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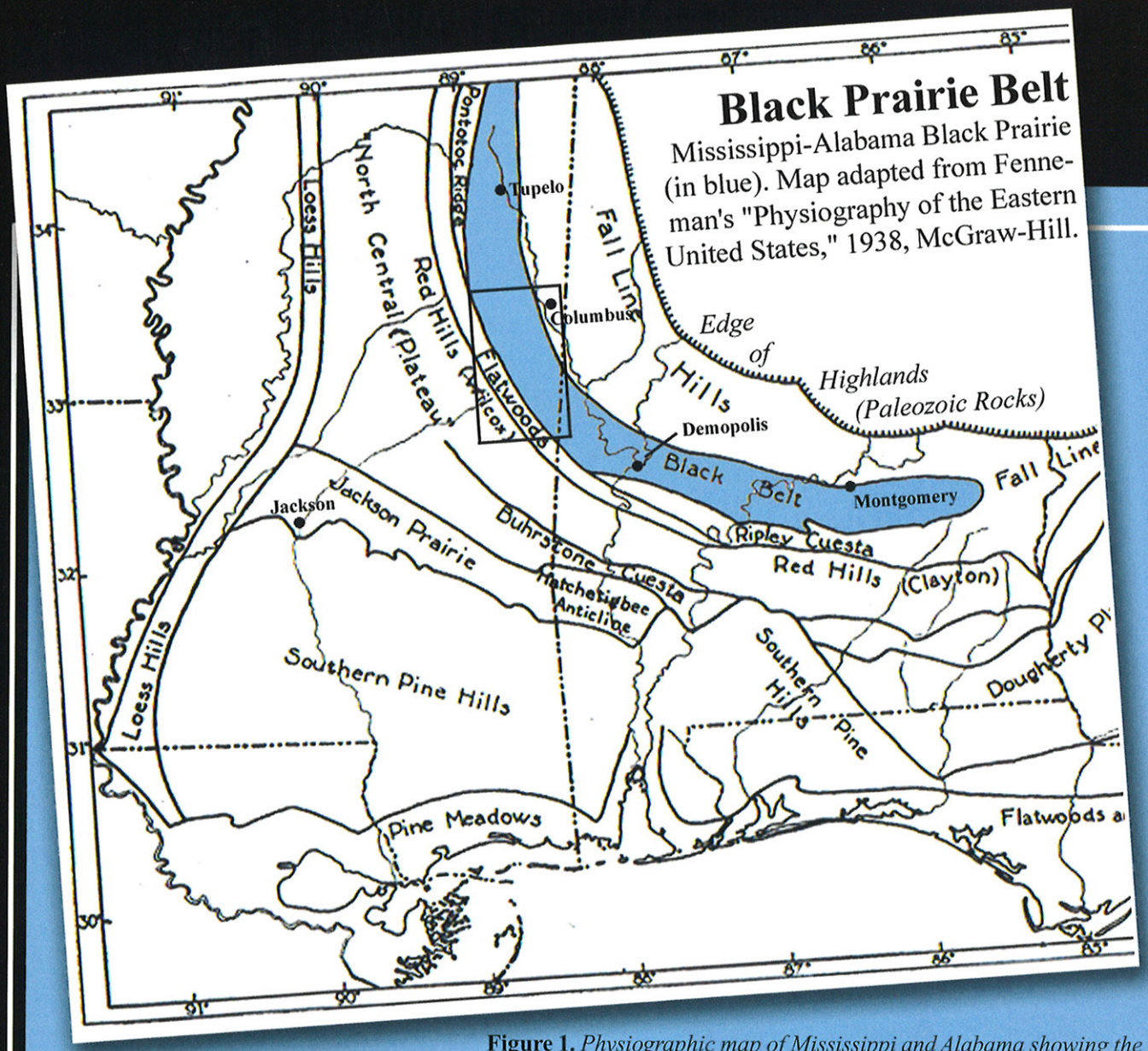

Figure 1. *Physiographic map of Mississippi and Alabama showing the Black Prairie. Outlined area in east-central Mississippi is enlarged in Figure 2.*

By George Phillips

No region in the entire Southeast, except perhaps the Mississippi Delta, conjures up as many images of agricultural history as the Black Prairie of Mississippi and Alabama (Figure 1). Also known as the "Black Belt," "Blackland Prairie," and at one time the "Cotton Belt," the region has a rich natural and cultural heritage that developed from a distinctive physical and socio-economic landscape.

