

THE FLORA OF ERATH COUNTY, TEXAS, U.S.A.

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ABSTRACT

Knowledge of county floras in Texas is crucial for determining species composition, management, preservation, and restoration across the state. Like most Texas counties, floristic data for Erath County, Texas, is poorly known. The objectives of this investigation were to compile a flora for Erath County, determine the introduced, endemic, threatened, and endangered species, as well as make comparisons to the county's original flora and that of the North Central Texas region. Field work was conducted from September 2003 to December 2009 at 35 sites in Erath County. In addition herbaria were searched to locate specimens from Erath County. A total of 870 species (888 taxa) were identified in 103 families. One hundred forty-four taxa were introduced while 744 taxa were native. Eighteen of the species are Texas endemics. There were two rare plants, *Dalea reverchonii* and *Penstemon guadalupensis*, but no threatened or endangered plants were found during the investigation. Four state-listed noxious species were collected during the investigation—*Arundo donax* (giant reed), *Convolvulus arvensis* (field bindweed), *Tamarix chinensis*, and *T. gallica* (salt-cedars).

RESUMEN

El conocimiento de las Floras de los condados de Texas es fundamental para determinar la composición, el manejo, la preservación y la restauración de las especies en todo el estado. Como la mayoría de los condados de Texas, los datos florísticos del condado de Erath, Texas, son poco conocidos. Los objetivos de esta investigación fueron compilar la Flora del condado de Erath, determinar las especies introducidas, endémicas, amenazadas y en peligro de extinción, así como hacer comparaciones con la flora original del condado y la de la región centro norte de Texas. El trabajo de campo se llevó a cabo desde septiembre de 2003 hasta diciembre de 2009 en 35 sitios en el condado de Erath. Además, se registraron herbarios para localizar especímenes del condado de Erath. Se identificaron un total de 870 especies (888 taxones) de 103 familias. 144 taxones eran introducidos, mientras que 744 taxones eran nativos. Dieciocho de las especies son endémicas de Texas. Había dos plantas raras, *Dalea reverchonii* y *Penstemon guadalupensis*, pero no se encontraron plantas amenazadas o en peligro. Durante la investigación se recolectaron cuatro especies nocivas incluidas en la lista estatal: *Arundo donax* (junco gigante), *Convolvulus arvensis* (enredadera de campo), *Tamarix chinensis* y *T. gallica* (cedros de la sal).

INTRODUCTION

Knowledge of Texas floras is crucial for determining species composition, which in turn is applicable to the management, preservation, and restoration of individual plant species and ecoregions across the state. The flora for Erath County (Fig. 1), in the southern portion of the Western Cross Timbers, is poorly known and in need of investigation before it becomes more diminished by agricultural activity and urban growth. Here, we present the most complete flora known from the county based on relatively recent fieldwork and collections from the county deposited in herbaria. Having an up-to-date flora for a county is important for identifying changes in species' distributions. This can be used in management plans for conserving endangered species, documenting the spread of invasive plants, and to improve the authenticity of restoration projects.

It is estimated that the Cross Timbers region (CT) consists of 4.8 million ha between southeastern Kansas and North Central Texas (Hoagland et al. 1999) and lies on rolling topography with underlying Cretaceous limestone (Poole et al. 2007). Average annual rainfall is 62–100 cm with April, May, and June being the months with most rainfall (Correll & Johnson 1970). Soils of the CT are often stony or rocky (Dyksterhuis 1948; Correll & Johnson 1970). Farming, ranching, and the cultivation of crops occurred on prairies and the fringes of woodlands in the CT (Correll & Johnson 1970; Hoagland et al. 1999). Negligent agricultural practices and fire suppression exacerbated erosion and the overgrowth of weedy species, resulting in the suppression of native mid- to tall-grasses and the loss of original climax understory vegetation

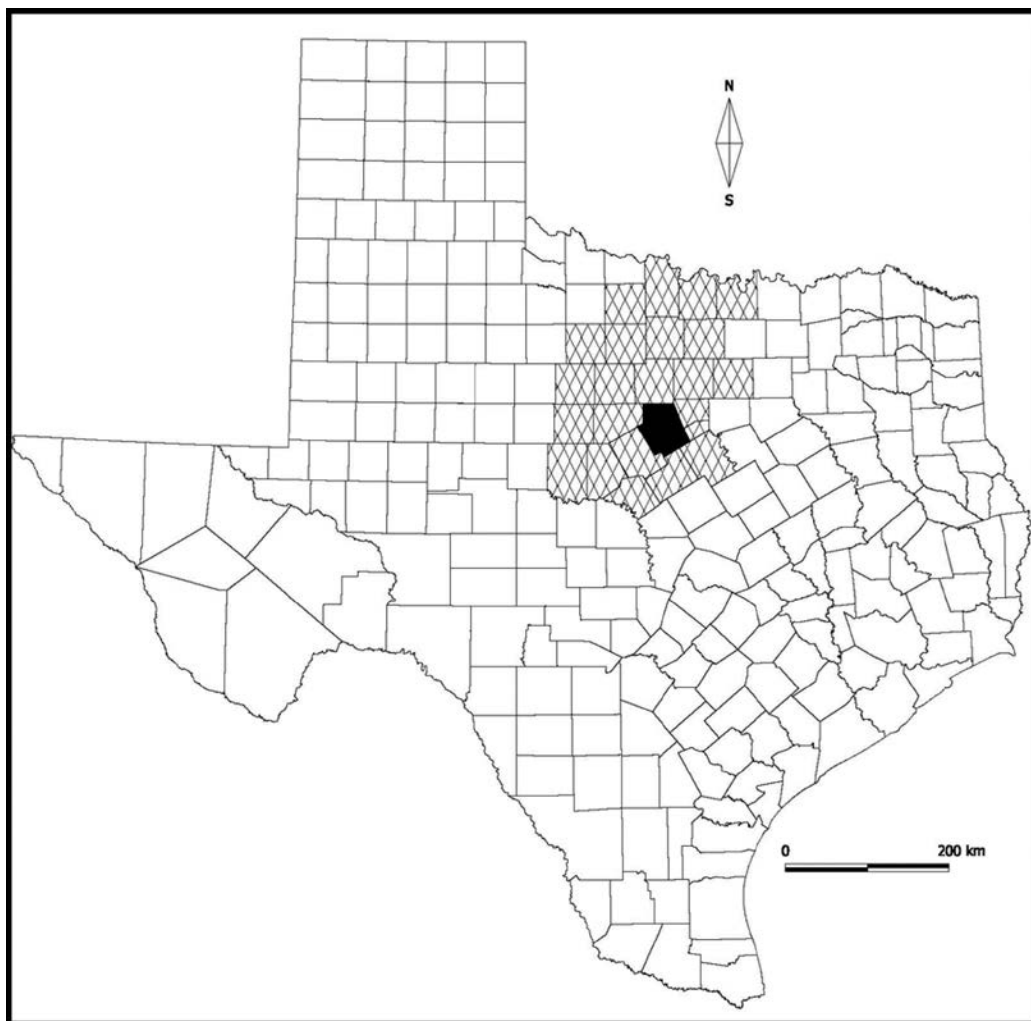


FIG. 1. Map of Texas showing the location of Erath County (black) and surrounding counties that contain portions of the Western Cross Timbers. Scale bar ranges from 0–200km.

(Dyksterhuis 1948; Hoagland et al. 1999; Van Auken 2000). Invasion of native prairies and some woody plant communities by species such as juniper (*Juniperus* spp.) and mesquite (*Prosopis glandulosa*) has occurred over large areas (Van Auken et al. 1988; Van Auken 2000). In more natural areas, post and blackjack oaks (*Quercus stellata* and *Q. marilandica*) were interspersed with a variety of mid- to tall-grass prairie species (Dyksterhuis 1948; Correll & Johnson 1970).

The CT forms two bands of vegetation in Texas: the Western Cross Timbers (WCT) and the Eastern Cross Timbers (Hoagland et al. 1999). The WCT is a belt of woodland interspersed periodically by the Fort Worth Prairie (Diggs et al. 1999) ranging from northern Oklahoma to North Central Texas (Dyksterhuis 1948; Diggs et al. 1999; Hoagland et al. 1999). Erath County occurs in the central to southeastern portion of the WCT (Fig. 1) with a small portion in the southeast portion of the county in the Lampasas Cut Plain. Geology, soils, and climate have been discussed for the region (Diggs et al. 1999). Most of Erath County is geologically within the Trinity Group, which are the oldest Cretaceous layers that form mostly sandy

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Woodbine or Trinity strata and sandy soils are common (Diggs et al. 1999). In addition, fingerlike extensions of Cretaceous strata dominated by limestones, which form buttes and mesas, occur in the southeastern extreme of the county (Diggs et al. 1998), with Chalk Mountain being an excellent example. The two major rivers in the county are the Bosque and Paluxy, which join the Brazos River outside the county. Erath County has a mean of 230 days that are frost-free with a mean annual temperature range of 18–19° C and a mean annual precipitation range of 71–81 cm (Diggs et al. 1998). There are eight soil associations that occur within the county (Wagner et al. 1972). The Malotter-Purves-Dugout association occupies about 46% of the county and is a shallow, stony soil that was mostly grassland with scattered oaks and which is now often used as rangeland. The Windthorst-Duffau association occupies about 24% of the county and are relatively deep sandy loams that was forested areas with some converted to cropland (Wagner et al. 1972). The other 30% of the county is composed of six other soil associations which range from 1–8% of the county and were generally occupied by prairie vegetation that was converted to crops or range conditions (Wagner et al. 1972).

Ecosystems from Erath County were identified using the Texas Ecological Assessment and Monitoring (TEAM) analysis software (Texas Parks and Wildlife Department 2020). The county has 14 ecosystem types based on the analysis. They are the Crosstimbers Oak Forest and Woodland, Edwards Plateau Dry-Mesic Slope Forest and Woodland, Edwards Plateau Limestone Savanna and Woodland, Edwards Plateau Limestone Shrubland, Southeastern Great Plains Tallgrass Prairie, Southeastern Great Plains Floodplain Forest, Improved Grasslands, Grass Farms, Orchards, Urban Types, Barren, Marshes, Native Invasives, and Open Water. Each are briefly discussed for the county.

The Crosstimbers Oak Forest and Woodland ecosystem is associated with sandy members of the Cretaceous Woodbine Formation, while western occurrences occupy soils derived from the sands of the Cretaceous Trinity Group (Elliott 2014). Sands or sandy loams, some with a claypan, are characteristic of the ecosystem (Elliott 2014). The ecosystem is a savanna or woodland dominated by *Quercus stellata* (post oak) and/or *Q. marilandica* (blackjack oak) with other species in the canopy that may include *Ulmus crassifolia* (cedar elm), *Q. fusiformis* (plateau live oak), *Celtis laevigata* (sugarberry), and *Juniperus virginiana* (eastern redcedar) (Elliott 2013, 2014). The herbaceous understory may have been historically dominated by *Schizachyrium scoparium* (little bluestem), but current herbaceous plant composition is largely determined by land use history and grazing pressure (Elliott 2013; 2014). Tallgrass species such as *Andropogon gerardii* (big bluestem) and *Sorghastrum nutans* (Indiangrass) are likely important components of the understory along with *Buchloe dactyloides* (buffalograss), little bluestem, *Nassella leucotricha* (Texas wintergrass), *Paspalum setaceum* (fringeleaf paspalum), *Sporobolus compositus* (tall dropseed), *Bouteloua curtipendula* (sideoats grama), *B. hirsuta* (hairy grama), *B. rigidiseta* (Texas grama), *Bothriochloa laguroides* ssp. *torreyana* (silver blue-stem), and *Aristida* spp. (threeawn) (Elliott, 2013; 2014). Non-native species can be abundant due to introduction during livestock operations or from planting and include *Bromus catharticus* (rescuegrass), *B. japonicus* (Japanese brome), *B. tectorum* (cheatgrass), *Cynodon dactylon* (bermudagrass) and *Bothriochloa ischaemum* var. *songarica* (King Ranch bluestem) (Elliott 2013). With the disruption of a natural fire cycle, branching of woody species may be continuous to near ground level, reducing light penetration and leading to reduced herbaceous cover (Elliott 2014). The shrub layer consists of species such as *Smilax bona-nox* (greenbrier), *Prosopis glandulosa* (honey mesquite), *Rhus trilobata* (skunkbush sumac), *Crataegus* spp. (hawthorn), *Zanthoxylum hirsutum* (tickle-tongue), *Rhus glabra* (smooth sumac), and *Sideroxylon lanuginosum* (gum bumelia) (Elliott 2013, 2014). Sites may become dominated by honey mesquite, sometimes with *Ziziphus obtusifolia* (lotebush) as a common shrub component or junipers (including *Juniperus virginiana* (eastern redcedar), *J. ashei* (Ashe juniper), and *J. pinchotii* (redberry juniper) (Elliott 2013), when fire is lacking or overgrazing occurs, or a combination of the two disturbances occur at sites.

The Edwards Plateau Dry-Mesic Slope Forest and Woodland ecosystem is found on Cretaceous limestone slopes within the Edwards Plateau and adjacent ecoregions, including the Carbonate Cross Timbers (Elliott 2014). Slopes are greater than 20% and the shallow dark clay to clay-loam soil has stones and boulders on the soil surface (Elliott 2014). The ecosystem canopy is typically dominated or co-dominated by deciduous

trees, including *Q. buckleyi* (Texas oak), and *Q. sinuata* var. *breviloba* (white shin oak), *Fraxinus texensis* (Texas ash), *Ulmus crassifolia* (cedar elm), and *Celtis laevigata* var. *reticulata* (netleaf hackberry) (Elliott 2014). Plateau live oak and Ashe juniper are often present and may be co-dominant with deciduous species in the ecosystem (Elliott 2014). Canopy closure is variable, and this ecosystem can be either forests or woodlands, with the shrub layer containing species including *Aesculus pavia* var. *flavescens* (red buckeye), *Cercis canadensis* var. *texensis* (Texas redbud), *Forestiera pubescens* (elbowbush), *Ungnadia speciosa* (Mexican buckeye), *Frangula caroliniana* (Carolina buckthorn), *Viburnum rufidulum* (rusty blackhaw), *Rhus* spp. (sumac), and *Vitis* spp. (grape) (Elliott 2014). *Carex planostachys* (cedar sedge) is often present with forbs such as *Salvia roemeriana* (cedar sage), *Lespedeza texana* (Texas lespedeza), and grasses such as little bluestem, and *Bouteloua* spp. (gramas) (Elliott 2014).

The Edwards Plateau Limestone Savanna and Woodland ecosystem occurs on Cretaceous limestones of the Lampasas Cutplain ecoregion (Elliott 2014). Soils are generally loams, clay loams, or clays, often with limestone parent material (Elliott 2014). It is an upland ecosystem of the Edwards Plateau and is typified by a mosaic of evergreen oak and juniper forests, woodlands and savannas over shallow soils of rolling uplands and adjacent upper slopes where limestone is present (Elliott 2013, 2014). Species such as plateau live oak and Ashe juniper often dominate the canopy of this system. Other canopy species may include Texas oak, cedar elm, Texas ash, white shin oak, and netleaf hackberry (Elliott 2013; 2014). The shrub layer may be fairly well-developed, containing overstory species, as well as species such as honey mesquite, *Diospyros texana* (Texas persimmon), *Mahonia trifoliata* (agarito), gum bumelia, *Opuntia engelmannii* (Engelmann pricklypear), and *Cylindropuntia leptocaulis* (tasajillo) (Elliott 2013). Many uplands have mottes of plateau live oak in a generally grass-dominated landscape, forming what has been referred to as a motte-savanna with little bluestem, sideoats grama, *Bothriochloa barbinodis* (cane bluestem), silver bluestem, Texas wintergrass, buffalograss, hairy grama, Texas grama, *Aristida purpurea* (purple threeawn), and *Carex planostachys* (cedar sedge) (Elliott 2013). The composition of the grassland component is affected by grazing, fire, and climate with shortgrass species such as buffalograss favored under heavy continuous grazing and/or dry climate (to the west), while mid- and tall-grasses are selected under more mesic conditions, more well-developed soils, and well-managed grazing (Elliott 2013). The herbaceous stratum may be dominated by non-native grass species, especially King Ranch bluestem (Elliott 2013).

