

## MADREAN LOWER MONTANE PINE - OAK FOREST AND WOODLAND

**Nature Serve ID:** CES305.796

**Geology:** Tertiary igneous substrates are commonly encountered with this system in the Davis Mountains region, but the system may also occur on sandstone and limestone substrates, such as in the Guadalupe Mountains region.

**Landform:** This system occupies the relatively rugged slopes of the mountainous areas of the Trans-Pecos, but may also occupy gently rolling landscapes at higher elevations.

**Soils:** Often rocky soils derived from igneous and sedimentary substrates, but also mountain loams.

**Parent Description:** This system occurs at higher elevations of the Davis, Chisos, and Guadalupe Mountains than the Madrean Pinyon – Juniper Woodland. It is typically dominated by *Pinus ponderosa* (ponderosa pine) [or *Pinus arizonica* (Arizona pine) in the Chisos], but oak species such as *Quercus emoryi* (Emory oak), *Quercus grisea* (gray oak), *Quercus x pauciloba* (wavyleaf oak), and *Quercus gambelii* (Gambel oak) may be present to codominant. The subcanopy and shrub layer are typically not dense and may include species of the canopy as well as *Quercus hypoleucoides* (silverleaf oak), *Juniperus deppeana* (alligator juniper), *Cercocarpus montanus* (mountain mahogany), *Holodiscus dumosus* (rockspirea), *Symphoricarpos* spp. (snowberries), *Nolina* spp. (sacahuista), *Cylindropuntia imbricata* (tree cholla), and *Mimosa aculeaticarpa* var. *biuncifera* (catclaw mimosa). *Pinus cembroides* (Mexican pinyon pine), and in the Guadalupe Mountains, *Pinus edulis* (pinyon pine), becomes a common component, particularly at the lower elevational limits of this type and in more xeric situations. The herbaceous layer is typically dominated by graminoids including *Piptochaetium fimbriatum* (pinyon ricegrass), *Muhlenbergia emersleyi* (bull muhly), *Muhlenbergia pauciflora* (New Mexican muhly), *Bouteloua curtipendula* (sideoats grama), *Bouteloua gracilis* (blue grama), *Bouteloua hirsuta* (hairy grama), *Bothriochloa barbinodis* (cane bluestem), *Bothriochloa laguroides* ssp. *torreyana* (silver bluestem), *Andropogon gerardii* (big bluestem), *Blepharoneuron tricholepis* (pine dropseed), *Koeleria macrantha* (junegrass), *Hesperostipa neomexicana* (New Mexico feathergrass), *Heteropogon contortus* (tanglehead), *Muhlenbergia montana* (mountain muhly), *Muhlenbergia dubia* (pine muhly), *Muhlenbergia rigida* (purple muhly), *Eragrostis intermedia* (plains lovegrass), *Panicum bulbosum* (bulb panicum), *Schizachyrium cirratum* (Texas bluestem), and *Schizachyrium scoparium* (little bluestem).

