native.

Phalaris caroliniana Walt. - May Grass. CRW [K, G]. Native.

Phleum pratense L. - Common Timothy. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Phragmites australis (Cav.) Trin. ex Steud. subsp. *americanus* Saltonst, P.M. Peterson & Soreng - Common Reed. CRW [!]. Native. CL. **Crawford County Record** (Pryer 3254).

Phragmites australis (Cav.) Trin. ex Steud. subsp. *australis* - Common Reed. CRW [!, K]. Non-Native. CL.

Poa annua L. - Annual Blue Grass. CH [!, K], CRW [!, K, G]. Non-Native. CL.

Poa bulbosa L. subsp. *vivipara* (Koel.) Arcang. - Bulbous Blue Grass. CH [K]. Non-Native.

Poa chapmaniana Scribn. - Chapman's Blue Grass. CH [!, K], CRW [!]. Native. **Rare**. OP, CL. **Crawford County Record** (Pryer 29, Pryer 66, Pryer 4063, Pryer 4300). Reported in nine counties in Kansas, including this report; common in Missouri and Arkansas, but rare and with a questionable presence in Oklahoma.

Poa compressa L. - Flat-Stem Blue Grass. CH [!K], CRW [!, K, G]. Non-Native. OC, CL.

Poa pratensis L. subsp. *pratensis* - Kentucky Blue Grass. CH [!, K], CRW [!, K, G]. Non-Native. OC, CL. Gibson did not recognize subspecies of this taxon.

Poa sylvestris A. Gray - Woodland Blue Grass. CH [K], CRW [!, K, G]. Native. CL.

Schedonnardus paniculatus (Nutt.) Trel. - Tumble Grass. CH [K], CRW [K, G]. Native.

Schedonorus arundinaceus (Schreb.) Dumort. Tall False Rye Grass. CH [!, K], CRW [!, K]. Non-Native. OP, OC, CL.

Schedonorus pratensis (Huds.) Beauv. - Meadow False Rye Grass. CH [!, K], CRW [!, K, G]. Non-Native. OC, CL.

Schizachyrium scoparium (Michx.) Nash var. *scoparium* - Little False Bluestem. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Sclerochloa dura (L.) Beauv. - Common Hard Grass. CRW [K]. Non-Native.

Setaria faberi Herrm. - Japanese Bristle Grass. CH [!, K], CRW [!, K]. Non-Native. **Noxious**. OP, CL.

Setaria italica (L.) Beauv. - Italian Bristle Grass. CH [!]. Non-Native. CL. **Cherokee County Record** (Pryer 1825).

Setaria parviflora (Poir.) Kerguélen - Marsh Bristle Grass. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Setaria pumila (Poir.) Roemer & J.A. Schultes subsp. *pumila* - Yellow Bristle Grass. CH [!, K], CRW [!, K]. Non-Native. OC, CL.

Setaria viridis (L.) Beauv. var. *viridis* - Green Bristle Grass. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL. Gibson did not recognize varieties of this taxon.

Sorghastrum nutans (L.) Nash - Yellow Indian Grass. CH [!, K], CRW [!, K, G]. Native. CL.

Sorghum bicolor (L.) Moench subsp. *bicolor* - Broom-Corn. CH [K], CRW [K, G]. Non-Native.

Sorghum bicolor (L.) Moench subsp. *drummondii* (Steud.) de Wet ex Davidse - Broom-Corn. CH [!], CRW [!]. Non-Native. CL. **State Record**. Cherokee County Vouchers (Pryer 5823). This subspecies has scattered reports in several states including Missouri; unreported for Oklahoma or Arkansas with the closest reports from Jasper and McDonald counties, Missouri.

Sorghum halepense (L.) Pers. - Johnson Grass. CH [!, K], CRW [!, K, G]. Non-Native. **Noxious**. OP, OC, CL.

Spartina pectinata Bosc ex Link - Freshwater Cord Grass. CH [!, K], CRW [!, K, G]. Native. CL.

Sphenopholis intermedia (Rydb.) Rydb. - Slender Wedgescale. CH [K], CRW [!, K, G]. Native. CL.

Sphenopholis obtusata (Michx.) Scribn. - Prairie Wedgescale. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Sporobolus airoides (Torr.) Torr. - Alkali-Sacaton. CH [!]. Native. OP. **Cherokee County Record** (Pryer 3085).

Sporobolus clandestinus (Biehler) A.S. Hitchc. - Rough Dropseed. CH [!, K], CRW [!, K]. Native. OC, CL.

Sporobolus compositus (Poir.) Merr. var. *compositus* - Head-Like Dropseed. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Sporobolus compositus (Poir.) Merr. var. *macer* (Trin.) Kartesz & Gandhi - Head-Like Dropseed. CH [K], CRW [!]. Native. OC, CL. **Crawford County Record** (Pryer 3376, Pryer 5690, Pryer 6280).

Sporobolus neglectus Nash - Small Dropseed. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Sporobolus pyramidatus (Lam.) A.S. Hitchc. - Target Dropseed. CRW [!, K]. Native. CL.

Sporobolus vaginiflorus (Torr. ex A. Gray) Wood - Poverty Dropseed. CH [K], CRW [!, K]. Native. CL.

Thinopyrum intermedium (Host) Barkworth & D.R. Dewey - Intermediate Quack Grass. CRW [!]. Non-Native. CL. **Crawford County Record** (Pryer 1373).

Tridens flavus (L.) A.S. Hitchc. var. *flavus* - Tall Redtop. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Tridens muticus (Torr.) var. *elongatus* (Buckl.) Shinnars - Nash Awnless Fluff Grass. CH [K], CRW [K]. Native.

Tridens strictus (Nutt.) Nash - Long-Spike Fluff Grass. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Tripsacum dactyloides (L.) L. - Eastern Mock Grama. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Triticum aestivum L. - Bread Wheat. CH [!], CRW [!]. Non-Native. OP, OC, CL. **Cherokee County Record** (Pryer 635, Pryer 934, Pryer 5121). **Crawford County Record** (Pryer 468, Pryer 794, Pryer 800).

Urochloa platyphylla (Munro ex Wright) R. Webster - Broad-Leaf Liverseed Grass. CH [!]. Native. CL. **Cherokee County Record** (Pryer 5536).

Vulpia myuros (L.) K.C. Gmel. - Rat-Tail Six-Weeks Grass. CH [!, K], CRW [K]. Non-Native. OP.

Vulpia octoflora (Walt.) Rydb. var. *octoflora* - Eight-Flower Six-Weeks Grass. CH [!, K], CRW [!, K, G]. Native. OP, CL. Gibson did not recognize varieties of this taxon.

Polemoniaceae (Phlox Family)

Phlox divaricata L. - Wild Blue Phlox. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Phlox paniculata L. - Fall Phlox. CH [K]. Native.

Phlox pilosa L. - Downy Phlox CRW [G]. Gibson report. Gibson did not recognize subspecies of this taxon.

Phlox pilosa L. subsp. *ozarkana* (Wherry) Wherry - Downy Phlox. CH [K]. Native.

Phlox pilosa L. subsp. *pilosa* - Downy Phlox. CH [!, K], CRW [!, K]. Native. OP, OC.

Polemonium reptans L. var. *reptans* - Greek-Valerian. CH [K]. Native. **Rare**. Reported in four counties in Kansas but common in surrounding states.

Polygalaceae (Milkwort Family)

Polygala incarnata L. - Procession-Flower. CH [K], CRW [K, G]. Native.

Polygala sanguinea L. - Purple Milkwort. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Polygala senega L. - Seneca-Snakeroot. CH [K]. Native. **Rare**. Only reported in Cherokee County, Kansas; common in Missouri and Arkansas but rare in Oklahoma.

Polygala verticillata L. - Whorled Milkwort. CH [K]. Native.

Polygonaceae (Buckwheat Family)

Fallopia convolvulus (L.) A. Löve - Black-Bindweed. CH [K], CRW [!, K, G]. Non-Native. **Noxious**. CL.

Fallopia scandens (L.) Holub - Climbing Black-Bindweed. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Persicaria amphibia (L.) S.F. Gray p.p. - Water Smartweed. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Persicaria bicornis (Raf.) Nieuwl. - Pink Knotweed. CH [!, K], CRW [K, G]. Native. CL.

Persicaria hydropiper (L.) Delarbre - Mild Water-Pepper. CH [!], CRW [!, K, G]. Non-Native. OP, CL. **Cherokee County Record** (Pryer 2482, Pryer 5368).

Persicaria hydropiperoides (Michx.) Small - Swamp Smartweed. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Persicaria lapathifolia (L.) S.F. Gray - Dock-Leaf Smartweed. CH [!, K], CRW [K, G]. Native. CL.

Persicaria longiseta (Bruijn) Kitagawa - Bristly Lady's-Thumb. CH [!], CRW [!]. Non-Native. OC. **Crawford County Record** (Pryer 1993, Pryer 3328, Pryer 3454, Pryer 6024, Pryer 6142, Pryer 6176). **Cherokee County Record** (Pryer 5797).

Persicaria maculosa S.F. Gray - Spotted Lady's-Thumb. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Persicaria pensylvanica (L.) M. Gómez - Pinkweed. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Persicaria punctata (Ell.) Small - Dotted Smartweed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Persicaria sagittata (L.) Gross. - Arrow-Leaf Tearthumb. CRW [G]. Native. **Rare**. Reported in three counties in Kansas but common in surrounding states.

Persicaria virginiana (L.) Gaertn. - Jumpseed. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Polygonum aviculare L. subsp. *aviculare* - Yard Knotweed. CH [K], CRW [!, K]. Non-Native. CL.

Polygonum aviculare L. subsp. *depressum* (Meisn.) Arcang. - Yard Knotweed. CH [K], CRW [!, K, G]. Non-Native. OC, CL.

Polygonum ramosissimum Michx. - Yellow-Flower Knotweed. CRW [G]. Gibson did not recognize subspecies of this taxon.

Polygonum ramosissimum Michx. subsp. *prolificum* (Small) Costea & Tardif - Yellow-Flower Knotweed. CRW [K]. Native.

Polygonum ramosissimum Michx. subsp. *ramosissimum* - Yellow-Flower Knotweed. CH [!, K], CRW [!, K]. Native. Non-Native. **Noxious**. OP, CL.

Reynoutria japonica Houtt. - Japanese-Knotweed. CRW [K]. Non-Native.

Rumex acetosella L. - Common Sheep Sorrel. CH [!, K], CRW [!, K, G]. Non-Native. **Noxious**. OP, CL.

Rumex altissimus Wood - Pale Dock. CH [!, K], CRW [!, K, G]. Native. **Noxious**. OC, CL.

Rumex crispus L. subsp. *crispus* - Curly Dock. CH [!, K], CRW [!, K, G]. Non-Native. **Noxious**. OP, OC, CL. Gibson did not recognize subspecies of this taxon.

Rumex hastatulus Baldw. - Heart-Wing Sorrel. CH [K]. Native. **Extirpated**. The most recent specimen was made on June 9, 2002 (*Holland 10154B*) for Woodson County, Kansas. This specimen resides at McGregor Herbarium, Univsity of Kansas.

Rumex obtusifolius L. - Bitter Dock. CH [!, K]. Non-Native. **Noxious**. OP, CL.

Rumex patientia L. - Patience Dock. CH [K]. Non-Native. **Noxious**.

