RESTORING NATIVE GRASSLANDS AND BOBWHITE QUAIL IN THE BLACK BELT PRAIRIE

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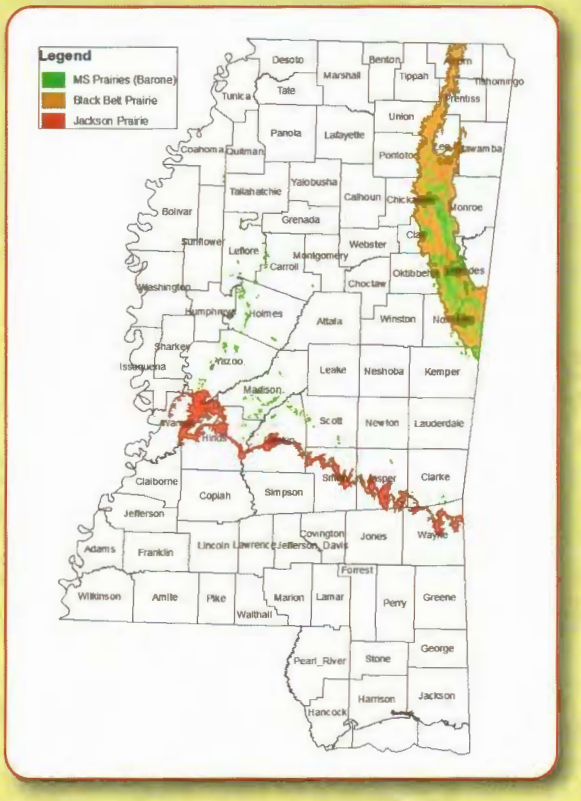
When most folks hear the word "prairie," they immediately think of an old western movie or possibly the endless sea of fenced grasslands and corn fields that can be seen while driving cross-country on a family vacation. Many Mississippians may be surprised to learn that we have our own prairies right here in the Magnolia State. Indeed, Mississippi was once home to more than 200,000 acres of prairie grasslands located in the Black Belt and Jackson Prairies (see map). These prairies are a true treasure of natural biological diversity, with some prairie remnants known to hold more than 400 species of plants in an extremely small area. Biologists and sportsmen are hopeful that, by understanding and restoring these grassland relics, we can restore another natural treasure of near antiquity in the region – the bobwhite quail.



This map shows to location of chalk soil formations underlying the Black Belt and Jackson Prairies. Also included are the locations of remnant grasslands as defined by the 1830s land surveys.

Botanists documented 448 plants on this 200-acre prairie remnant in Chickasaw County Mississippi.

Prairie grasslands are quite different from the occasional "sage patch" you might encounter in an abandoned field or recent cut-over. Most of the grasslands in our state are the byproduct of some type of man-driven activity, such as timber harvest or burning, that sets back the natural succession of plant communities. Were it not for the occasional man-made "disturbance," these areas would eventually become a forest. True prairie grasslands, on the other hand, are ecologically suited to remain grasslands regardless of man-made disturbance. Under historical conditions, these grasslands would have remained open as a result of frequent natural fires and grazing by large animals, such as the American Bison and others. Both man-made and natural grasslands provide critical habitat for bobwhites and other wildlife.

The natural grasslands of the Black Belt and Jackson Prairies are unique, a distinction largely due to their geology, which includes relatively young soils that originate from calcareous rock or "chalk" sediments that are more than 70 million years old. Where prairie soils are healthy, they exhibit a distinctive dark to black coloration that gives the region its name. Folks familiar with these regions are probably equally familiar with the degraded chalk outcrops on roadsides and other heavily disturbed areas where the topsoil has been removed or washed away. It is not uncommon to find shark's teeth, sea shells, and other clues to the region's natural history in these chalk bluffs.

Unfortunately, the dark soils of the prairies are not only their namesake, but also have contributed to their decline. These grasslands lying on rich, fertile soil were relatively easy for early settlers to clear and farm. Prairie soils with deeper topsoil were

Background image: MDWFP

well suited to grow cotton and other crops. Thinner soils were and are used for livestock grazing. However, frequent tillage, overgrazing, and suppression of natural fire regimes over more than 100 years have reduced the natural prairie grasslands in the Black Belt to a few scattered remnants. Though not directly related, bobwhites in the Black Belt have recently experienced a similar decline due to changing land uses in the region.