The Edwards Plateau Limestone Shrubland ecosystem occurs on massive limestone with soils that are shallow and often stony (Elliott 2014). Soils are generally loams, clay loams, or clays, often with limestone parent material (Elliott 2014). This ecosystem may be represented by extensive continuous shrub cover, or occur as a discontinuous shrubland, often with scattered emergent overstory trees such as white shin oak, plateau live oak, and/or Ashe juniper (Elliott 2014). Shrub cover may be represented as an assemblage of a rather diverse array of species including *Rhus lanceolata* (prairie sumac), Texas redbud, elbowbush, Mexican buckeye, Texas persimmon, *Mimosa borealis* (fragrant mimosa), *Condalia hookeri* (brasil), skunkbush sumac, *Opuntia engelmannii* var. *lindheimeri* (Lindheimer pricklypear), and agarito (Elliott 2014). Herbaceous cover may be patchy and is generally graminoid with species including little bluestem, sideoats grama, Texas grama, silver bluestem, Texas wintergrass, *Erioneuron pilosum* (hairy tridens), threeawns, and others (Elliott 2014).

The Southeastern Great Plains Tallgrass Prairie ecosystem occurs in the Lower Cretaceous formation including various limestones, sands (such as from the Paluxy and Antlers formations), and calcareous clays (such as from the Walnut formation) (Elliott 2014). Soils of the Southeastern Great Plains Tallgrass Prairie in Texas differ from those of the Southern Blackland Prairie in being browner in color and containing more rock fragments, though much of the region and soils of this area are more frequently characterized as Mollisols, as opposed to the Vertisols more characteristic of the Blackland Prairie (Elliott 2014). Little bluestem tends to dominate sites of this ecosystem, with sideoats grama as another significant component. Other grasses that are frequently present include Texas wintergrass, silver bluestem, threeawns, big bluestem, buffalograss, tall dropseed, *Bouteloua hirsuta* (hairy grama), Indiangrass, *Muhlenbergia reverchonii* (seep muhly), *Chloris*

verticillata (tumble windmillgrass), and hairy tridens. Forbs species such as *Symphyotrichum ericoides* (heath aster), *Ambrosia psilostachya* (western ragweed), *Tragia ramosa* (catnip noseburn), *Amphiachyris dracunculoides* (common broomweed), *Dyschoriste linearis* (narrowleaf dyschoriste), *Salvia texana* (Texas sage), *Oenothera* spp. (evening primrose), *Stenaria nigricans* var. *nigricans* (prairie bluets), *Lindheimera texana* (Texas star), *Thelesperma* spp. (greenthread), *Dalea* spp. (prairie clover), and *Psoralidium* spp. (scurfpea) may be encountered. Occurrences often contain and are sometimes dominated by the non-native grasses King Ranch bluestem or bermudagrass (Elliott 2014).

The Southeastern Great Plains Floodplain Forest ecosystem generally occupies Quaternary alluvium (Elliott 2014). Bottomland loamy, sandy, and clayey soils characterize this ecosystem (Elliott 2014). Dominant communities within this ecosystem range from floodplain forests to wet meadows to gravel/sand flats; however, they are linked by underlying soils and the flooding regime (Elliott 2014). Canopy dominants may include *Carya illinoensis* (pecan), *F. americana* (white ash), cedar elm, sugarberry, *Ulmus americana* (American elm), plateau live oak, *Acer negundo* (boxelder), *Gleditsia triacanthos* (common honeylocust), *Q. macrocarpa* (bur oak), *Morus rubra* (red mulberry), *F. pennsylvanica* (green ash), *Sapindus saponaria* var. *drummondii* (western soapberry), and especially along river margins, species such as *Populus deltoides* (eastern cottonwood) and *Salix nigra* (black willow) may dominate (Elliott 2014). Overgrazing and/or overbrowsing, mainly by cattle, white-tail deer, and American beaver may influence recruitment of overstory species and composition of the understory and herbaceous layers (Rosiere et al. 2013; Elliott 2014; Nelson et al. 2018). In an investigation of the Bosque River in Erath County, sugarberry and cedar elm were dominant canopy species (Rosiere et al. 2013). Shrub species may include *Cephalanthus occidentalis* (common buttonbush), *Ilex decidua* (possumhaw), gum bumelia, *Diospyros virginiana* (common persimmon), eastern redcedar, *Cornus drummondii* (roughleaf dogwood), and *Viburnum rufidulum* (rusty blackhaw) (Elliott 2014). Gum bumelia was a common, native shrub species on the Bosque River in Erath County (Rosiere et al. 2013). Vines or lianas such as *Berchemia scandens* (Alabama supplejack), *Campsis radicans* (common trumpet creeper), *Vitis* spp. (grape), *Parthenocissus quinquefolia* (Virginia creeper), *Toxicodendron radicans* (poison ivy), *Smilax bona-nox* (saw greenbrier), and *Ampelopsis* spp. (peppervine) may be conspicuous (Elliott 2014). Native lianas occurring along the Bosque River in Erath County included common trumpet creeper, *Vitis mustangensis* (Mustang grape), Virginia creeper, poison ivy, and saw greenbrier (Rosiere et al. 2013). Herbaceous cover in the ecosystem includes *Elymus* spp. (wildrye), *Verbesina virginica* (frostweed), *Chasmanthium* spp. (wood oats), *Carex* spp. (caric sedges), *Tripsacum dactyloides* (eastern gamagrass), *Symphyotrichum* spp. (asters), *Calyptocarpus vialis* (straggler daisy), *Geum canadense* (white avens), *Sanicula canadensis* (Canada snakeroot), *A. trifida* (giant ragweed), *Panicum virgatum* (switchgrass), *Galium* spp. (bedstraws), and *Teucrium canadense* (American germander) (Elliott 2014). Wetter sites may contain species such as *Rhynchospora* spp. (beaksedges), *Eleocharis* spp. (spikerushes), and *Nymphaea odorata* (American waterlily) (Elliott 2014). Herbaceous species on the Bosque River in Erath County were dominated by *Elymus canadensis* (Canada wildrye) with frostweed, wood oats, caric sedges, giant ragweed, and bedstraws also sampled (Rosiere et al. 2013). One relatively common native species sampled on both the Bosque (Rosiere et al. 2013) and Colorado (Nelson et al. 2018) rivers was *Rivinia humilis* (pigeonberry). Non-native grasses that may dominate these sites include bermudagrass, King Ranch bluestem, and *Sorghum halepense* (Johnsongrass). None of these introduced grasses were sampled on the Bosque River in Erath County, but other perhaps less common introduced grasses were sampled (Rosiere et al. 2013). Non-native trees like *Melia azedarach* (chinaberry) may be present (Elliott 2014). At the Bosque River, chinaberry was present as were a number of other introduced woody plants (Rosiere et al. 2019).

Agricultural and other human-related types identified during the TEAM analysis consists of four categories (TPWD 2020) including Improved Grasslands, Grass Farms, Orchards, and Urban Types. Improved Grasslands of highly managed areas, sometimes dominated by non-native grasses such as bermudagrass, Johnsongrass, and *Panicum coloratum* (kleingrass) (Elliott 2014), are a common association that occurs in Erath County. Grass Farms are dominated by bermudagrass and consist of golf course fairways and greens, yards, as well as hay farms that are fertilized and irrigated. Hay Farms include areas of moist soil and

fast-growing, highly productive grassland (Elliott 2014). Orchards are plantings of fruit or nut trees and Row Crops—all cropland where fields are fallow for some portion of the year (Elliott 2014). Urban types include areas that are built up but not entirely covered by impervious cover, including most of the area within cities and towns or built-up areas and wide transportation corridors dominated by impervious cover (Elliott 2014). Azonal types are those map types that are widespread across the state and not particularly characteristic of any region or naturally occurring vegetation type, possibly due to disturbance, where wide-ranging species adapted to disturbed conditions predominate (Elliott 2014). In addition, azonal types may be used to refer to general physiognomic types that are not ascribable to particular naturally occurring systems (Elliott 2014). Azonal types consist of four mapped categories related to Erath County, which are Barren, Marshes, Native Invasives, and Open Water.

The Barren category includes areas where little or no vegetative cover existed at the time of TEAMS data collection (Elliott 2014). This includes large areas cleared for development, rural roads and buildings and associated clearing in primarily rural areas, streambeds with exposed gravel or bedrock, rock outcrop, quarries, mines, and fallow fields or areas within cropland blocks that remain barren throughout one growing season or heavily grazed pastures where bare soils are dominant (Elliott 2014). Swadek and Burgess (2012) describe glades associated with Walnut limestone in northern Erath County as having thin soil and patchy vegetation typically with less than 50% vegetative cover. *Dalea reverchonii* (Comanche Peak prairie clover) along with other calciophiles and succulents occur most often in Walnut glades (Swadek & Burgess 2012; Taylor & O'Kennon 2013; Nelson & Kieschnick 2016). Areas mapped as marshes are small, and consist of wet or alternately wet and dry soils with herbaceous vegetation, often near tanks or ponds, and may contain *Typha* spp. (cattails), spikerushes, *Schoenoplectus* spp. (bulrushes), other sedges, *Polygonum* spp. (smartweeds) and grasses such as Johnsongrass or bermudagrass (Elliott 2014). In addition, some shrubs such as common buttonbush and black willow may be important in this category (Elliott 2014). The Native Invasive category includes various species of juniper or honey mesquite that dominate shrubland ecosystems (Elliott 2014). A variety of deciduous species may also be present, including cedar elm, *U. alata* (winged elm), sugarberry, and others (Elliott 2014). Large lakes, rivers, and ephemeral ponds are identified as Open Water (Elliott 2014). Areas classified in the Open Water category may support vegetation with pioneering species such as black willow, eastern cottonwood, *Juncus* spp. (rushes), sedges, cattails, and spikerushes (Elliott 2014). In addition to communities identified using TEAM for Erath County, a deep-sand community designated as a sand post oak-saw greenbrier (*Quercus margarettiae*-*Smilax bona-nox*) community is known based on the dominant tree and shrub species (Rosiere et al. 2018). This scrub forest community consisted of three layers: 1) a closed canopy of sand post oak and blackjack oak (*Q. marilandica*); 2) a shrub layer of mostly of Eastern pricklypear (*Opuntia humifusa*) and gum bumelia including saw greenbrier, a liana that extended into the tree canopy; and 3) an irregular understory of herbaceous plants dominated by white-hair panic (*Panicum acuminatum* var. *villosun*) and horseweed (*Conyza canadensis*) (Rosiere et al. 2018).

In addition to ecological investigations, several floristic studies have been done on the county or in larger regions that include Erath County. In floristic studies of the county, Lula C. Gough compiled the earliest flora as part of her Master's degree requirements for the University of Texas (Gough 1923). Her work, which occurred from 1921 to 1923, excluded the families of Poaceae and Cyperaceae (Gough 1923). Next, Diggs et al. (1999) listed the area's native, endemic, introduced, and naturalized species in a published flora of North Central Texas (NCT). Working within Erath County, Parker (2001) listed the woody species that occurred on Hunewell Ranch, which is owned by Tarleton State University. Turner et al. (2003a, 2003b) published an atlas of statewide flora, but at the time did not have sufficient information to record many plants that occur in Erath County. Lastly, Poole et al. (2007) listed information on rare plants occurring in Texas.

METHODS

Field work was conducted from September 2003 to December 2009 at 35 sites (Table 1) throughout the county (Fig. 2). Sites were visited at least monthly for the duration of the study in all seasons. Specimens were

TABLE 1. Study sites within Erath County, Texas, surveyed for plant specimens.

Site No./Study Site	Coordinates	Closest Town/Intersection
1 Tarleton Agricultural Center	32°14.889'N, 98°12.602'W	0.1 mi N of Hwy 8 & College Farm Rd. Stephenville, TX
2 Patillo, TX	32°12.881'N, 98°12.208'W	1.8 mi W of intersection of Hwy 281 & CR 144. Patillo, TX
3 Hunewell Ranch	32°12.901'N, 98°06.147'W	2.6 mi E of intersection of Hwy 67 & CR 182. Stephenville, TX
4 Morgan Mill, TX, CR 163	32°23.051'N, 98°10.550'W	1.4 mi W of intersection of CR 163 & 281. Morgan Mill, TX
5 Walter's Property	32°08.804'N, 98°15.660'W	0.5 mi S of intersection of CR 299 & CR 298. Dublin, TX
6 Bishop Cemetery	32°29.031'N, 98°06.303'W	2 mi NW of intersection of 1189 & CR 146
7 Dublin, TX, CR 304	32°05.319'N, 98°17.680'W	Intersection of Hwy 6 & CR 304. Dublin, TX
8 CR 316	32°02.017'N, 98°17.796'W	Intersection of CR 219 & CR 316
9 Live Oak Cemetery	32°05.203'N, 98°19.485'W	On Hwy 6, 1.2 mi W of intersection with Hwy 377. Dublin, TX
10 Dublin, TX, CR 347	32°05.751'N, 98°22.598'W	Intersection of CR 347 & Hwy 6. Dublin, TX
11 Griswald Property	32°25.977'N, 98°18.174'W	1 mi SE of intersection of CR 126 & Hwy 1188. Huckabay, TX
12 Huckabay, TX, CR 713	32°20.495'N, 98°16.961'W	Intersection of CR 713 & Hwy 108. Huckabay, TX
13 Sudman Property	32°15.698'N, 98°08.416'W	0.8 mi S of intersection of Hwy 377 & CR 180
14 Acrea Cemetery	32°19.284'N, 98°06.640'W	1 mi N of intersection of CR 150 & Hwy 377
15 Paluxy River	32°21.267'N, 98°01.559'W	0.2 mi N of intersection of Hwy 377 & CR 149. Bluffdale, TX
16 Bluff Dale, TX	32°18.053'N, 98°00.024'W	Intersection of Bluegill Ridge & Jimmy Houston Way in Mountain Lakes Housing Development. Bluffdale, TX
17 Thurber, TX, Gordon Center	32°30.227'N, 98°24.799'W	1 mi E of exit 367 on I-20 at Tarleton State University W.K. Gordon Center
18 Thurber, TX, CR 107	32°30.236'N, 98°25.979'W	5 mi N of intersection of CR 107 & CR 400. Thurber, TX
19 Indian Creek Cemetery	32°08.070'N, 98°08.905'W	0.9 mi E of intersection of Indian Creek Cemetery Rd & Hwy 281
20 Johnsville Cemetery	32°08.756'N, 98°01.888'W	0.4 mi E of intersection of Hwy 2481 & CR 208
21 CR 204	32°08.796'N, 97°59.494'W	1.4 mi S of intersection of Hwy 67 & CR 204
22 Duffau, TX, CR 213	32°04.885'N, 98°01.279'W	5.7 mi S of intersection of Hwy 2481 & Hwy 67. Duffau, TX
23 Alexander Cemetery	32°03.490'N, 98°12.797'W	0.4 mi SW of intersection of Hwy 914 & Hwy 6
24 Turnbow Cemetery	32°00.412'N, 98°11.807'W	0.2 mi E of intersection of CR 543 & CR 263
25 Purves Live Oak Cemetery	32°00.745'N, 98°17.606'W	0.7 mi SW of intersection of Hwy 219 & CR 317
26 Lingleville Cemetery	32°14.550'N, 98°21.964'W	0.1 mi S of intersection of Hwy 8 & CR 538
27 Lowell Cemetery	32°15.271'N, 98°28.366'W	Intersection of CR 397 & Hwy 8
28 Old School Hill Cemetery	32°20.276'N, 98°27.876'W	7 mi N of intersection of Hwy 8 & CR 397
29 Bunyan Cemetery	32°09.979'N, 98°22.446'W	0.6 mi W of intersection of CR 372 & Hwy 219. Bunyan, TX
30 Edna Hill, TX, CR 326	31°57.067'N, 98°19.695'W	Intersection of CR 326 & Hwy 1702. Edna Hill, TX
31 Clairette, TX	32°02.367'N, 98°07.450'W	CR 270 between Hwy 6 and Two Rivers Ranch
32 Thurber Cemetery	32°30.674'N, 98°25.097'W	0.1 mi S of intersection of Hwy 108 & PR 741
33 Oak Dale Cemetery	32°17.127'N, 98°14.973'W	0.1 mi W of intersection of Hwy 108 & CR 429
34 Stephenville City Park	32°12.880'N, 98°12.213'W	0.3 mi W of intersection of park drive with S Graham St
35 Bosque River	32°22.360'N, 98°19.935'W	Floodplain of river in eastern city limits of Stephenville, TX

processed at the Tarleton State University Herbarium (TAC) using standard herbarium procedures (Diggs et al. 1999). Each specimen was identified and classified as native, endemic, or introduced using *Shinners and Mahler's Illustrated Flora of North Central Texas* (Diggs et al. 1999) and taxonomy was updated to that available at the Angiosperm Phylogenetic Group (Stevens 2001), Powell and Worthington (2018), and treatments available in the Flora of North America (www.efloras.org). Plants were compared to those listed on the Texas State-listed Noxious Weeds (USDA NRCS 2018), state threatened and endangered plant species list (Texas Parks and Wildlife Department 2020), and rare plants of Texas (Poole et al. 2007). The Gough (1923) species list was used as a baseline, and our specimens were added to the list of vascular plant flora known from Erath County. Her herbarium collections at TAC were annotated according to taxonomy in Diggs et al. (1999) and then updated (Stevens 2001; Powell and Worthington 2018). In addition, specimen data were obtained from SEInet Regional Networks of North American Databases from the Texas and Oklahoma Regional Consortium of