Rumex pulcher L. - Fiddle Dock. CH [!], CRW [G]. Non-Native. **Noxious**. OP.
Cherokee County Record (*Pryer 1716*).

Rumex verticillatus L. - Swamp Dock. CH [K]. Native. **Rare**. Reported in eight counties in Kansas; common in Missouri and Arkansas where it is considered noxious, but rare in Oklahoma.

Pontederiaceae (Pickerelweed Family)

Heteranthera limosa (Sw.) Willd. - Blue Mud-Plantain. CH [K]. Native.

Pontederia cordata L. - Pickerelweed. CH [K]. **Rare**. Reported in two counties in Kansas; common in Missouri and Arkansas but rare in Oklahoma.

Portulacaceae (Purslane Family)

Portulaca oleracea L. - Little-Hogweed. CH [K], CRW [!, K, G]. Native. Adventive. OC.

Portulaca pilosa L. - Kiss-Me-Quick. CRW [!, K, G]. Non-Native. OC.

Potamogetonaceae (Pondweed Family)

Potamogeton crispus L. - Curly Pondweed. CH [K], CRW [!, K, G]. Non-Native. CL.

Potamogeton diversifolius Raf. - Waterthread. CH [K], CRW [!, K, G]. Native. CL.

Potamogeton foliosus Raf. - Leafy Pondweed. CH [K], CRW [K, G]. Native.

Potamogeton nodosus Poir. - Long-Leaf Pondweed. CH [K], CRW [!, K, G]. Native. OC, CL.

Potamogeton pusillus L. - Small Pondweed. CRW [!, K]. Native. CL.

Stuckenia pectinata (L.) Böerner - Sago False Pondweed. CRW [K, G]. Native.

Zannichellia palustris L. - Horned-Pondweed. CRW [!]. Native. OC. **Crawford County Record** (*Pryer 5621*).

Primulaceae (Primrose Family)

Androsace occidentalis Pursh - Western Rock-Jasmine. CH [K], CRW [!, K, G]. Native. OC, CL.

Dodecatheon meadia L. - Pride-of-Ohio. CH [K], CRW [!, K, G]. Native. OC.
Lysimachia ciliata L. - Fringed Yellow-Loosestrife. CH [!, K], CRW [K, G]. Native. CL.
Lysimachia minima (L.) U. Manns & A. Anderb. - Chaffweed. CH [!, K], CRW [!].
 Native. OP, CL.
Lysimachia nummularia L. - Creeping-Jenny. CH [K]. Non-Native.
Samolus parviflorus Raf. - Water-Pimpernel. CH [K]. Native.

Ranunculaceae (Buttercup Family)

Anemone canadensis L. - Round-Leaf Thimbleweed. CH [!], CRW [!]. Native. OP, CL.
Cherokee County Record (Pryer 1173). **Crawford County Record** (Pryer 1357).
Anemone caroliniana Walt. - Carolina Thimbleweed. CH [K], CRW [K, G]. Native.
Anemone virginiana L. var. *virginiana* - Tall Thimbleweed. CH [K], CRW [K, G].
 Native.
Aquilegia canadensis L. - Red Columbine. CH [!, K], CRW [!, K, G]. Native. OP, OC.
Clematis catesbyana Pursh - Satincurls. CH [K]. Native. **Rare**. Only reported in
 Cherokee County, Kansas; common in a small region in Missouri and Arkansas
 and considered extirpated in Oklahoma.
Clematis pitcheri Torr. & A. Gray var. *pitcheri* - Bluebill. CH [!, K], CRW [!, K, G].
 Native. OP, CL. Gibson did not recognize varieties of this taxon.
Clematis terniflora DC. - Sweet Autumn Virgin's-Bower. CH [!, K], CRW [!, K, G].
 Non-Native. OP, CL.
Delphinium carolinianum Walt. - Carolina Larkspur. CRW [G]. Gibson did not recognize
 subspecies of this taxon.
Delphinium carolinianum Walt. subsp. *carolinianum* - Carolina Larkspur. CH [K], CRW
 [!]. Native. OC, CL. **Crawford County Record** (Pryer 855, Pryer 4887).
Delphinium carolinianum Walt. subsp. *virescens* (Nutt.) R.E. Brooks - Carolina
 Larkspur. CH [K], CRW [!, K]. Native. CL.
Delphinium tricornis Michx. - Dwarf Larkspur. CH [!, K], CRW [K, G]. Native. OP.
Enemion biternatum Raf. - Eastern False Rue-Anemone. CH [!, K], CRW [K, G]. Native.
 OP.
Ficaria verna Huds. subsp. *calthifolia* (Rchb.) Nyman - Eurasian-Buttercup. CH [!].
 Non-Native. CL. **State Record**. Cherokee county voucher (Pryer 6421).
 Abundant on a private property, including its wooded areas. This taxon has been
 reported in few counties nationwide and mostly in northern states with the
 exception of Alabama. The closest report is from St. Louis County, Missouri; not
 reported for Oklahoma or Arkansas.
Myosurus minimus L. - Tiny Mousetail. CH [K], CRW [K, G]. Native.
Ranunculus abortivus L. - Kidney-Leaf Buttercup. CH [!, K], CRW [!, K, G]. Native.
 OC, CL.
Ranunculus acris L. var. *acris* - Tall Buttercup. CRW [!]. Non-Native. OC. **Crawford
 County Record** (Pryer 4476).
Ranunculus bulbosus L. - St. Anthony's-Turnip. CH [K]. Non-Native.
Ranunculus fascicularis Muhl. ex Bigelow - Early Buttercup. CH [!, K], CRW [K, G].
 Native. OP.

Ranunculus hispidus Michx. var. *hispidus* - Bristly Buttercup. CH [!, K]. Native. **Rare**. OP. Reported in two counties in Kansas but common in surrounding areas.

Ranunculus hispidus Michx. var. *nitidus* (Chapman) T. Duncan - Bristly Buttercup. CRW [K]. Native. **Rare**. Reported in ten counties in Kansas but common in surrounding states.

Ranunculus laxicaulis (Torr. & A. Gray) Darby - Mississippi Buttercup. CH [K]. Native. **Rare**. Reported in two counties in Kansas but common in surrounding states.

Ranunculus micranthus Nutt. - Rock Buttercup. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Ranunculus recurvatus Poir. var. *recurvatus* - Blisterwort. CH [!, K], CRW [!]. Native. CL. **Rare**. **Crawford county record** (Pryer 353). Reported in seven counties in Kansas, including this report, but common in surrounding states.

Ranunculus repens L. - Creeping Buttercup. CH [!], CRW [!]. Non-Native. OP, OC. **Cherokee County Record** (Pryer 4525). **Crawford County Record** (Pryer 4215).

Ranunculus sardous Crantz - Hairy Buttercup. CH [!], CRW [!, K]. Non-Native. OC, CL. **Cherokee County Record** (Pryer 488, Pryer 929, Pryer 1710, Pryer 4202).

Ranunculus sceleratus L. var. *sceleratus* - Cursed Buttercup. CH [!, K], CRW [!, K]. Native. OC, CL.

Thalictrum dasycarpum Fisch. & Avé-Lall. - Purple Meadow-Rue. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Thalictrum dioicum L. - Early Meadow-Rue. CH [!]. Native. OP. **Cherokee County Record** (Pryer 432). Was considered **extirpated** from the state.

Thalictrum thalictroides (L.) Eames & Boivin - Rue-Anemone. CH [!, K]. CRW [G]. Native. OP.

Rhamnaceae (Buckthorn Family)

Ceanothus americanus L. - New Jersey-Tea. CH [!, K], CRW [G]. Native. OP.

Ceanothus herbaceus Raf. - Prairie Redroot. CH [K], CRW [K, G]. Native.

Rhamnus japonica Maxim - Japanese Buckthorn. CRW [G]. Non-Native. **Crawford County Record**. Gibson collected reported this specimen as *Rhamnus lanceolata*, however upon re-identification using Yatskievych (2013), the specimen is actually *Rhamnus japonica*. Only reported in three counties nationwide, including two in Missouri and one in Illinois; the closest reports are from Jackson and Boone counties Missouri.

Rhamnus lanceolata Pursh subsp. *glabrata* (Gleason) Kartesz & Gandhi - Lance-Leaf Buckthorn. CH [K], CRW [!, K, G]. Native. OC.

Rosaceae (Rose Family)

Agrimonia gryposepala Wallr. - Tall Hairy Grooveburr. CH [!]. Native. **Rare**. OP. **Cherokee County Record** (Pryer 1733). Reported in two counties in Kansas and rare in Missouri and Arkansas. This taxon has not been reported in the state of Oklahoma.

Agrimonia parviflora Ait. - Harvestlice. CH [K], CRW [G]. Native.

Agrimonia pubescens Wallr. - Soft Grooveburr. CH [!, K], CRW [!, G]. Native. OP, OC, CL.

Agrimonia rostellata Wallr. - Beaked Grooveburr. CH [! , K]. Native. **Rare**. OP. Reported in seven counties in Kansas but common in surrounding states.

Amelanchier arborea (Michx. f.) Fern. - Downy Service-Berry. CH [! , K], CRW [K]. Native. OP.

Chaenomeles speciosa (Sweet) Nakai - Common Flowering-Quince. CH [!]. Non-Native. Probably a persisting planting at former homestead.

Crataegus berberifolia Torr. & A. Gray Barberry - Hawthorn. CH [K]. Native.

Crataegus calpodendron (Ehrh.) Medik. - Pear Hawthorn. CH [K]. Native.

Crataegus coccinioides Ashe - Kansas Hawthorn. CH [K]. Native. **Extirpated**. The most recent specimen was made on August 2, 1956 (*E.W. Lathrop 2713*) for Cherokee County, Kansas. This specimen resides at McGregor Herbarium, University of Kansas.

Crataegus crus-galli L. - Cock-Spur Hawthorn. CH [!], CRW [! , K, G]. Native. OC, CL.

Crataegus mollis (Torr. & A. Gray) Scheele - Downy Hawthorn. CH [K], CRW [! , K, G]. Native. OC.

Crataegus pruinosa (Wendl. f.) K. Koch - Waxy-Fruit Hawthorn. CH [K], CRW [! , K, G]. Native. **Rare**. CL. Reported in six counties in Kansas but common in surrounding states.

Crataegus punctata Jacq. - Dotted Hawthorn. CH [K], CRW [K, G]. Native. **Rare**. Reported in four counties in Kansas but common in surrounding states.

Crataegus succulenta Schrad. ex Link - Fleshy Hawthorn. CH [K]. Native. **Rare**. Reported in three counties in Kansas; common in Missouri but not reported from Oklahoma or Arkansas.

Crataegus viridis L. var. *viridis* - Green Hawthorn. CH [! , K], CRW [! , K, G]. Native. OC, CL. Gibson did not recognize varieties of this taxon.

Fragaria virginiana Duchesne subsp. *virginiana* - Virginia Strawberry. CH [! , K], CRW [! , K, G]. Native. OP, CL.

Geum canadense Jacq. var. *canadense* - White Avens. CH [! , K], CRW [! , K]. Native. OP, CL.

Geum vernum (Raf.) Torr. & A. Gray - Spring Avens. CH [! , K], CRW [! , K, G]. Native. OC, CL.

