

## MADREAN MESIC AND CANYON FOREST AND WOODLAND

**Nature Serve ID:** *Not yet described.*

**Geology:** Various geological strata of the Trans-Pecos mountains, particularly limestone and igneous formations. The system often occupies local alluvium, both fine and coarse, and sometimes Quaternary alluvium as mapped.

**Landform:** Montane canyons and stream terraces.

**Soils:** Canyon (Mountain Savannah), Foothill Slope, Draw, Limestone Canyon, Mountain Loam, Limestone Hill & Mountain and Igneous Hill & Mountain Ecological Sites.

**Parent Description:** Formerly, this previously undescribed system had components that may have been included in the Madrean Lower Montane Pine-Oak Forest and Woodland, Madrean Upper Montane Conifer-Oak Forest and Woodland, North American Desert Lower Montane Riparian Woodland and Shrubland, or Rocky Mountain Bigtooth Maple Ravine Woodland. These woodlands occur in canyons and along streams, sometimes occupying benches, terraces, and adjacent lower slopes with coarse, rocky substrate. The canopy may be variously dominated by a number of coniferous, broad-leaved evergreen, and deciduous components depending on phytogeography, elevation, and availability of groundwater. Canopy species may include *Pseudotsuga menziesii* (Douglas-fir, lacking in the Davis Mountains), *Pinus ponderosa* var. *scopulorum* (ponderosa pine), *Pinus arizonica* var. *stormiae* (Arizona pine, in the Chisos Mountains), *Pinus cembroides* (Mexican pinyon pine), *Pinus edulis* (pinyon pine, in the Guadalupe Mountains), *Cupressus arizonica* (Arizona cypress), *Juniperus deppeana* (alligator juniper), *Juniperus flaccida* (weeping juniper, in the Chisos Mountains), *Quercus emoryi* (Emory oak), *Quercus rugosa* (netleaf oak), *Quercus hypoleucoides* (silverleaf oak), *Quercus graciliformis* (Chisos oak), *Quercus gravesii* (Chisos red oak), *Quercus muehlenbergii* (chinkapin oak), and *Quercus grisea* (gray oak). Species such as *Ungnadia speciosa* (Mexican buckeye), *Acer grandidentatum* (bigtooth maple), *Fraxinus velutina* (velvet ash), *Prunus serotina* var. *virens* (southwestern chokecherry), *Arbutus xalapensis* (Texas madrone), *Ostrya knowltonii* (western hop-hornbeam, in the Guadalupe Mountains), and/or *Ostrya virginiana* var. *chisosensis* (Big Bend hop-hornbeam, in the Chisos Mountains) may be present in more mesic situations, such as perennial water sources. Shrubs that may be present include *Salvia regla* (mountain sage), *Juglans microcarpa* (little walnut), *Nolina erumpens* (foothill nolina), *Dasyllirion leiophyllum* (smooth sotol), *Agave havardiana* (Havard agave), *Agave parryi* ssp. *neomexicana* (New Mexico agave), *Mahonia haematocarpa* (red barberry), *Garrya ovata* (eggleaf siltassel), *Ceanothus greggii* (desert Ceanothus), *Crataegus tracyi* (mountain hawthorn), *Cercocarpus montanus* (mountain mahogany), *Sambucus nigra* ssp. *cerulea* (blue elderberry), *Frangula betulifolia* (birchleaf buckthorn), *Philadelphus* spp. (mockorange), and *Vitis arizonica* (canyon grape). The herbaceous layer is patchy with species such as *Piptochaetium fimbriatum* (pinyon ricegrass), *Bouteloua curtipendula* (sideoats grama), *Poa strictiramea* (Chisos bluegrass), *Muhlenbergia rigida* (purple muhly), *Muhlenbergia emersleyi* (bull muhly), *Bothriochloa laguroides* ssp. *torreyana* (silver bluestem), and *Schizachyrium scoparium* (little bluestem).

