A MAP OF PRESETTLEMENT PRAIRIES OF MISSOURI
AT 1:500,000

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Abstract. A map of pre settlement prairies of Missouri has been prepared using the field notes and township plat maps of the U. S. General Land Office Survey. The dates of the survey range from 1816 into the 1850's. The map is based exclusively on use of the word "prairie" in the field notes. Barrens, glades, long grass, brush, etc. are not included. The physiographic expression of prairies varied widely in Missouri, including extensive wet prairies in northern Missouri, prairie hollows in the Ozarks and upland prairies throughout. Few places on prairies were more than 6 km from timber. Missouri had a total of 47,663 km² of pre settlement prairie, which was 26.7% of its total area.

Introduction

This paper is a report of the completion of a map of the pre settlement prairies of Missouri and a commentary on some geographical characteristics of those prairies. All information for the map was taken from the plat maps and field notes of the U.S. General Land Office survey in the Division of Archives of the Office of Secretary of State, Jefferson City, Missouri. The survey in Missouri began in late 1816 with surveys to confirm Spanish grants, and effectively ended in the 1850's. The survey of any one tract of land was done when settlement of it seemed imminent, so the survey preceded white settlement of any tract by a few years at most. Major exceptions to this were (a) the lands already settled and claimed by Spanish land grants before 1803, (b) lands claimed under New Madrid earthquake certificates, (c) lands occupied by squatters after the Louisiana Purchase of 1803 but before the Land Office began land sales in 1818, and (d) the Platte Purchase country northwest of Kansas City which was not added to Missouri until 1836, after several thousand persons already were living there.

Methodology for construction of the map was previously discussed in a paper before the Fifth Midwest Prairie Conference (Schroeder 1978) and will not be treated here. It should be pointed out, however, that only prairies, so designated with that specific word in the field notes, have been mapped. This includes both upland or dry prairies, as well as bottom or wet prairies. Vegetation types sometimes recognized as prairie today, but not described as prairie by the surveyors, are excluded from the map. Examples of such exclusions are barrens, glades, long grass, scattering timber, brush, and hazel rough. Excluded also are the section corners where the surveyors wrote they could find no trees "within reasonable distance" (up to half a km) to serve as bearing trees. Further exclusions are those tracts of land described as prairie in the accounts of early settlers and explorers, unless they were also described as prairie in the surveyor's field notes. In summary, the map is a strict reconstruction of pre settlement prairie according to use of the word "prairie" in the surveyor's field notes. On that single criterion it is both an objective map (that is, not subject to personal interpretation of the field notes) and an accurate map.

The map was originally drawn on separate county maps at 1:125,000. Data were then transferred to a single sheet state map at 1:500,000. The map is not reproducible for this article. Detail of the map may be indicated by its inclusion of isolated prairies as small as 4 ha. Location of prairie boundaries on the map are within 1 km of their true location according to the field notes.

Geographical Characteristics

In northwestern and north-central Missouri, prairies regularly occupied both upland drainage divides and wet tracts in valley bottoms. Most major streams in this region are south-flowing, and in detail the valleys showed a pronounced asymmetry in prairie-timber relationships. Ridge top prairies regularly extended down the east-facing valley slopes, merging into the wet prairies.
on the wide, poorly drained valley floors. Timber occurred on the east bank of the streams, and extended into draws on the west-facing valley sides. The surveyors commented that prairie occurred right up the west bank (windward to fire) of the Nodaway River channel, and timber occurred on the east bank (leeward to fire).

The Chariton Hills in north-central Missouri and the dissected hill country of northeastern Missouri had the most intricate pattern of prairies. "Intricacy" is measured by extending several straight lines in random directions across an area and counting the number of prairie boundaries that intersect the lines. Much of what was shown as "timber" on the plat maps is better interpreted as savanna or barrens on the basis of size and distribution of trees. Prairie, barrens, savanna, and true forest intermixed in a most complex mosaic in this region. Most of the prairies on watershed divides in Sullivan County were no more than 2 km wide, often narrowing to a couple hundred m. Wet prairie also was reduced to tracts as small as 4 ha, and the surveyors probably missed many that were located away from the section lines.