Geum virginianum L. - Cream Avens. CH [!], CRW [! , G]. Native. **Rare**. OP, CL. **Cherokee County Record** (*Pryer 1719, Pryer 4958, Pryer 5364*). Only reported in Crawford County, Kansas; rare in Missouri but common in northwest Arkansas.

Gillenia stipulata (Muhl. ex Willd.) Baill. - Indian-Physic. CH [! , K], CRW [K]. Native. **Rare**. OP. Reported in three counties in Kansas but common in surrounding states.

Malus baccata (L.) Borkh. - Siberian Crabapple. CRW [!]. Non-Native. OC. **Crawford County Record** (*Pryer 5281*).

Malus ioensis (Wood) Britt. - Prairie Crabapple. CH [K]. Native.

Physocarpus opulifolius (L.) Maxim. var. *intermedius* (Rydb.) B.L. Robins - Atlantic Ninebark. CH [K]. Native. **Rare**. Reported in two counties in Kansas; common in Missouri and Arkansas but rare in Oklahoma.

Potentilla indica (Andr.) T. Wolf - Indian-Strawberry. CRW [! , K]. Non-Native. CL.

Potentilla norvegica L. - Norwegian Cinquefoil. CH [! , K], CRW [! , K, G]. Native.

Potentilla recta L. - Sulphur Cinquefoil. CH [! , K], CRW [! , K, G]. Non-Native. OC, CL.
Potentilla simplex Michx. - Oldfield Cinquefoil. CH [! , K], CRW [! , K, G]. Native. OP, OC.

Prunus americana Marsh. - American Plum. CH [! , K], CRW [! , K, G]. Native. CL.
Prunus angustifolia Marsh. - Chickasaw Plum. CH [K], CRW [! , K, G]. Native. CL.
Prunus hortulana Bailey - Hortulan Plum. CH [! , K], CRW [! , K, G]. Native. OC, CL.
Prunus mahaleb L. - Perfumed Cherry. CH [!]. Non-Native. CL. **Cherokee County Record** (Pryer 5478).

Prunus rivularis Scheele - Creek Plum. CH [! , K], CRW [! , K, G]. Native. OC, CL.
 Gibson recognized *Prunus munsoniana*. We are following the most recent treatment for the genus published by Flora of North America (Rohrer et al. 2014), which synonymizes *P. munsoniana* under *P. rivularis*.

Prunus serotina Ehrh. var. *serotina* - Black Cherry. CH [! , K], CRW [! , K, G]. Native. OP, OC, CL.

Prunus virginiana L. var. *demissa* (Nutt.) Torr. - Choke Cherry. CRW [K]. Native.
Prunus virginiana L. var. *virginiana* - Choke Cherry. CH [!], CRW [K, G]. Native. OP.
Cherokee County Records (Pryer 139, Pryer 175, Pryer 182).

Pyrus calleryana Dcne. - Bradford Pear. CH [!], CRW [!]. Non-Native. OC, CL.
Cherokee County Record (Pryer 5474). **Crawford County Record** (Pryer 2325, Pryer 4044, Pryer 4046, Pryer 5280, Pryer 6415).

Pyrus communis L. - Common Pear. CH [!], CRW [K, G]. Non-Native. OP. **Cherokee County Record** (Pryer 4097, Pryer 5473).

Rosa arkansana Porter - Prairie Rose. CH [! , K], CRW [! , K, G]. Native. OP, OC, CL.
Rosa carolina L. subsp. *carolina* - Carolina Rose. CH [! , K], CRW [! , K, G]. Native. OP, CL.

Rosa carolina L. subsp. *subserulata* (Rydb.) W.H. Lewis - Carolina Rose. CH [! , K], CRW [! , K, G]. Native. OP, OC, CL.

Rosa foliolosa Nutt. ex Torr. & A. Gray - White Prairie Rose. CH [K]. Native. **Rare**.
 Reported in two counties in Kansas; rare in Missouri and Arkansas but common in Oklahoma.

Rosa × *mediocidentis* W.H. Lewis. - CH [K]. Native.

Rosa multiflora Thunb. ex Murr. - Rambler Rose. CH [! , K], CRW [! , K, G]. Non-Native. **Noxious**. OC, CL.

Rosa setigera Michx. - Climbing Rose. CH [! , K], CRW [! , K, G]. Native. OC, CL.
Rosa spinosissima L. - Scotch Rose. CRW [G]. Non-Native.

Rubus allegheniensis Porter var. *allegheniensis* - Allegheny Blackberry. CH [! , K], CRW [! , K, G]. Native. OP, OC, CL.

Rubus bushii Bailey - Bush's Blackberry. CH [! , K]. Native. OP.

Rubus flagellaris Willd. - Whiplash Dewberry. CH [! , K], CRW [! , K]. Native. OC, CL.

Rubus occidentalis L. - Black Raspberry. CH [K], CRW [! , K, G]. Native. OC, CL.

Rubus roribaccus (Bailey) Rydb. - Lucretia Dewberry. CH [K], CRW [!] Native.
Crawford County Record (Pryer 4849)

Rubus trivialis Michx. - Southern Dewberry. CH [K], CRW [!]. Native. **Crawford County Record** (Pryer 4413).

Rubiaceae (Madder Family)

Cephalanthus occidentalis L. - Common Buttonbush. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Cruciata pedemontana (Bellardi) Ehrend. - Piedmont-Bedstraw. CH [!, K], CRW [!, K]. Non-Native. OP, OC, CL.

Diodia teres Walt. - Poorjoe. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Diodia virginiana L. - Virginia Buttonweed. CH [!, K], CRW [!, K]. Native. **Rare**. OP. Reported in three counties in Kansas but common in surrounding states.

Galium aparine L. - Sticky-Willy. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Galium circaeazans Michx. - Licorice Bedstraw. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Galium concinnum Torr. & A. Gray - Shining Bedstraw. CH [!, K]. Native. OP.

Galium obtusum Bigelow subsp. *obtusum* - Blunt-Leaf Bedstraw. CH [K], CRW [!, G]. Native. OC. Gibson did not recognize subspecies of this taxon.

Galium pilosum Ait. - Hairy Bedstraw. CH [!, K], CRW [K]. Native. OP, OC, CL.

Crawford County Record (Pryer 1319, Pryer 1447).

Galium sherardia Krause Blue Field-Madder. CH [!]. Non-Native. OP. **Cherokee County Record** (Pryer 377).

Galium triflorum Michx. - Fragrant Bedstraw. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Galium virgatum Nutt. - Southwestern Bedstraw. CH [K], CRW [!, K, G]. Native. OC.

Houstonia longifolia Gaertn. - Long-Leaf Summer Bluet. CH [K], CRW [!, K, G]. Native. **Rare**. OC. Only reported in Cherokee County, Kansas, but common in surrounding states.

Houstonia pusilla Schoepf - Tiny Bluet. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Spermacoce glabra Michx. - Smooth False Buttonweed. CH [!, K], CRW [K]. Native. **Rare**. CL. Reported in eight counties in Kansas but common in surrounding states.

Stenaria nigricans (Lam.) Terrell var. *nigricans* - Diamond-Flowers. CH [K], CRW [K, G]. Native.

Ruscaceae (Butcher's-Broom Family)

Maianthemum racemosum (L.) Link subsp. *racemosum* - Feathery False Solomon's-Seal. CH [K]. Native.

Polygonatum biflorum (Walt.) Ell. var. *biflorum* - King Solomon's-Seal. CH [K], CRW [!, K, G]. Native. CL.

Rutaceae (Rue Family)

Ptelea trifoliata L. subsp. *trifoliata* - Common Hoptree. CH [!, K], CRW [K, G]. Native. OC, CL.

Zanthoxylum americanum P. Mill. - Toothachetree. CH [!, K], CRW [!, K, G]. Native. CL.

Salicaceae (Willow Family)

Populus alba L. - White Poplar. CH [K], CRW [!, K, G]. Non-Native. CL. **Cherokee County Record** (Pryer 5471).

Populus deltoides Bartr. ex Marsh. - Eastern Cottonwood. CRW [G] Gibson did not recognize subspecies of this taxon at the time of his publication. Only the taxon with infraspecific designations are included in the overall tallies for the counties.

Populus deltoides Bartr. ex Marsh. subsp. *deltoides* - Eastern Cottonwood. CRW [!]. Native. CL. **State Record**. Crawford County voucher (*Pryer 781*). Reported throughout the eastern United States, including the 4-state region, and occurring in several counties bordering Kansas in Oklahoma and Missouri.

Populus deltoides Bartr. ex Marsh. subsp. *monilifera* (Ait.) Eckenwalder - Eastern Cottonwood. CH [!, K], CRW [!, K, G]. Native. CL.

Salix amygdaloides Anderss. - Peach-Leaf Willow. CH [K], CRW [K, G]. Native.

Salix caroliniana Michx. - Carolina Willow. CH [K], CRW [K, G]. Native.

Salix eriocephala Michx. - Missouri Willow. CH [!]. Native. CL. **Cherokee County Record** (*Pryer 479, Pryer 1199, Pryer 5777*).

Salix famelica (Ball) Argus - CRW [K]. Native.

Salix humilis Marsh. var. *humilis* - Prairie Willow. CH [K], CRW [G]. Native.

Salix interior Rowlee - Sandbar Willow. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Salix nigra Marsh. - Black Willow. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Salviniaceae (Water Fern Family)

Azolla microphylla Kaulfuss - Mexican Mosquito Fern. CH [!, K]. Native. OP.

Santalaceae (Sandalwood Family)

Comandra umbellata (L.) Nutt. subsp. *umbellata* - Bastard-Toadflax. CH [K]. Native.

Phoradendron leucarpum (Raf.) Reveal & M.C. Johnston subsp. *leucarpum* - Oak Mistletoe. CH [K], CRW [K]. Native. **Rare**. Reported in six counties in Kansas; common in surrounding states. In Missouri this taxon has a southern distribution.

Sapindaceae (Soapberry Family)

Aesculus glabra Willd. var. *arguta* (Buckl.) B.L. Robins. - Ohio Buckeye. CH [K], CRW [K, G]. Native.

Aesculus glabra Willd. var. *glabra* - Ohio Buckeye. CRW [!]. Native. **Rare**. OC, CL. **Crawford County Record** (*Pryer 2052, Pryer 2726, Pryer 2727, Pryer 2728, Pryer 2729, Pryer 2789, Pryer 4354*). Reported in two counties in Kansas but common in surrounding states.

Sapindus saponaria L. var. *drummondii* (Hook. & Arn.) L. Benson - Wing-Leaf Soapberry. CRW [!, G]. Native. CL.

Sapotaceae (Sapodilla Family)

Sideroxylon lanuginosum Michx. subsp. *oblongifolium* (Nutt.) T.D. Pennington - Gum Bully. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Saururaceae (Lizard's-Tail Family)

Saururus cernuus L. - Lizard's-Tail. CH [K]. Native. **Rare**. Reported in two counties in Kansas but common in surrounding states.

SAXIFRAGACEAE (Saxifrage Family)

Heuchera americana L. var. *hirsuticaulis* (Wheelock) Rosendahl, Butters & Lakela - American Alumroot. CH [K]. Native.

Heuchera richardsonii R. Br. - Richardson's Alumroot. CH [!, K]. Native. OP.

Scrophulariaceae (Figwort Family)

Scrophularia lanceolata Pursh - Lance-Leaf Figwort. CH [!, K]. Native. OP.