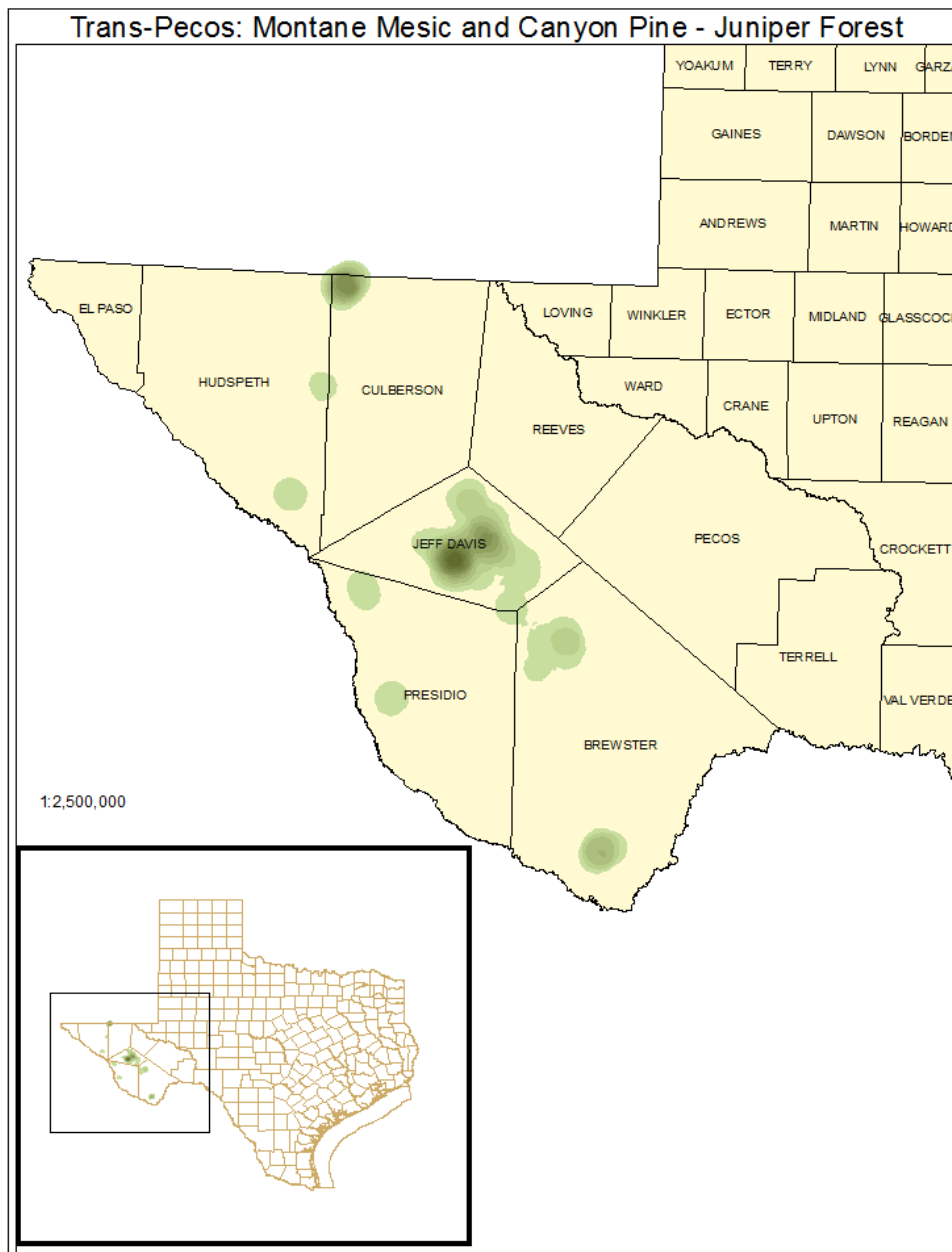
**ECOLOGICAL MAPPING SYSTEMS:**

**TRANS-PECOS: MONTANE MESIC AND CANYON PINE - JUNIPER FOREST**

**Mapping System ID: 11201**

**EMS Description:** Canyon and mesic slope woodlands dominated by coniferous evergreen species of *Pinus* spp. (pines), *Juniperus* spp. (junipers), *Pseudotsuga menziesii* (Douglas-fir), and/or *Cupressus arizonica* (Arizona cypress).