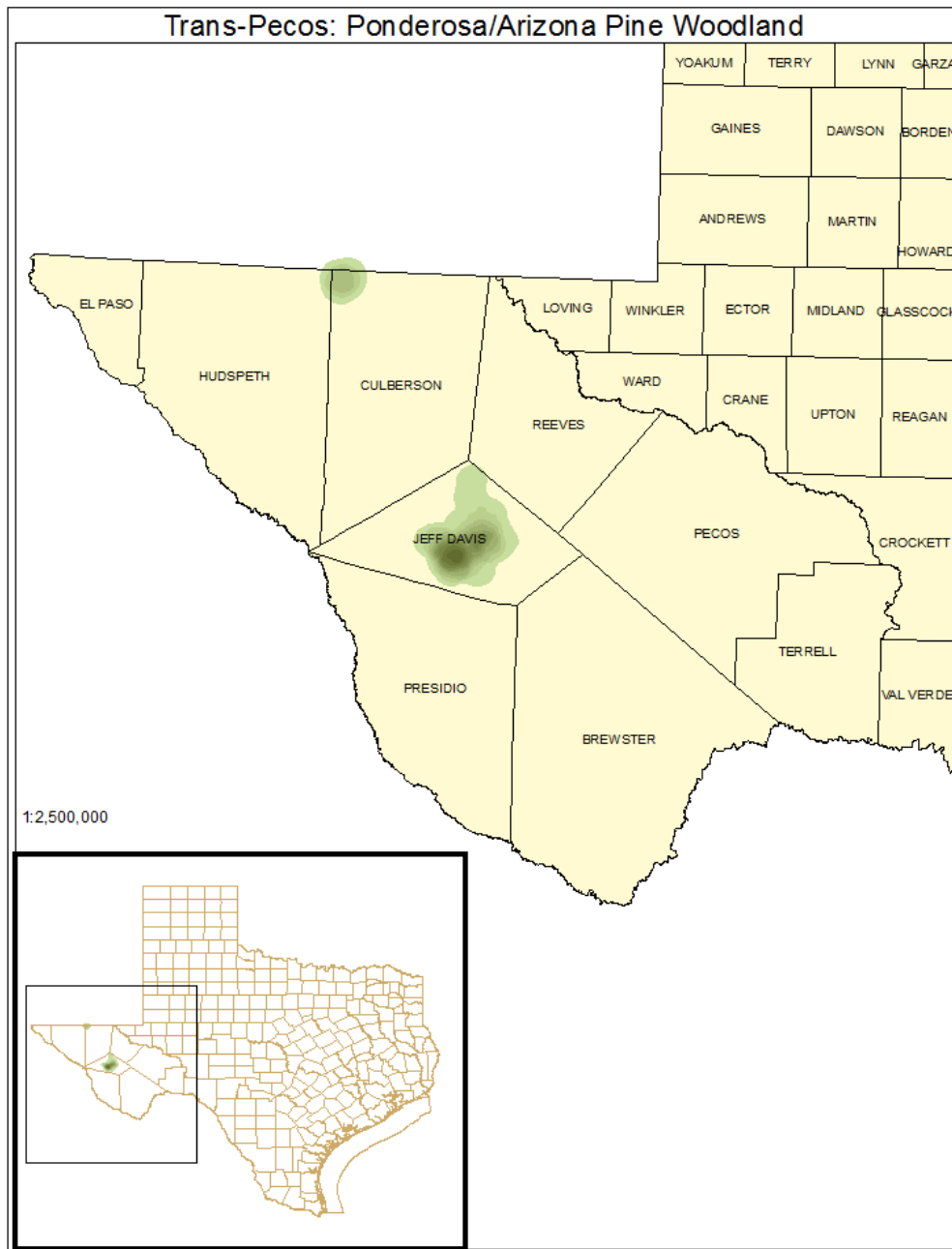
**ECOLOGICAL MAPPING SYSTEMS:**

**TRANS-PECOS: PONDEROSA/ARIZONA PINE WOODLAND**

**Mapping System ID:** 10901

**EMS Description:** Woodlands dominated by *Pinus ponderosa* (ponderosa pine), though oaks, junipers, and pinyon pines may be common.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Davis Mountains State Park: Texas Parks & Wildlife Department