Scrophularia marilandica L. - Carpenter's-Square. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Verbascum blattaria L. - White Moth Mullein. CH [!, K], CRW [!, K, G]. Non-Native. OP, CL.

Verbascum thapsus L. - Great Mullein. CH [!, K], CRW [!, K, G]. Non-Native. OP, OC, CL.

Simaroubaceae (Quassia-Wood Family)

Ailanthus altissima (P. Mill.) Swingle - Tree-of-Heaven. CRW [K, G]. Non-Native.

Smilacaceae (Greenbrier Family)

Smilax bona-nox L. var. *bona-nox* - Fringed Greenbrier. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Smilax ecirrata (Engelm. ex Kunth) S. Wats. - Upright Carrion-Flower. CH [K]. Native.

Smilax glauca Walt. - Sawbrier. CRW [!, G]. Native. OC, CL.

Smilax hispida Muhl. ex Torr. - Chinaroot. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Smilax lasioneuron Hook. - Blue Ridge Carrion-Flower. CH [K], CRW [K]. Native.

Smilax pulverulenta Michx. - Downy Carrion-Flower. CH [K]. Native. **Rare**.

Solanaceae (Potato Family)

Datura stramonium L. - Jimsonweed. CH [!, K], CRW [!, K, G]. Non-Native. CL.

Lycium barbarum L. - Matrimony-Vine. CRW [!]. Non-Native. OC. **Crawford County Record** (Pryer 3588).

Petunia axillaris (Lam.) B.S.P. - Garden Petunia. CH [K]. Non-Native.

Physalis angulata L. - Cut-Leaf Ground-Cherry. CH [!, K], CRW [K]. Native. OP, OC, CL. **Crawford County Record** (Pryer 1677, Pryer 1873, Pryer 5766, Pryer 5932).

Physalis heterophylla Nees - Clammy Ground-Cherry. CH [K], CRW [!, K, G]. Native. CL.

Physalis longifolia Nutt. - Long-Leaf Ground-Cherry. CRW [!, K, G]. Native. Gibson did not recognize varieties of this taxon. Only one specimen was found and reidentified as *P. longifolia* var. *subglabrata*. It is expected that specimens reported by Gibson probably represented both varieties. Only the taxon including varieties are used in tallies for each county.

Physalis longifolia Nutt. var. *longifolia* - Long-Leaf Ground-Cherry. CH [!, K], CRW [!, K]. Native. OP. CL.

Physalis longifolia Nutt. var. *subglabrata* (Mackenzie & Bush) Cronq. - Long-Leaf Ground-Cherry. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Physalis missouriensis Mackenzie & Bush - Missouri Ground-Cherry. CRW [!], CRW [K]. Native. OC. **Crawford County Record** (Pryer 5585).

Physalis pubescens L. - Husk-Tomato. CH [!], K], CRW [K, G]. Native. OP.

Physalis pumila Nutt. var. *pumila* - Dwarf Ground-Cherry. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL. Gibson did not recognize varieties of this taxon.

Physalis virginiana P. Mill. var. *virginiana* - Virginia Ground-Cherry. CH [!], K], CRW [!]. Native. CL. **Crawford County Record** (Pryer 532, Pryer 778, Pryer 2546).

Solanum americanum P. Mill. - American Black Nightshade. CRW [!], G]. CL.

Solanum carolinense L. var. *carolinense* - Carolina Horse-Nettle. CH [!], K], CRW [!], K, G]. Native. **Noxious**. OP, OC, CL. Gibson did not recognize varieties of this taxon.

Solanum dimidiatum Raf. - Western Horse-Nettle. CH [!], K], CRW [!], G]. Native. **Rare**. OC, CL. Reported in nine counties in Kansas; common in Oklahoma with occasional reports for Missouri and Arkansas, where it is considered adventive.

Solanum elaeagnifolium Cav. - Silver-Leaf Nightshade. CH [K]. Native. **Noxious**.

Solanum ptychanthum Dunal - Eastern Black Nightshade. CH [!], K], CRW [!], K]. Native. **Noxious**. OC, CL.

Solanum rostratum Dunal - Horned Nightshade. CH [!], K], CRW [!], K, G]. Native. OC, CL.

Solanum sarrachoides Sendtner - Tropical American Nightshade. CH [!], CRW [!]. Non-Native. OP, OC, CL. **Crawford County Record** (Pryer 1544, Pryer 1947, Pryer 2397, Pryer 3587, Pryer 6013).

Staphyleaceae (Bladdernut Family)

Staphylea trifolia L. - American Bladdernut. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.

Trilliaceae (Trillium Family)

Trillium sessile L. - Toadshade. CH [K], CRW [!], K, G]. Native. OP, OC, CL.

Trillium viridescens Nutt. - Taper-Tip Trillium. CH [!], K], CRW [K]. Native. **Rare**. OP. Only reported in Cherokee County, Kansas, but common in surrounding states.

Typhaceae (Cat-Tail Family)

Typha angustifolia L. - Narrow-Leaf Cat-Tail. CH [K], CRW [!], K, G]. Non-Native. CL.

Typha domingensis Pers. - Southern Cat-Tail. CH [!], K]. Native. CL.

Typha latifolia L. - Broad-Leaf Cat-Tail. CH [!], K], CRW [!], K, G]. Native. CL.

Ulmaceae (Elm Family)

Ulmus alata Michx. - Winged Elm. CH [K]. Native. **Rare**. Only reported in Cherokee County, Kansas, but common in surrounding states.

Ulmus americana L. - American Elm. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.

Ulmus × *intermedia* Elowsky - CH [K].

Ulmus parvifolia Jacq. - Chinese Elm. CRW [!], K]. Non-Native. CL.

Ulmus pumila L. - Siberian Elm. CH [K], CRW [!], K, G]. Native. OC.

Ulmus rubra Muhl. - Slippery Elm. CH [!], K], CRW [!], K, G]. Native. OC, CL.

Urticaceae (Nettle Family)

Boehmeria cylindrica (L.) Sw. - Small-Spike False Nettle. CH [!], CRW [!], K, G].
Native. OP, OC, CL.

Laportea canadensis (L.) Weddell - Canadian Wood-Nettle. CH [!], K], CRW [!], K, G].
Native. OP, OC, CL.

Parietaria pensylvanica Muhl. ex Willd. - Pennsylvania Pellitory. CH [!], CRW [!], K, G].
Native. OP, OC, CL.

Pilea pumila (L.) A. Gray - Canadian Clearweed. CH [!], K], CRW [!], K, G]. Native. OP,
OC, CL.

Urtica chamaedryoides Pursh - Heart-Leaf Nettle. CH [K]. Native. **Rare**. Reported in
three counties in Kansas; common in the surrounding areas. Rare in Missouri and
Oklahoma but common in Arkansas.

Urtica dioica L. subsp. *gracilis* (Ait.) Seland. - Stinging Nettle. CH [K]. Native.

Valerianaceae (Valerian Family)

Valerianella radiata (L.) Dufr. - Beaked Cornsalad. CH [!], K], CRW [!], K, G]. Native.
OP, CL.

Verbenaceae (Verbena Family)

Glandularia bipinnatifida (Nutt.) Nutt. - Dakota Mock Vervain. CH [!], CRW [!], K, G].
Native. OC, CL. **Cherokee County Record** (*Pryer 4399, Pryer 4409*).

Glandularia canadensis (L.) Nutt. - Rose Mock Vervain. CH [!], K], CRW [!], K, G].
Native. OP, OC, CL.

Phyla cuneifolia (Torr.) Greene - Wedgeleaf. CH [K]. Native.

Phyla lanceolata (Michx.) Greene - Northern Frogfruit. CH [!], K], CRW [!], K, G].
Native. OC, CL.

Verbena × *blanchardii* Moldenke - CH [K]. Native.

Verbena bracteata Cav. ex Lag. & Rodr. - Carpet Vervain. CH [K], CRW [!], K, G].
Native. OC.

Verbena × *engelmannii* Moldenke - CRW [K]. Native.

Verbena hastata L. - Simpler's-Joy. CH [!], K], CRW [!], K, G]. Native. OP, CL.

Verbena × *illicita* Moldenke - CH [K]. Native.

Verbena × *rydbergii* Moldenke - CH [K]. Native.

Verbena simplex Lehm. - Narrow-Leaf Vervain. CH [!], K], CRW [!], K, G]. Native. OC,
CL.

Verbena stricta Vent. - Hoary Vervain. CH [K], CRW [!], K, G]. Native. OC.

Verbena urticifolia L. - White Vervain. CH [!], K], CRW [!], K, G]. Native. OC, CL.

Violaceae (Violet Family)

Hybanthus concolor (T.F. Forst.) Spreng. - Eastern Green-Violet. CH [K]. Native.

Viola affinis vel. af. Le Conte - Sand Violet. CRW [!]. Native. CL. **Potential State
Record** (*Pryer 17, Pryer 96*). Rare in Missouri and occasional but common in
Arkansas; mostly in the eastern United States.

Viola bicolor Pursh - Field Pansy. CH [!], K], CRW [!], K, G]. Native. OP, OC, CL.

Viola missouriensis Greene - Missouri Violet. CH [!], K], CRW [!], G]. Native. OP, OC,
CL.

Viola nephrophylla Greene - Northern Bog Violet. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Viola palmata L. var. *palmata* - Three-Lobe Violet. CH [!, K], CRW [K]. Native. **Rare**. OP, OC. **Crawford County Record** (*Pryer 4437, Pryer 4442, Pryer 4485*).

Reported in four counties in Kansas, including this report; common in Arkansas and Missouri but rare in Oklahoma.

Viola pedata L. - Bird-Foot Violet. CH [!, K], CRW [G]. Native. OP.

Viola pedatifida G. Don - Crow-Foot Violet. CH [K], CRW [K, G]. Native.

Viola pubescens Ait. Downy - Yellow Violet. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Viola sagittata Ait. var. *sagittata* - Arrow-Leaf Violet. CH [!, K], CRW [!, K, G]. Native. OP, OC. Gibson did not recognize varieties of this taxon.

Viola sororia Willd. - Hooded Blue Violet. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Viola striata Ait. - Striped Cream Violet. CRW [G]. Native. Adventive.

Viola subsinuata Greene - Early Blue Violet. CH [K]. Native.

Viola × *viarum* Pollard - CH [K]. Native.

Vitaceae (Grape Family)

Ampelopsis cordata Michx. - Heart-Leaf Peppervine. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Cissus trifoliata (L.) L. - Sorrelvine. CH [K]. Native. **Rare**. Reported in three counties in Kansas and also rare in Missouri; common in Oklahoma and Arkansas.

Parthenocissus inserta (Kerner) Fritsch - Thicket-Creeper. CRW [!]. Native. OC.

Crawford County Record (*Pryer 2771*).

Parthenocissus quinquefolia (L.) Planch. - Virginia-Creeper. CH [!, K], CRW [!, K, G]. Native. OP, CL.

Vitis aestivalis Michx. var. *aestivalis* - Summer Grape. CH [!, K], CRW [!, G]. Native. OP, CL.

Vitis cinerea (Engelm.) Engelm. ex Millard var. *cinerea* - Gray-Bark Grape. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL. Gibson did not recognize varieties of this taxon.

Vitis riparia Michx. - River-Bank Grape. CH [!, K], CRW [!, K, G]. Native. OC, CL.