Although some 20th century vegetation maps and a few early geologic maps suggest a continuous prairie from northeastern Mississippi to central Alabama, the original structure of the Black Prairie was most likely a mosaic of forest and grassland, with the former always the dominant vegetation type. A 1938 interpretation of General Land Office notes and map sketches clearly suggests many small, disconnected, or insular, prairies composing the Black Prairie (Figure 2). One early 19th century writer indicated ". . . open prairies of every size from 100 to 1,000-2,000 acres, mixed and interspersed in every form with timbered land of all kinds" (W. W. McGuire, On the prairies of Alabama, 1834). The "timbered land" was the dominant botanical structure of the region and consisted of bottomland mixed hardwood forest and upland oak-hickory-pine woodland.

At the time of the European settlement, individual prairies of 500 acres or more numbered in the hundreds, and some of these had names. The Mayhew Prairie (Figure 2), on the Oktibbeha-Lowndes County line between Starkville and West Point, covered about 5,700 acres. The Black Prairie WMA forms an eastern limb of this

Black Prairie of Northeast Mississippi

historic prairie. The Monroe Prairie, which occupied the roughly north-south stream divide west of Aberdeen, was more than 30 miles long at its greatest length. With many finger-like projections from small stream divides, it covered in excess of 46,000 acres. Historic Plymouth Bluff on the Tombigbee River at Columbus lies on the eastern margin of what was a small prairie that consisted of 1,300-plus acres in the early 19th Century, according to former Mississippi State University geographer M. W. Myers (*Geography of the Mississippi Black Prairie*, 1948).

On a training mission through the South, missionary-linguist William Goodell of Massachusetts very eloquently described the Black Prairie in the vicinity of Mayhew Mission (Figures 1, 2). In a letter published in the *Missionary Herald* in 1822, Goodell described Mayhew Prairie in the colorful language of the day:

"As you approach . . . from the east, there opens unexpectedly to view an extensive prairie, which contains several thousand acres, and which appears to be without a single tree, or fence, except now and then a small cluster of trees at great distances, like the little islands of the sea. Casting your eye over the prairie, you discover here and there, herds of cattle, and horses and wild deer, all grazing and happy. The grass, which will soon be 8 feet high, is now about 8 inches, and has all the freshness of spring.

"The oak . . . with the sycamore and mulberry, borders the prairie on all sides. Flowers of red, purple, yellow, and indeed of every hue, are scattered, by a bountiful God, in rich profusion."

The grass species reaching "8 feet high" is most likely the native cane *Arundinaria*, which prior to settlement of the South formed extensive 'canebrakes' in and along floodplains of the Black Prairie (and other regions of the South).

Everything unique about the Black Prairie can be traced ultimately to its geology, which determines the properties of the overlying soil. The soil, in turn, along with climate, determines the structure and composition of the vegetation growing on it. The discovery of the affect of geology and climate on soils is attributed to Eugene W. Hilgard, a 19th century Mississippi geologist known as the "father of modern soil science in the United States." Hilgard, and many others since, have noted that the Black Prairie is underlain by chalky sediments deposited by a shallow sea that once covered most of Mississippi and much of Alabama during the latter part of the Cretaceous Period, from 84 to 65 million years ago. In fact, the term "Cretaceous" contains the Latin root word *creta*, meaning "chalk."