The clearest expression of prairie interfingered with narrow ribbons of timber occurred in the low-relief Osage Plains of west-central Missouri. The bands of river-border timber were narrow. Even along the Osage River, the largest river with the widest floodplain, timber usually extended no more than a km away from the channel, so that the wide, wet flood plains of this region were more prairie than timber.

The Western Ozark Border, from Joplin and Springfield to Boonville on the Missouri River, as a region, showed the most clearly defined prairies in the state. The prairie-timber edge was most abrupt in this region, a characteristic probably related to the strong Mississippian bedrock control of topography. Flattish Ozark plateau remnants formed well-defined prairies, while steeply dissected regions along major stream valleys formed extensive timbered tracts. It is no coincidence that this region has, by far, the largest number of named prairies in the state. With clearly perceived limits, the prairies became identifiable units to settlers and their communities and the means to describe locations. Polk County has 19 named prairies, the greatest number of any county in Missouri, while Newton County has 14.

The Ozarks proper included a few prairies within the extensive forest. It has been pointed out that settlers of the Ozarks, largely from Kentucky and Tennessee, did not have the term "prairie" in their vocabularies, but instead referred to grassy tracts with such Middle South terms as "barrens," "balds," and "glades" (Sauer 1927). The land surveyors, however, did use "prairie" for 2 kinds of environments in the Ozarks. There were prairies on the rolling uplands, usually karstic. There were also prairie hollows or valleys, as identified by Swallow (1859) for Crawford County: "[The land north of dividing ridge is] traversed by numerous beautiful prairie valleys, bounded by gentle hills. . . .". Both types of prairies occurred in southeastern Camden County and contiguous parts of Laclede County. Long linear prairies followed the broad, shallow valleys of Goodwin Hollow and the Auglaize system, while upland prairie occupied the broad dividing ridge of the Camden-Laclede county line. The uplands are a well-developed karst plateau, while the valleys are usually dry at the surface, occupied by "losing streams" which lose water into the alluvium and bedrock beneath the valley floor.

Perry County along the Mississippi River is an example of how much more ubiquitous grasses may have been in the Ozarks than use of the word "prairie" indicates. The survey notes contain no mention of the word "prairie" for this county. However, the terms "barren" and "long grass" were frequently used to describe the vegetation at the end of each mile of survey. "Barrens" was used for the land around Perryville. "Long grass" was used for most of the southern parts of the county, so that at least one half of the county was described by these 2 terms. With both terms, however, there were enough trees of sufficient size in the environment to serve as witness and bearing trees.

Prairies were not extensive in the Mississippi Alluvial Lowlands of southeastern Missouri. Small prairies were located on low, but well drained, sandy terraces, as the Sikeston Ridge and Kennett Ridge. These prairies were among the first sites selected for white settlement in the region. All these prairies have long had established names and formed delimited communities. Wet prairies occurred in very few places notably within the Mingo Swamp and at Grassy Lake near New Madrid.

St. Louis City and County present a special case because they were settled before the survey of the U.S. General Land Office. In rare cases the survey field notes may describe a landscape already in use for nearly half a century. However, the testimony of land claimants before the U.S. Land Commissioners provides clues to the actual presettlement environment. All sources indicate that the site of St. Louis was timbered only from the river bank to the low limestone bluff, or 1 km from the river. Westward beyond Broadway
stretched the prairies. One of the French settlers testified that:

"the spot immediately where the town now stands was very heavily timbered, but back of the town it was generally prairie, with some timber growing, but where the timber did not grow it was entirely free from undergrowth, and the grass grew in great abundance everywhere, and of the best quality; but where the inhabitants used to cut their hay was where Judge Lucas now lives [Locust and 13th streets], and between his house and the cottonwood-trees, (Scharf 1883)

St. Louis may very well lay claim to the title of "first prairie city" of the United States.