Vitis vulpina L. - Frost Grape. CH [!, K], CRW [!, K, G]. Native. OP, OC, CL.

Zygophyllaceae (Creosote-Bush Family)

Tribulus terrestris L. - Puncturevine. CH [K], CRW [K, G]. Non-Native.

Appendix E. Modern List of Gibson's Taxa with Current Nomenclature.

Table VIII. Modern List of Gibson Taxa. List of taxa for Gibson using current nomenclature based on Kartesz (2017). Rare taxa are indicated with an asterix (*) and noxious taxa are bolded.

Family	Scientific Name	Nativity
Acanthaceae	<i>Dicliptera brachiata</i>	Native
	<i>Justicia americana</i>	Native
	<i>Ruellia humilis</i>	Native
	<i>Ruellia strepens</i>	Native
Aceraceae	<i>Acer negundo</i>	Native
	<i>Acer saccharinum</i>	Native
	<i>Acer saccharum</i> var. <i>saccharum</i>	Native
Acoraceae	<i>Acorus calamus</i>	Non-Native
Adoxaceae	<i>Sambucus nigra</i> subsp. <i>canadensis</i>	Native
	<i>Viburnum prunifolium</i>	Native
Agavaceae	<i>Camassia scilloides</i>	Native
	<i>Yucca flaccida</i>	Native
Alismataceae	<i>Alisma subcordatum</i>	Native
	<i>Sagittaria ambigua</i> *	Native
	<i>Sagittaria brevirostra</i>	Native
	<i>Sagittaria calycina</i>	Native
	<i>Sagittaria latifolia</i>	Native
Alliaceae	<i>Allium canadense</i> var. <i>mobile</i>	Non-Native
	<i>Allium sativum</i>	Native
	<i>Allium vineale</i>	Non-Native
	<i>Nothoscordum bivalve</i>	Native
Amaranthaceae	<i>Amaranthus albus</i>	Native
	<i>Amaranthus hybridus</i>	Non-Native
	<i>Amaranthus retroflexus</i>	Non-Native
	<i>Amaranthus spinosus</i>	Native
	<i>Amaranthus tuberculatus</i>	Native
	<i>Chenopodium album</i>	Native
	<i>Chenopodium standleyanum</i>	Native
	<i>Dysphania ambrosioides</i>	Non-Native
	<i>Iresine rhizomatosa</i>	Native
Anacardiaceae	<i>Toxicodendron radicans</i> subsp. <i>negundo</i>	Native
	<i>Rhus aromatica</i>	Native
	<i>Rhus copallinum</i>	Native
	<i>Rhus glabra</i>	Native
	<i>Toxicodendron radicans</i> subsp. <i>negundo</i>	Native
Annonaceae	<i>Asimina triloba</i>	Native

Apiaceae	<i>Zizia aurea</i>	Native
	<i>Chaerophyllum procumbens</i>	Native
	<i>Chaerophyllum tainturieri</i>	Native
	<i>Cicuta maculata</i>	Native
	<i>Cryptotaenia canadensis</i>	Native
	<i>Daucus carota</i>	Non-Native
	<i>Erigenia bulbosa</i> *	Native
	<i>Eryngium leavenworthii</i>	Native
	<i>Eryngium yuccifolium</i>	Native
	<i>Lomatium foeniculaceum</i>	Native
	<i>Osmorhiza longistylis</i>	Native
	<i>Perideridia americana</i>	Native
	<i>Polytaenia nuttallii</i>	Native
	<i>Sanicula odorata</i>	Native
	<i>Thaspium trifoliatum</i> var. <i>aureum</i>	Native
	<i>Torilis arvensis</i> subsp. <i>arvensis</i>	Non-Native
	<i>Ptilimnium capillaceum</i>	Native
	<i>Ptilimnium nuttallii</i>	Native
Apocynaceae	<i>Amsonia tabernaemontana</i> var. <i>salicifolia</i> *	Native
	<i>Apocynum cannabinum</i>	Native
	<i>Asclepias incarnata</i>	Native
	<i>Asclepias longifolia</i> var. <i>hirtella</i>	Native
	<i>Asclepias purpurascens</i>	Native
	<i>Asclepias stenophylla</i>	Native
	<i>Asclepias syriaca</i>	Native
	<i>Asclepias tuberosa</i>	Native
	<i>Asclepias verticillata</i>	Native
	<i>Asclepias viridiflora</i>	Native
	<i>Asclepias viridis</i>	Native
	<i>Cynanchum laeve</i>	Native
Aquifoliaceae	<i>Gonolobus suberosus</i> var. <i>granulatus</i> *	Native
	<i>Ilex decidua</i>	Native
Araceae	<i>Arisaema dracontium</i>	Native
	<i>Arisaema triphyllum</i> subsp. <i>triphyllum</i>	Native
	<i>Lemna minor</i>	Native
Aristolochiaceae	<i>Asarum canadense</i>	Native
Asparagaceae	<i>Asparagus officinalis</i>	Non-Native
	<i>Asplenium platyneuron</i>	Native
Aspleniaceae	<i>Asplenium rhizophyllum</i>	Native
Asteraceae	<i>Achillea millefolium</i>	Native
	<i>Ageratina altissima</i> var. <i>altissima</i>	Native
	<i>Ambrosia artemisiifolia</i>	Native
	<i>Ambrosia bidentata</i>	Native

<i>Ambrosia psilostachya</i>	Native
<i>Ambrosia trifida</i>	Native
<i>Amphiachyris dracunculoies</i>	Native
<i>Antennaria neglecta</i>	Native
<i>Anthemis cotula</i>	Non-Native
<i>Arctium minus</i>	Non-Native
<i>Arnoglossum plantagineum</i>	Native
<i>Artemisia ludoviciana</i>	Native
<i>Astranthium ciliatum</i>	Native
<i>Bidens aristosa</i>	Native
<i>Bidens bipinnata</i>	Native
<i>Boltonia asteroides</i> var. <i>latisquama</i>	Native
<i>Boltonia asteroides</i> var. <i>recognita</i>	Native
<i>Bradburia pilosa</i>	Native
<i>Brickellia eupatorioides</i> var. <i>corymbulosa</i>	Native
<i>Carduus nutans</i>	Non-Native
<i>Cichorium intybus</i>	Non-Native
<i>Cirsium altissimum</i>	Native
<i>Conoclinium coelestinum</i>	Native
<i>Coreopsis grandiflora</i>	Native
<i>Coreopsis tinctoria</i>	Native
<i>Datura stramonium</i>	Native
<i>Dracopis amplexicaulis</i>	Native
<i>Dyssodia papposa</i>	Native
<i>Echinacea angustifolia</i>	Native
<i>Echinacea pallida</i>	Native
<i>Eclipta prostrata</i>	Native
<i>Elephantopus carolinianus</i>	Native
<i>Eleusine indica</i>	Non-Native
<i>Erigeron annuus</i>	Native
<i>Erigeron canadensis</i>	Non-Native
<i>Erigeron divaricatus</i>	Native
<i>Erigeron philadelphicus</i>	Native
<i>Erigeron strigosus</i> var. <i>strigosus</i>	Native
<i>Erigeron tenuis</i> *	Native
<i>Eupatorium altissimum</i>	Native
<i>Eupatorium perfoliatum</i>	Native
<i>Eupatorium serotinum</i>	Native
<i>Eurybia hemispherica</i>	Native
<i>Euthamia gymnospermoides</i>	Native
<i>Eutrochium purpureum</i> var. <i>purpureum</i>	Native
<i>Galinsoga quadriradiata</i>	Non-Native
<i>Gamochaeta purpurea</i>	Native

<i>Grindelia lanceolata</i>	Native
<i>Helenium amarum</i> var. <i>amarum</i>	Native
<i>Helenium flexuosum</i> *	Native
<i>Helianthus annuus</i>	Native
<i>Helianthus grosseserratus</i>	Native
<i>Helianthus maximiliani</i>	Native
<i>Helianthus mollis</i>	Native
<i>Helianthus pauciflorus</i> subsp. <i>pauciflorus</i>	Native
<i>Helianthus salicifolius</i>	Native
<i>Helianthus strumosus</i> *	Native
<i>Helianthus tuberosus</i>	Native
<i>Heliopsis helianthoides</i> var. <i>scabra</i>	Native
<i>Hieracium longipilum</i>	Native
<i>Iva annua</i>	Native
<i>Krigia caespitosa</i> var. <i>caespitosa</i>	Native
<i>Krigia dandelion</i>	Native
<i>Krigia occidentalis</i> *	Native
<i>Lactuca canadensis</i>	Native
<i>Lactuca floridana</i>	Native
<i>Lactuca serriola</i>	Non-Native
<i>Leucanthemum vulgare</i>	Non-Native
<i>Liatris punctata</i>	Native
<i>Liatris pycnostachya</i>	Native
<i>Matricaria chamomilla</i>	Non-Native
<i>Nabalus asperus</i>	Native
<i>Nothocalais cuspidata</i>	Native
<i>Packera obovata</i>	Native
<i>Ratibida columnifera</i>	Native
<i>Ratibida pinnata</i>	Native
<i>Rudbeckia hirta</i>	Native
<i>Rudbeckia hirta</i> var. <i>hirta</i>	Native
<i>Rudbeckia laciniata</i>	Native
<i>Rudbeckia subtomentosa</i>	Native
<i>Rudbeckia triloba</i>	Native
<i>Senecio hieraciifolius</i> var. <i>hieraciifolius</i>	Native
<i>Silphium integrifolium</i>	Native
<i>Silphium laciniatum</i>	Native
<i>Silphium perfoliatum</i>	Native
<i>Solidago altissima</i>	Native
<i>Solidago altissima</i> var. <i>gilvocanescens</i>	Native
<i>Solidago gigantea</i>	Native
<i>Solidago missouriensis</i>	Native
<i>Solidago nemoralis</i> var. <i>longipetiolata</i>	Native

	<i>Solidago rigida</i>	Native
	<i>Solidago speciosa</i> var. <i>rigidiuscula</i>	Native
	<i>Solidago ulmifolia</i>	Native
	<i>Sonchus arvensis</i>	Non-Native
	<i>Sonchus asper</i>	Non-Native
	<i>Symphyotrichum drummondii</i> var. <i>drummondii</i>	Native
	<i>Symphyotrichum ericoides</i>	Native
	<i>Symphyotrichum lanceolatum</i> var. <i>lanceolatum</i>	Native
	<i>Symphyotrichum ontarionis</i> var. <i>ontarionis</i>	Native
	<i>Symphyotrichum pilosum</i> var. <i>pilosum</i>	Native
	<i>Symphyotrichum praealtum</i> var. <i>praealtum</i>	Native
	<i>Symphyotrichum x amethystinum</i>	Native
	<i>Taraxacum erythrospermum</i>	Non-Native
	<i>Taraxacum officinale</i>	Native
	<i>Tragopogon dubius</i>	Non-Native
	<i>Verbesina alternifolia</i>	Native
	<i>Verbesina helianthoides</i> *	Native
	<i>Verbesina virginica</i>	Native
	<i>Xanthium strumarium</i>	Native
	<i>Pseudognaphalium obtusifolium</i> subsp. <i>obtusifolium</i>	Native
	<i>Pyrrhopappus carolinianus</i>	Native
Balsaminaceae	<i>Impatiens capensis</i>	Native
	<i>Impatiens pallida</i>	Native
Berberidaceae	<i>Podophyllum peltatum</i>	Native
Betulaceae	<i>Betula nigra</i>	Native
	<i>Corylus americana</i>	Native
Bignoniaceae	<i>Campsis radicans</i>	Native
	<i>Catalpa bignonioides</i>	Native
	<i>Catalpa speciosa</i>	Native
	<i>Buglossoides arvensis</i>	Non-Native
	<i>Heliotropium tenellum</i>	Native
	<i>Hydrophyllum virginianum</i>	Native
	<i>Lithospermum canescens</i>	Native
	<i>Lithospermum incisum</i>	Native
	<i>Lithospermum occidentale</i>	Native
	<i>Myosotis verna</i>	Native
	<i>Phacelia gilioides</i>	Native
	<i>Phacelis hirsuta</i>	Native
Brassicaceae	<i>Barbarea vulgaris</i>	Non-Native
	<i>Borodinia canadensis</i>	Native
	<i>Brassica juncea</i>	Non-Native
	<i>Brassica nigra</i>	Non-Native
	<i>Camelina microcarpa</i>	Non-Native