This former soybean field is pictured three months following the planting of native prairie plants.

This is the same field pictured 15 months following planting. This restored prairie offers excellent nesting and brood-rearing cover for bobwhites and rabbits.

While the ecological and anthropological significance of prairies have long been familiar to natural resource professionals in the South, the restoration and enhancement of remnants and former prairies has recently begun to attract regional and national attention. In 2004, Wildlife Mississippi, in cooperation with the Mississippi Department of Wildlife, Fisheries, and Parks and other state and federal partners, began the Black Belt Prairie Restoration Initiative (BPRI) to restore, enhance and protect native grasslands within Black Belt Prairie. In order to meet the goals of the prairie initiative, much of the restoration work must occur on private lands. Over the last eight years, the imitative has been very successful with the restoration of several thousand acres of what was the historically 150,000 acres of prairie grassland in the Black Belt region. The success of the initiative is largely due to participation from private landowners and the cooperation of the partners in working through grants and conservation programs.

Daniel Coggin, Environmental Banking Coordinator for Wildlife Mississippi, notes "It's remarkable to recall where we started in 2004 and see where we are today." The initiative has worked to acquire specialized native grass planting equipment, coordinate restoration efforts, build relationships with natural resources groups, encourage private contractors to conduct restoration practices, educate the public about prairie grasslands, and provide technical guidance for private landowners interested in prairie restoration. The partnership, which includes the MDWFP, Wildlife Mississippi, Mississippi State University, the US Fish and Wildlife Service and the USDA-NRCS, hopes to continue working with private landowners and to further expand the partnership to acquire additional funding for restoration. "The participation of private landowners is critical to this effort" says Coggin. "We hope to continue to work together to provide assistance for landowners interested in resorting and managing prairie habitat to benefit bobwhites and other wildlife." Thus far, the initiative has restored more than 10,000 acres of prairie grasslands in the Black Belt Region of Mississippi and Alabama.

Jack Robertson and his dog Buster hunt for elusive bobwhites on a restored prairie on Burnt Oak Lodge in Lowndes County (www.burntoaklodge.com).

The partners actively work with private landowners to employ a variety of restoration techniques, which include herbicide applications to control tall fescue and Bermudagrass in old fields, prescribed burning, establishing prairie plants from seed, or removal of invasive brush and cedars. Cost-share for these practices is available from a variety of sources. Biologists are also quick to recommend that landowners manage forest lands adjacent to native grasslands, as well. Timber harvest, prescribed fire, and herbicide applications are commonly employed where appropriate to create and manage desirable plant communities for bobwhites. It is highly recommended that landowners take it upon themselves to "talk across the fence" and get their neighbors involved in habitat management. The larger the block of suitable habitat for bobwhites, the more likely we are to affect bobwhite populations.

Jack Robertson, Lowndes County landowner and operator of Burnt Oak Lodge, has had a positive experience restoring native grasslands on his property. "The cost-share and technical guidance we received has been critical to the success of our prairie restoration project." Robertson has restored more than 200 acres of native prairie on his farm by planting native grasses and forbs from seed, spraying tall fescue and burning on existing prairie remnants, and clearing invasive cedars. "We became interested in managing native grasses because of our quail hunting operation, but the more we got into it, we started to enjoy seeing the results of our work from an aesthetics point of view. It makes you feel good to know that you're managing your habitat the way it was intended."

In addition to local landowners and resource professionals, Black Belt Prairie restoration has attracted interest throughout the South. In May of 2012, the partners hosted the Southeastern Prairie Symposium in Starkville. The symposium received great reviews from the more than 100 participants that represented 14 states. For more information about restoring Black Belt Prairies or managing native grasslands for wildlife habitat on your property, please visit our website at www.mdwfp.com/prairierestoration or email John Gruchy at johng@mdwfp.state.ms.us.