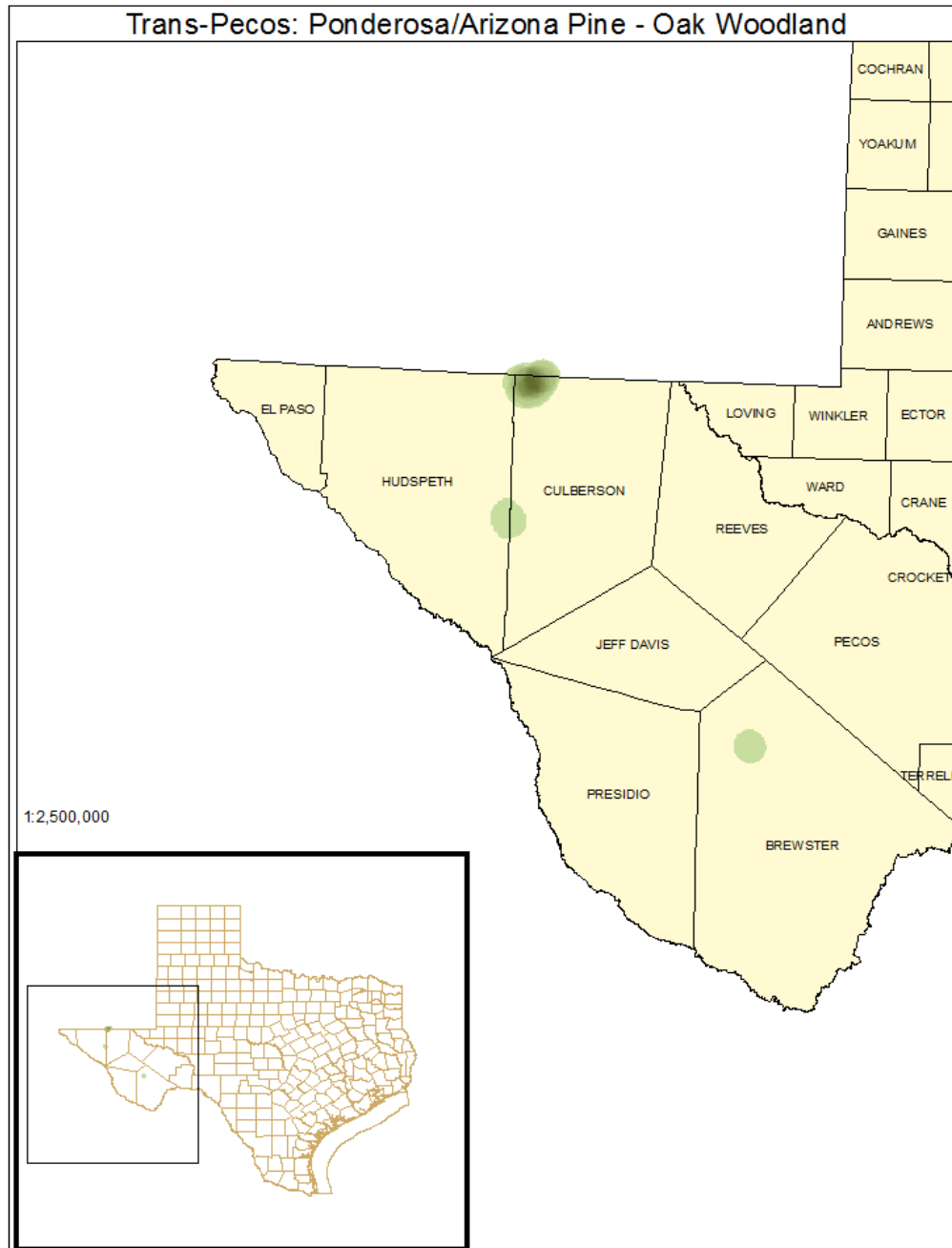
Guadalupe Mountains National Park: US National Park Service

## TRANS-PECOS: PONDEROSA/ARIZONA PINE - OAK WOODLAND

**Mapping System ID:** 10903

**EMS Description:** Woodlands co-dominated by *Pinus ponderosa* (ponderosa pine) and oak species such as *Quercus emoryi* (Emory oak), *Quercus gambelii* (Gambel oak), and *Quercus grisea* (gray oak).

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Guadalupe Mountains National Park: US National Park Service