	<i>Capsella bursa-pastoris</i>	Non-Native
	<i>Cardamine concatenata</i>	Native
	<i>Cardamine parviflora</i>	Native
	<i>Cardamine pensylvanica</i>	Native
	<i>Descurainia pinnata</i> subsp. <i>brachycarpa</i>	Native
	<i>Draba brachycarpa</i>	Native
	<i>Draba cuneifolia</i>	Native
	<i>Draba reptans</i>	Native
	<i>Erysimum repandum</i>	Non-Native
	<i>Iodanthus pinnatifidus</i>	Native
	<i>Lepidium densiflorum</i>	Native
	<i>Lepidium virginicum</i> subsp. <i>virginicum</i>	Native
	<i>Physaria gracilis</i> subsp. <i>gracilis</i>	Native
	<i>Planodes virginicum</i>	Native
	<i>Selenia aurea</i>	Native
	<i>Sisymbrium altissimum</i>	Non-Native
	<i>Sisymbrium officinale</i>	Non-Native
	<i>Sisyrinchium angustifolium</i>	Native
	<i>Sisyrinchium campestre</i>	Native
	<i>Thlaspi arvense</i>	Non-Native
Cactaceae	<i>Opuntia humifusa</i>	Native
Campanulaceae	<i>Campanulastrum americanum</i>	Native
	<i>Lobelia cardinalis</i>	Native
	<i>Lobelia siphilitica</i>	Native
	<i>Lobelia spicata</i>	Native
	<i>Triodanis perfoliata</i> subsp. <i>biflora</i>	Native
	<i>Triodanis perfoliata</i> subsp. <i>perfoliata</i>	Native
Cannabaceae	<i>Celtis laevigata</i>	Native
	<i>Celtis occidentalis</i>	Native
	<i>Celtis tenuifolia</i>	Native
	<i>Humulus lupulus</i>	Non-Native
Caprifoliaceae	<i>Lonicera japonica</i>	Non-Native
	<i>Lonicera maackii</i>	Non-Native
	<i>Lonicera sempervirens</i> *	Native
	<i>Symphoricarpos orbiculatus</i>	Native
	<i>Triosteum perfoliatum</i>	Native
Caryophyllaceae	<i>Agrostemma githago</i>	Non-Native
	<i>Arenaria serphyllifolia</i>	Non-Native
	<i>Cerastium brachypodum</i>	Native
	<i>Cerastium glomeratum</i>	Non-Native
	<i>Dianthus armeria</i>	Non-Native
	<i>Minuartia patula</i>	Native
	<i>Saponaria officinalis</i>	Non-Native

	<i>Silene antirrhina</i>	Native
	<i>Silene stellata</i>	Native
	<i>Silene virginica</i>	Native
	<i>Stellaria media</i>	Non-Native
Celastraceae	<i>Celastrus scandens</i>	Native
	<i>Euonymus atropurpureus</i>	Native
Ceratophyllaceae	<i>Ceratophyllum demersum</i>	Native
Cistaceae	<i>Lechea tenuifolia</i>	Native
Commelinaceae	<i>Commelina communis</i>	Non-Native
	<i>Tradescantia bracteata</i>	Native
	<i>Tradescantia hirsutiflora</i>	Native
	<i>Tradescantia ohiensis</i>	Native
Convolvulaceae	<i>Calystegia silvatica</i> subsp. <i>fraterniflora</i>	Native
	<i>Convolvulus arvensis</i>	Non-Native
	<i>Cuscuta cuspidata</i>	Native
	<i>Cuscuta glomerata</i>	Native
	<i>Cuscuta gronovii</i>	Native
	<i>Cuscuta pentagona</i> var. <i>pentagona</i> *	Native
	<i>Cuscuta polygonorum</i>	Native
	<i>Ipomoea coccinea</i>	Non-Native
	<i>Ipomoea hederacea</i>	Native
	<i>Ipomoea lacunosa</i>	Native
	<i>Ipomoea purpurea</i>	Non-Native
Cornaceae	<i>Cornus drummondii</i>	Native
	<i>Cornus obliqua</i>	Native
Crassulaceae	<i>Sedum pulchellum</i>	Native
	<i>Sedum sarmentosum</i>	Non-Native
Cucurbitaceae	<i>Sicyos angulatus</i>	Native
Cupressaceae	<i>Juniperus virginiana</i>	Native
Cyperaceae	<i>Carex annectens</i>	Native
	<i>Carex bicknellii</i>	Native
	<i>Carex blanda</i>	Native
	<i>Carex brevior</i>	Native
	<i>Carex bushii</i>	Native
	<i>Carex crus-corvi</i> *	Native
	<i>Carex davisii</i>	Native
	<i>Carex festucacea</i> *	Native
	<i>Carex frankii</i>	Native
	<i>Carex granularis</i>	Native
	<i>Carex grvida</i>	Native
	<i>Carex grisea</i>	Native
	<i>Carex hirsutella</i> *	Native
	<i>Carex hyalinolepis</i>	Native

	<i>Carex leavenworthii</i>	Native
	<i>Carex lupulina</i>	Native
	<i>Carex meadii</i>	Native
	<i>Carex oklahomensis</i> *	Native
	<i>Carex pellita</i>	Native
	<i>Carex radiata</i> *	Native
	<i>Carex shortiana</i>	Native
	<i>Carex squarrosa</i> *	Native
	<i>Carex vulpinoidea</i>	Native
	<i>Cyperus acuminatus</i>	Native
	<i>Cyperus echinatus</i>	Native
	<i>Cyperus esculentus</i>	Native
	<i>Cyperus odoratus</i>	Native
	<i>Cyperus squarrosus</i>	Native
	<i>Cyperus strigosus</i>	Native
	<i>Eleocharis acicularis</i>	Native
	<i>Eleocharis compressa</i>	Native
	<i>Eleocharis obtusa</i>	Native
	<i>Eleocharis palustris</i>	Native
	<i>Fimbristylis puberula</i> var. <i>puberula</i>	Native
	<i>Scirpus atrovirens</i>	Native
	<i>Schoenoplectus fluviatilis</i>	Native
	<i>Scirpus pendulus</i>	Native
Dioscoreaceae	<i>Dioscorea villosa</i>	Non-Native
Ebenaceae	<i>Diospyros virginiana</i>	Native
Elaeagnaceae	<i>Elaeagnus angustifolia</i>	Native
Euphorbiaceae	<i>Acalypha monoccocca</i>	Native
	<i>Acalypha virginica</i>	Native
	<i>Croton capitatus</i>	Native
	<i>Croton glandulosus</i>	Native
	<i>Croton monanthogynus</i>	Native
	<i>Euphorbia corollata</i>	Native
	<i>Euphorbia dentata</i>	Native
	<i>Euphorbia humistrata</i>	Native
	<i>Euphorbia maculata</i>	Native
	<i>Euphorbia marginata</i>	Native
	<i>Euphorbia missurica</i>	Native
	<i>Euphorbia nutans</i>	Native
	<i>Euphorbia serpens</i>	Native
	<i>Euphorbia spathulata</i>	Native
	<i>Parietaria pensylvanica</i>	Native
	<i>Tragia betonicifolia</i>	Native
Fabaceae	<i>Acemisson americanus</i> var. <i>americanus</i>	Native

<i>Amorpha canescens</i>	Native
<i>Amorpha fruticosa</i>	Native
<i>Apios americana</i>	Native
<i>Astragalus canadensis</i>	Native
<i>Astragalus crassicaarpus</i> var. <i>crassicaarpus</i>	Native
<i>Astragalus distortus</i>	Native
<i>Baptisia alba</i> var. <i>macrophylla</i>	Native
<i>Baptisia australis</i> var. <i>minor</i>	Native
<i>Baptisia bracteata</i> var. <i>leucophaea</i>	Native
<i>Cercis canadensis</i>	Native
<i>Chamaecrista fasciculata</i> var. <i>fasiculata</i>	Native
<i>Colutea arborescens</i>	Non-Native
<i>Crotalaria sagittalis</i>	Native
<i>Dalea candida</i> var. <i>candida</i>	Native
<i>Dalea purpurea</i>	Native
<i>Desmanthus illinoensis</i>	Native
<i>Desmodium canadense</i>	Native
<i>Desmodium canescens</i>	Native
<i>Desmodium ciliare</i> *	Native
<i>Desmodium cuspidatum</i>	Native
<i>Desmodium glabellum</i> *	Native
<i>Desmodium obtusum</i>	Native
<i>Desmodium paniculatum</i>	Native
<i>Desmodium perplexum</i>	Native
<i>Desmodium sessilifolium</i>	Native
<i>Gleditsia triacanthos</i>	Native
<i>Glycyrrhiza lepidota</i>	Native
<i>Gymnocladus dioicus</i>	Native
<i>Hyloidesmum glutinosum</i>	Native
<i>Kummerowia stipulacea</i>	Non-Native
<i>Kummerowia striata</i>	Non-Native
<i>Lespedeza capitata</i>	Native
<i>Lespedeza cuneata</i>	Non-Native
<i>Lespedeza repens</i>	Native
<i>Lespedeza stuevei</i>	Native
<i>Lespedeza violacea</i>	Native
<i>Lespedeza virginica</i>	Native
<i>Medicago lupulina</i>	Non-Native
<i>Medicago sativa</i>	Non-Native
<i>Melilotus officinalis</i>	Non-Native
<i>Mimosa nuttallii</i>	Native
<i>Orbexilum pedunculatum</i> var. <i>pedunculatum</i>	Native
<i>Pedicularis canadensis</i>	Native

