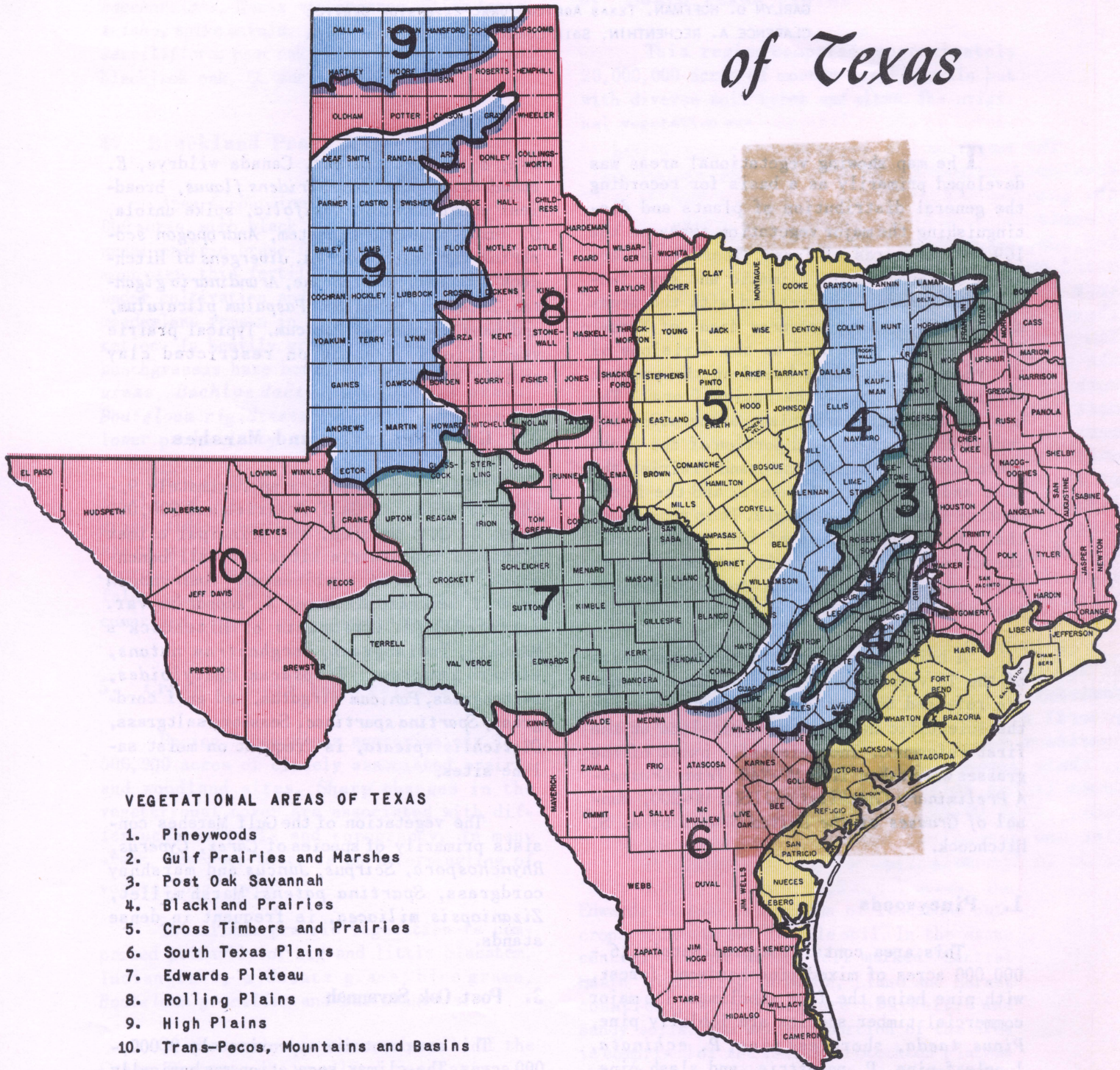


# Vegetational Areas

*of Texas*



## VEGETATIONAL AREAS OF TEXAS

1. Pineywoods
2. Gulf Prairies and Marshes
3. Post Oak Savannah
4. Blackland Prairies
5. Cross Timbers and Prairies
6. South Texas Plains
7. Edwards Plateau
8. Rolling Plains
9. High Plains
10. Trans-Pecos, Mountains and Basins

TEXAS AGRICULTURAL EXPERIMENT STATION -- TEXAS AGRICULTURAL EXTENSION SERVICE

College Station, Texas

in cooperation with

UNITED STATES DEPARTMENT OF AGRICULTURE

# VEGETATIONAL AREAS OF TEXAS

FRANK W. GOULD, TEXAS AGRICULTURAL EXPERIMENT STATION  
GARLYN O. HOFFMAN, TEXAS AGRICULTURAL EXTENSION SERVICE  
TEXAS A&M UNIVERSITY  
CLARENCE A. RECHENTHIN, SOIL CONSERVATION SERVICE, USDA

The map showing vegetational areas was developed primarily as a basis for recording the general distribution of plants and distinguishing major vegetation types on the 169,000,000 acres of Texas. These areas are based on topographic, climatic and soil factors and generally correspond with the areas shown in L-400, *Land Resource Areas of Texas*. Ten areas are presented as the divisions of vegetational types based on the present working knowledge of native flora. The most complex pattern of plant association occurs in the north-central portion of the State where the vegetation of land resource areas of the Grand Prairie, the East and West Cross Timbers and the North Central Prairies intermingle. It is recognized that continued studies of vegetational structure in the diversity of habitats in Texas may provide basis for future modification of these areas.