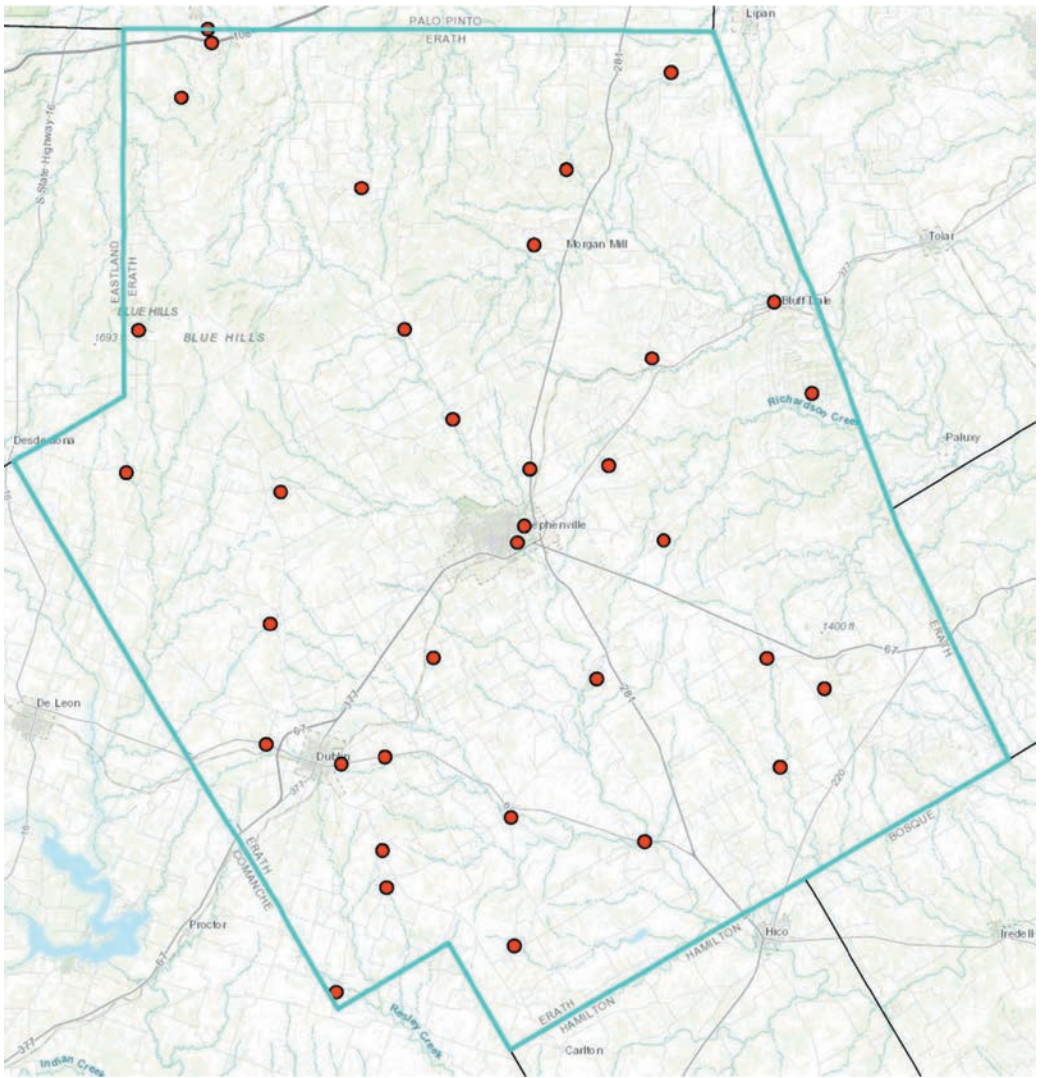


FIG. 2. Thirty-five sites from which plants were collected in Erath County, Texas, U.S.A.

Herbaria (TORCH) website. Herbarium specimens from this analysis are included from the Botanical Research Institute of Texas Herbarium (BRIT); Florida State University’s Robert K. Godfrey Herbarium (FSU); Furman University, Ives Herbarium (FUGR); Howard Payne University Herbarium (HPC); Tarleton State University Herbarium (TAC); The Missouri Botanical Garden’s Herbarium (MOBOT); The University of Massachusetts Herbarium, Amherst (AC); The EL Reed Herbarium at Texas Tech University (TTC); The University of Georgia Herbarium (GA); The University of Tennessee Herbarium (UTC); The University of Texas at Austin Billie L. Turner Plant Resources Center (LL & TEX); The University of Texas at El Paso Herbarium (UTEP); The William and Lynda Steere Herbarium of the New York Botanical Garden (NY); Pittsburg State University, Theodore M. Sperry Herbarium (KSP); and University Arizona Herbarium (AZ).

Even though we have included a number of data sources, it should be noted that the flora of Erath County is not complete. Much of Erath County is private land and many of our collections are from road right-of-ways,

bridge access to rivers that were not fenced, university properties, city parks, and cemeteries. We collected from two private ranches, but a large proportion of the county is not accessible. In addition, there are a number of conservation lakes that are privately owned that we were unable to access. Therefore, this county flora will undoubtedly increase in numbers as more private properties become available for botanical collection. Here, we present the flora that was available at 35 sites (Table 1; Fig. 2) and those listed online from 16 herbaria.

RESULTS

There were 870 total species (888 taxa) collected from Erath County with 144 taxa being introduced and 18 being endemic to Texas. Native taxa numbered 726 in the county. One lycophyte, six polypodiophytes, three gymnosperms, and 860 angiosperms were identified from Erath County in NCT. Of angiosperm species, 688 were eudicots and 172 were monocots. *Arundo donax* (giant reed), *Convolvulus arvensis* (field bindweed), *Tamarix chinensis*, and *T. gallica* (salt-cedars) occurred on the state noxious weeds list (USDA 2018). *Dalea reverchonii* (Comanche Peak prairie clover) and *Penstemon guadalupensis* (Guadalupe Penstemon) were considered rare (Poole et al. 2007). No threatened or endangered species (TPWD 2017) for the state were identified.

DISCUSSION

Floristic comparison to NCT

The 870 species (Appendix) comprise 39.1% of the total species found in NCT (2223; Diggs et al. 1999). Of the 394 introduced plants in NCT (Diggs et al. 1999), 144 were collected in Erath County. Ninety-nine endemic species occur in Texas (Diggs et al. 1999), with 18 species being recorded from Erath County during this study. One new lycophyte, *Isoetes butleri* (limestone quillwort) and six new polypodiophytes, were collected for NCT, including *Adiantum capillus-veneris* (southern maidenhair), *Azolla caroliniana* (mosquito fern), *Equisetum hyemale* (tall scouring-rush), *Pellaea atropurpurea* (purple cliff-brake), *P. wrightiana* (Wright's cliff brake), and *Woodsia obtusa* subsp. *occidentalis* (common woodsia). Gough (1923) had collected two additional peridophytes: *Asplenium resiliens* (blackstem spleenwort), and *Pellaea wrightiana* (Wright's cliff-brake). No new species of gymnosperms were collected for NCT other than those initially reported by Gough (1923), which included *Juniperus asheii* (mountain cedar), *J. pinchotii* (redberry juniper), and *J. virginiana* (eastern redcedar). Of angiosperms, 19.8% of those collected were monocots in Erath County as compared to 26.2% in NCT. Eudicots comprised 73.8% for the NCT region, while 80.2% were eudicots in the Erath County investigation. North Central Texas has 17% of total flora being introduced species with 16.2% of those collected in Erath County being introduced species. Lower numbers of monocots in the flora of Erath County may be due to undercollection of grasses and sedges, whereas higher numbers of eudicots could be due to introductions of eudicots as weeds during agricultural activities in the county.

Floristic comparison to Gough (1923)

In her study on the flora of Erath County, Gough (1923) collected 400 plant species across 90 families even though she did not collect any specimens for the Cyperaceae or Poaceae. The present investigation added to the floristic knowledge of Erath County by identifying 870 species across 103 families. Native species dominated in this study and in Gough's (1923). However, 144 introduced species (including two sedges and 47 grasses) were collected in this study as compared to 36 (all eudicots) in Gough (1923). The large numbers of introduced species is mostly because the Poaceae and Cyperaceae families were not examined in the Gough study in 1923. However it may be significant that 95 introduced eudicots were collected in this investigation. This increase could be due to increasing introductions over the last century or undercollection of species by Gough (1923), or a combination of the two hypotheses. Fifteen of the 18 endemic species reported in this study were new to Gough's 1923 county flora. She reported only three species that were Texas endemics—*Juncus texanus* (Texas rush), *Silphium albiflorum* (white rosinweed), and *Teucrium cubense* var. *laevigata* (annual germander).

The majority of species in Gough's (1923) study were eudicots, and they dominated this investigation as

well (80.2%). The dominant eudicot families Gough (1923) reported and those found for this study were the Asteraceae and Fabaceae. The two most dominant monocot families reported by Gough (1923) were the Liliaceae and Commelinaceae, while the most dominant monocot families found in this study were the Poaceae and Cyperaceae. The differences in the dominant monocot families was due to the omission of grasses (Poaceae) and sedges (Cyperaceae) from her study by Gough (1923). Dominance of native species was common to both investigations, making up 91% of Gough's (1923) collection and 83.8% of this study. Gough (1923) found four families of nonflowering plants during her study: Aspleniaceae (spleenwort fern), Cupressaceae (junipers), Equisetaceae (horsetails), and Pteridaceae (maidenhair fern). This investigation added three new non-flowering plant families: Isoeteaceae, Salviniaceae (mosquito fern) and Woodsiaceae (wood fern).

Erath County floristic records and major range extensions

Harsley and Nelson (2010), Cowley and Nelson (2016), and Turner and Nelson (2017) previously published on new county records and range extensions for Erath County using data from this county flora and known distributions from Turner et al. (2003a; 2003b). Harsley and Nelson (2010) collected 98 species that were new records for Erath County with 35 being major range extensions (defined as not directly bordering Erath County) for the Western Cross Timbers. Cowley and Nelson (2016) collected 105 new records for Erath County and 79 major range extensions for the WCT. Turner and Nelson (2017) found 119 new species records from Erath County and 54 taxa were county records with 65 taxa considered major range extensions into the WCT. This new county flora has provided much new information on plant distribution that was previously not available in Turner et al. (2003a; 2003b).

Unvouchered specimens

Twenty-two species (3%) were listed by Gough (1923) as occurring in Erath County but are not tied to available voucher specimens and are thus designated as "no specimen available" (NSA) in Appendix. Specimens could have been lost in herbarium moves, destroyed by insects, or perhaps voucher specimens were not made. We collected in habitats occurring in the 35 sites sampled where the 22 species could occur, but were unable to locate these specimens and include them in this investigation.

APPENDIX

Annotated Checklist for Erath County, Texas arranged alphabetically by family. Common names for species are included in brackets. Plants that are native (N) to the United States, endemic to Texas (E), and introduced (I) are indicated Diggs et al. 1999). Species marked with an asterisk (*) indicate specimens first documented by Gough (1923). Some specimens from Gough (1923) have been lost from the TAC collection or vouchers were not made, and these are indicated by the bolded designation "NSA," which signifies that there is no specimen available.

Acanthaceae

Dyschoriste linearis (Torr. & A. Gray) Kuntze [snakeherb]*, N, TAC00001
Justicia americana (L.) Vahl [American water-willow]*, N, TEX00031255
Ruellia caroliniensis (J.F. Gmel.) Steud. [small-flower ruellia], N, TAC06266
Ruellia drummondiana (Nees) A. Gray [Drummond's ruellia], E, TAC06268
Ruellia humilis Nutt. [prairie-petunia]*, N, TAC02

Alismataceae

Echinodorus berteroi (Spreng.) Fassett [burhead], N, TAC06563
Sagittaria latifolia Willd. [Common arrowhead], N, TAC00370.
Sagittaria platyphylla (Engelm.) J.G. Sm. [delta arrowhead]*, N, TAC00004

Amaranthaceae

Alternanthera caracasana Kunth [mat chaff-flower], N, TAC06243
Amaranthus albus L. [tumbleweed]*, N, TAC00005
Amaranthus blitoides L. [prostrate pigweed]*, N, TAC00006
Amaranthus hybridus L. [slender pigweed]*, N, TAC00007

Amaranthus palmeri S. Watson [carelessweed], N, TAC04457
Amaranthus retroflexus L. [red-root pigweed]*, N, TAC00008
Amaranthus rudis J.D. Sauer [Nuttall's water-hemp], I, TAC06155
Amaranthus spinosus L. [spiny pigweed]*, I, TAC00009
Froelichia floridana (Nutt.) Moq. [field snake-cotton]*, N, TAC00010
Froelichia gracilis (Hook.) Moq. [slender snake-cotton]*, N, TAC06830.
Gossypianthus lanuginosus (Poir.) Moq. var. *tenuiflorus* (Hook.) Mears ex Henr. [lance-leaf cotton-flower]*, N, TAC00011

Amarylilidaceae

Allium ampeloprasum L. [wild leek], I, TAC06443
Allium drummondii Regel [Drummond's onion], N, TAC04767
Allium canadense L. var. *canadense* [wild garlic], N, TAC06164
Allium canadense L. var. *fraseri* G.B. Ownbey [wild onion], N, TAC04766
Allium canadense L. var. *hyacinthoides* (Bush) Ownbey & Aase [wild onion]*, N, TAC00215
Nothoscordum bivalve (L.) Britton [crow-poison]*, N, TAC00219
Zephyranthes chlorosolen (Herb.) D. Dietr. [cebolla], NTAC00218
Zephyranthes drummondii D. Don [prairie rain-lily]*, N, TAC02685

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Anacardiaceae

- Rhus copallinum* L. var. *latifolia* Engl. [flame-leaf sumac]*, N, TAC00012
Rhus glabra L. [smooth sumac]*, N, TAC00013
Rhus lanceolata (A. Gray) Britton [prairie sumac], N, 4459
Rhus trilobata Nutt. [skunkbush]*, N, TA C04463
Toxicodendron pubescens Mill. [Eastern poison-oak], N, TAC00446
Toxicodendron radicans (L.) Kuntze [poison-oak]*, N, TAC00014