The French village of Florissant and its common fields and common pasture were laid out in the broad prairies of north St. Louis County. In fact, the name, Fleurissant, is likely derived from the spectacular beauty of the prairie wildflowers in bloom (Houck 1908).

Wet Prairies

Regrettably, wet prairies were not separately differentiated as the map was being compiled. However, by their topographical position in flood plains, wet prairies can be inferred. Virtually every county in Missouri north of the Missouri River and in west-central Missouri had wet prairies. They were common along the Missouri River beginning at the mouth of the Grand River and continuing upstream to the Iowa line. In Atchison County 80% of the flood plain was prairie, and the Missouri River channel itself cut into prairie. One of the largest uninterrupted prairies of Missouri, the Wakenda Prairie, occupied the wide floodplain in southern Carroll County. Most of the Mississippi bottomland in St. Charles County, near the junction of the Missouri and Mississippi rivers, was wet prairie, and wet prairies occurred along the Mississippi upstream from there. Where the Missouri River cuts across the Ozarks, wet prairies were much less common and very much smaller.

Size of Prairies

Trees could be seen from almost any place in a pre-settlement prairie. Surveyors noted isolated American elms, bur oaks, and other large trees on the prairie, and also noted timbered draws and scattered groves not topographically distinct. Father O'Hanlon (1890), describing an extensive prairie tract of northeast Missouri, wrote that in summer his "range of vision was mostly covered by hazy-looking woods."

To measure maximum distance to timber, circles of graded sizes were moved about on the map. No place could be found on a prairie which was more than 10 km from timber. One place, in northeastern Jasper County, was more than 9 km. One more place, in adjacent Barton County, was more than 8 km. Not until circle size was reduced to a radius of 5 km did many places (in 12 counties) appear which were that far from timber. One may conclude that Missouri pre-settlement prairies, though they may have been very attenuated as they stretched along divides and in bottoms, were commonly narrow, so that few places on prairies were more than 5 km from timber.

Summary

There were 47,663 km² (18,484 sq miles) of pre-settlement prairie in Missouri. This reckoning is based on use of the word "prairie" in the field notes, a conservative definition of prairie. Barton County had the highest percentage of its land in pre-settlement prairie (86%), followed by Atchison (83%), and Nodaway (81%). For the state as a whole, 26.7% of its area was in prairie.

Literature Cited


Swallow, G. C. 1859. Geological report of the country along the line of the South-Western Branch of the Pacific Railroad, State of Mis- souri. G. Knapp for the Missouri Geol. Surv., St. Louis.
The Western Ozark Border, from Joplin and Union County to Newton County, is one of the most beautiful sections of Missouri. The prairie-timber edge is a beautiful transition zone between the two habitats. The prairie is well-defined and the timber is dense. This area is rich in flora and fauna, with a variety of plants and animals that are found nowhere else in the state. The area is also home to a number of rare species, including the Ozark pocket gopher and the Ozark long-eared bat.

The Ozarks are known for their rugged mountains and rolling hills, with numerous streams and springs that provide water for the region. The area is also home to a number of caves and karst formations, which are popular with spelunkers and geologists. The Ozarks have a rich history, with Native American tribes having inhabited the region for thousands of years. The area was also home to early European settlers, who established farms and communities in the region.

The Ozarks are known for their beauty, and the area is a popular destination for tourists and nature lovers. The region is home to a number of state parks and natural areas, including the Ozark National Scenic Riverways, which are a popular destination for canoeists and kayakers. The area is also home to a number of historic sites, including the Branson and the Branson National Historic Site, which is home to a number of historic buildings and sites.

The Ozarks are also home to a number of small towns and communities, which are known for their friendly and welcoming atmosphere. The area is a popular destination for retirees, who are drawn to the region's mild climate and beautiful scenery. The Ozarks are also home to a number of universities and colleges, which are known for their commitment to research and education. The area is also home to a number of businesses and industries, which contribute to the region's economy.