Sierra Diablo Wildlife Management Area: Texas Parks & Wildlife Department

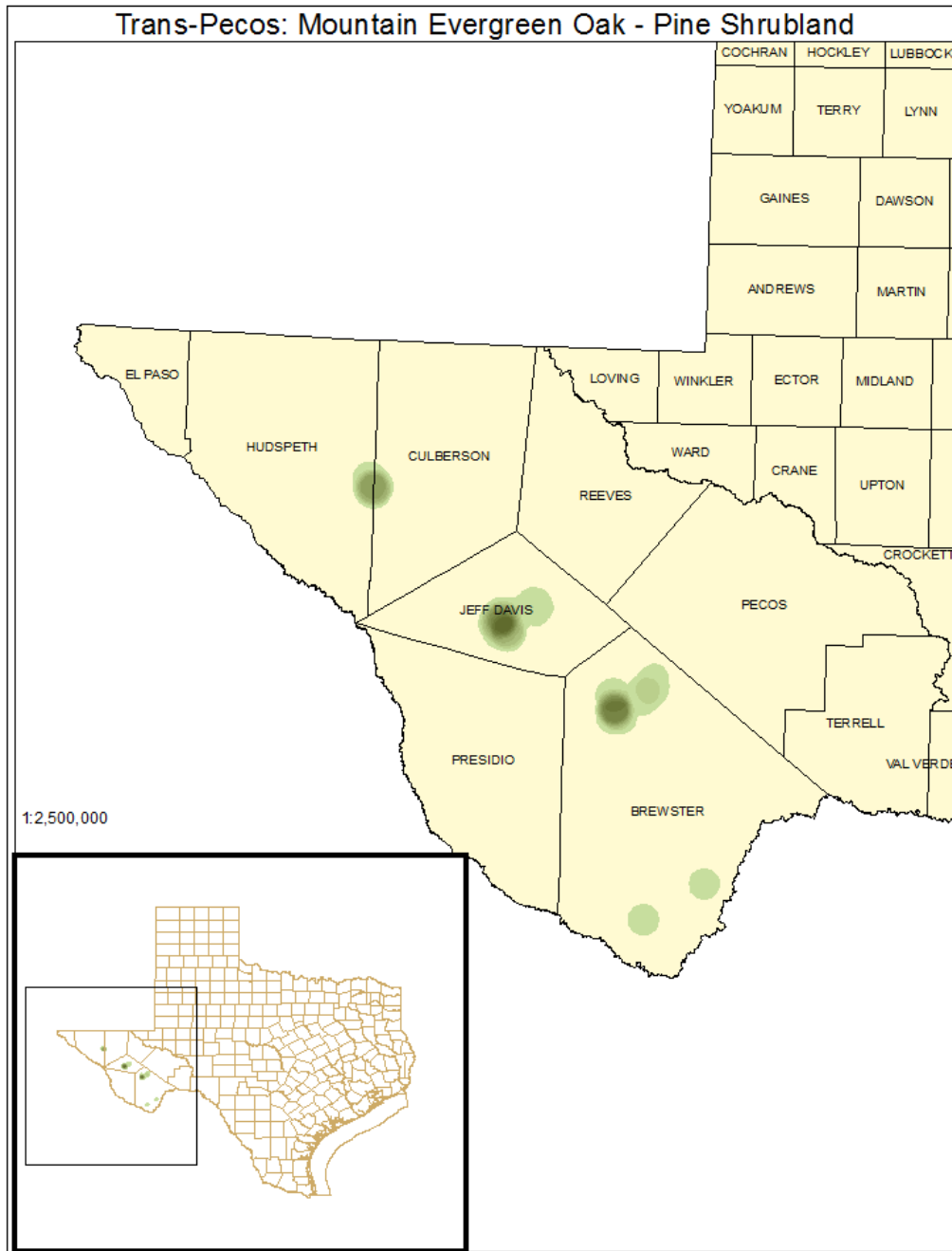


## TRANS-PECOS: MOUNTAIN EVERGREEN OAK - PINE SHRUBLAND

**Mapping System ID: 10905**

**EMS Description:** Shrublands representing young growth of the *Pinus ponderosa* (ponderosa pine) and *Quercus* spp. (oak) dominated woodlands. *Pinus cembroides* (Mexican pinyon pine) and *Juniperus deppeana* (alligator juniper) may be common components of the shrubland.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Big Bend National Park: US National Park Service