Apiaceae

- Ammoselinum popei* Torr. & A. Gray [no common name], N, BRIT490093
Bowlesia incana Ruiz & Pav. [hoary bowlesia], I, BRIT39954
Bupleurum rotundifolium L. [round-leaf thoroughwax], I, BRIT498209
Chaerophyllum tainturieri Hook. var. *dasycarpum* Hook. ex S. Watson [hairy-fruit chervil], N, TAC04464
Chaerophyllum tainturieri Hook. var. *tainturieri* [chervil], N, TAC04466
Conium maculatum L. [poison hemlock]*, I, TAC00015
Cymopterus macrorrhizus Buckley [big-root wavewing], N, TAC04468
Daucus pusillus Michx. [southwestern carrot]*, N, TAC00016
Eryngium leavenworthii Torr. & A. Gray [Leavenworth's eryngo]*, N, TAC00017
Hydrocotyle verticillata var. *triradiata* (A. Rich.) Fernald, N, TAC06225
Lomatium foeniculaceum (Nutt.) J.M. Coult. & Rose subsp. *daucifolium* (Torr. & A. Gray) Theobald [carrot-leaf lomatium]*, N, **NSA**
Polytaenia nuttallii DC. [prairie-parsley], N, TAC04471
Ptilimnium nuttallii (DC.) Britton [Nuttall's mock bishop's-weed], N, TAC00018
Sanicula canadensis L. [Canada sanicle]*, N, TAC00019
Spermolepis echinata (Nutt. ex DC.) A. Heller [beggar's-lice]*, N, TAC00020
Spermolepis inermis (Nutt. ex DC.) Mathias & Constance [spreading scaleseed], N, TAC06284
Torilis arvensis (Huds.) Link [hedge-parsley], I, TAC04475
Torilis nodosa (L.) Gaertn. [knotted hedge-parsley]*, I, TAC03762

Apocynaceae

- Amsonia ciliata* Walter var. *texana* (A. Gray) J.M. Coult. [Texas slimpod]*, N, TAC4476
Apocynum cannabinum L. [prairie dogbane]*, N, TAC00023
Asclepias asperula (Decne.) Woodson subsp. *capricornu* (Woodson) Woodson [antelope-horns]*, N, TAC00025
Asclepias oenotheroides Cham. & Schltdl. [sidecluster milkweed], N, TAC06293
Asclepias stenophylla A. Gray [slim-leaf milkweed], N, TAC06576
Asclepias tuberosa L. subsp. *interior* Woodson [butterfly milkweed]*, N, TAC00026
Asclepias verticillata L. [whorled milkweed], N, TAC04480
Asclepias viridis Walter [green milkweed]*, N, (TAC0082)
Cynanchum laeve (Michx.) Pers. [bluevine]*, N, **NSA**
Cynanchum racemonsum (Jacq.) Jacq. var. *unifarium* (Scheele) Sundell, N, TAC06435
Matelea biflora (Raf.) Woodson [two-flowered milkvine]*, N, TAC00028
Vinca major L. [big-leaf periwinkle], I, TAC04477
Vinca minor L. [common periwinkle]*, I, **NSA**

Aquifoliaceae

- Ilex decidua* Walter [deciduous holly], N, TAC04228

Araceae

- Arisaema dracontium* (L.) Schott [green-dragon]*, N, TAC00024

Asparagaceae

- Asparagus officinalis* L. [garden asparagus], I, TEX00318934
Camassia scilloides (Raf.) Cory [wild hyacinth]*, N, TAC00217
Yucca arkansana Trel. [Arkansas yucca]*, N, (TAC06292)
Yucca constricta Buckley [Buckley's yucca], E, TAC06159
Yucca pallida McKelvey [pale-leaf yucca], E, TAC04455
Yucca rupicola Scheele [Texas yucca], E, TAC05209
Yucca torreyi Shafer [Spanish-dagger]*, N, **NSA**

Aspleniaceae

- Asplenium resiliens* Kunze [black-stem spleenwort]*, N, TAC00029

Asteraceae

- Achillea millefolium* L. [common yarrow]*, N, TAC00030
Ambrosia artemisiifolia L. [common ragweed]*, N, TAC00031
Ambrosia psilostachya DC. [western ragweed]*, N, TAC00115
Ambrosia trifida L. var. *texana* Scheele [giant ragweed]*, N, TAC00032
Amphichyris amoena (Shinners) Solbrig. [annual broomweed], N, TAC04520
Amphichyris dracunculoides (DC.) Nutt. [common broomweed], N, TAC04522
Aphanostephus ramosissimus DC. [plains lazy daisy], N, BRIT01731
Aphanostephus skirrhobasis (DC.) Trel. [Arkansas lazy daisy]*, N, TAC00033
Arnoglossum plantagineum Raf. [prairie-plantain]*, N, TAC00034
Artemisia ludoviciana Nutt. subsp. *mexicana* (Willd. ex Spreng.) D.D. Keck [Mexican sagebrush]*, N, TAC00035
Astranthium integrifolium (Michx.) Nutt. subsp. *ciliatum* (Raf.) DeJong [blue daisy], N, TAC00036
Baccharis neglecta Britton [Roosevelt-weed], N, TAC06314
Baccharis texana (Torr. & A. Gray) A. Gray [prairie baccharis], N, TAC04233
Bidens aristosa (Michx.) Britton [bearded beggar-ticks], N, KSP009206
Bidens frondosa L. [beggar-ticks], N, TAC04234
Bidens bipinnata L. [Spanish-needles]*, N, TAC00037
Calyptocarpus vialis Less. [horse herb], N, TAC06744
Centaurea americana Nutt. [basket-flower], N, TAC04493
Centaurea cyanus L. [Bachelor-button]. I. TAC00810
Chaetopappa asteroides Nutt. ex DC. [common least daisy]*, N, TAC04235
Cirsium texanum Buckley [Texas thistle], N, TAC04495
Cirsium undulatum (Nutt.) Spreng. [wavy-leaf thistle]*, N, TAC00038
Conoclinium coelestinum (L.) DC. [mistflower], N, TAC00858
Conzya canadensis (L.) Cron. var. *glabrata* (A. Gray) Cron. [horsetweed]*, N, TAC00039
Conzya ramosissima Cronquist*, N, [low fleabane] TAC00040
Coreopsis basilis (A. Dietr.) S.F. Blake [golden-mane coreopsis]*, N, AZ25485
Coreopsis tinctoria Nutt. [Plains coreopsis], N, TAC00835
Crepis pulchra L. [Showy hawk's-beard], I, TAC04402
Croptilon divaricatum (Nutt.) Raf. [slender goldenweed], N, TAC06313
Croptilon hookerianum (Torr. & A. Gray) House var. *hookerianum* [no common name], N, TAC06556
Croptilon hookerianum (Torr. & A. Gray) House var. *validum* (Rydb.) E.B. Sm., N, TAC06571
Diaperia candida (Torr. & A. Gray) Benth. & Hook., [silver evax]*, N, TAC00045
Diaperia prolifera (Nutt. ex DC.) Nutt. [big-head evax], N, TAC04503
Diaperia verna (Raf.) Morefield [many-stem evax]*, N, TAC00046

- Dracopis amplexicaulis* (Vahl) Cass. [clasping coneflower]*, N, TAC00041
- Dysodiopsis tagetoides* (Torr. & A. Gray) Rydb. [marigold dogweed], N, BRIT285179
- Echinacea angustifolia* DC. [blacksamson], N, TAC04498
- Eclipta prostrata* (L.) L. [pieplant], N, TAC04239
- Engelmannia peristenia* (Raf.) Goodman & C.A. Lawson [Engelmann's daisy]*, N, TAC00042
- Erigeron flagellaris* A. Gray [trailing fleabane], N, LL00010622
- Erigeron modestus* A. Gray [plains fleabane], N, TAC04241
- Erigeron philadelphicus* L. [Philadelphia fleabane], N, TAC00871
- Erigeron strigosus* Muhl. ex Willd. var. *beyrichii*, N, TAC06413
- Erigeron strigosus* Muhl. ex Willd. var. *strigosus* [prairie fleabane], N, TAC04505
- Erigeron tenuis* Torr. & A. Gray [slender fleabane], N, TAC06474
- Eupatorium serotinum* Michx. [late eupatorium]*, N, TAC00044
- Gaillardia aestivalis* (Walter) H. Rock var. *aestivalis* [lance-leaf gaillardia], N, TAC04506
- Gaillardia pulchella* Foug. [Indian-blanket]*, N, TAC00047
- Gaillardia suavis* (A. Gray & Engelm.) Britton & Rusby [rayless gaillardia]*, N, TAC00048
- Gamochaeta falcata* (Lam.) Cabrera [no common name], I, TAC00938
- Gamochaeta pensylvanica* (Willd.) Cabrera [cudweed], N, TAC06415
- Gamochaeta purpurea* (L.) Cabrera [purple cudweed]*, N, TAC00049
- Grindelia lanceolata* Nutt. [gulf gumweed], N, TAC04515
- Grindelia nuda* A.W. Wood [rayless gumweed], N, TAC04519
- Grindelia papposa* G.L. Nesom & Y.B. Suh [saw-leaf daisy], N, TAC06514
- Grindelia squarrosa* (Pursh) Dunal [curly-cup gumweed]*, N, TAC00050
- Gutierrezia sarothrae* (Pursh) Britton & Rusby, [broom snakeweed], N, BRIT299474
- Gutierrezia texana* (DC.) Torr. & A. Gray [Texas broomweed]*, N, TAC00051
- Helenium amarum* (Raf.) H. Rock var. *amarum* [bitterweed], N, TAC6130
- Helenium amarum* (Raf.) H. Rock var. *badium* (A. Gray ex S. Watson) Waterfall [Basin sneezeweed]*, N, TAC00052
- Helenium elegans* DC., N, [no common name] TAC04528
- Helenium microcephalum* DC. [small-head sneezeweed], N, TAC06560
- Helianthus annuus* L. [common sunflower], N, TAC04248
- Helianthus grosseserratus* M. Martens [saw-tooth sunflower]*, N, TAC00053
- Helianthus hirsutus* Raf. [hairy sunflower], BRIT307596
- Helianthus maximiliani* Schrad. [Maximilian sunflower]*, N, TAC05725
- Helianthus petiolaris* Nutt. [plains sunflower]*, N, TAC00054
- Heterotheca canescens* (DC.) Shinnars [gray gold-aster], N, TAC04533
- Heterotheca subaxillaris* (Lam.) Britton & Rusby [camphorweed]*, N, TAC04534
- Heterotheca villosa* (Pursh) Shinnars [narrow-leaf gold-aster]*, N, TAC00055
- Hymenopappus artemisiifolius* DC. [wild cauliflower], N, TAC06485
- Hymenopappus scabiosaeus* L'Her. var. *corymbosus* (Torr. & A. Gray) B.L. Turner [old-plainsman]*, N, TAC00056
- Hymenopappus tenuifolius* Pursh. [chalkhill wooly-white]*, N, TAC00057
- Iva angustifolia* Nutt. ex DC. [narrow-leaf sumpweed]*, N, TAC00058
- Iva annua* L. [sharp-bract sumpweed]*, N, TAC00059
- Krigia cespitosa* (Raf.) K.L. Chambers var. *cespitosa* [weedy dwarf-dandelion], N, TAC01004
- Krigia occidentalis* Nutt. [western dwarf-dandelion]*, N, TAC00060
- Lactuca ludoviciana* (Nutt.) Riddell [western wild lettuce]*, N, **NSA**
- Lactuca serriola* L. [prickly lettuce]*, I, TAC00061
- Liatris mucronata* DC. [narrow-leaf gayfeather]*, N, TAC00062
- Lindheimera texana* Engelm. & A. Gray [Texas-star]*, N, TAC00063
- Lygodesmia texana* (Torr. & A. Gray) Greene [Texas skeleton-plant]*, N, TAC06644
- Marshallia caespitosa* Nutt. ex DC. *, N, TAC00064
- Melampodium leucanthum* Torr. & A. Gray [rock daisy], N, TAC06596
- Packera plattensis* (Nutt.) Á. Löve & D. Löve [prairie groundsel], N, TAC04549
- Packera tampicana* (DC.) C. Jeffery [yellowtop], N, TAC04253
- Palafoxia callosa* (Nutt.) Torr. & A. Gray [small palafoxia]*, N, TAC00065
- Parthenium hysterophorus* L. [false ragweed]*, N, TAC00066
- Pinaropappus roseus* (Less.) Less. [small rock-lettuce], N, TAC06149
- Pluchea odorata* (L.) Cass. [canela]*, N, TAC00067
- Pseudognaphalium obtusifolium* (L.) Hill. & Burt. [fragrant cupweed], N, TAC04259
- Pyrrhopappus grandiflorus* (Nutt.) Nutt. [tuber false dandelion], N, TAC04261
- Pyrrhopappus pauciflorus* (D. Don) DC. [many-stem false dandelion]*, N, TAC00068
- Ratibida columnifera* (Nutt.) Wootton & Standl. [Mexican-hat]*, N, TAC00069
- Rudbeckia hirta* L. var. *pulcherrima* Farw. [black-eyed-susan]*, N, TAC00070
- Senecio ampullaceus* Hook. [Texas groundsel], E, TAC04560
- Senecio vulgaris* L. [common groundsel]*, I, TAC00071
- Silphium albidiflorum* A. Gray [white rosinweed]*, E, TAC04562
- Silphium laciniatum* L. [compassplant]*, N, TAC00072
- Simsia calva* (Engelm. & A. Gray) A. Gray [awnless bush-sunflower], N, TAC04567
- Solidago gigantea* Aiton [giant goldenrod]*, N, TAC00118
- Solidago ludoviciana* (A. Gray.) Small [willow goldenrod], N, TAC06518
- Solidago mollis* Bartlett [velvety goldenrod], N, NY2354460
- Solidago patula* Muhl. var. *strictula* Torr. & A. Gray [willow goldenrod], N, TAC06144
- Solidago petiolaris* Aiton [no common name], N, TAC6828
- Solidago radula* Nutt. [rough goldenrod]*, N, TAC00073
- Solidago speciosa* Nutt. var. *rigidiuscula* Torr. & A. Gray [prairie goldenrod]*, N, TAC00074
- Sonchus asper* (L.) Hill [prickly sow-thistle]*, I, TAC00075
- Sonchus oleraceus* L. [common sow thistle], I, TAC03947
- Symphyotrichum dumosus* L. [bushy aster], N, TAC04492
- Symphyotrichum ericoides* (L.) G.L. Nesom [heath aster]*, N, TAC00077
- Symphyotrichum oblongifolium* (Nutt.) G.L. Nesom, [azure aster], N, TEX00009632
- Symphyotrichum patens* Aiton var. *gracilis* Hook. [spreading aster], N, TAC05061
- Symphyotrichum praealtum* (Poir.) G.L. Nesom, [willow-leaf aster], N, BRIT333392
- Symphyotrichum pratensis* Raf. [silky aster]*, N, TAC00078
- Symphyotrichum subulatum* Michx. var. *ligulatus* Shinnars [wireweed]*, N, TAC00076
- Taraxacum erythrospermum* Andrzej ex Besser [red-seed dandelion], I, TAC06526

