

T-46 — “Morse Clay Prairie Flora Report”

Abstract: The objective of this project was to examine plant composition in Morse Clay prairies following disturbance. The best examples of Morse Clay prairies are found on Barksdale Air Force base and Bodcau Wildlife Management Area in Bossier Parish. Current management of Barksdale is focused on wildlife, oil and gas exploitation, timber harvesting, and recreation. Consequently, few areas remain in relatively natural condition, and all of the prairie area has at one time been subject to disturbance. Bodcau WMA has similar habitat to that of Barksdale with similar areas of Morse Clay prairie. Some of the prairie area is protected in registered natural areas, but much of it is now plowed land managed for food plots. All areas where Morse Clay prairie occurs have had ground disturbance in the past.

Four study plots in four prairies away from prairie edges were established for this project. Each plot measured 20 m x 50 m or 31.6 m x 31.6 m (0.1 ha). Within each 0.1 ha plot were two 3.16 m x 3.16 m plots (0.001). Each of these in turn had a 1 m x 1 m (0.0001) plot within it. Each plot was surveyed for total species. If a particular species occurred in a 0.0001 ha plot, it automatically occurred in the 0.001 ha plot in which it was nested and in the 0.1 ha plot as well. All species in the plots were recorded every month during a one year span throughout 2006 and 2008. Cover percentage was estimated subjectively and estimates were then converted to percentages. Soil samples were also collected in the woodlands upslope and downslope from prairie openings.

Results of the texture and chemical analyses determined soil in the prairies was either a silty clay loam or silty clam. Average pH was 7.71, a value higher than woodlands upslope and downslope from the prairie. Calcium and potassium concentrations were also generally higher in prairie soils.

Vascular flora of the four plots was documented, along with species richness and cover classes by prairie. Four state rare species were recorded in the plots – *Carex meadii* Dewey., *Coreopsis palmata* Nutt., *Houstonia purpurea* L. var. *calycosa* Gray., and *Nemastylis geminiflora* Nutt. A total of 159 species were discovered and plot richness was about average for open plant communities through the southeast. Cover data indicate that these prairies have many scattered species, none of which are dominant except very locally.

(Abstract excerpted from: “Morse Clay Prairie Flora Report (T-46)” Final Report (October 2008). MacRoberts and MacRoberts, Bog Research; Shreveport, Louisiana; 24 pp)