Davis Mountains State Park: Texas Parks & Wildlife Department

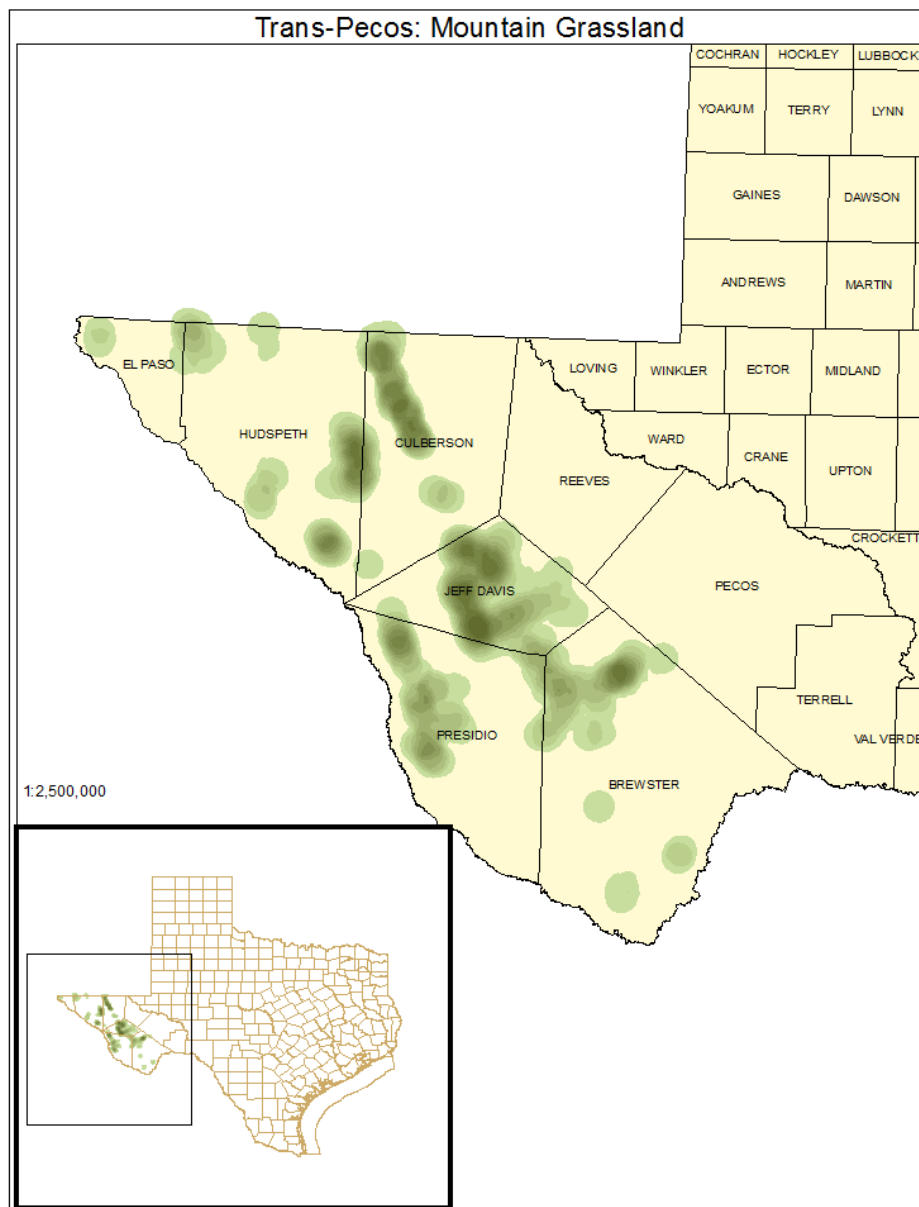
Sierra Diablo Wildlife Management Area: Texas Parks & Wildlife Department

## TRANS-PECOS: MOUNTAIN GRASSLAND

**Mapping System ID: 10907**

**EMS Description:** This savanna represents the open, grassy interstices of the pine woodlands of higher elevations. Mid-height grasses such as *Piptochaetium fimbriatum* (pinyon ricegrass), *Muhlenbergia emersleyi* (bull muhly), *Muhlenbergia pauciflora* (New Mexican muhly), *Bouteloua curtipendula* (sideoats grama), *Heteropogon contortus* (tanglehead), *Bothriochloa laguroides* ssp. *torreyana* (silver bluestem), and *Bouteloua gracilis* (blue grama) are common dominants.

**Distribution Map:**





**Example:**



**Public Land Occurrence:**

Big Bend National Park: US National Park Service

Black Gap Wildlife Management Area: Texas Parks & Wildlife Department

Davis Mountains State Park: Texas Parks & Wildlife Department

Elephant Mountain Wildlife Management Area: Texas Parks & Wildlife Department

Guadalupe Mountains National Park: US National Park Service

Sierra Diablo Wildlife Management Area: Texas Parks & Wildlife Department