Taraxacum officinale F.H. Wigg. [common dandelion], I, TAC06531
Tetraneuris linearifolia (Hook.) Greene, N, TAC04581
Tetraneuris scaposa (DC.) Greene [plains yellow daisy]*, N, TAC00079
Thelesperma filifolium (Hook.) A. Gray var. *filifolium* [greenthread], N, TAC04578
Thelesperma simplicifolium A. Gray [slender greenthread], N, TAC04580
Townsendia exscapa (Richardson) Porter [Easter daisy], N, TAC01181
Verbesina encelioides (Cav.) Benth. & Hook. ex A. Gray [cowpen daisy], N, TAC04268
Verbesina virginica L. [frostweed]*, N, TAC00080
Vernonia baldwinii Torr. [Baldwin's ironweed]*, N, TAC04585
Vernonia lindheimeri A. Gray & Engelm. [wooly ironweed]*, N, TAC00081
Xanthisma spinulosum (Pursh) D.R. Morgan & R.L. Hatton, [spiny ironplant], N, TAC06148
Xanthisma texanum DC. subsp. *drummondii* (Torr. & A. Gray) A. Gray [Texas sleepy daisy]*, N, TAC00082
Xanthium strumarium L. var. *canadense* (Mill.) Torr. & A. Gray [cocklebur]*, N, TAC04272
Zinnia grandiflora Nutt. [plains zinnia], N, TAC04587

Berberidaceae

Berberis trifoliolata Moric [agarito]* N, TAC00523
Nandina domestica Thunb. [sacred-bamboo] I, TAC06304

Bignoniaceae

Campis radicans (L.) Seem. ex Bureau [common trumpet-creeper], N, TAC06646
Catalpa speciosa (Warder) Warder ex Engelm., [cigartree]*, I, TAC00083

Boraginaceae

Lappula occidentalis (S. Watson) Greene [cupseed]*, N, TAC00084
Lithospermum arvensis (L.) I.M. Johnst. [corn gromwell], I, TAC06173
Lithospermum carolinense (Walter ex J.F. Gmel.) MacMill., [carolina puccoon]*, N, TAC00085
Lithospermum incisum Lehm. [narrow-leaf puccoon]*, N, TAC00086
Nama hispidum A. Gray [Sandbell]*, N, TAC00195
Phacelia congesta Hook. [Blue-curls]*, N, TAC00196
Phacelia hirsuta Nutt. [hairy phacelia]*, N, TAC00197
Phacelia patuliflora (Engelm. & A. Gray) A. Gray var. *teucriifolia* (I.M. Johnst.) Constance, [no common name], N, TAC04313
Phacelia strictiflora (Engelm. & A. Gray) A. Gray var. *lundelliana* Constance, N TAC02080

Brassicaceae

Brassica rapa L. [turnip], I, TAC01293
Capsella bursa-pastoris (L.) Medik. [shepard's-purse]*, I, TAC00087
Descurainia pinnata (Walter) Britton [pinnate tansy-mustard]*, N, TAC03951
Descurainia sophia (L.) Webb ex Prantl [flixweed tansy-mustard], I, TAC06287
Draba platycarpa Torr. & A. Gray [broad-pod draba], N, TAC01335
Draba reptans (Lam.) Fernald [Carolina draba]* N, **NSA**
Draba cuneifolia Nutt. ex Torr. & A. Gray [wedge-leaf draba]*, N, TAC00088
Lepidium austrinum Small [southern pepperweed], N, TAC01347
Lepidium virginicum L. [Virginia pepper-grass]* N, TAC00090
Matthiola longipetala (Vent.) DC. [eveningstock], I, TAC01386
Myagrum perfoliatum L. [no common name], I, TAC06286

Physaria densiflora (A. Gray) O'Kane & Al-Shehbaz [dense-flower bladderpod], E, TAC04595
Physaria gordonii (A. Gray) O'Kane & Al-Shehbaz [popweed], N, TAC01379
Physaria gracilis (Hook.) O'Kane & Al-Shehbaz [white bladderpod]*, N, TAC00091
Physaria engelmannii (A. Gray) O'Kane & Al-Shehbaz [Engelmann's bladderpod], N, TAC004596
Physaria recurvata (Engelm. ex A. Gray) O'Kane & Al-Shehbaz [slender bladderpod], E, TAC04273
Planodes virginicum (L.) Greene [Virginia sibara]*, N, TAC00093
Raphanus sativus L. [radish], I, TAC01389
Rapistrum rugosum (L.) All., [no common name], I, TAC04275
Rorippa nasturtium-aquaticum (L.) All. [watercress]*, I, TAC01395
Rorippa palustris (L.) Besser subsp. *fernaldiana* (Butters & Abbe) Jonsell [bog yellowcress]*, N, TAC00122
Rorippa teres (Michx.) Stuckey [tansy-leaf yellowcress]*, N, TAC00092
Sinapsis arvensis L. [field mustard]* I, TAC00094
Thlaspi arvense L. [field pennycress] I, TAC04278

Cactaceae

Cylindropuntia leptocaulis DC. [pencil cactus]*, N, TAC06507
Echinocereus reichenbachii (Terscheck ex Walp.) F. Haage [lace cactus], N, TAC06161
Escobaria missouriensis (Sweet) D.R. Hunt [plains nipple cactus]*, N, **NSA**
Mammillaria heyderi Muehlenpf. var. *heyderi* [flattened mammillaria]*, N, TAC04279
Opuntia engelmannii Salm-Dyck var. *lindheimeri* (Engelm.) B.D. Parfitt & Pinkava. [Texas prickly-pear], N, TAC06223
Opuntia humifusa (Raf.) Raf. [eastern prickly-pear]* N, TAC05898
Opuntia macrohiza Engelm. [plains prickly-pear], N TAC06262
Opuntia phaeacantha Engelm. var. *major* [brown-spine prickly-pear], N, TAC04600

Campanulaceae

Triodanis holzingeri McVaugh [no common name], N, TEX00021113
Triodanis leptocarpa (Nutt.) Nieuwl. [slimpod Venus'-looking-glass], N, TAC04280
Triodanis perfoliata (L.) Nieuwl. var. *biflora* (Ruiz & Pav.) T.R. Bradley [small Venus'-looking-glass]*, N, TAC00550
Triodanis perfoliata (L.) Nieuwl. var. *perfoliata* [clasping Venus'-looking-glass]*, N, TAC00097
Triodanis texana McVaugh [Texas Venus'-looking-glass], E, HPC00011180

Cannabaceae

Celtis laevigata Willd. var. *laevigata* [sugarberry], N, TAC05597
Celtis laevigata Willd. var. *texana* (Scheele) Sarg.*, N, TAC00324
Celtis laevigata Willd. var. *reticulata* Torr. [net-leaf hackberry]*, N, TAC06300

Caprifoliaceae

Lonicera alba L. [no common name], I, TTC006909
Lonicera albiflora Torr. & A. Gray [white honeysuckle]*, N, TAC00098
Lonicera japonica Thunb. [Japanese honeysuckle], I, TAC04281
Lonicera maackii (Rupr.) Maxim. [bush honeysuckle] I, TAC00569
Lonicera sempervirens L. [trumpet honeysuckle] N, TAC06476
Sambucus nigra L. var. *canadensis* (L.) Bolli [common elderberry], N, TAC06147
Valerianella amarella (Lindh. ex Engelm.) Krok [hairy cornsalad], N, TAC05022
Valerianella radiata (L.) Dufur. [beaked cornsalad]*, N, TAC00328

Viburnum rufidulum Raf. [southern blackhaw]* N, TAC00099

Caryophyllaceae

Arenaria serpyllifolia L. [thyme-leaf sandwort] I, TAC04391

Cerastium brachypodum (Engelm. ex A. Gray) B.L. Rob. [short-stalk chickweed], N, TAC00595

Cerastium fontanum Baumg. subsp. *vulgare* (Hartm.) Greuter & Burdet [common mouse-ear]*, I, TAC00123

Cerastium glomeratum Thuill. [no common name] I, TAC04603

Gypsophila elegans M. Bieb [baby's breath], I, TAC00605

Loeflingia squarrosa Nutt. [spreading loeflingia]*, N, TAC00101

Minuartia drummondii (Shinners) McNeill [Drummond's sandwort]*, N, TAC00605

Paronychia jamesii Torr. & A. Gray [James' nailwort], N, TAC04604

Paronychia virginica Spreng. [Park's nailwort]* N, TAC00102

Petrorhagia dubia (Raf.) G. López & Ramo. [childing pink], I, TAC06795

Sagina decumbens (Elliot) Torr. & A. Gray [trailing pearlwort]*, N, TAC00103

Silene antirrhina L. [sleepy catchfly]*, N, TAC00061

Stellaria media (L.) Vill. [common chickweed], I, TAC06131

Vaccaria hispanica (Mill.) Rauschert [cowherb]*, I, TEX00034359

Chenopodiaceae

Chenopodium album L. [lamb's quarter]* I, TAC00105

Chenopodium ambrosioides L. [wormseed lamb's quarter]* I, TAC00106

Chenopodium leptophyllum (Moq.) Nutt. ex S. Watson [Slim-leaf goosefoot], N, TAC04605

Chenopodium pratericola Rydb. [thick-leaf goosefoot], N, TEX00039936

Cycloloma atriplicifolium (Spreng.) J.M. Coul. [plains tumbleweed]*, N, TAC00124

Cistaceae

Helianthemum georgianum Chapm. [Georgia sun-rose]*, N, TAC00108

Lechea tenuifolia Michx. [narroe-leaf pinweed], N, BRIT370701

Cleomaceae

Polanisia dodecandra (L.) DC. subsp. *trachysperma* (Torr. & A. Gray) H.H. Iltis [clammyweed], N, TAC06512

Polanisia erosa (Nutt.) H.H. Iltis [large clammyweed] N, TAC06276

Commelinaceae

Commelina erecta L. [erect dayflower], N TAC06721

Commelina virginica L. [Virginia dayflower]*, N TAC00109

Tradescantia gigantea Rose [giant spiderwort], N, TAC00656

Tradescantia occidentalis (Britton) Smyth [prairie spiderwort]*, N, TAC00110

Tradescantia ohimensis Raf. [Ohio spiderwort], N TAC06234

Tradescantia subcaulis Bush [stemless spiderwort], E, TEX00309418

Tradescantia tharpii E.S. Anderson & Woodson [Tharp's spiderwort]*, N, TAC00111

Convolvulaceae

Convolvulus arvensis L. [field bindweed] I, TAC06577

Convolvulus equitans Benth. [gray bindweed]*, N, TAC00125

Cuscuta cuspidata Engelm. [cusp dodder], N, TAC01406

Cuscuta indecora Choisy var. *indecora* [showy dodder], N, TAC00292

Cuscuta pentagona Engelm. var. *glabrior* (Engelm.) Gandhi, R.D. Thomas, & S.L. Hatch [no common name]*, N, BRIT217478

Evolvulus nuttallianus Schult. [hairy evolvulus], N, TAC06466

Evolvulus sericeus Sw. [silky evolvulus]*, N BRIT371815

Ipomoea cordatotriloba Dennst. var. *torreyana* (A. Gray) D.F.

Austin [cotton morning-glory], N, TAC04612

Ipomoea pandurata (L.) G. Mey. [wild sweet-potato]*, N, **NSA**

Ipomoea purpurea (L.) Roth [common morning-glory]*, N, TAC00113

Cornaceae

Cornus drummondii C.A. Mey. [rough-leaf dogwood]*, N, TAC00114

Crossulaceae

Sedum nuttallianum Raf. [yellow stonecrop]*, N, TAC06123

Cucurbitaceae

Cucumis melo L. [cantalope], I, TEX00031687

Cucurbita foetidissima Kunth [buffalo gourd]*, N, TAC00127

Cucumis pepo L. [Texas-gourd]*, N, TAC04615

Ibervillea lindheimeri (A. Gray) Greene [balsam gourd]*, N, TAC04619

Melothria pendula L. [drooping melonette], N TAC06431

Cupressaceae

Juniperus ashei J. Buchholz [Ashe's juniper], N, TAC01411

Juniperus pinchotti Sudw. [Pinchot's juniper], N, TAC00128

Juniperus virginiana L. [red juniper], N, TAC0129

Cyperaceae

Carex austrina (Small) Mack. [southern caric sedge], N, TAC06489

Carex blanda Dewey [charming caric sedge], N, TAC05631

Carex cephalophora Muhl. ex Willd. [caric sedge], N, TAC05892

Carex emoryi Dewey [William Emory's caric sedge], N, TAC01424

Carex festucacea Schkuhr ex Willd. [fescue-like caric sedge], N, TAC04623

Carex glaucoidea Tuck. ex Olney [gray-green-fruit caric sedge], N, TAC06837

Carex granularis Muhl. ex Willd. [granular caric sedge], N, TAC05883

Carex gravida L.H. Bailey [heavy fruit caric sedge], N, TAC01418

Carex microdonta Torr. & Hook. [small-tooth caric sedge], N, TAC01428

Carex muehlenbergii Schkuhr ex Willd. var. *muehlenbergii* Gotthilf [Muhlenberg's caric sedge], N, TAC06653

Carex planostachys Kunze [cedar caric sedge], N, TAC01430

Carex retroflexa Muhl. ex Willd. [reflexed-fruit caric sedge], N, TAC04628

Carex striatula Michx. [companion caric sedge], N, TAC04641

Carex umbellata Schkuhr ex Willdenow [small-beak caric sedge], N, TAC04625

Cyperus acuminatus Torr. & Hook. ex Torr. [taper-leaf flat sedge], N, TAC06626

Cyperus aggregatus (Willd.) Endl. [inflatedscale flatsedge], FSU136543

Cyperus elegans L. [sticky flat sedge], N, TEX00288831

Cyperus erythrorhizos Muhl. [red-root flat sedge] N, TAC06464

Cyperus esculentus L. [yellow nut-grass], I, TAC06544

Cyperus lupulinus (Spreng.) Marcks [slender flat sedge], N, TAC06124

Cyperus odoratus L. [fragrant flat sedge], N TAC04629

Cyperus polystachyos Rottb. [no common name], N TAC06566

Cyperus retroflexus Buckley [one-flower flat sedge], N, TAC04631

Cyperus retrorsus Chapm. [no common name], N, TAC04630

Cyperus rotundus L. [nut-grass], I, TAC06543

Cyperus strigosus L. [false nut-grass], N, TAC04633

Eleocharis compressa Sullivant var. *acutisquamata* (Buckley) S.G.