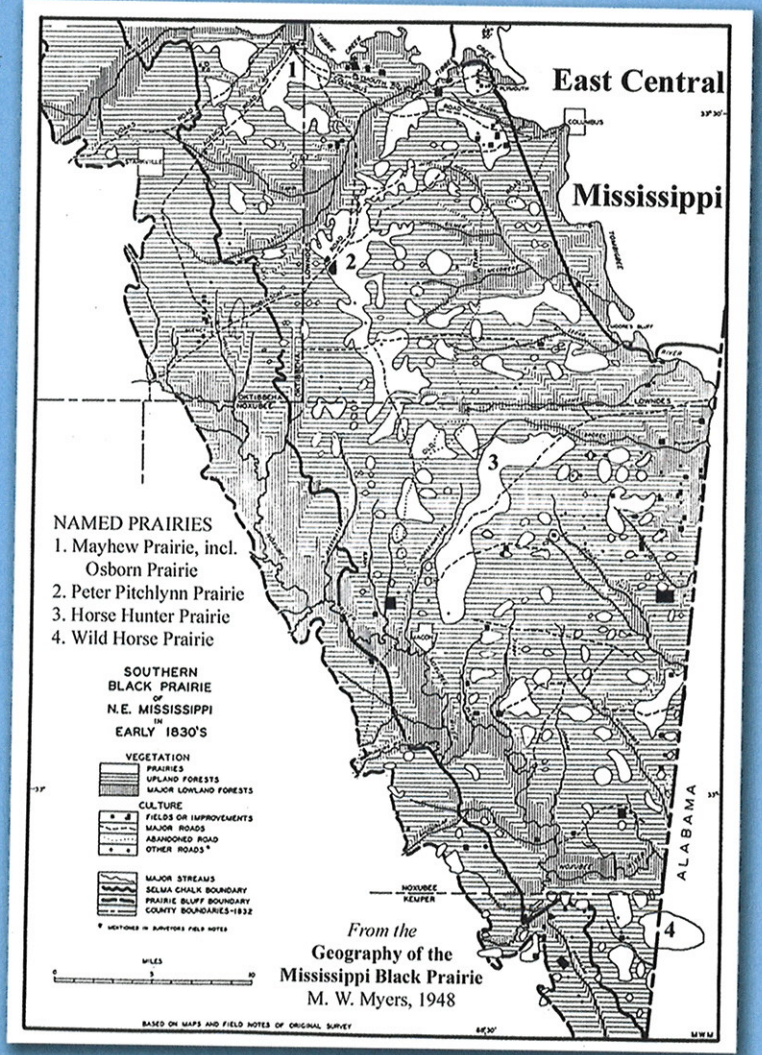

Figure 2. *Map of east-central Mississippi, as outlined in Figure 1. This map is an interpretation of General Land Office notes and sketches; it is modified from the Ph.D. dissertation of MSU geographer Dr. Merle W. Myers. Names of prairies were added from other sources. Prairies are indicated by white (blank) spaces amid upland and lowland forest, which are indicated by both horizontal and vertical lines.*

Black Prairie of Northeast Mississippi

origin of the prairies" (J.F.H. Claiborne, *Mississippi as a province, territory, and state, 1880*). Some readers will be quick to question the veracity of this colorful tale, but, remarkably, there is a bit of truth in it. It is well documented that the African elephant, a very close living relative of the extinct mammoth, is responsible for converting large areas of east African forest and woodland to grassy savannahs, due to the elephant's large individual size, herding instincts, and big appetites. Thus, prior to the appearance of the first Eurasian immigrants to the New World during the last Ice Age (~18,000 years ago), treeless areas in the Black Prairie may have been under the partial influence of giant herbivores, including mammoths, mastodons, and giant ground sloths, whose remains are well documented in the collections of the Mississippi Museum of Natural Science (Figure 4a,b).

