

COUNTY RECORDS AND MAJOR RANGE EXTENSIONS FOR
ANGIOSPERMS FROM THE LAMPASAS CUT PLAIN OF THE WEST
CROSS TIMBERS AND PRAIRIES IN SAN SABA AND MILLS
COUNTIES, TEXAS

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As conservation ecology and plant restoration become more important due to habitat loss, a well-known flora of an area is essential for making conservation decisions and restoring ecosystems. The Lampasas Cut Plain makes up the largest portion of the Grand Prairie and extends through Bosque, Hamilton, Coryell, Bell, Williamson, Lampasas and Mills Counties (Diggs et al. 1999). Due to the variable topography, microhabitats ranging from nearly soilless slopes to areas of deeper soil create conditions for highly variable vegetation. Depending on the area, The Lampasas Cut Plain vegetation can be compared to that of the Cross Timbers, Edwards Plateau, or Fort Worth Prairie (Diggs et al. 1999).

Both Mills and San Saba counties lie close to the boundary of the Cross Timbers and prairies and Edwards Plateau ecoregions. This creates a species-rich environment of vegetation characteristic of both regions. However, few studies on the flora of this region have been conducted. The purpose of this study is to expand the knowledge of the flora of Mills and San Saba counties. Species collected were identified as native, endemic, or introduced, rare, threatened, or endangered. It is also noted if species appear on the Texas State-listed Noxious Weeds list.

Methods.—Plants were collected along both sides of the Texas Colorado River (the west side in San Saba County, the east being in Mills County), San Saba River, as well as Timberlake Biological Field Station located near Goldthwaite, Texas in June of 2018 (Fig. 1). Specimens were identified as well as classified as endemic, native, or invasive using *Shinners and Mahler's Illustrated Flora of North*

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Figure 1. Texas map showing sampling location; Mills and Saba counties shaded in gray.

Central Texas (Diggs. et al. 1999) and distribution assessed using Turner et al. (2003a, b). Species collected were also compared to those which occur on the Texas State-listed Noxious Weeds (United States Department of Agriculture 2018), and state threatened and endangered plant species list (Texas Park and Wildlife Department 2018).

Results & Discussion.—A total of twenty species were collected (Table 1), 15 of them being native and five of them being introduced with none being endemic to Texas. No species are considered to be rare, threatened, or endangered nor present on the noxious weeds list.

Eleven new county records were collected for Mills County and nine for San Saba County. Two species (*Morus rubra* from Mills County and *Cynodon dactylon* from San Saba County) were major

Table 1. Collected species (common names in parenthesis) in their respective counties including records from bordering counties (Turner et al. 2003a; 2003b). Counties: Brown (Br), San Saba (SS), Lampasas (La), Comanche (C), Hamilton (H), Burnet (Bu), Llano (LL), McCulloch (Mc) and Mills (M). MRE is Major Range Extensions with no reported collections in surrounding counties. Classification: native (N), endemic (E), or introduced (I) as well as collection numbers (Coll. No.) for each.

Family/Species/Common Name	Bordering Counties	N/E/I	Coll. No.
Mills County			
Acanthaceae			
<i>Ruellia nudiflora</i> (Engelm. & A. Gray)	Br	N	2415
Urb. var. <i>nudiflora</i> (Violet Ruellia)			
Asteraceae			
<i>Helenium microcephalum</i> DC. (Small-Head Sneezeweed)	SS, Br	N	2414
Cactaceae			
<i>Cylindropuntia leptocaulis</i> (DC.) F.M. Knuth (Desert Christmas Cactus)	SS, Br, La	N	2416
Cornaceae			
<i>Cornus drummondii</i> C.A. Mey. (Rough-Leaf Dogwood)	SS, Br, C	N	2406
Lamiaceae			
<i>Teucrium canadense</i> L. (American Germander)	SS	N	2418
Moraceae			
<i>Morus rubra</i> L. (Red Mulberry)	MRE	N	2413
Poaceae			
<i>Sorghum halapense</i> (L.) Pers. (Johnson Grass)	Br, La	I	2417
Primulaceae			
<i>Samolus valerandi</i> L. subsp. <i>parviflorus</i> (Raf.) Hutlén (Thin-Leaf Brookweed)	SS, Br	N	2400
Rhamnaceae			
<i>Ziziphus obtusifolia</i> (Hook. Ex. Torr. & A. Gray.) A. Gray (Lotebush)	Br	N	2419
Rutaceae			
<i>Ptelea trifoliata</i> L. (Hoptree)	SS, C	N	2407
<i>Zanthoxylum hirsutum</i> Buckley (Prickly-Ash)	SS, Br, H, La	N	2405