Smith [sharp-scale spike-rush], N, TAC04634

Eleocharis montevidensis Kunth [no common name], N TAC04635

Eleocharis palustris (L.) Roem. & Shult. [large-spike spike-rush], N, TAC04505
Fuierena simplex Vahl. [umbrella sedge], N, TAC04632
Lipocarpa micrantha (Vahl) G.C. Tucker [no common name], N, TAC06141

Ebenaceae

Diospyros virginiana L. [common persimmon], N, TAC00131

Equisetaceae

Equisetum hyemale L. subsp. *affine* (Engelm.) Calder & R.L. Taylor [tall scouring-rush]*, N, TAC04639

Euphorbiaceae

Acalypha virginica L. [Virginia copperleaf], N, TAC04640
Argythamnia humilis (Engelm. & A. Gray) Müll. Arg. [low wild mercury]*, N, TEX00037448
Argythamnia mercurialina (Nutt.) Müll. Arg. [tall wild mercury]*, N, TAC00142
Cnidioscolus texanus (Müll. Arg.) Small [Texas bull-nettle]*, N, TAC00137
Croton capitatus Michx. var. *lindheimeri* (Engelm. & A. Gray) Müll. Arg. [woolly croton], N, TAC04647
Croton glandulosus L. var. *lindheimeri* Müll. Arg. [Lindheimer's croton]*, N, TAC00138
Croton lindheimerianus Scheele [three-seed croton] N, TAC04650
Croton monanthogynus Michx. [doveweed]*, N, TAC00139
Croton texensis (Klotzsch) Müll. Arg. [Texas croton]*, N, TAC00141
Euphorbia albomarginata Torr. & A. Gray [white-margin euphorbia]*, N, TAC00132
Euphorbia davidii Subils [no common name], N, TAC06589
Euphorbia dentata Michx. [toothed spurge]*, N, TAC00143
Euphorbia fendleri Torr. & A. Gray* [Fendler's spurge], N, TAC00133
Euphorbia geyeri Engelm. [Geyer's euphorbia], N, TAC04293
Euphorbia glyptosperma Engelm. [ridge-seed euphorbia], N, TAC04645
Euphorbia longicuris Scheele [wedge-leaf euphorbia]*, TAC00144
Euphorbia maculata L. [spotted euphorbia]*, N, TAC00134
Euphorbia marginata Pursh [snow-on-the-mountain]*, N, TAC04659
Euphorbia missurica Raf. [prairie spurge]*, N, TAC00135
Euphorbia nutans Lag. [eyebane]*, N, TAC00136
Euphorbia prostrata Aiton [prostrate euphorbia], N, TAC04294
Euphorbia spathulata Lam. [warty euphorbia]*, N, TAC00146
Euphorbia strictospora Engelm. [slim-seed euphorbia]*, N, **NSA**
Euphorbia tetrapora Engelm. [weak euphorbia], N, TAC01559
Stillingia sylvatica Garden ex L. [queen's-delight]*, N, TAC00148
Stillingia texana I.M. Johnst. [Texas stillingia], N, TAC04663
Tragia betonicifolia Nutt. [betony noseburn] N, TAC04666
Tragia brevispica Engelm. & A. Gray [short-spike noseburn], N, TAC04667
Tragia ramosa Torr. [catnip noseburn]*, N, TAC00151

Fabaceae

Acaciella angustissima (Mill.) Britton & Rose [prairie acacia]*, N, TAC06613
Acmispion americanus (Nutt.) Rydb [Pursh's deer-vetch]*, N, TAC00166
Albizia julibrissin Durazzo [mimosa], I, TAC06572
Amorpha fruticosa L. [false indigo]*, N, TAC00152
Astragalus lindheimeri Engelm. ex A. Gray. [buffalo-clover], N, BRIT217335
Astragalus lotiflorus Hook. [lotus milk-vetch], N, TAC02334
Astragalus nuttallianus DC. var. *austrianus* (Small) Barneby [no common name], N, TAC02323

Astragalus nuttallianus DC. var. *nuttallianus* [Nuttall's milk-vetch]*, N, TAC00153
Astragalus nuttallianus DC. var. *pleianthus* (Shinners) Barneby, E, TAC06526
Astragalus nuttallianus DC. var. *trichocarpus* Torr. & A. Gray [southwestern milk-vetch], N, BRIT349028
Astragalus platensis Nutt. [ground-plum], N, TAC02343
Baptisia leucophaea Nutt. [plain's wild indigo], N, TAC02357
Centrosema virginianum (L.) Benth. [butterfly-pea]*, N, TAC00154
Cercis canadensis L. var. *canadensis* [easterN redbud]*, N, TAC02375
Cercis canadensis L. var. *texensis* (S. Watson) M. Hopkins [Texas redbud], N, TAC04674
Chamaecrista fasciculata (Michx.) Breene [partridge-pea]*, N, TAC00155
Dalea aurea Nutt. ex Pursh [golden dalea], N, TAC04678
Dalea compacta Spreng. var. *compacta* [showy prairie-clover] N, TAC04679
Dalea enneandra Nutt. [big-top dalea]*, N, TAC00156
Dalea frutescens A. Gray [black dalea]* N, TAC00157
Dalea halli A. Gray [no common name], N, BRIT245553
Dalea multiflora (Nutt.) Shinners [round-head dalea]*, N, TAC04683
Dalea phleoides (Torr. & A. Gray) Shinners var. *microphylla* (Torr. & A. Gray) Barneby [long-bract prairie-clover], N, BRIT122704
Dalea purpurea Vent. [purple prairie-clover]*, N, **NSA**
Dalea reverchonii (S. Watson) Shinners [Comanche Peak prairie-clover], E, BRIT24574
Dalea tenuis (J.M. Coul.) Shinners [no common name], E, TAC04297
Desmanthus illinoensis (Michx.) MacMill ex B.L. Rob & Fernald [Illinois bundle flower]*, N, TAC00158
Dalea leptolobus Torr. & A. Gray [prairie bundle-flower]*, N, **NSA**
Dalea velutinus Scheele [no common name], N, TAC02419
Desmodium paniculatum (L.) DC. [panicked tick-clover], N, TAC04299
Desmodium sessilifolium (Torr.) Torr. & A. Gray [sessile-leaf tick-clover]*, N, TAC00159
Desmodium tweedyi Britton [Tweedy's tick clover], N, TAC06546
Desmodium viridiflorum (L.) DC. [velvet-leaf tick-clover]*, N, TAC00160
Galactia volubilis (L.) Britton [downy milk-pea], N, TAC06488
Gleditsia triacanthos L. [common honey-locust]*, N, TAC00161
Glottidium vesicarium (Jacq.) R.M. Harper [bladderpod]*, N, TAC00162
Indigofera miniata Ortega var. *miniata* [coast indigo], N, TAC04686
Lathyrus hirsutus L. [rough-pea], I, TAC04302
Lathyrus pusillus Elliot [low peavine], N, TAC04688
Lespedeza stuevei Nutt. [tall bush-clover]* N, TAC00164
Lespedeza texana Britton [Texas bush-clover], N, TAC02449
Lespedeza violacea (L.) Pers. [violet lespedeza]*, N, TAC00165
Lupinus texensis Hook. [Texas bluebonnet]*, N, TAC00167
Medicago lupulina L. [black medick], I, TAC04689
Medicago minima (L.) L. [black medick], I, TAC06132
Medicago polymorpha L. [California bur-clover]*, I, TAC00168
Medicago sativa L. [alfalfa]*, I, TAC04692
Melilotus albus Medik. [white sweet-clover]*, I, TAC00169
Melilotus officinalis (L.) Lam. [yellow sweet-clover]*, I, TAC00170
Mimosa borealis A. Gray [catclaw]*, I, TAC00171
Mimosa nuttallii (DC.) B.L. Turner [catclaw sensitive-briar]*, N, TAC00172
Mimosa strigillosa Torr. & A. Gray [powderpuff] N, TAC04303
Neptunia lutea (Leavenw.) Benth. [yellow-puff]*, N, TAC00173

Oxytropis lambertii Pursh [locoweed], N, TAC02559
Pediomelum cuspidatum (Pursh) Rydb. [tall-bread scurf-pea]*, N, TAC00174
Pediomelum digitatum (Nutt. ex Torr. & A. Gray) Isley [palm-leaf scurf-pea], N, TAC06595
Pediomelum hypogaeanum (Nutt. ex Torr. & A. Gray) Rydb. [edible scurf-pea]*, N, TAC00175
Pediomelum linearifolium (Torr. & A. Gray) J.W. Grimes*, N, TAC00176
Pediomelum rhombifolium (Torr. & A. Gray) Rydb. [broad-leaf scurf-pea], N, TAC00177
Pomaria jamesii (Torr. & A. Gray) Walp.*, N, TAC00178
Prosopis glandulosa Torr. [honey mesquite]*, N, TAC00179
Psoraleum tenuiflorum (Pursh) Rydb. [slim-leaf scurf-pea], N, TAC02510
Rhynchosia latifolia Nutt. ex Torr. & A. Gray [broad-leaf snout-bean]*, N, **NSA**
Robinia pseudoacacia L. [black locust]*, N, TAC00180
Senegalia roemeriana (Scheele) Britton & Rose [catclaw]*, N, BRIT217409
Senna lindheimeriana (Scheele) H.S. Irwin & Barneby [Lindheimer's senna], N, TAC04705
Senna marilandica (L.) Link [wild senna], N, TAC04308
Senna roemeriana (Scheele) H.S. Irwin & Barneby [two-leaf senna]*, N, TAC00181
Strophostyles helvula (L.) Elliott [amberique- bean], N, TAC06278
Strophostyles leiosperma (Torr. & A. Gray) Piper*, N, TAC00182
Styphnolobium affine (Torr. & A. Gray) Walp. [eve's-necklace], N, TAC04709
Tephrosia virginianum (L.) Pers. [goat's-rue]*, N, TAC00183
Trifolium carolinianum Michx. [Carolina clover], N, BRIT122715
Trifolium incarnatum L. [crimson clover], I, TAC06896
Trifolium repens L. [white clover], I, TAC03959
Trifolium vesiculosum Savi. [arrow-leaf clover], I, TAC02602
Vicia ludoviciana Nutt. subsp. *ludoviciana* [deer pea vetch]*, N, TAC00185
Vicia sativa L. subsp. *nigra* (L.) Ehrh. [narrow-leaf vetch], I, TAC04716
Vicia sativa L. subsp. *sativa* [common vetch], I, TAC04312
Vicia villosa Roth subsp. *varia* (Host) Corb. [winter vetch], I, TAC02628
Vicia villosa Roth subsp. *villosa* [hairy vetch], I, TAC02629
Zornia bracteata J.F. Gmel. [bracted zornia]*, N, TAC00186

Fagaceae

Quercus buckleyi Nixon & Dorr [Texas red oak]*, N, TAC04718
Quercus fusiformis Small [plateau live oak]*, N, TAC00191
Quercus macrocarpa Michx. [bur oak]*, N, TAC00187
Quercus marilandica Münchh. [blackjack oak]*, N, TAC00188
Quercus margaretiae Ashe ex Small [Sand post oak], N, TAC05897
Quercus sinuata Walter var. *breviloba* (Torr.) C.H. Müll. [scrub oak]*, N, TAC01605
Quercus shumardii Buckley [Shumard's oak], N, TAC01607
Quercus stellata Wangerh. [post oak]*, N, TAC00189

Gentianaceae

Eustoma russellianum (Hook.) G. Don [bluebell gentian]*, N, TAC04731
Sabatia campestris Nutt. [prairie rose gentian], N, TAC04733
Sabatia formosa Buckley [Buckley's sabatia], N, TAC01647
Zeltnera beyrichii (Torrey & A. Gray) G. Mans. [rock centaury], N, TAC06734

Geraniaceae

Erodium cicutarium (L.) L'Hér. ex Aiton [filaree]*, I, TAC00192

Erodium texanum A. Gray [stork's-bill]*, N, TAC00193
Geranium carolinianum L. [crane's-bill]*, N, TAC00194
Geranium texanum (Trel.) A. Heller [Texas geranium], N, TAC04738

Haloragaceae

Myriophyllum heterophyllum Michx. [no common name], N, TAC02060

Heliotropiaceae

Euploca tenella (Torr.) Feuillet & Halse [pasture heliotrope], N, TAC04590

Iridaceae

Iris germanica L. [garden iris], I, TAC06238
Nemastylis geminiflora Nutt. [prairie-iris]*, N, TAC00198
Sisyrinchium angustifolium Mill. [bermuda blue-eyed-grass]*, N, TAC00199
Sisyrinchium ensigerum E.P. Bicknell [sword-leaf blue-eyed-grass], N, TAC02103
Sisyrinchium langloisii Greene [pale blue-eyed-grass], N, TEX00376232
Sisyrinchium minus Engelm. & A. Gray [least blue-eyed-grass], N, TAC06285
Sisyrinchium pruinatum E.P. Bicknell [dotted blue-eyed-grass], N, TAC04314

Isoetaceae

Isoetes butleri Engelm. [limestone quillwort], N, BRIT89755

Juglandaceae

Carya illinoensis (Wangerh.) K. Koch [pecan]*, N, TAC04316
Juglans nigra L. [black walnut]*, N, TAC00200

Juncaceae

Juncus brachycarpus Engelm. [white-root rush], N, TAC04741
Juncus bufonius L. [toad rush], N, TAC04318
Juncus dudleyi Wiegand [no common name], N, TAC02145
Juncus effusus L. var. *solutus* Fernald & Wiegand [common rush]*, N, **NSA**
Juncus interior Wiegand [inland rush], N, TAC04743
Juncus marginatus Rostk. [grass-leaf rush], N, TAC04746
Juncus tenuis Willd. [slender rush]*, N, **NSA**
Juncus texanus (Engelm.) Coville [Texas rush]*, E, **NSA**
Juncus torreyi Coville [Torrey's rush], N, TAC04319

Krameriaceae

Krameria lanceolata Torr. [trailing ratany]*, N, TAC04322

Lamiaceae

Calamintha arkansana (Nutt.) Shinn. [Ozark savory], N, TAC02172
Hedeoma acinoides Scheele [slender hedeoma]*, N, TEX00021405
Hedeoma drummondii Benth. [Drummond's hedeoma], N, GA213865
Hedeoma hispida Pursh [rough hedeoma]*, N, TAC00201
Hedeoma reverchonii (A. Gray) A. Gray var. *reverchonii* [rock hedeoma], N, TAC04747
Lamium amplexicaule L. [henbit]*, I, TAC00202
Lamium purpureum L. var. *purpureum* [purple deadnettle], I, TAC06898
Lycopus americanus Muhl. ex Barton [American bugleweed], N, TAC04325
Marrubium vulgare L. [common horehound]*, I, TAC00203
Monarda citriodora Cerv. ex Lag. [lemon beebalm]*, N, TAC00204
Monarda clinopodioides A. Gray [basil beebalm], N, BRIT229603
Monarda fistulosa L. var. *mollis* (L.) Benth. [wild bergamot], N, TAC04331

Monarda punctata L. var. *intermedia* (E.M. McClint. & Epling) Waterf. [no common name]*, E, TAC06843
Physostegia intermedia (Nutt.) Engelm. & A. Gray [intermediate lion's-heart], N, TAC04750
Salvia azurea Mivhx. ex Lam. var. *grandiflora* Benth. [blue sage]*, N, TAC00208
Salvia coccinea Buc'hoz ex EtL. [tropical sage], N, TAC06699
Salvia engelmannii A. Gray [Engelmann's sage], E, TAC04751
Salvia farinacea Benth. [Mealy sage], N, TAC05746
Salvia greggii A. Gray [Gegg's sage], N, TAC06748
Salvia lyrata L. [Lyre-leaf sage], N, TAC02257
Salvia reflexa Hornem. [lance-leaf sage]*, N, TEX00022856
Salvia roemeriana Scheele [cedar sage], N, TAC04753
Salvia texana (Scheele) Torr. [Texas sage]*, N, TAC04755
Scutellaria drummondii Benth. var. *edwardsiana* B.L. Turner [Drummond's skullcap]*, N, TAC04757
Scutellaria parvula Michx. [small skullcap]*, N, TAC02284
Scutellaria resinosa Torr. [resin-dot skullcap]*, N, TAC00211
Scutellaria wrightii A. Gray [Wright's skullcap] N, TAC04761
Stachys crenata Raf. [shade betony]*, N, TAC00212
Teucrium canadense L. [American germander]*, N, TAC00213
Teucrium cubense Jacq. var. *laevigatum* (Vahl) Shinnars* [annual germander], E, TAC00214
Teucrium lacinatedum Torr. [Cut-leaf germander], N, TAC02303
Warnockia scutellarioides (V. Engelm. & A. Gray) M.W. Turner [Prairie Brazoria], N, TAC02169

Lentibulariaceae

Utricularia gibba L. [cone-spur bladderwort], N, TAC04332

Liliaceae

Androstephium coeruleum (Scheele) Greene [blue funnel-lily]*, N, TAC00216
Muscari neglectum Guss. ex Ten. [starch grape-hyacinth], I, TAC06127
Zigadenus nuttallii (A. Gray) S. Watson [death-camass]*, N, TAC00220

Linaceae

Linum hudsonioides Raf. [no common name], N, TEX00037639
Linum imbricatum (Raf.) Shinnars [tufted flax]*, N, TAC00222
Linum pratense (J.B. Norton) Small [meadow flax], N, TAC04769
Linum rigidum var. *berlandieri* (Hook.) Torr. & A. Gray [Berlandier's flax]*, N, TAC00221
Linum rupestre (A. Gray) Engelm. ex A. Gray [Rock flax], N, LL00032824
Linum sulcatum Riddell [Grooved flax], N, TAC00223

Loasaceae

Mentzelia nuda (Pursh.) Torr. & A. Gray [bractless mentzelia], N, TAC002746

Lythraceae

Ammannia coccinea Rottb. [purple ammannia]*, N, TEX00290791
Lythrum alatum Pursh var. *lanceolatum* (Elliott) Rottb. & A. Gray ex Rothr. [lance-leaf loosestrife], N, BRIT229019
Lythrum californicum Torr. & A. Gray [California loosestrife], N, TAC002761
Rotala ramosior (L.) Koehne [toothcup]*, N, TAC00224

