MADREAN ENCINAL

Nature Serve ID: CES305.795

Geology: This system may occur on various substrates including Permian limestones of Guadalupe Mountains, Tertiary igneous formations, and sandstone formation, and even colluvial/alluvial substrates at middle elevations in mountainous areas of the Trans-Pecos.

Landform: Mountain slopes and rolling uplands in mountainous areas.

Soils: This system may occur on a wide range of soils, often rocky or gravelly, derived from limestone, sandstone, or igneous parent material. It may also occur on loams and alluvial surfaces.

Parent Description: This system sometimes co-occurs with the Madrean Pinyon-Juniper Woodland and also grades into the Madrean Lower Montane Pine-Oak Forest and Woodland at higher elevations. It may replace the pinyon-juniper woodland at lower elevations and grade into desert grasslands, desert shrublands or montane chaparral. These lower elevation occurrences tend to be more open woodlands and savannas. Oak species typically dominate these woodlands with species such as *Quercus grisea* (gray oak), *Quercus emoryi* (Emory oak), *Quercus hypoleucoides* (silverleaf oak), *Quercus arizonica* (Arizona white oak), and/or *Quercus rugosa* (netleaf oak). On limestone, *Quercus mohriana* (Mohr's shin oak) may be common. Various pine and juniper species, such as *Juniperus deppeana* (alligator juniper), *Pinus cembroides* (Mexican pinyon pine), *Pinus edulis* (pinyon pine, in the Guadalupe Mountains region), may be conspicuous elements of the canopy. This system may be present as a shrubland, closed woodland, or open woodland. In addition to the oak, pine, and juniper species, other shrubs that may be encountered include *Mimosa aculeaticarpa* var. *biuncifera* (catclaw mimosa), *Mimosa dysocarpa* (velvetpod mimosa), *Rhus trilobata* (skunkbush sumac), and *Cercocarpus montanus* (mountain mahogany). *Viguiera stenoloba* (skeleton-leaf golden eye), *Parthenium incanum* (mariola), and other species common to the deserts of lower elevations may be present to common. *Nolina texana* (Texas sacahuista), *Dasylirion leiophyllum* (smooth sotol), *Opuntia imbricata* (tree cholla), and *Agave* spp. (agaves) are commonly encountered. The herbaceous layer is typically dominated by graminoids such as *Muhlenbergia emersleyi* (bull muhly), *Bouteloua curtipendula* (sideoats grama), *Bouteloua gracilis* (blue grama), *Bouteloua hirsuta* (hairy grama), *Bouteloua eriopoda* (black grama), *Piptochaetium fimbriatum* (pinyon ricegrass), and *Heteropogon contortus* (tanglehead), but this layer may be sparse.

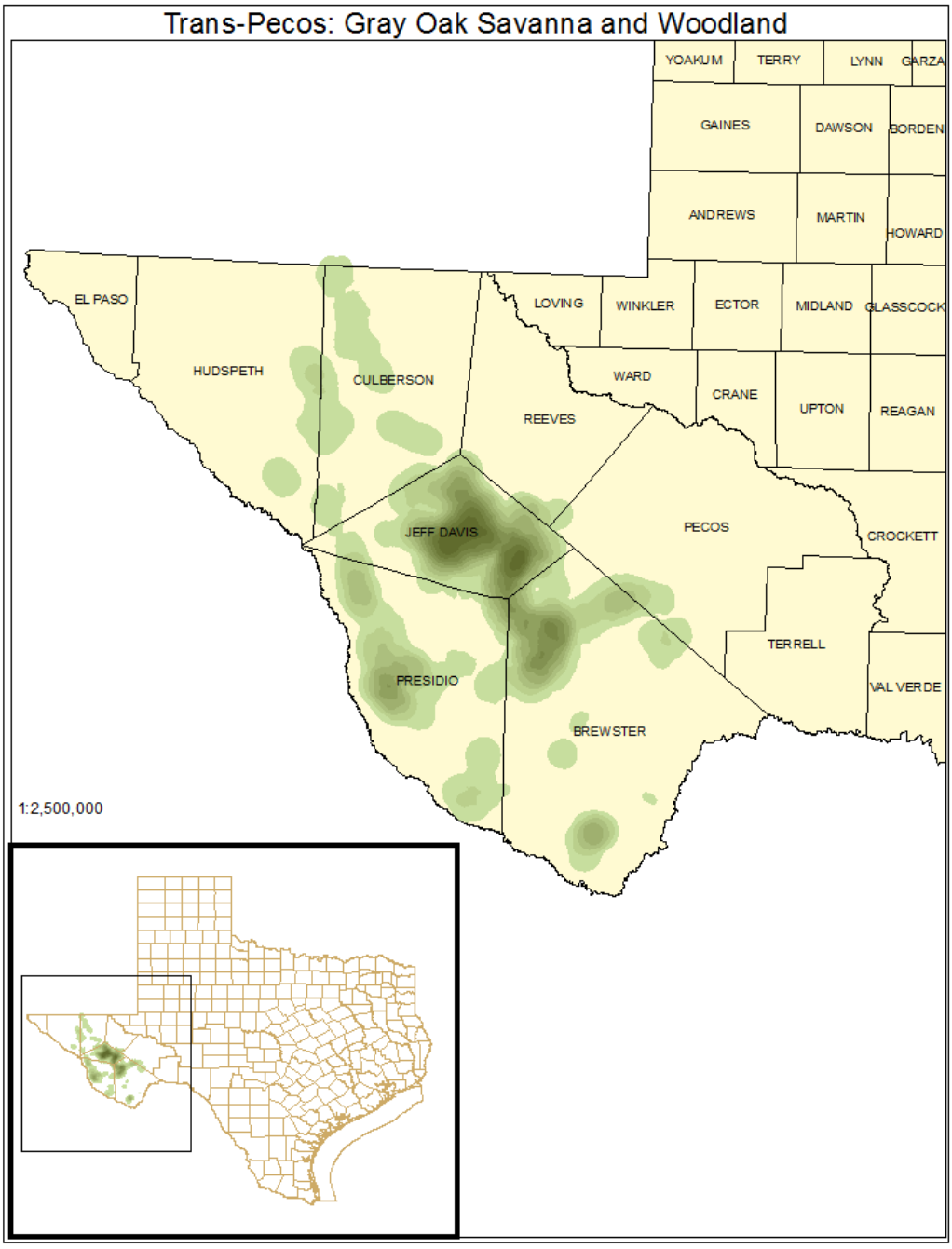
ECOLOGICAL MAPPING SYSTEMS:

TRANS-PECOS: GRAY OAK SAVANNA AND WOODLAND

Mapping System ID: 10702

EMS Description: This type is an oak woodland dominated by evergreen oaks.

Distribution Map:



Example:

Public Land Occurrence:

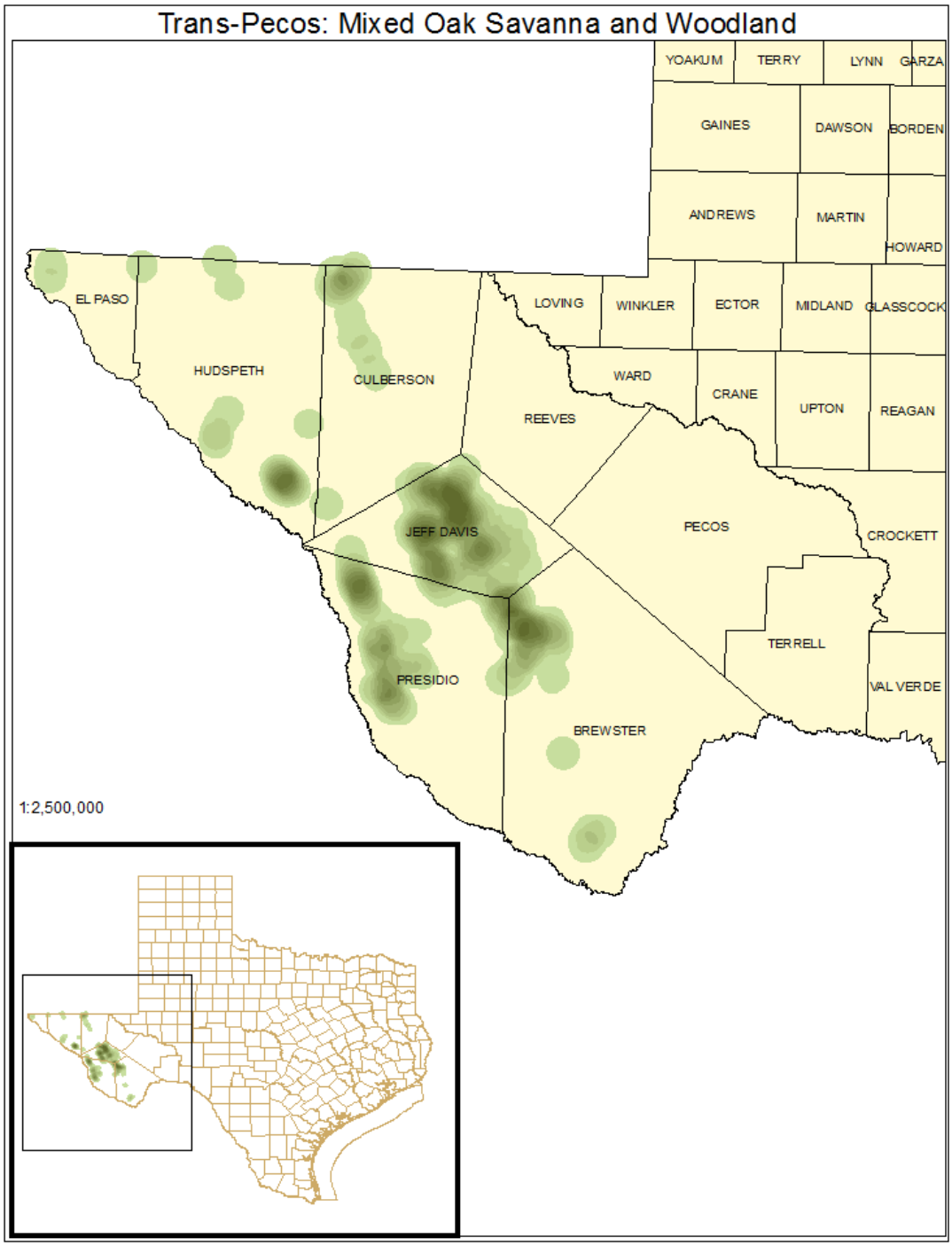
Big Bend National Park: US National Park Service
Big Bend Ranch State Park: Texas Parks & Wildlife Department
Black Gap Wildlife Management Area: Texas Parks & Wildlife Department
Davis Mountains State Park: Texas Parks & Wildlife Department
Elephant Mountain Wildlife Management Area: Texas Parks & Wildlife Department
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: MIXED OAK SAVANNA AND WOODLAND

Mapping System ID: 10703

EMS Description: Oaks of various species may dominate these woodlands.

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