	<i>Robinia pseudo-acacia</i>	Native
	<i>Senna marilandica</i>	Native
	<i>Strophostyles helvola</i>	Native
	<i>Strophostyles leiosperma</i>	Native
	<i>Stylosanthes biflora</i>	Native
	<i>Tephrosia virginiana</i>	Native
	<i>Trifolium campestre</i>	Non-Native
	<i>Trifolium dubium</i>	Non-Native
	<i>Trifolium pratense</i>	Non-Native
	<i>Trifolium reflexum</i>	Native
	<i>Trifolium repens</i>	Non-Native
	<i>Vicia villosa</i> subsp. <i>varia</i>	Non-Native
	<i>Wisteria frutescens</i>	Native
Fagaceae	<i>Quercus macrocarpa</i>	Native
	<i>Quercus muehlenbergii</i>	Native
	<i>Quercus palustris</i>	Native
	<i>Quercus rubra</i>	Native
	<i>Quercus shumardii</i>	Native
	<i>Quercus stellata</i>	Native
	<i>Quercus velutina</i>	Native
Gentianaceae	<i>Sabatia angularis</i> *	Native
	<i>Sabatia campestris</i>	Native
Geraniaceae	<i>Geranium carolinianum</i>	Native
Grossulariaceae	<i>Ribes missouriense</i>	Native
Haloragaceae	<i>Myriophyllum heterophyllum</i>	Native
Hemerocallidaceae	<i>Hemerocallis fulva</i>	Non-Native
Hyacinthaceae	<i>Muscari botryoides</i>	Non-Native
	<i>Ornithogalum umbellatum</i>	Non-Native
Hydrocharitaceae	<i>Elodea canadensis</i>	Native
	<i>Najas guadalupensis</i>	Native
Hypericaceae	<i>Hypericum drummondii</i>	Native
	<i>Hypericum mutilum</i>	Native
	<i>Hypericum perforatum</i>	Non-Native
	<i>Hypericum punctatum</i>	Native
	<i>Hypericum sphaerocarpum</i>	Native
Hypoxidaceae	<i>Hypoxis hirsuta</i>	Native
Iridaceae	<i>Belamcanda chinensis</i>	Non-Native
	<i>Iris germanica</i>	Non-Native
	<i>Nemastylis geminiflora</i>	Native
Juglandaceae	<i>Carya cordiformis</i>	Native
	<i>Carya illinoensis</i>	Native
	<i>Carya laciniosa</i>	Native
	<i>Carya ovata</i>	Native

Juncaceae	<i>Juglans nigra</i>	Native
	<i>Juncus acuminatus</i>	Native
	<i>Juncus brachyphyllus</i>	Native
	<i>Juncus diffusissimus</i>	Native
	<i>Juncus dudleyi</i>	Native
	<i>Juncus effusus</i> var. <i>solutus</i>	Native
	<i>Juncus interior</i>	Native
	<i>Juncus marginatus</i>	Native
	<i>Juncus nodatus</i> *	Native
	<i>Juncus tenuis</i>	Native
Lamiaceae	<i>Juncus torreyi</i>	Native
	<i>Hedeoma hispida</i>	Native
	<i>Lamium amplexicaule</i>	Non-Native
	<i>Lamium purpureum</i>	Non-Native
	<i>Lycopus americanus</i>	Native
	<i>Lycopus virginicus</i>	Native
	<i>Mentha arvensis</i>	Native
	<i>Monarda citriodora</i>	Native
	<i>Monarda fistulosa</i>	Native
	<i>Nepeta cataria</i>	Non-Native
	<i>Physostegia angustifolia</i> *	Non-Native
	<i>Physostegia virginiana</i>	Native
	<i>Salvia azurea</i> var. <i>grandiflora</i>	Native
	<i>Scutellaria parvula</i>	Native
	<i>Stachys tenuifolia</i>	Native
	<i>Teucrium canadense</i> var. <i>canadense</i>	Native
Lauraceae	<i>Trichostema brachiatum</i>	Native
	<i>Pycnanthemum tenuifolium</i>	Native
Lauraceae	<i>Lindera benzoin</i>	Native
Lentibulariaceae	<i>Utricularia gibba</i>	Native
Liliaceae	<i>Erythronium mesochoreum</i>	Native
	<i>Lilium michiganense</i> *	Native
Linaceae	<i>Linum sulcatum</i>	Native
	<i>Linum usitatissimum</i>	Non-Native
Linderniaceae	<i>Lindernia dubia</i>	Native
Lythraceae	<i>Ammannia coccinea</i>	Native
	<i>Cuphea viscosissima</i>	Native
	<i>Didiplis diandra</i> *	Native
	<i>Lythrum alatum</i>	Native
Malvaceae	<i>Abutilon theophrasti</i>	Non-Native
	<i>Callirhoe alcaeoides</i>	Native
	<i>Callirhoe involucrata</i>	Native
	<i>Hibiscus laevis</i>	Native

	<i>Hibiscus moscheutos</i>	Native
	<i>Hibiscus moscheutos</i> subsp. <i>moscheutos</i>	Native
	<i>Hibiscus trionum</i>	Non-Native
	<i>Malva neglecta</i>	Non-Native
	<i>Sida spinosa</i>	Native
	<i>Tilia americana</i> var. <i>americana</i>	Native
Melanthiaceae	<i>Veratrum virginicum</i> *	Native
Menispermaceae	<i>Cocculus carolinus</i>	Native
	<i>Menispermum canadense</i>	Native
Molluginaceae	<i>Mollugo verticillata</i>	Native
Montiaceae	<i>Claytonia virginica</i>	Native
	<i>Phemeranthus parviflorus</i>	Native
Moraceae	<i>Maclura pomifera</i>	Native
	<i>Morus alba</i>	Non-Native
	<i>Morus rubra</i>	Native
Nyctaginaceae	<i>Mirabilis albida</i>	Native
	<i>Mirabilis nyctaginea</i>	Native
Nymphaeaceae	<i>Nymphaea odorata</i>	Native
Oleaceae	<i>Fraxinus americana</i>	Native
	<i>Fraxinus pennsylvanica</i>	Native
	<i>Ligustrum vulgare</i>	Non-Native
Onagraceae	<i>Ludwigia alternifolia</i>	Native
	<i>Ludwigia palustris</i>	Native
Onagraceae	<i>Ludwigia peploides</i> var. <i>glabrescens</i>	Native
	<i>Oenothera curtiflora</i>	Native
	<i>Oenothera filiformis</i>	Native
	<i>Oenothera laciniata</i>	Native
	<i>Oenothera linifolia</i>	Native
	<i>Oenothera macrocarpa</i> subsp. <i>macrocarpa</i>	Native
	<i>Oenothera speciosa</i>	Native
	<i>Oenothera triloba</i>	Native
	<i>Oenothera villosa</i>	Native
Onocleaceae	<i>Onoclea sensibilis</i>	Native
Ophioglossaceae	<i>Botrypus virginianus</i>	Native
Orchidaceae	<i>Platanthera praeclara</i> *	Native
	<i>Spiranthes cernua</i>	Native
	<i>Spiranthes vernalis</i>	Native
Orobanchaceae	<i>Agalinis fasciculata</i> *	Native
	<i>Agalinis purpurea</i> *	Native
	<i>Agalinis tenuifolia</i>	Native
	<i>Buchnera americana</i>	Native
	<i>Castilleja coccinea</i>	Native
	<i>Dasistoma macrophylla</i>	Native

Oxalidaceae	<i>Oxalis corniculata</i>	Native
	<i>Oxalis stricta</i>	Native
	<i>Oxalis violacea</i>	Native
Papaveraceae	<i>Corydalis crystallina</i>	Native
	<i>Corydalis micrantha</i>	Native
	<i>Corydalis micrantha</i> subsp. <i>australis</i>	Native
	<i>Dicentra cucullaria</i>	Native
Passifloraceae	<i>Passiflora incarnata</i>	Native
	<i>Passiflora lutea</i> *	Native
Penthoraceae	<i>Penthorum sedoides</i>	Native
Phrymaceae	<i>Mimulus alatus</i>	Native
	<i>Phryma leptostachya</i>	Native
Phyllanthaceae	<i>Phyllanthus caroliniensis</i> *	Native
Phytolaccaceae	<i>Phytolacca americana</i>	Native
Plantaginaceae	<i>Callitriche heterophylla</i> var. <i>heterophylla</i>	Native
	<i>Collinsia violacea</i>	Native
	<i>Gratiola virginiana</i>	Native
	<i>Leucospora multifida</i>	Native
	<i>Linaria vulgaris</i>	Non-Native
	<i>Nuttallanthus texanus</i>	Native
	<i>Penstemon digitalis</i>	Native
	<i>Penstemon tubiflorus</i>	Native
	<i>Plantago aristata</i>	Native
	<i>Plantago lanceolata</i>	Non-Native
	<i>Plantago major</i>	Non-Native
	<i>Plantago virginica</i>	Native
	<i>Plantago rugelii</i>	Native
	<i>Vernonia arkansana</i>	Native
	<i>Vernonia baldwinii</i>	Native
	<i>Vernonia fasciculata</i>	Native
	<i>Vernonia missurica</i> *	Native
	<i>Veronica arvensis</i>	Non-Native
	<i>Veronica peregrina</i> var. <i>xalapensis</i>	Native
	<i>Veronica polita</i>	Non-Native
Platanaceae	<i>Platanus occidentalis</i>	Native
Poaceae	<i>Aegilops cylindrica</i>	Non-Native
	<i>Agrostis elliottiana</i> *	Native
	<i>Agrostis gigantea</i>	Non-Native
	<i>Agrostis heymanii</i>	Native
	<i>Agrostis perennans</i>	Native
	<i>Alopecurus carolinianus</i>	Native
	<i>Andropogon gerardii</i>	Native
	<i>Andropogon virginicus</i>	Native

<i>Aristida oligantha</i>	Native
<i>Avena sativa</i>	Non-Native
<i>Bothriochloa laguroides</i> subsp. <i>torreyana</i>	Native
<i>Bouteloua curtipendula</i>	Native
<i>Bromus arvensis</i>	Non-Native
<i>Bromus inermis</i>	Non-Native
<i>Bromus pubescens</i>	Native
<i>Bromus secalinus</i>	Non-Native
<i>Bromus tectorum</i>	Non-Native
<i>Cenchrus incertus</i> *	Native
<i>Cenchrus longispinus</i>	Native
<i>Chasmanthium latifolium</i>	Native
<i>Chloris verticillata</i>	Native
<i>Cinna arundinacea</i>	Native
<i>Coleataenia rigidula</i> subsp. <i>rigidula</i>	Native
<i>Cynodon dactylon</i>	Non-Native
<i>Dactylis glomerata</i> subsp. <i>glomerata</i>	Non-Native
<i>Diarrhena obovata</i>	Native
<i>Dichanthelium acuminatum</i> var. <i>acuminatum</i>	Native
<i>Dichanthelium clandestinum</i>	Native
<i>Dichanthelium oligosanthes</i>	Native
<i>Dichanthelium scoparium</i> *	Native
<i>Digitaria cognata</i>	Native
<i>Digitaria filiformis</i>	Native
<i>Digitaria sanguinalis</i>	Non-Native
<i>Echinochloa muricata</i> var. <i>muricata</i>	Native
<i>Ellisia nyctelea</i>	Native
<i>Elymus canadensis</i>	Native
<i>Elymus virginicus</i>	Native
<i>Eragrostis capillaris</i>	Native
<i>Eragrostis cilianensis</i>	Non-Native
<i>Eragrostis minor</i>	Non-Native
<i>Eragrostis pectinacea</i>	Native
<i>Eragrostis spectabilis</i>	Native
<i>Eragrostis trichodes</i>	Native
<i>Eriochloa contracta</i>	Native
<i>Festuca paradoxa</i>	Native
<i>Festuca rubra</i>	Native
<i>Festuca subverticillata</i>	Native
<i>Glyceria striata</i>	Native
<i>Hordeum jubatum</i>	Native
<i>Hordeum pusillum</i>	Native
<i>Koeleria macrantha</i>	Native