Malvaceae

Abutilon fruticosum Guill. & Perr. [Indian-mallow]*, N, TAC06122
Abutilon theophrasti Medik. [Indian-mallow]*, N, TAC06533
Callirhoe alcaeoides (Michx.) A. Gray [plains winecup]*, N, **NSA**
Callirhoe involucrata (Nutt.) A. Gray var. *involucrata* [purple poppy-mallow]*, N, TAC00225
Callirhoe involucrata (Nutt.) A. Gray var. *lineariloba* (Torr. & A. Gray) Torr. [slim-lobe poppy-mallow], N, TAC06687

Callirhoe pedata (Nutt. ex Hook.) A. Gray [finger poppy-mallow]*, N, TAC04773

Malva parviflora L. [little mallow]*, I, TAC00226
Malva neglecta Wallr. [common mallow], I, TAC06187
Sida abutilifolia Mill. [spreading sida], N, TAC04775
Sida spinosa L. [prickly sida], N, TAC06588

Martyniaceae

Proboscidea louisianica (Mill.) Thell. [common devil's-claw]*, N, TAC00254

Meliaceae

Melia azedarach L. [China-berry]*, I, TAC00227

Menispermaceae

Cocculus carolinus (L.) DC. [Carolina snailseed]*, N, TAC00228

Molluginaceae

Mollugo verticillata L. [green carpetweed]*, I, TAC00230

Moraceae

Broussonetia papyrifera (L.) L'Her ex Vent. [paper-mulberry]*, I, TEX00288335
Morus alba L. [white mulberry], I, TAC06452
Morus rubra L. [red mulberry]*, N, TAC05636
Maclura pomifera (Raf.) C.K. Schneid. [osage-orange]*, N, TAC00231

Nelumbonaceae

Nelumbo lutea (Willd.) Pers. [yellow lotus]*, N, TAC01575

Nyctaginaceae

Boerhavia diffusa L. [scarlet spiderling]*, N, TAC00233
Boerhavia erecta L. [erect spiderling]*, N, BRIT229101
Mirabilis alba (Walter) Heimerl [white four-o'clock]*, N, TAC00234
Mirabilis glabra (S. Watson) Standl. [tall four-o'clock]*, N, TAC00232
Mirabilis jalapa L. [four-o'clock], I, TAC06590
Mirabilis linearis (Pursh) Heimerl [linear-leaf four-o'clock]*, N, TAC00235

Nymphaeaceae

Nymphaea odorata Aiton [white water-lily], N, TAC06737

Oleaceae

Forestiera pubescens Nutt. var. *glabrifolia* Shinnars [smooth-leaf forestiera], N, TAC04777
Forestiera pubescens Nutt. var. *pubescens* [spring-herald], N, TAC04338
Fraxinus americana L. [white ash]*, N, HPC00008-9705
Fraxinus pennsylvanica Marshall [green ash]*, N, TAC00236
Fraxinus texensis (A. Gray) Sarg. [Texas ash], N, TAC06617
Ligustrum japonicum Thunb. [Japanese privet], I, TAC06429
Ligustrum sinense Lour. [Chinese privet], I, TAC06745
Ligustrum vulgare L. [common privet], I, TAC05848

Onagraceae

Ludwigia peploides (Kunth) P.H. Raven [water-primrose]*, N, TAC00242
Oenothera capillifolia Scheele subsp. *capillifolia* [Berlandier's evening-primrose]*, N, TAC00237
Oenothera cinerea (Wooton. & Standl.) W.L. Wagner & Hoch [wooly gaura], N, FUGR0010-17456
Oenothera curtiflora W.L. Wagner & Hoch [small-flower gaura]*, N, TAC00240
Oenothera filiformis (Small) W.L. Wagner & Hoch [tall gaura], N, TAC 002879

- Oenothera glaucifolia* W.L. Wagner & Hoch [false gaura]*, N, TAC00248
- Oenothera grandis* (Britton) Smyth [big primrose], N, TAC00243
- Oenothera hartwegii* Benth. subsp. *pubescens* (A. Gray) W.L. Wagner [grand prairie evening primrose], N, TAC04800
- Oenothera laciniata* Hill [cut-leaf evening-primrose]*, N, TAC00243
- Oenothera macrocarpa* Nutt. subsp. *macrocarpa* [flutter-mill]*, N, TAC04805
- Oenothera nealleyi* (J.M. Coult.) Krakos & W.L. Wagner [roadside gaura], N, TAC00241
- Oenothera patriciae* W.L. Wagner & Hoch [plains gaura], N, TAC04341
- Oenothera rhombipetala* Nutt. ex Torr. & A. Gray [four-point evening-primrose]*, N, TAC00244
- Oenothera serrulata* Nutt. [yellow evening-primrose]*, N, TAC00238
- Oenothera sinuosa* W.L. Wagner & Hoch [wavy-leaf gaura], N, TAC04802
- Oenothera speciosa* Nutt. [showy-primrose]*, N, TAC00245
- Oenothera suffrutescens* (Ser.) W.L. Wagner & Hoch [scarlet gaura]*, N, TAC00239
- Oenothera triangulata* (Buckley) W.L. Wagner & Hoch [no common name], N, BRIT251607
- Oenothera triloba* Nutt. [stemless evening-primrose]*, N, TAC00246
- Oenothera xenogaura* W.L. Wagner & Hoch [sweet guara], N, TAC06736

Orchidaceae

- Spiranthes lacera* (Raf.) Raf. var. *gracilis* (Bigelow) Luer [slender ladies'-tresses]*, N, **NSA**

Orobanchaceae

- Agalinis heterophylla* (Nutt.) Small ex Britton [prairie agalinis], N, TAC04357
- Buchnera americana* L. [American bluehearts], N, BRIT50559
- Castilleja indivisa* Engelm. [Texas paintbrush]*, N, TAC04994
- Castilleja purpurea* (Nutt.) G. Don var. *pupurea* [purple paintbrush], N, TAC00302
- Orobanche ludoviciana* Nutt. subsp. *multiflora* (Nutt.) Collins [large flower broomrape], N, HPC00019081

Oxalidaceae

- Oxalis corniculata* L. [creeping ladies'-sorrel], N, TAC04810
- Oxalis drummondii* A. Gray [Drummond's oxalis], E, TAC06505
- Oxalis stricta* L. [gray-green woodsorrel]*, N, TAC00249
- Oxalis violacea* L. [violet woodsorrel]*, N, TAC00251

Papaveraceae

- Argemone albiflora* Hornem. subsp. *texana* G.B. Ownbey [white prickly-poppy], N, TAC04812
- Argemone polyanthemus* (Fedde) G.B. Ownbey*, N, TAC00252
- Corydalis micrantha* (Engelm. ex A. Gray) A. Gray subsp. *australis* (Chapm.) G.B. Ownbey [southern corydalis], N, TAC01627
- Corydalis curvisiliqua* Engelm. subsp. *grandibracteata* (Fedde) G.B. Ownbey [no common name], N, TAC03024
- Papaver rhoeas* L. [corn poppy], I, TAC03032

Passifloraceae

- Passiflora incarnata* L. [maypop passion-flower]*, N, TAC00253

Phyllanthaceae

- Phyllanthus polygonoides* Nutt. ex Spreng [knotweed leaf-flower]*, N, TAC00147

Phytolaccaceae

- Phytolacca americana* L. [pokeweed]*, N, TAC00255

- Rivina humilis* L. [pigeon-berry]*, N, TAC00256

Plantaginaceae

- Leucospora multifida* (Michx.) Nutt. [narrow-leaf conohea]*, N, TAC00303
- Nuttallanthus canadensis* (L.) D.A. Sutton [old-field toad-flax], N, HPC00010467
- Nuttallanthus texanus* (Scheele) D.A. Sutton [Texas toad-flax]*, N, TAC04358
- Penstemon cobaea* Nutt. [wild foxglove]*, N, TAC00305
- Penstemon guadalupensis* A. Heller [Guadalupe penstemon], E, TAC06125
- Penstemon laxiflorus* Pennell*, N, TAC00304
- Plantago helleri* Small [cedar plantain]*, N, TAC00257
- Plantago heterophylla* Nutt. [slim-spice plantago]*, N, TAC00258
- Plantago patagonica* Jacq. [bristle-bract plantain]*, N, TAC00259
- Plantago rhodosperma* Decne. [tallow-weed]*, N, TAC00261
- Plantago virginica* L. [pale-seed plantain], N, TAC04819
- Plantago wrightiana* Decene. [Wright's plantain], N, TAC 03081
- Veronica arvensis* L. [common speedwell], I, TAC04997
- Veronica peregrina* L. subsp. *xalapensis* (Kunth) Pennell [Jalapa speedwell]*, N, TAC00308
- Veronica polita* Fr. [no common name], I, TAC03609

Platanaceae

- Platanus occidentalis* L. [American sycamore]*, N, TAC06811

Poaceae

- Aegilops cylindrica* Host [jointed goat grass], I, TAC04822
- Agrostis hyemalis* (Walter) Britton, Sterns, & Poggenb. [tickle grass], N, TAC04823
- Andropogon gerardii* Vitman subsp. *gerardii* [big bluestem], N, TAC04828
- Andropogon glomeratus* (Walter) Britton, Sterns, & Poggenb. [bushy bluestem], N, TAC04829
- Aristida longispica* Poir. [slim-spice threeawn], N, UTEP273
- Aristida oligantha* Michx. [oldfield threeawn], N, TAC06250
- Aristida purpurascens* Poir. [arrow grass], N, TAC06855
- Aristida purpurea* Nutt. var. *longiseta* (Steud.) Vasey [red threeawn], N, TAC06659
- Aristida purpurea* Nutt. var. *purpurea* [purple threeawn], N, TAC04830
- Aristida purpurea* Nutt. var. *wrightii* (Nash) Allred [Wright's threeawn], N, TAC01723
- Arundo donax* L. [giant reed], I, TAC06403
- Avena fatua* L. [wild oats], I, TAC06301
- Avena sativa* L. [common oats], I, TAC06129
- Bothriochloa barbinodis* (Lag.) Herter var. *Barbinodis* [cane bluestem], N, TAC01680
- Bothriochloa ischaemum* (L.) Keng var. *songarica* (Rupr. ex Fisch. & C.A. Mey.) Celerier & Harlan [King Ranch bluestem], I, TAC04831
- Bothriochloa laguroides* (DC.) Herter. subsp. *torreyana* (Steud.) Allred & Gould. [silver bluestem], N, TAC04834
- Bouteloua barbata* Lag. [sixweeks grama], N, TAC06578
- Bouteloua curtipendula* (Michx.) Torr. var. *caespitosa* Gould & Kapadia [side-oats grama], N, TAC04841
- Bouteloua curtipendula* (Michx.) Torr. var. *curtipendula* [side-oats grama], N, TAC04843
- Bouteloua hirsuta* Lag. [hairy grama], N, TAC04846
- Bouteloua pectinata* Feath. [tall grama], N, TAC04850
- Bouteloua rigidiseta* (Steud.) Hitchc. [Texas grama], N, TAC04851
- Bromus catharticus* Vahl [rescue grass], I, TAC04852
- Bromus hordeaceus* L. [soft chess], I, TAC06536
- Bromus japonicus* Thunb. ex Murray [Japanese brome], I, TAC04855

- Bromus pubescens* Muhl. ex Willd. [no common name], N, TAC05803
- Bromus secalinus* L. [rye brome], I, TAC01765
- Bromus tectorum* L. var. *tectorum* [cheat grass], I, TAC05609
- Buchloe dactyloides* (Nutt.) Engelm. [buffalo grass], N, TAC05447
- Cenchrus echinatus* L. [southern sandbur], N, HPC000262744
- Cenchrus spinifex* Cav. [common sandbur], N, TAC04857
- Chasmanthium latifolium* (Michx.) H.O. Yates, [broad-leaf wood-oats], N, TAC06741
- Chloris cucullata* Bisch. [hooded windmill grass], N, TAC06412
- Chloris subdichlostachya* Müll. Hal. [short-spike windmill grass], N, TAC04859
- Chloris verticillata* Nutt. [tumble windmill grass], N, TAC04861
- Chloris virgata* Sw. [feather fingergrass], N, TAC06821
- Coelorachis cylindrica* (Michx.) Nash [Carolina joint-tail], N, TAC04863
- Cynodon dactylon* (L.) Pers. [Bermuda grass], I, TAC04864
- Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark var. *acuminatum* [white-haired panic], N, MOB0464882
- Dichanthelium linearifolium* (Scribn. ex Nash) Gould [slim-leaf panic], N, HPC00026699
- Dichanthelium oligosanthos* (Schult.) Gould [Scribner's rosette grass], N, TAC04910
- Dichanthelium spheerocarpon* (Elliott) Gould [round-seed panic], N, MOB0253352
- Digitaria ciliaris* (Retz.) Koeler [southern crab grass], I, TAC06705
- Digitaria cognata* (Schult.) Pilg. subsp. *cognata* [fall witch grass], N, TAC04867
- Digitaria sanguinalis* (L.) Scop. [hairy crabgrass], I, HPC00026321
- Echinochloa colona* (L.) Link [jungle rice], I, HPU0002627443
- Echinochloa crus-galli* (L.) P. Beauv. [barnyard grass], I, TAC04869
- Echinochloa muricata* (P. Beauv.) Fernald var. *microstachya* Wiegand, N, TAC06151
- Eleusine indica* (L.) Gaertn. [goose grass], I, TAC06725
- Elymus canadensis* L. [Canada wild rye], N, TAC05619
- Elymus virginicus* L. [Virginia wild rye], N, TAC06409
- Eragrostis barrelieri* Daveau [Mediterranean love grass], I, TAC04872
- Eragrostis cilianensis* (All.) Vignalo ex Janch., [stinkgrass], I, UTC00235656
- Eragrostis curtispedicellata* Buckley [gummy love grass], N, TAC06408
- Eragrostis curvula* (Schrad.) Nees weepinglove grass], I, HPC00026632
- Eragrostis intermedia* Hitchc. [plains love grass], N, TAC06716
- Eragrostis pilosa* (L.) P. Beauv. [India love grass], I, TAC04879
- Eragrostis secundiflora* J. Presl. subsp. *oxylepis* (Torr.) S.D. Koch [red love grass], N, TAC04875
- Eragrostis spectabilis* (Pursh) Steud. [purple love grass], N, TAC05058
- Eragrostis sessilisipica* Buckley [tumble lovegrass], N, TAC01836
- Eragrostis superba* Peyr. [Wilman's love grass], I, HPC00026634
- Eragrostis trichodes* (Nutt.) A.W. Wood [sand lovegrass], N, HPC00026635
- Erioneuron pilosum* (Buckley) Nash [hairy tridens], N, TAC04878
- Hordeum murinum* L. subsp. *leporinum* (Link) Arcang. [hare barley], I, TAC04881
- Hordeum pusillum* Nutt. [little barley], N, TAC04885
- Leptochloa dubia* (Kunth) Nees [green spangletope], N, TAC01872
- Limnoda arkaniana* (Nutt.) L.H. Dewey [Ozark grass], N, TAC04886
- Lolium perenne* L. subsp. *multiflorum* (Lam.) Husn. [Italian rye grass], I, TAC04889
- Lolium temulentum* L. [darnel], I, TTC003049
- Muhlenbergia capillaris* (Lam.) Trin. [gulf muhly], N, TAC06534
- Muhlenbergia glabriflora* Scribn. [inland muhly], N, TAC04891
- Muhlenbergia reverchonii* Vasey & Scribn. [seep muhly], N, TAC04892
- Muhlenbergia schreberi* J.F. Gmel. [nimble-will], N, TAC05624
- Nassella leucotricha* (Trin. & Rupr.) Barkworth [winter grass], N, TAC04894
- Panicum capillare* L. [witch grass], N, TAC04897
- Panicum coloratum* L. [klein grass], I, TAC04900
- Panicum hallii* Vasey var. *hallii* [Hall's panicum], N, TAC04904
- Panicum obtusum* Kunth [vine-mesquite], N, TAC04909
- Panicum virgatum* L. [switch grass], N, TAC04911
- Pascopyrum smithii* (Rydb.) Á. Löve [western wheat grass], N, TAC06549
- Paspalum dilatatum* Poir. [dallis grass], I, TAC04917
- Paspalum pubiflorum* Rupr. var. *pubiflorum* [hairy-seed paspalum], I, TAC04918
- Paspalum setaceum* Michx. [thin paspalum], I, TAC04920
- Paspalum urvillei* Steud. [Vasey grass], I, TAC04922
- Phalaris caroliniana* Walter [wild canary grass], N, TAC04923
- Poa annua* L. [annual bluegrass], N, TAC06157
- Poa arachnifera* Torr. [Texas blue grass], N, TAC04924
- Polypogon monspeliensis* (L.) Desf. [rabbit's foot], I, TAC04925
- Schedonnardus paniculatus* (Nutt.) Trel. [tumble grass], I, TAC04927
- Schizachyrium scoparium* (Michx.) Nash [little bluestem], N, TAC04929
- Setaria parviflora* (Poir.) Kerguelén [knot-root bristle grass], N, TAC04930
- Setaria pumila* (Poir.) Roem. & Shult. [yellow bristle grass], I, TAC04933
- Setaria viridis* (L.) P. Beauv. [green bristle grass], I, UTC00235657
- Sorghastrum nutans* (L.) Nash [yellow indian grass], N, TAC04935
- Sorghum halepense* (L.) Pers. [Johnson grass], I, TAC04937
- Sphenopholis obtusata* (Michx.) Scribn. [prairie wedgescale], N, TAC04021
- Sporobolus compositus* (Poir.) Merr. var. *compositus*, [tall dropseed], N, TAC06669
- Sporobolus compositus* (Poir.) Merr. var. *drummondii* (Trin.) Kartez & Gandhi [meadow dropseed], N, GA108693
- Sporobolus cryptandrus* (Torr.) A. Gray [sand dropseed], N, TAC06459
- Sporobolus indicus* L. (R. Br.) [smut grass], I, NY1827793
- Sporobolus pyramidatus* (Lam.) Hitchc. [whorled dropseed], N, UTEP9872
- Steinchisma hians* (Elliott) Nash [gaping panicum], N, TAC04908
- Trachypogon spicatus* (L.f.) Kuntze [spiked crinkleawn], N, UTC00237446
- Tridens albescens* (Vasey) Wootton & Standl. [white tridens], N, TAC04942
- Tridens flavus* (L.) Hitchc. [purpletop], N, TAC04945
- Tridens muticus* (Torr.) Nash var. *muticus* [slim tridens], N, TAC02039
- Triplasis purpurea* (Walter) Chapm. [purple sand grass], N, TAC06857
- Tripsacum dactyloides* (L.) L. [eastern gamma grass], N, HPC00026724
- Trisetum interruptum* Buckley [prairie trisetum], N, TAC06163
- Triticum aestivum* L. [bread wheat], I, UTEP9937
- Urochloa brizantha* (Hochst. ex A.Rich.) R. Webster [palisade grass], I, TEX00313913
- Urochloa ciliatissima* (Buckley) R.D. Webster [fringed signal grass], N, TEX00313944