A brief summary of characteristics of the 10 vegetational areas follows. The predominant plants for each vegetational area in general are the ones growing on good and poor condition rangeland. Plants are referred to by their common names, with scientific names listed in italics at first reference. TAES MP-585, *Texas Plants--A Checklist and Ecological Summary*, was used as a guide in the selection of plant names.

## 1. Pineywoods

This area contains approximately 16,000,000 acres of mixed pine-hardwood forest, with pine being the fire subclimax. The major commercial timber species are loblolly pine, *Pinus taeda*, shortleaf pine, *P. echinata*, longleaf pine, *P. palustris*, and slash pine, *P. elliottii*. The principal grasses are mainly species of *Panicum*, *Paspalum* and *Andropogon*. Frequent in forest association are blackseed needlegrass, *Stipa avenacea*, Virginia wild-

rye, *Elymus virginicus*, Canada wildrye, *E. canadensis*, purpletop, *Tridens flavus*, broadleaf uniola, *Uniola latifolia*, spike uniola, *U. laxa*, pineland bluestem, *Andropogon scoparius* var. *divergens* (*A. divergens* of Hitchcock's Manual), switchcane, *Arundinaria gigantea*, brownseed paspalum, *Paspalum plicatulum*, and many species of *Panicum*. Typical prairie vegetation is present on restricted clay prairie sites.

## 2. Gulf Prairies and Marshes

This area comprises approximately 9,500,000 acres of Gulf Prairies and 500,000 acres of Gulf Marshes. The principal climax plants of the prairie sites are tall bunchgrass, including bigbluestem, *Andropogon gerardi*, seacoast bluestem, *A. scoparius* var. *littoralis* (*A. littoralis* of Hitchcock's Manual), Indiangrass, *Sorghastrum nutans*, eastern gamagrass, *Tripsacum dactyloides*, switchgrass, *Panicum virgatum*, and gulf cordgrass, *Spartina spartinae*. Seashore saltgrass, *Distichlis spicata*, is frequent on moist saline sites.

The vegetation of the Gulf Marshes consists primarily of species of *Carex*, *Cyperus*, *Rhynchospora*, *Scirpus*, *Juncus* and marshhay cordgrass, *Spartina patens*. Marsh millet, *Zizaniopsis miliacea*, is frequent in dense stands.

## 3. Post Oak Savannah

This area contains approximately 9,000,000 acres. The climax vegetation was basically a savannah type. Due to intensive grazing practices, much of this area has degenerated to dense stands of oak brush with an understory of yaupon, *Ilex vomitoria*.

The climax grass vegetation consists mainly of little bluestem, *Andropogon scoparius*, Indiangrass, switchgrass, purpletop, a variety of silver bluestem, *Andropogon saccharoides*, Texas wintergrass, *Stipa leucotricha*, spike uniola, longleaf uniola, *Uniola sessiliflora*, post oak, *Quercus stellata*, and blackjack oak, *Q. marilandica*.

#### 4. Blackland Prairies

Area 4 contains approximately 11,500,000 acres, with black clay-loam soil developed under prairie grass-forb vegetation. For the most part, this fertile area has been brought under cultivation and only small acreages of meadowland remain in climax tall grass vegetation. In heavily grazed pastures, the tall bunchgrasses have been replaced by buffalograss, *Buchloe dactyloides*, Texas grama, *Bouteloua rigidisetata*, and other grasses of lower productivity.

The climax grass vegetation includes little and big bluestem, Indiangrass, switchgrass, sideoats grama, *Bouteloua curtipendula*, hairy grama, *B. hirsuta*, tall dropseed, *Sporobolus asper*, Texas wintergrass and buffalograss. The prairie forb vegetation is comprised largely of legumes and composites.

#### 5. Cross Timbers and Prairies

Region 5 comprises approximately 16,500,000 acres of closely associated prairie and woodland sites. Sharp changes in the vegetational cover are associated with differences in soils and topography. In many areas, however, there is an intermingling of vegetational types.

The climax prairie vegetation is comprised primarily of big and little bluestem, Indiangrass, sideoats grama, blue grama, *Bouteloua gracilis*, and buffalograss.

On the predominantly sandy soils of the Cross Timbers, the woodland vegetation is dominated by shinnery oak, *Quercus spp.*, post oak and blackjack oak. The climax herbaceous vegetation is composed of big and little bluestem, sand lovegrass, *Eragrostis tri-*

*chodes*, Indiangrass, switchgrass and many species of legumes and palatable forbs.

