

**FIELD SUMMARY REPORT  
CENTRAL TEXAS PROJECT**

**BROWNWOOD NW, NE, SW, SE  
LLANO NW, SW**

I. 1:100,000 MAP NAMES

Brownwood NW, NE, SW, SE  
Llano NW, SW

II. FIELD TRIP PERSONNEL

Curtis J. Carley	USFWS
Frank J. Sargent	Martel
Jim Dick	Martel
Joanne Weber	Martel

III. FIELD DATES

June 12 - 23, 1988

IV. COLLATERAL DATA

USGS Topographical Quadrangle Maps: 1:24,000; 1:250,000

Soil Surveys

V. PHOTOGRAPHY

Type: Color Infrared Transparencies  
Scale: 1:58,000

The resolution quality is generally good throughout all the maps. The emulsion is consistent throughout the maps with approximately 40% of the strips appearing dark or unusually tinted and there are some instances of spectral reflectance. The remaining photographs have good emulsion. There should not be any interpretation problems due to resolution or emulsion.



Mesquite Section. Plains with high hills characterize most of the terrain. Tablelands occur in the southwest and northeast portions of the map. The dominant vegetation includes grasslands with shrubs and low trees. Oak and juniper occur with grass and mesquite. The elevation ranges from 900 feet to 2300 feet above sea level for the entire 1:250,000 map.

The Llano NW 1:100,000 and Llano SW 1:100,000 maps are both located entirely within the Juniper-Oak-Mesquite Section of the Subhumid Prairie Division. In Llano NW, irregular plains appear in the north, changing to tablelands as you move south. Plains with high hills make up the remainder of the map throughout the southern and eastern portions. Plains with high hills characterize the northern and eastern sections of Llano SW, changing to tablelands as you move towards the south and west. In small corners of the southwest and southeast are high hills. The dominant vegetation consists of mesquite and grasses, also Oak and Juniper which rarely grow higher than 20 feet. The elevation ranges from 1300 feet to 2400 feet above sea level for the Llano NW and Llano SW 1:100,000 maps.

The area experiences hot summers with most rainfall occurring in the Spring and Fall. Winters are dry and mild with brief cold spells. The average annual temperature ranges between 48<sup>o</sup> and 81<sup>o</sup> F and the average annual precipitation is 27 inches. On the western edge of the maps (Brownwood NW, SW and Llano NW, SW) the rainfall average may drop to 20 inches per year. The average number of frost-free days a year is 231.

The major drainage flow is generally from northwest to southeast and west to east. The largest river in the study area is the Colorado River. This runs through Brownwood NW, SW, and SE. The Llano River runs through Llano SW and NW, and the San Saba River runs through Llano NW, Brownwood SW and SE. Other major rivers include the Guadalupe River in Llano SW, the Leon River in Brownwood NE, the Lampasas River in Brownwood SE and the Concho River in Brownwood NW. Lake Brownwood in Brownwood NW, Proctor Lake in Brownwood NE, and Brady Reservoir in Brownwood SW are the major reservoirs in the area.

## VII. BIOLOGICAL CHARACTERISTICS OF WETLANDS HABITATS

Broad leaved deciduous (PF01) species in forested wetland areas (temporarily flooded wetlands-PF01A) are Green ash (Fraxinus pennsylvanica), elm (Ulmus sp.), cottonwood (Populus deltoides), pecan (Carya illinoensis), walnut (Juglans nigra), sugarberry/hackberry (Celtis sp.), Oak (Quercus sp.) and willow (Salix sp.). Willow is the predominate species for seasonal and semi-permanently flooded wetland forests (PFO1C, PFO1F).

The only needle leaved deciduous tree (PF02) found in forested wetland areas is the bald cypress (Taxodium distichum). These were found only in Llano maps. Most situations find this tree in a semi-permanent condition, although it may also be seasonal.

Most of these trees generally appear in riparian communities, sloughs or floodplains. Backwaters of reservoirs are an area where all three water regimes may be encountered. Generally the semi-permanent trees are in standing water. Seasonal trees, located behind semi-permanent trees generally stand in moist soils subjected to pool fluctuations. The temporary trees are situated between seasonal trees and upland areas.

The scrub/shrub community consists of the above mentioned young trees below 20 feet in height as well as Baccharis glutinosa for temporary wetlands (PSS1A). Seasonally flooded shrub communities are primarily willow (PSS1C). Semi-permanently flooded (F) shrub wetlands consist of willow and/or buttonbush (Cephalanthus occidentalis, PSS1C-F). Willow dominates in the backwater areas of reservoirs and impoundments along with the buttonbush.

Salt cedar (Tamarix sp.), needle-leaved deciduous (PSS2) occurs in temporary (A) and intermittently (J) flooded situations in riparian communities. However, it may invade upon the backwaters of some reservoirs (impoundments) in a seasonal condition. This can stress the plant, causing it to die.

Emergents in temporarily flooded (PEM1A) areas are sunflower (Helianthus sp.), cocklebur (Xanthium strumarium), beak rush (Rhynchospora sp.), milkweed (Asclepius sp.), spike rush (Eleocharis sp.) and dock (Rumex sp.). Seasonally flooded emergents (PEM1C) consist of sedges (Carex sp.), spike rush, smartweed (Polygonum sp.), Juncus sp., and three square (Scirpus sp.). Cattail (Typha latifolia), bulrush (Scripus sp.) and water willow (Justicia americana) are the primary emergents in semi-permanently flooded situations (PEM1F). In several locations three square was observed in a spring/seep (B water regime) situation.

Aquatic beds consists of algal mats (AB1). American Lotus (Nelumbo lutea), spatterdock (Nuphar luteum), and floating water primrose (Jussiaea repens), AB3, were observed. Floating aquatic bed (AB4) duckweed (Lemna sp.) was seen in the field which was not there at the time of the photography. Other aquatic beds were noted but not identified due to inaccessibility.

X. EXPECTATIONS VS. GROUND VERIFICATIONS

nature of the area is drainage oriented with deep streams and little or no immediate floodplain. Care will have to be taken when pulling vegetation along river banks. Because channels are cut deep, contour levels will have to be observed.

There was also a lack of seasonal indicators, such as willows, relative to the maps further north. The rocky terrain with very shallow soil and the dryer climate may have an effect on the plant.

Brownwood NW,SW, NE and SE are also drainage oriented in nature. Unlike Llano, there are more large reservoirs and more agricultural activity. During field observations most of the reservoirs have higher pool levels now than in the photography submerging seasonal and even temporary vegetation. Also, vegetation along streams with a bright pink signature should be studied more closely. Originally it was considered to possibly be seasonal signature but it turned out that much of it was upland grasses. The topos should be followed closely and soil surveys used to check for hydric soils.