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Big Bend National Park: US National Park Service

Davis Mountains State Park: Texas Parks & Wildlife Department

Fort Davis National Historic Site: US National Park Service

Guadalupe Mountains National Park: US National Park Service

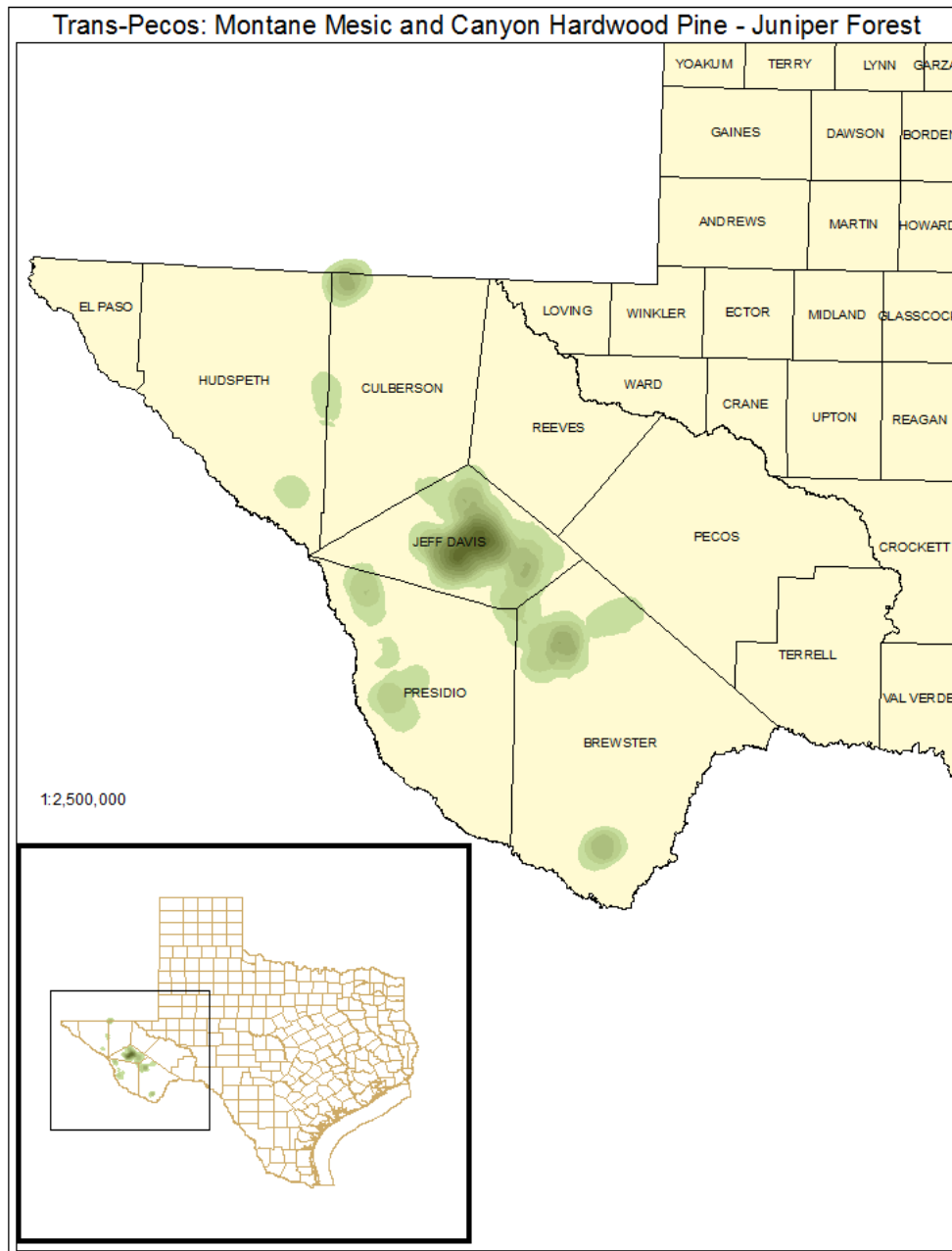
Sierra Diablo Wildlife Management Area: Texas Parks & Wildlife Department

## TRANS-PECOS: MONTANE MESIC AND CANYON HARDWOOD – PINE - JUNIPER FOREST

**Mapping System ID: 11203**

**EMS Description:** Woodlands co-dominated by coniferous evergreen species and broad-leaved evergreen and deciduous hardwoods including *Quercus* sp. (oaks), *Acer grandidentatum* (bigtooth maple), and possibly other species.