#### 6. South Texas Plains

This region comprises approximately 20,000,000 acres of mostly level terrain but with diverse soil types and sites. The original vegetation was comprised mainly of perennial warm-season bunchgrasses in post oak and live oak, *Quercus virginiana*, frequently with mesquite *Prosopis spp.*, and other brush species forming dense thickets on the ridges. Long-continued grazing has altered the vegetation to such a degree that now the region is known as the "brush country." Most of the desirable grasses have persisted under the protection of brush and cacti.

Characteristic grasses of the sandy loam soils are seacoast bluestem, species of *Setaria*, *Paspalum*, *Chloris* and *Trichloris*, silver bluestem, big sandbur, *Cenchrus myosuroides*, and tanglehead, *Heteropogon contortus*. The dominant grasses on the clay and clay loams are silver bluestem, Arizona cottontop, *Trichachne californica*, buffalograss, curlymesquite, *Hilaria belangeri*, and species of *Setaria*, *Pappophorum* and *Bouteloua*. Low saline areas are characterized by gulf cordgrass, seashore saltgrass, alkali sacaton, *Sporobolus airoides*, and switchgrass. In the post oak and live oak savannahs, the grasses are mainly seacoast bluestem, Indiangrass, switchgrass, crinkleawn, *Trachypogon secundus*, and species of *Paspalum*.

#### 7. Edwards Plateau

This area is the West Central Texas "Hill Country" of some 24,000,000 acres. The Edwards Plateau is a region of limestone outcrops and rocky but fertile soil. In the east-central portion is the well marked "Central Basin" (centering in Mason, Llano and Burnet counties), with a mixture of granitic and sandy soils. The western portion of the area is comprised of the semi-arid Stockton Plateau which has an annual rainfall of 18-20 inches or less.

The principal climax grasses of this area are cane bluestem, *Andropogon barbinodis*,

silver bluestem, little bluestem, sideoats and hairy grama, Indiangrass, curlymesquite, buffalograss, fall witchgrass, *Leptoloma cognatum*, and species of *Tridens* and *Elymus*. Tobosa, *Hilaria mutica*, forms dense stands on the Stockton Plateau.

Throughout the Edwards Plateau, live oak, shinnery oak, mesquite and species of *Juniperus* dominate the woody vegetation.

## 8. Rolling Plains

This area has approximately 24,000,000 acres of rolling-to-rough topography and mixed grassland vegetation. Soils range from coarse sands along outwash terraces adjacent to streams to tight or compact clay on red bed clays and shales. Rough, broken lands on steep slopes are found in the western portion.

The principal climax grasses are mixtures of big and little bluestem, sand bluestem, *Andropogon hallii*, sideoats grama, Indiangrass and switchgrass in the more sandy soils. Sideoats and blue grama, tobosa and buffalograss are dominant on the tighter soils. Mesquite is a common invader on all soils. Shinnery oak and sand sagebrush, *Artemisia filifolia*, are common on the deep sands.

## 9. High Plains

Area 9 contains approximately 20,000,000 acres of level-to-slightly rolling plains with highly fertile clay and sandy soils.

Blue grama and buffalograss comprise the principal vegetation on the clay and clay loam sites. Other important grasses are little

## sideoats grama

bluestem, /western wheatgrass, *Agropyron smithii*, Indiangrass and switchgrass on the sandy loam soils. Shinnery oak and sand sagebrush are conspicuous on sandy sites. Several species of dropseeds, *Sporobolus spp.*, are abundant on coarse sands in the southern portion.

## 10. Trans-Pecos, Mountains and Basins

This area of approximately 18,000,000 acres includes most of the region west of the Pecos River. It is made up mainly of arid valleys, plateaus and mountains. The mountains are 3,000 to 8,000 feet in elevation and support ponderosa pine, *Pinus ponderosa*, forest vegetation on a few of the higher slopes. The principal vegetation types are the creosote bush, *Larrea divaricata*, and tarbush, *Flourensia cernua*, desert shrub, grama grassland, *Yucca* and *Juniperus* savannahs, and pinon pine, *Pinus edulis* and *P. cembroides*, and oak forest. Alkali sacaton and species of saltbush, *Atriplex*, are present on the saline soils.

The grass vegetation, especially on the higher mountain slopes, includes many southwestern and Rocky Mountain species not present elsewhere in Texas. On the desert flats, black grama, *Bouteloua eriopoda*, burrograss, *Scleropogon brevifolius*, and fluffgrass, *Tridens pilosus*, are frequent. More productive sites have numerous species of grama, muhly, *Muhlenbergia*, dropseed and perennial threeawn, *Aristida*, grasses. At the higher elevations, little bluestem and Texas bluestem, *Andropogon cirratus*, sideoats and blue grama, pinon ricegrass, *Piptochaetium fimbriatum*, wolftail, *Lycurus phleoides*, and several species of *Stipa* are frequent.