Figure 4. *(b) A reconstruction of a mammoth at the Royal British Columbia Museum in Victoria, Canada. The species of mammoth that inhabited Mississippi stood about 10-11 feet high at the shoulders and weighed 7-8 tons.*

Only rare vestiges of the original grassy areas of the Black Prairie remain today. There are very few acres of this once unique portion of the Gulf Coastal Plain that have not been altered by man, but this is true of so many regions of the country today. To find unaltered prairie vegetation in the Black Prairie now is a rare thing, but remnant prairie fragments have been identified in a few places. This type of documentation is conducted by the Museum of Natural Science's Natural Heritage Program. Attempts to preserve such prairie patches are ongoing. Most individuals living in the vicinity of the Black Prairie today are at least familiar with the conversion of prairie to cropland and pastureland (Figure 5). Those of us who were raised on it and even farmed it, like this writer, are also well aware of its crop productivity and agrarian heritage. And those of us who grew up exploring it and hunting it have intimate knowledge of its beauty, biodiversity, and even the bounty of game species that inhabit it still.

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Figure 5. *Part of a prairie near Artesia now in use as pasture land.*

Among other forms of prehistoric life, the warm Cretaceous sea teemed with microscopic algae called coccolithophores (Figure 3) and protozoans called foraminifera. These single-celled organisms secreted shells of calcium carbonate around themselves for protection and nutrition. When these microorganisms died, their tiny shells became part of the sediment accumulating at the bottom of the sea.

Over millions of years, this calcareous sediment solidified into a dirty chalk called marl, similar to but not as pure as the chalk composing the chalk cliffs of Dover in the British Isles. The chalk and clay content of the Black Prairie bedrock impart a distinctive texture to the historically rich soils of the region. One such soil type is termed "black gumbo," which is simultaneously a product and producer of prairie grasslands on Cretaceous age bedrock in several southern states, including Texas and Arkansas.

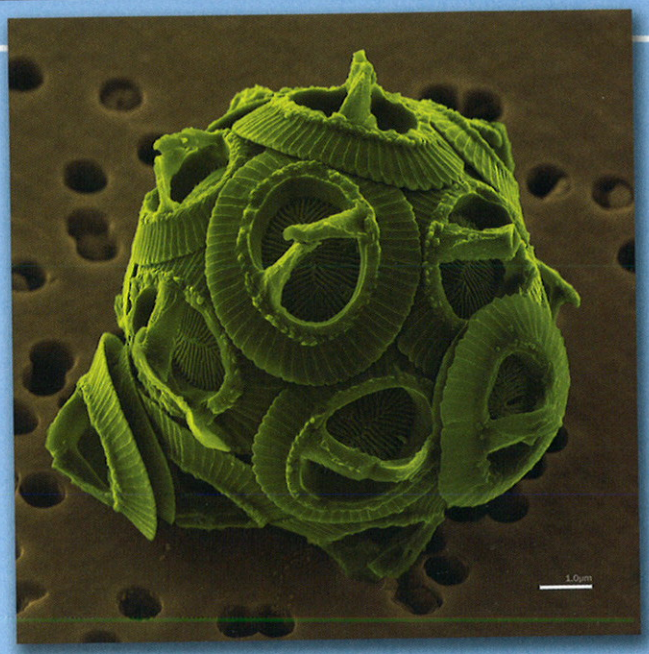

Figure 3. *A microscopic algae-like organism called a coccolithophore. The remains of coccolithophores are the principal component of the marl and chalk deposits that define the Black Prairie geologically. The white scale bar measures 1/1000th of a millimeter.*

Soils derived from Cretaceous age rock and sediment were of paramount importance in the origin and maintenance of grassy openings in the Black Prairie region, but they may not have been the only factor involved. The use of fire by Native Americans to clear land for crop agriculture or to facilitate game animal procurement may have also contributed to the formation of prairies, perhaps making the natural, discontinuous prairie islands more connected, or at least encouraging certain prairie plant and community types.

There is yet another, much more fanciful explanation for prairie islands of this unique region. A Choctaw Indian legend, as related to "father of Mississippi history" J.F.H. Claiborne by famous southern frontiersman Gen. Sam Dale, told of a race of giant cannibals that once resided in the northern portion of the territory. The giants "utilized the mammoth as their burden bearers. They kept them closely herded, and as they devoured everything and broke down forests, this was the

Figure 4. *(a) A mammoth molar excavated by museum personnel and volunteers near Crawford in August 2006.*