**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

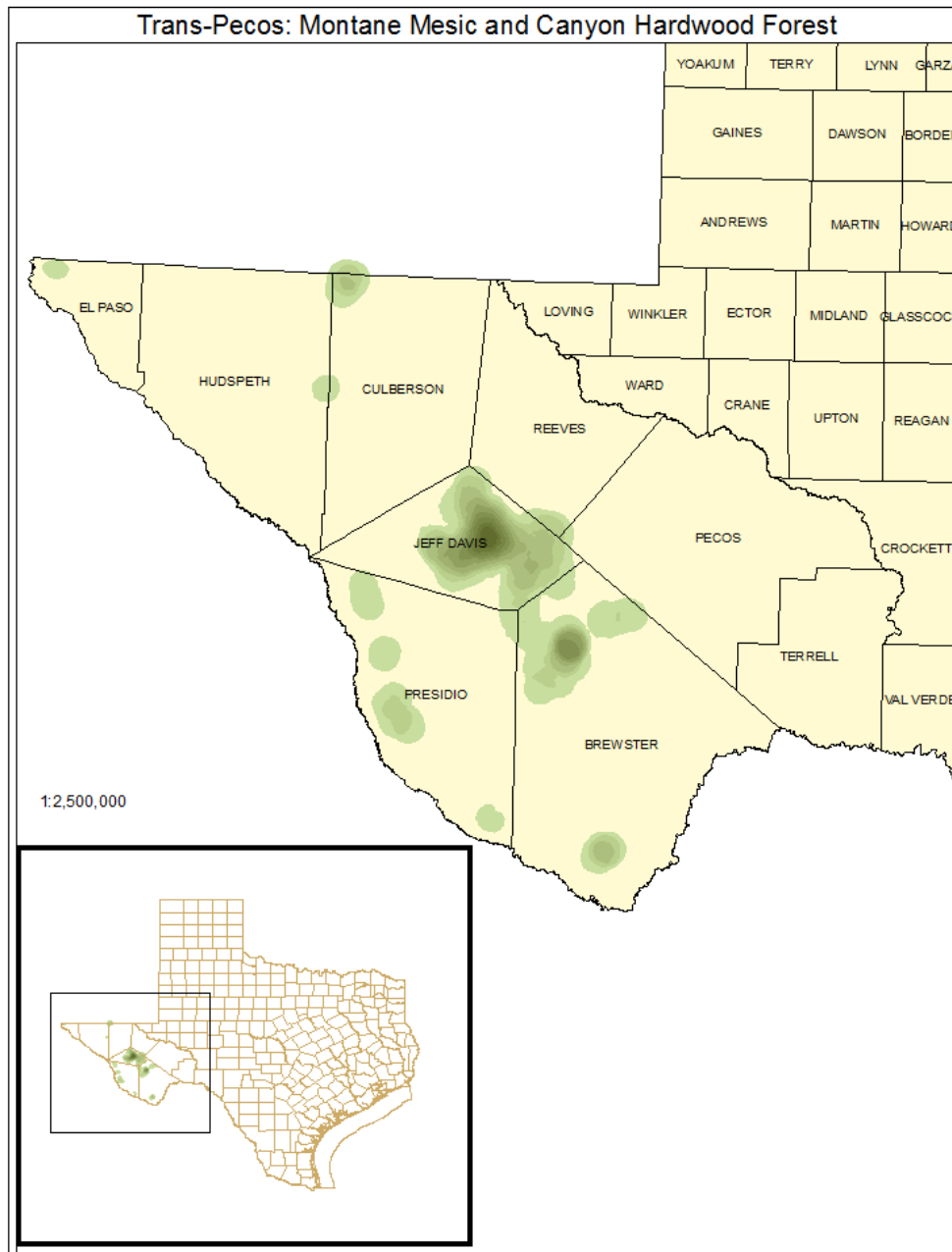
Sierra Diablo Wildlife Management Area: Texas Parks & Wildlife Department

## TRANS-PECOS: MONTANE MESIC AND CANYON HARDWOOD FOREST

**Mapping System ID: 11204**

**EMS Description:** Forests and woodlands dominated by deciduous hardwoods such as *Acer grandidentatum* (bigtooth maple), *Quercus muehlenbergii* (chinkapin oak), *Quercus gravesii* (Chisos red oak), and *Fraxinus velutina* (velvet ash). Coniferous evergreen and broad-leaved evergreen are often present in the canopy.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Big Bend National Park: US National Park Service