Urochloa fusca (Sw.) B.F. Hansen & Wunderlin, [browntop signal-grass], N, UTC00235654
Urochloa texana (Bukl.) R. Webster [Texas signalgrass], N, TAC01924
Vulpia octoflora (Walter) Rydb. var. *octoflora* [common sixweeks grass], N, TAC01848

Polemoniaceae

Ipomopsis rubra (L.) Wherry [standing-cypress]*, N, TAC03096
Phlox cuspidata Scheele [pointed phlox]*, N, TAC00265
Phlox drummondii Hook. subsp. *mcallisterii* (Whitehouse) Wherry [no common name], N, TAC03111
Phlox pilosa L. subsp. *pilosa* [prairie phlox]*, N, TAC00264

Polygalaceae

Polygala alba Nutt. [white milkwort]*, N, TAC00266
Polygala verticillata L. [whorled milkwort], N, TEX00285704

Polygonaceae

Eriogonum annuum Nutt. [annual wild buckwheat]*, N, TAC00268
Eriogonum longifolium Nutt. [long-leaf wild buckwheat]*, N, TAC00269
Eriogonum multiflorum Benth. [heart-sepal wild buckwheat], N, TAC06270
Polygonum amphibium L. var. *emersum* Michx. [water smartweed], N, TAC04349
Polygonum aviculare L. [prostrate knotweed]*, I, TAC00270
Polygonum convolvulus L. [climbing buckwheat]*, I, TAC00271
Polygonum glabrum Wild., N, TAC06746
Polygonum hydropiperoides Michx. [swamp smartweed]*, N, **NSA**
Polygonum lapathifolium L. [willow smartweed]*, N, TAC00272
Polygonum pensylvanicum L. [smartweed], N, TAC04952
Polygonum scandens L. var. *cristatum* (Engelm. & A. Gray) Gleason*, N, TAC00274
Polygonum virginianum L. [jumpseed], N, TAC06142
Rumex altissimus Wood [pale dock]*, N, TAC00273
Rumex crispus L. [curly dock]*, I, TAC04956
Rumex hastatulus Baldwin [heart-wing sorrel] N, TAC04958

Polypremaceae

Polypremum procumbens L. [polyprim]* N, TAC00095

Portulacaceae

Portulaca grandiflora Hook. [rose-moss], I, TAC00275
Portulaca oleracea L. [common purslane]*, I, TAC00276
Portulaca pilosa L. [shaggy portulaca]*, N, TAC00277
Portulaca umbraticola Kunth subsp. *lanceolata* (Engelm.) J.F. Matthews & Ketron [wing-pod portulaca]*, N, TAC00278
Talinum parviflorum Nutt. [prairie flameflower]*, N, **NSA**

Potamogetonaceae

Potamogeton diversifolius Raf. [water-thread pondweed], N, TAC06433
Potamogeton nodosus Poir. [long-leaf pondweed], N, TAC04959
Zannichellia palustris L. [common poolmat], N, TAC05049

Primulaceae

Samolus valerandi L. subsp. *parviflorus* (Raf.) Hultén [thin-leaf brookweed]*, N, TAC00279

Pteridaceae

Adiantum capillus-veneris L. [southern maidenhair]*, N, TAC00281
Pellaea atropurpurea (L.) Link [purple cliff-brake], N, TAC06261
Pellaea wrightiana Hook. [Wright's cliff brake]*, N, TAC00280

Ranunculaceae

Anemone berlandieri Pritz. [ten-petal anemone]*, N, TAC04350

Anemone caroliniana Walter [Carolina anemone], N, TEX00032941
Clematis reticulata Walter [net-leaf clematis]*, N, TAC00282
Clematis terniflora DC. [sweet-autumn clematis], I, TAC06224
Consolida ajacis (L.) Schur. [annual larkspur], I, TAC03260
Consolida orientales (J. Gay) Schrodinger [oriental larkspur], I, HPC000045243
Delphinium carolinianum Walter subsp. *carolinianum* [wild blue larkspur], N, TAC06283
Delphinium carolinianum Walter subsp. *virescens* (Nutt.) R.E. Brooks [prairie larkspur]*, N, TAC00283
Ranunculus parviflorus L. [sticktight buttercup], I, TAC03284
Ranunculus sceleratus L. [blister buttercup], N, TAC04962

Rhamnaceae

Berchemia scandens (Hill) K. Koch [supplejack], N, TAC05052
Ceanothus herbaceus Raf. [redroot], N, BRIT229061
Frangula caroliniana (Walter) A. Gray [Carolina buckthorn]*, N, TAC00284
Ziziphus obtusifolia (Hook. ex Torr. & A. Gray) A. Gray [lotebush], N, TAC06273

Rosaceae

Crataegus crus-galli L. [cockspur hawthorn]*, N, TAC00286
Crataegus viridis L. [greenhaw]*, N, **NSA**
Geum canadense Jacq. var. *camporum* (Rydb.) Fernald & Weath. [white avens]*, N, TAC06874
Prunus angustifolia Marshall [sandhill plum]*, N, TAC0314
Prunus gracilis Engelm. & A. Gray [sand plum], N, TAC06838
Prunus mexicana S. Watson [wild plum]*, N, TAC04970
Prunus persica L. Batsch [peach], I, HPC000056087
Prunus rivularis Scheele [hog plum]*, N, TAC06158
Pyrus calleryana Decene. [Callery pear], I, TAC06900
Rosa multiflora Thunb. ex Murr. [Japanese rose], I, TAC03331
Rosa setigera Michx. var. *tomentosa* Torr. & A. Gray [prairie rose], N, TAC03332
Rubus aboriginum Rydb., N, TAC04972
Rubus oklahomus L.H. Bailey [dewberry], N, TAC04973
Rubus trivialis Michx. [southern dewberry]*, N, **NSA**
Sanguisorba annua (Nutt. ex Hook.) Torr. & A. Gray [prairie burnet]*, N, TEX00360157

Rubiaceae

Cephalanthus occidentalis L. [common buttonbush]*, N, TAC00289
Diodia teres Walter [poor-Joe]*, N, TAC00290
Galium aparine L. [bedstraw]*, N, TAC00291
Galium pilosum Aiton [hairy bedstraw], N, TAC04979
Galium virgatum Nutt. [southwest bedstraw]*, N, TAC00292
Houstonia pusilla Schoepf [tiny bluet]*, N, TAC00293
Sherardia arvensis L. [spurwort], I, TAC06154
Stenaria nigricans (Lam.) Terrell var. *nigricans* [prairie bluets]*, N, TAC04981

Rutaceae

Poncirus trifoliata (L.) Raf. [trifoliate orange], I, TAC06145
Ptelea trifoliata L. [hoptree]*, N, TAC00295
Zanthoxylum hirsutum Buckley [prickly-ash]*, N, TAC00296

Salicaceae

Populus alba L. [white poplar]*, I, TAC00297
Populus deltoides Bartram ex Marshall subsp. *deltoides* [eastern cottonwood]*, N, TAC00298
Populus nigra L. [black poplar]*, I, TAC00299
Salix nigra Marshall [black willow]*, N, TAC03392

Salviniaaceae

Azolla caroliniana Willd. [water fern], N, TAC06445

Santalaceae

Phoradendron tomentosum (DC.) Engelm. ex A. Gray [mistletoe]*, N, TAC00336

Sapindaceae

Acer negundo L. [box-elder], N, TAC06171

Acer saccharinum L. [silver maple]*, I, TAC00003

Sapindus drummondii Hook. & Arn. [western soapberry]*, N, TAC06150

Ungnadia speciosa Endl. [Texas-buckeye]*, N, TAC00300

Sapotaceae

Sideroxylon lanuginosum Michx. subsp. *oblongifolium* (Nutt.) T.D. Penn. [chittamwood]*, N, TAC04356

Scrophulariaceae

Verbascum thapsus L. [common mullein]*, I, TAC00306

Simaroubaceae

Ailanthus altissima (Mill.) Swingle [tree-of-heaven]*, I, TAC05622

Smilacaceae

Smilax bona-nox L. [saw greenbrier]*, N, TAC00309

Smilax tamnoides L. [bristle greenbrier], N, TAC06901

Solanaceae

Capsicum annuum L. var. *glabriusculum* (Dunal) Heiser & Pickersgill [bird pepper], N, TAC06139

Chamaesaracha coniodes (Moric. ex Dunal) Britton [false nightshade]*, N, TAC00310

Chamaesaracha coronopus (Dunal) A. Gray [green false nightshade], N, TEX00019139

Chamaesaracha sordida (Dunal) A. Gray [hairy false nightshade], N, TAC03622

Datura stramonium L. [jimsonweed]*, I, TAC00313

Datura wrightii Regel [Indian-apple], N, TAC05001

Physalis angulata L. [cut-leaf ground-cherry], N, TAC06940

Physalis cinerascens (Dunal) Hitchc. [beach ground-cherry]*, N, TAC00314

Physalis heterophylla Nees [clammy ground-cherry]*, N, TAC00315

Physalis longifolia Nutt. var. *longifolia* [common ground-cherry], N, TAC03639

Physalis mollis Nutt. [field ground-cherry]*, N, TAC00316

Solanum carolinense L. [horse-nettle]*, N, **NSA**

Solanum dimidiatum Raf. [western horse-nettle], N, TAC05006

Solanum elaeagnifolium Cav. [silver-leaf nightshade]*, N, TAC00318

Solanum ptychanthum Dunal [American nightshade]*, N, TAC00319

Solanum rostratum Dunal [buffalo-bur]*, N, TAC00321

Solanum triquetrum Cav. [Texas nightshade]*, N, TAC05193

Tamaricaceae

Tamarix chinensis Lour. [Chinese tamarisk], I, TEX00281833

Tamarix gallica L. [salt-cedar]*, I, TAC00322

Typhaceae

Typha domingensis Pers. [narrow-leaf cat-tail], N, TAC05014

Typha latifolia L. [common cat-tail]*, N, TAC03701

Ulmaceae

Ulmus alata Michx. [winged elm]*, N, TAC00325

Ulmus americana L. [American elm]*, N, TAC00327

Ulmus crassifolia Nutt. [cedar elm]*, N, TAC05616

Urticaceae

Boehmeria cylindrica Muhl. ex. Willd. [Pennsylvania pellitory], N, TAC06555

Parietaria pensylvanica Muhl. ex Willd. var. *pensylvanica* [Pennsylvania pellitory]*, N, TAC04366

Verbenaceae

Aloysia gratissima (Gillies & Hook.) Tronc. [common beebush], N, TAC06248

Glandularia bipinnatifida (Nutt.) Nutt. [Dakota vervain]*, N, TAC05028

Glandularia pumilia (Rydb.) Unger [pink vervain]*, N, TAC00329

Lantana urtioides Hayek [Texas lantana], N, TAC06279

Phyla nodiflora (L.) Greene. [frogfruit]*, N, TAC00332

Verbena bracteata Lag. & Rodr. [big-bractvervain]*, N, TAC00330

Verbena canescens Kunth. [gray vervain], N, TAC05035

Verbena halei Small [slender vervain]*, N, TAC00333

Verbena hastata L. [swamp verbena], N, HPC00023964

Verbena neomexicana (A. Gray) Small [hillside vervain], N, TAC06143

Vitex agnus-castus L. [common chastetree]*, I, TAC00334

Violaceae

Hybanthus verticillatus (Ortega) Baill. [nodding green-violet]*, N, TAC00335

Viola bicolor Pursh [field pansy]*, N, TAC05041

Viola missouriensis Greene [Missouri violet], N, TAC05042

Viola sororia Willd. [blue prairie violet]*, N, TEX00286105

Vitaceae

Ampelopsis cordata Michx. [heart-leaf ampelopsis]*, N, TAC00337

Cissus trifoliata (L.) L. [cowitch]*, N, TAC04372

Parthenocissus quinquefolia (L.) Planch. [Virginia-creeper]*, N, TAC00338

Vitis monticola Buckley [sweet mountain grape], E, TAC06579

Vitis mustangensis Buckley [mustang grape]*, N, TAC00339

Vitis cinerea (Engelm.) Millardet var. *helleri* (L.H. Bailey) M.O.

Moore [winter grape], N, TAC05048

Vitis vulpina L. [fox grape]*, N, TAC00340

Woodsiaceae

Woodsia obtusa (Spreng.) Torr. subsp. *occidentalis* Windham [common woodsia], N, TAC06442

Zygophyllaceae

Kallstroemia parviflora Norton [warty caltrop]*, N, TAC00341

Tribulus terrestris L. [goathead]*, I, TAC00343

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