	<i>Lolium perenne</i> subsp. <i>multiflorum</i>	Non-Native
	<i>Lolium perenne</i> subsp. <i>perenne</i>	Non-Native
	<i>Melica nitens</i> *	Native
	<i>Muhlenbergia glabrifloris</i>	Native
	<i>Muhlenbergia mexicana</i>	Native
	<i>Muhlenbergia schreberi</i>	Native
	<i>Panicum capillare</i>	Native
	<i>Panicum dichotomiflorum</i>	Native
	<i>Panicum virgatum</i>	Native
	<i>Pascopyrum smithii</i>	Native
	<i>Paspalum floridanum</i>	Native
	<i>Paspalum laeve</i>	Native
	<i>Paspalum pubiflorum</i>	Native
	<i>Paspalum setaceum</i>	Native
	<i>Phalaris canariensis</i>	Non-Native
	<i>Phalaris caroliniana</i>	Native
	<i>Phleum pratense</i>	Non-Native
	<i>Poa annua</i>	Non-Native
	<i>Poa compressa</i>	Non-Native
	<i>Poa pratensis</i>	Non-Native
	<i>Poa sylvestris</i>	Native
	<i>Schedonnardus paniculatus</i>	Native
	<i>Schedonorus pratensis</i>	Non-Native
	<i>Schizachyrium scoparium</i> var. <i>scoparium</i>	Native
	<i>Setaria parviflora</i>	Native
	<i>Setaria viridis</i>	Non-Native
	<i>Sorghastum nutans</i>	Native
	<i>Sorghum bicolor</i> subsp. <i>bicolor</i>	Non-Native
	<i>Sorghum halepense</i>	Non-Native
	<i>Spartina pectinata</i>	Native
	<i>Sphenopholis intermedia</i>	Native
	<i>Sphenopholis obtusata</i>	Native
	<i>Sporobolus compositus</i> var. <i>compositus</i>	Native
	<i>Sporobolus neglectus</i>	Native
	<i>Tridens flavus</i> var. <i>flavus</i>	Native
	<i>Tridens strictus</i>	Native
	<i>Tripsacum dactyloides</i>	Native
	<i>Vulpia octoflora</i>	Native
Polemoniaceae	<i>Phlox divaricata</i>	Native
	<i>Phlox pilosa</i>	Native
Polygalaceae	<i>Polygala incarnata</i>	Native
	<i>Polygala sanguinea</i>	Native
Polygonaceae	<i>Fallopia convolvulus</i>	Non-Native

	<i>Fallopia scandens</i>	Native
	<i>Persicaria amphibia</i>	Native
	<i>Persicaria bicornis</i>	Native
	<i>Persicaria hydropiperoides</i>	Native
	<i>Persicaria lapathifolia</i>	Native
	<i>Persicaria maculosa</i>	Non-Native
	<i>Persicaria pensylvanica</i>	Native
	<i>Persicaria punctata</i>	Native
	<i>Persicaria sagittata*</i>	Native
	<i>Persicaria virginiana</i>	Native
	<i>Polygonatum biflorum</i>	Native
	<i>Polygonatum biflorum</i> var. <i>biflorum</i>	Native
	<i>Polygonum aviculare</i> subsp. <i>depressum</i>	Non-Native
	<i>Persicaria hydropiper</i>	Non-Native
	<i>Polygonum ramosissimum</i>	Native
	<i>Rumex acetosella</i>	Non-Native
	<i>Rumex altissimus</i>	Native
	<i>Rumex crispus</i>	Non-Native
	<i>Rumex pulcher</i>	Non-Native
Portulacaceae	<i>Portulaca oleracea</i>	Native
	<i>Portulaca pilosa</i>	Native
Potamogetonaceae	<i>Potamogeton crispus</i>	Non-Native
	<i>Potamogeton diversifolius</i>	Native
	<i>Potamogeton foliosus</i>	Native
	<i>Potamogeton nodosus</i>	Native
	<i>Stuckenia pectinata</i>	Native
Primulaceae	<i>Androsace occidentalis</i>	Native
	<i>Dodecatheon meadia</i>	Native
	<i>Lysimachia ciliata</i>	Native
Pteridaceae	<i>Argyrochosma dealbata</i>	Native
	<i>Pellaea atropurpurea</i>	Native
	<i>Pellaea glabella</i>	Native
Ranunculaceae	<i>Anemone caroliniana</i>	Native
	<i>Anemone virginiana</i>	Native
	<i>Aquilegia canadensis</i>	Native
	<i>Clematis pitcheri</i>	Native
	<i>Clematis terniflora</i>	Non-Native
	<i>Delphinium carolinianum</i> subsp. <i>virescens</i>	Native
	<i>Delphinium tricornis</i>	Native
	<i>Enemion biternatum</i>	Native
	<i>Myosurus minimus</i>	Native
	<i>Ranunculus abortivus</i>	Native
	<i>Ranunculus fascicularis</i>	Native

	<i>Ranunculus micranthus</i>	Native
	<i>Thalictrum dasycarpum</i>	Native
	<i>Thalictrum thalictroides</i>	Native
Rhamnaceae	<i>Ceanothus americanus</i>	Native
	<i>Ceanothus herbaceus</i>	Native
	<i>Rhamnus japonica</i>	Non-Native
Rosaceae	<i>Agrimonia parviflora</i>	Native
	<i>Agrimonia pubescens</i>	Native
	<i>Crataegus mollis</i>	Native
	<i>Crataegus pruinosa</i> *	Native
	<i>Crataegus punctata</i> *	Native
	<i>Crataegus viridis</i>	Native
	<i>Crataegus crus-galli</i>	Native
	<i>Fragaria virginiana</i> var. <i>virginiana</i>	Native
	<i>Geum canadense</i> var. <i>canadense</i>	Native
	<i>Geum vernum</i>	Native
	<i>Geum virginianum</i> *	Native
	<i>Potentilla norvegica</i>	Native
	<i>Potentilla recta</i>	Non-Native
	<i>Potentilla simplex</i>	Native
	<i>Prunella vulgaris</i> var. <i>lanceolata</i>	Native
	<i>Prunus americana</i>	Native
	<i>Prunus angustifolia</i>	Native
	<i>Prunus hortulana</i>	Native
	<i>Prunus rivularis</i>	Native
	<i>Prunus serotina</i>	Native
	<i>Prunus virginiana</i>	Native
	<i>Pyrus communis</i>	Non-Native
	<i>Rosa arkansana</i>	Native
	<i>Rosa carolina</i> subsp. <i>carolina</i>	Native
	<i>Rosa carolina</i> subsp. <i>subserrulata</i>	Native
	<i>Rosa multiflora</i>	Non-Native
	<i>Rosa setigera</i>	Native
	<i>Rosa spinosissima</i>	Non-Native
	<i>Rubus allegheniensis</i>	Native
	<i>Rubus alumnus</i>	Native
	<i>Rubus flagellaris</i>	Native
	<i>Rubus frondosus</i>	Native
	<i>Rubus occidentalis</i>	Native
	<i>Rubus pensilvanicus</i>	Native
Rubiaceae	<i>Cephalanthus occidentalis</i>	Native
	<i>Diodia teres</i>	Native
	<i>Galium aparine</i>	Native

	<i>Galium circaezans</i>	Native
	<i>Galium obtusum</i>	Native
	<i>Galium triflorum</i>	Native
	<i>Galium virgatum</i>	Native
	<i>Houstonia longifolia</i> *	Native
	<i>Houstonia pusilla</i>	Native
	<i>Stenaria nigricans</i> var. <i>nigricans</i>	Native
Rutaceae	<i>Zanthoxylum americanum</i>	Native
	<i>Ptelea trifoliata</i> subsp. <i>trifoliata</i>	Native
Salicaceae	<i>Populus alba</i>	Non-Native
	<i>Populus deltoides</i>	Native
	<i>Salix amygdaloides</i>	Native
	<i>Salix caroliniana</i>	Native
	<i>Salix humilis</i> var. <i>humilis</i>	Native
	<i>Salix interior</i>	Native
	<i>Salix nigra</i>	Native
Sapindaceae	<i>Aesculus glabra</i> var. <i>arguta</i>	Native
	<i>Sapindus saponaria</i> var. <i>drummondii</i>	Native
Sapotaceae	<i>Sideroxylon lanuginosum</i> subsp. <i>oblongifolium</i>	Native
Scrophulariaceae	<i>Scrophularia marilandica</i>	Native
	<i>Verbascum blattaria</i>	Non-Native
	<i>Verbascum thapsus</i>	Non-Native
Simaroubaceae	<i>Ailanthus altissima</i>	Non-Native
Smilacaceae	<i>Smilax bona-nox</i> var. <i>bona-nox</i>	Native
	<i>Smilax glauca</i>	Native
	<i>Smilax herbacea</i>	Native
	<i>Smilax hispida</i>	Native
Solanaceae	<i>Physalis heterophylla</i>	Native
	<i>Physalis longifolia</i>	Native
	<i>Physalis longifolia</i> var. <i>subglabrata</i>	Native
	<i>Physalis pubescens</i>	Native
	<i>Physalis pumila</i>	Native
	<i>Solanum americanum</i>	Native
	<i>Solanum carolinense</i>	Native
	<i>Solanum dimidiatum</i> *	Native
	<i>Solanum eleagnifolium</i>	Native
	<i>Solanum rostratum</i>	Native
Staphyleaceae	<i>Staphylea trifolia</i>	Native
Trilliaceae	<i>Trillium sessile</i>	Native
Typhaceae	<i>Typha angustifolia</i>	Non-Native
	<i>Typha latifolia</i>	Native
Ulmaceae	<i>Ulmus americana</i>	Native
	<i>Ulmus pumila</i>	Native

	<i>Ulmus rubra</i>	Native
Urticaceae	<i>Boehmeria cylindrica</i>	Native
	<i>Laportea canadensis</i>	Native
	<i>Pilea pumila</i>	Native
Valerianaceae	<i>Valerianella radiata</i>	Native
Verbenaceae	<i>Glandularia bipinnatifida</i>	Native
	<i>Glandularia canadensis</i>	Native
	<i>Phyla lanceolata</i>	Native
	<i>Verbena bracteata</i>	Native
	<i>Verbena hastata</i>	Native
	<i>Verbena simplex</i>	Native
	<i>Verbena stricta</i>	Native
	<i>Verbena urticifolia</i>	Native
Violaceae	<i>Viola bicolor</i>	Native
	<i>Viola missouriensis</i>	Native
	<i>Viola nephrophylla</i>	Native
	<i>Viola pedata</i>	Native
	<i>Viola pedatifida</i>	Native
	<i>Viola pubescens</i>	Native
	<i>Viola sagittata</i>	Native
	<i>Viola sororia</i>	Native
	<i>Viola striata</i>	Native
Vitaceae	<i>Ampelopsis cordata</i>	Native
	<i>Parthenocissus quinquefolia</i>	Native
	<i>Vitis aestivalis</i>	Native
	<i>Vitis aestivalis</i> var. <i>aestivalis</i>	Native
	<i>Vitis cinerea</i>	Native
	<i>Vitis riparia</i>	Native
	<i>Vitis vulpina</i>	Native
Woodsiaceae	<i>Woodsia obtusa</i>	Native
Zygophyllaceae	<i>Tribulus terrestris</i>	Non-Native