Big Bend Ranch State Park: 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

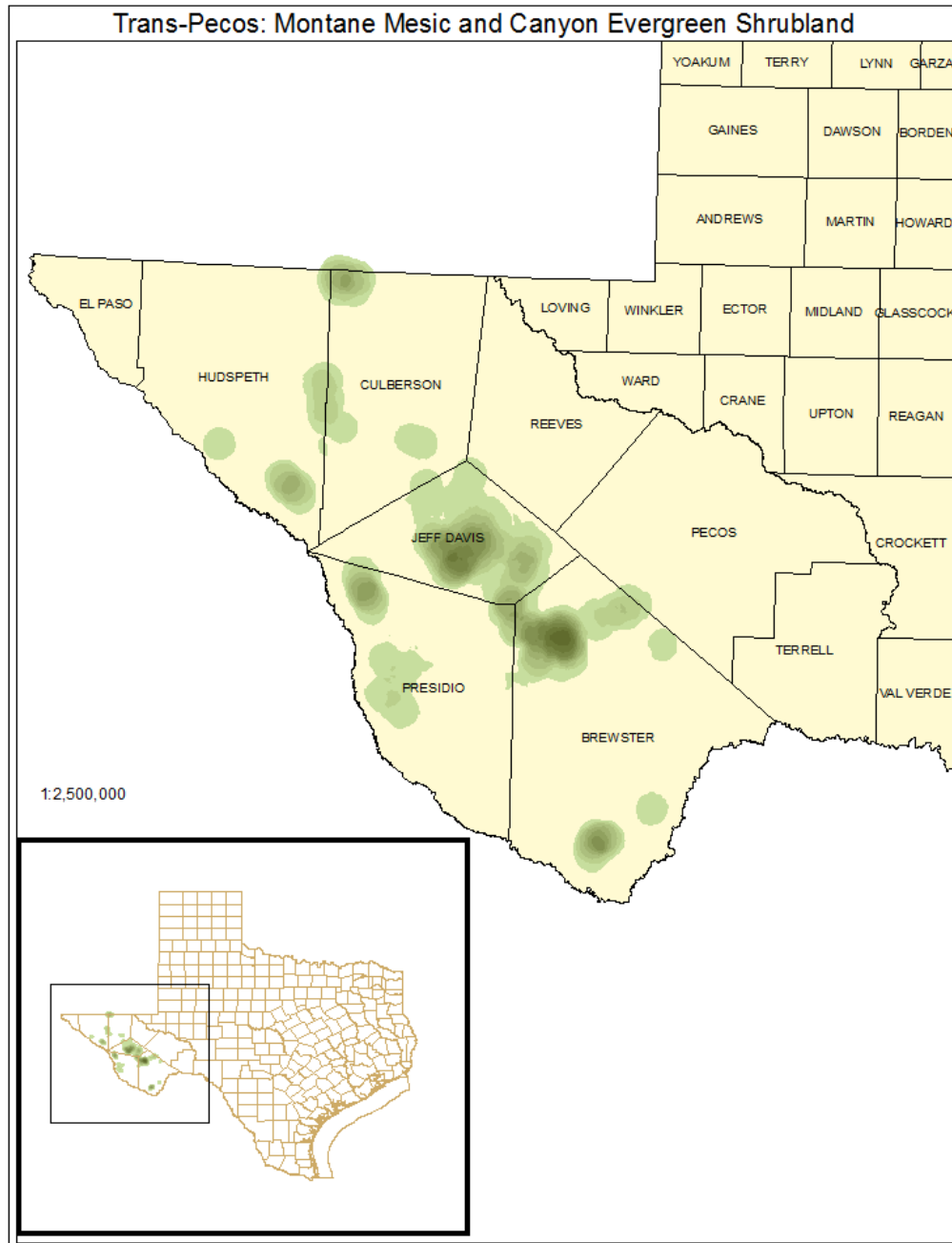
Sierra Diablo Wildlife Management Area: Texas Parks & Wildlife Department

## TRANS-PECOS: MONTANE MESIC AND CANYON EVERGREEN SHRUBLAND

**Mapping System ID: 11205**

**EMS Description:** Shrublands often mixed within a woodland or forest matrix and dominated by coniferous evergreen and/or broad-leaved evergreen species, often species represented in the canopy of the evergreen forest and woodland.