Table 1. Cont.

Family/Species/Common Name	Bordering Counties	N/E/I	Coll. No.
San Saba County			
Asteraceae			
<i>Ambrosia psilostachya</i> DC. (Western Ragweed)	M, La, Bu, LL, Ma	N	2404
<i>Calyptocarpus vialis</i> Less. (Prostrate Lawnflower)	Br	N	2402
<i>Chloracantha spinosa</i> (Benth.) G.L. Nesom (Mexican Devilweed)	M, Bu, LL	N	2411
<i>Xanthium strumarium</i> L. var. <i>canadense</i> (Mill.) Torr. & A. Gray (Cocklebur)	M, Br, Mc, Bu	N	2408
Cuscutaceae			
<i>Cuscuta indecora</i> Choisy var. <i>indecora</i> (Showy Dodder)	M, LL, Bu	N	2409
Euphorbiaceae			
<i>Ricinus communis</i> L. (Castor-Bean)	M	I	2403
Poaceae			
<i>Cynodon dactylon</i> (L.) Pers. (Bermuda Grass)	MRE	I	2410
<i>Sorghum halapense</i> (L.) Pers. (Johnson Grass)	Br, La	I	2401
Verbenaceae			
<i>Vitex agnus-castus</i> L. (Common Chastetree)	Br, LL, Bu	I	2395

range extensions. Details of the major range extensions are discussed in the following paragraphs.

FAMILY POACEAE

Cynodon dactylon (L.) Pers. (Bermuda Grass; Tarleton State University accession number N-2410) is a common wide-spread introduced grass cultivated in North-Central Texas since around 1882 for use in pastures. Although its origin is uncertain, it is thought to possibly be native to Africa or India (Diggs et al. 1999). The presence of this species in San Saba County (Turner et al. 2003a) confirms and extends broad use of Bermuda grass in pastures across Texas.

FAMILY MORACEAE

Morus rubra L. (Red Mulberry; Tarleton State University accession number N-2413) is a native tree found along stream bottoms and is common in southeast and eastern Texas throughout the Rolling Plains and Edwards Plateau ecoregions (Digg et al. 1999). Presence of this species in Mills County (Turner et al. 2003b) extends the range of this plant into the southwestern-most-part of the Cross-Timbers and Prairies ecoregion.

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LITERATURE CITED

- Diggs, G. M., Jr., B. L. Lipscomb & R. J. O'Kennon. 1999. Shinnery and Mahler's flora of north central Texas. Botanical Research Institute of Texas Press, Fort Worth. 1626 pp.
- Texas Parks and Wildlife Department. 2018. Endangered and threatened plants in Texas and the United States. Austin, Texas. <http://www.tpwd.state.tx.us/huntwild/wild/species/endang/plants/index.phtml>. (Accessed: August 25, 2018).
- Turner, B. L., H. Nichols, G. Denny & O. Doron. 2003a. Atlas of the vascular plants of Texas, Volume I. Fort Worth, Texas: Botanical Research Institute of Texas. 648 pp.
- Turner, B. L., H. Nichols, G. Denny & O. Doron. 2003b. Atlas of the vascular plants of Texas, Volume II. Fort Worth, Texas: Botanical Research Institute of Texas. 240 pp.
- United States Department of Agriculture, Natural Resource Conservation Service. 2018. Texas state-listed noxious weeds. The PLANTS Database, National Plant Data Center. Baton Rouge, Louisiana. <http://plants.usda.gov>. (Accessed: August 25, 2018).