

13. Coastal Prairie

Rarity Rank: S1/G2Q

Synonyms: Great Southwest Prairie, Eastern Coastal Prairie, Gulf Cordgrass Prairie, Cajun Prairie

Ecological Systems:

CES203.550 Texas-Louisiana Coastal Prairie

CES203.541 Texas-Louisiana Coastal Prairie Pondshore

CES203.543 Texas-Louisiana Saline Coastal Prairie

CES203.542 West Gulf Coastal Plain Texas-Louisiana Coastal Prairie Slough

General Description:

The prairie region of southwestern Louisiana was once very extensive (approximately 2.5 million acres), but today is limited to small, remnant parcels. On the south edge of its range, the community may occur on "islands" or "ridges" surrounded by marsh. The region is underlain by an impervious clay pan 6 to 18 inches below the surface that prevents downward percolation of water and inhibits upward movement of capillary water. Soils are typically circum-neutral to alkaline, saturated in winter, and often very dry in late spring and fall. Historically, trees were confined to the more elevated and better drained stream sides or ridges, forming "gallery forests", and acted to divide the Coastal Prairie into many subunits or "coves". The intrinsic soil conditions and frequent burning from lightning strikes prevented invasion by woody trees and shrubs and maintained the prairie vegetation. The natural demarcation line between the forest and grassland was (and is) very sharp. Coastal Prairie vegetation is extremely diverse and dominated by grasses, including *Paspalum plicatulum* (brownseed paspalum), *Paspalum* spp. (pasp grasses), *Schizachyrium scoparium* and *S. tenerum* (little and slender bluestem), *Andropogon gerardii* (big bluestem), *Andropogon* spp. (broomsedges), *Aristida* spp. (three-awn grasses), *Eragrostis* spp. (love grasses), *Spartina patens* (wire grass, near marshes), *Panicum virgatum* (switch grass), *Panicum* spp. (panic grasses), *Sorghastrum nutans* (Indian grass), *Sporobolus* spp. (dropseeds), and *Tridens* spp. (purple-top). Important sedges in the community include *Carex* spp. (caric sedges), *Cyperus* spp. (umbrella sedges), *Rhynchospora* spp. (beaked sedges), and *Scleria* spp. (nut-rushes). An abundance of forbs is present including *Cacalia ovata* (Indian platan), *Helianthus mollis* (sunflower), *Liatris* spp. (blazing-stars), *Asclepias* spp. (milkweeds), *Silphium* spp. (rosin-weeds), *Petalostemum* spp. (prairie clovers), *Baptisia* spp. (indigos), *Amsonia tabernaemontana* (blue star), *Rudbeckia* spp. (brown-eyed susans), *Euphorbia* spp. (spurges), *Euthamia* spp. (flat-topped goldenrods), *Hedyotis nigricans* (bluets), *Ruellia humilis* (wild petunia), *Ludwigia* spp. (water primroses), *Coreopsis* spp.



(tickseeds), *Solidago* spp. (goldenrods), *Agalinis* spp. (false foxgloves), and *Eupatorium* spp. (thoroughworts) (Allen et al. 2001, Grace et al. 2000, LNHP 1986-2004). Many plants in Coastal Prairie also occur in the pine savannahs and flatwoods that occur immediately north of the coastal prairie region. These include many of the above, plus *Drosera brevifolia* (sundew), *Polygala* spp. (milkworts), *Aletris* spp. (colic-roots), *Rhexia* spp. (meadow beauties), and *Sabatia* spp. (rose-gentians). As mentioned previously, fire plays a critical role in this natural community. Certain woody species may invade this habitat without periodic fire. The introduced species *Triadica sebifera* (= *Sapium sebiferum*; Chinese tallow tree) has become especially problematic, forming dense thickets or forests. The transition zone from coastal prairie to pine savannah is extremely diverse with the two habitat types sharing most herbaceous species in the transitional area. Baygalls or bayhead swamps may be included within coastal prairie.

Current Extent and Status:

Remnant Louisiana coastal prairies, once covering an estimated 2.5 million acres, have been reduced to less than 1 % of the original extent (Smith 1993). The disappearance of the coastal prairie can be attributed to rice and sugar cane production, oil exploration, and residential and commercial development. The current estimated upland prairie remnant extent is 93 acres and approximately 500 acres remain of the wet or marsh fringing prairie (L. Allain, personal communication).



The majority of the upland remnants exist along railroad right-of-ways between railroad tracks and highways. Many of these are threatened by highway widening projects, and fire suppression. Sabine NWR, managed by the USFWS, supports at least two known intact marsh fringing prairies with a total estimated area of 100 acres. White Lake Wetland Conservation Area, managed by the LDWF, has a wet prairie site of unknown condition and size. There are other wet prairies located on private lands, currently with no protection. Prairie restoration efforts began in the late 1980's, and there are 3 primary sites that have had some degree of success. The Eunice Prairie, owned by the Cajun Prairie Habitat Preservation Society, is a 15-acre restoration site that is registered with the Natural Areas Registry Program. The Duralde Prairie, owned by the USFWS, is a 345 acre restoration project, and another privately owned tract near Gueydan, Louisiana is being restored with the help of the NRCS and USGS.