**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

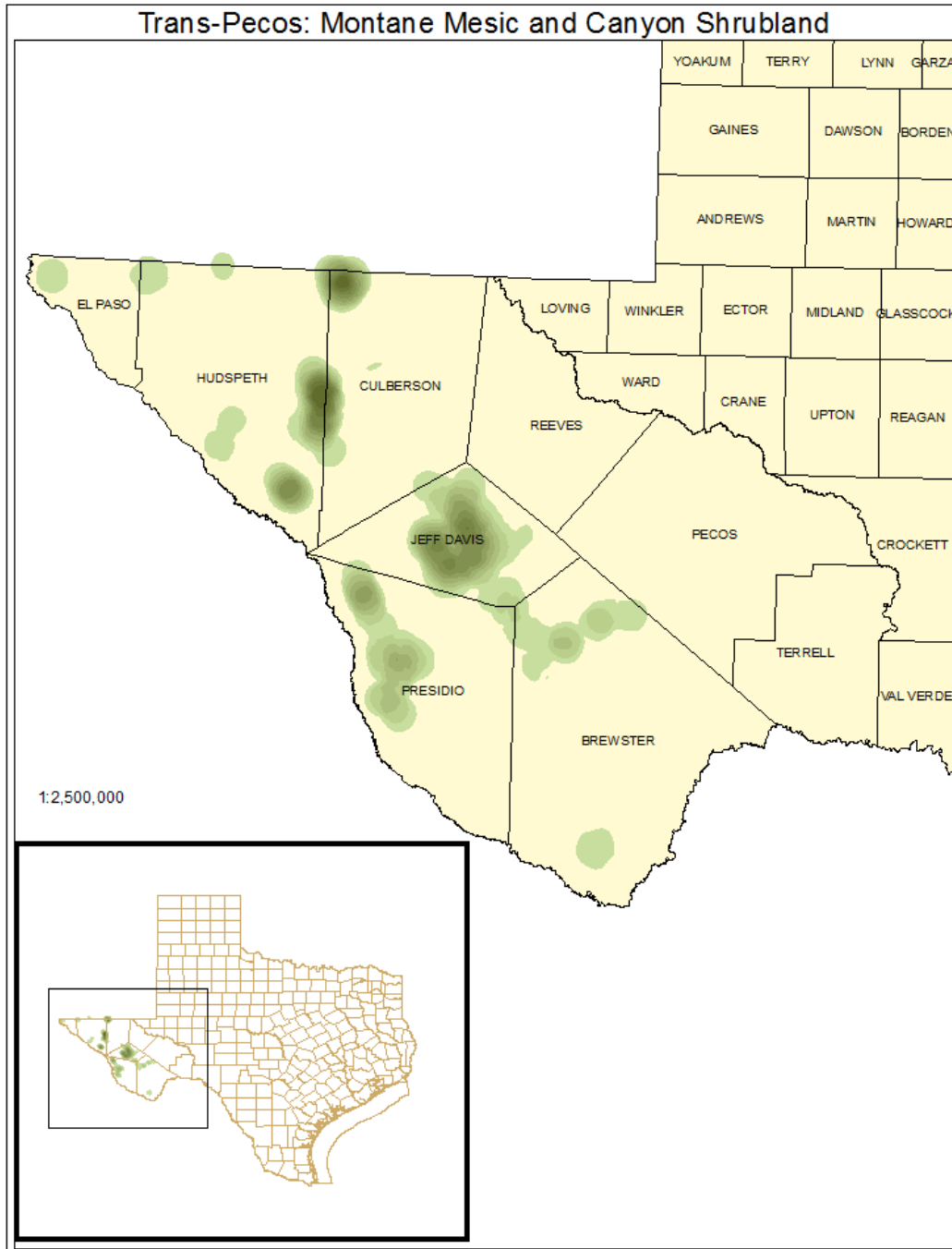
Sierra Diablo Wildlife Management Area: Texas Parks & Wildlife Department

## TRANS-PECOS: MONTANE MESIC AND CANYON SHRUBLAND

**Mapping System ID: 11206**

**EMS Description:** Shrublands often mixed within a woodland or forest matrix and dominated by deciduous shrub and small tree species.

**Distribution Map:**



**Example:**



**Public Land Occurrence:**

Big Bend National Park: US National Park Service

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