COASTAL PRAIRIES SPECIES OF CONSERVATION CONCERN (24)		
AMPHIBIANS Southern Crawfish Frog	American Woodcock Short-eared Owl Scissor-tailed Flycatcher	BUTTERFLIES Reakirt's Blue Little Metalmark Southern Dogface
BIRDS Mottled Duck Northern Harrier Northern Bobwhite Yellow Rail Black Rail Sandhill Crane Whooping Crane	Spragues Pipit Loggerhead Shrike Dickcissel Field Sparrow Grasshopper Sparrow Henslow's Sparrow Le Conte's Sparrow	MAMMALS Eastern Spotted Skunk
		REPTILES Ornate Box Turtle Western Slender Glass Lizard

Priority Species Research and Survey Needs:

Ornate Box Turtle: Initiate surveys in areas identified by SWG project T20 (Lorenze et al. 2004) to update occurrence and abundance data for inclusion in the LNHP database.

Waterbirds: Continue to conduct rookery surveys to update the LNHP database information.

Mottled Ducks: Research is needed on nesting success, brood rearing and brood success rates, molting habitat needs, and annual recruitment and survival rates along with other basic research to determine breeding and recruitment constraints.

Sandhill Cranes: Develop a monitoring program to determine their use of this habitat.

Short-eared Owl: Christmas Bird Count data indicate a significant decline in North America between 1960 and 1989. Expand efforts to locate and study wintering populations to determine limiting factors, management needs, and provide data necessary for habitat protection efforts.

Reakirt's Blue, Little Metalmark, Southern Dogface: Conduct surveys to determine current distribution and abundance for inclusion in the LNHP database.

Species Conservation Strategies:

1. Northern Bobwhite and Grassland Birds: Support implementation of recommended habitat restoration actions specified in NBCI and by LDWF Quail and Grassland Bird Task Force.
2. Shorebirds, Wading Birds:
 - Provide public education regarding the importance of waterbird nesting colonies and shorebird feeding areas. Reduce the negative effects of recreational and other uses on these areas.
 - Work with landowners to implement management and conservation recommendations for waterbirds (especially rails) of SWG project T18 upon completion.

3. Waterfowl:
 - Continue to encourage the creation/enhancement/maintenance of high-quality habitat across Louisiana.
 - Work with DU, DW, and USFWS to assuring that quality habitat, including refuge from hunting and other disturbance, is distributed across the landscape.
 - Encourage maintenance of rice agriculture and discourage conversion to crops with lower value to waterfowl.
 - Continue LDWF partnerships with DU, DW, USWFS, and state wildlife management agencies to conserve habitat on the northern breeding grounds.
4. Partner with LSU and ULL to develop/update management guidelines/BMPs for species of conservation concern that occur in lands cultivated for rice and sugarcane.

Threats Affecting Habitat:

The following table illustrates the threats identified for this habitat type and the sources of these threats. This represents all threats and sources of threats identified across all ecoregions of the state where this habitat occurs.

Source of Threat	Threat			
	Altered Composition/ Structure	Habitat Destruction or Conversion	Habitat Disturbance	Habitat Fragmentation
Conversion to agriculture or other forest types		XXX		XXX
Development/maintenance of pipelines, roads or utilities		XXX		XXX
Fire suppression	XXX			
Grazing practices	XXX		XXX	
Invasive/alien species	XXX			

Habitat Conservation Strategies:

1. Partner with NGOs, state and federal agencies, private landowners, etc. to promote protection, restoration, and expansion of coastal prairie habitat.
2. Promote fire as essential management tool. Burn these areas as needed and promote alternatives to fire where prescribed burning is not an option.
3. Provide educational information on this habitat type and its importance to species of conservation concern to landowners/land managers through technical pamphlets and the LDWF website.
4. Review existing grassland management plans and incorporate NBCI strategies to encourage restoration of this habitat type.

5. Support Louisiana Native Plant Initiative located at McNeese State University for the development of plant materials to facilitate restoration of coastal prairies, and help develop partnerships to secure long-term funding for the plant materials center.
6. Support research to determine grazing schedules, etc. regarding possible livestock production on restored coastal prairie sites as a management technique.
7. Work with land managers/hunting clubs/extension agents, etc. to discourage the placement of food plots in this habitat type.
8. Investigate restoration of coastal prairie on White Lake Wetlands Conservation Area.
9. Partner with NRCS to encourage farmers to plant native prairie plant species on agricultural buffer areas (CP33).
10. Partner with DOTD and federal agencies to promote the planting of native prairie species in rights-of-way areas where historic native prairies occurred.
11. Work with the legislature to provide incentives (tax breaks, etc.) to landowners to retain the natural state of areas where this habitat occurs.

References:

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