

# History of Missouri's World

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MISSOURI BECAME A STATE in 1821, but its legacy actually began millions of years ago. Changes taking place over eons of time created a unique, diverse region directing the progress of humankind. Missouri is an average size state, 250 miles wide and 328 miles long. Referred to as another Eden throughout American history and the "garden spot of the Far West" (Josiah Gregg), the state took on a euphoric existence amidst the developing nation. "The Bureau of Ethnology of the federal government pointed out that native Missourians are stronger and taller than the native citizens of any other State" (Williams 1904). By 1900 there was so much said about natural resources of Missouri (land, forests, rivers, mineral deposits) that a certain smugness developed among Missourians. This attitude went so far among Missouri citizens that it was believed they would do very well without the rest of the world.

How did Missouri evolve? Its geology, history, and agriculture intertwine to create an interesting story. What events occurred that established Missouri as the "greatest place on earth to live"?

## Missouri's Geology and Vegetation

The Paleozoic Era, 500,000,000 years ago, began with Missouri and the Ozark Highland submerged by seas advancing from both the Arctic and the Gulf. Layers of limestones, conglomerates, and sandstones formed from the diverse materials deposited by the seas. Because of this, Missouri is rich in fossils that include trilobites, brachiopods, cephalopods (ancestors of the nautilus), sharks and lungfish, and crinoids ("stone lilies" used as beads by native Americans).

Glaciers were a powerful force in the shaping of Missouri land. Grinding and crushing of rock mixed with animal and plant remains created rich, fertile soils dotted with erratic boulders while deposited glacial till formed moraines. Rolling lands with wide, meandering streams became characteristic of north Missouri. Huge dust storms brought in wind-blown soil, loess, up to 70 feet deep. These soils are responsible for the chocolate-colored rivers north of the Missouri River and its nickname, the "Big Muddy". South of the Missouri River rocky soils are prominent, creating a dendritic pattern to rivers and streams where cherty limestone resisted erosion.

Advancing and receding glaciers from the north were



**Fig. 1.** Limestone deposits left from Precambrian seas have eroded to leave sinkholes like this, as well as other Karst topographic features, throughout southern Missouri.

primarily responsible for the division of flora at the Missouri River (Gleason 1923). The flowering dogwood, bald cypress, and sassafras are examples of plants that are not naturally found north of the Missouri River. Oaks dominate three-fourths of Missouri's total forest lands (USDA 1992). In southeast Missouri, a large number of species remain along the Mississippi floodplain without moving into areas once occupied by glaciers. Neither soil conditions nor climate can be cited as an explanation, merely the advancement of glaciers. There is more evidence of a shift in vegetation east-west as opposed to any farther

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**Fig. 2.** *Trees and streams, some quiet, some raging, crisscross the entire state.*

south (Gleason 1923).

Uplift of the Rocky Mountains created the semi-arid region to the east, namely the Great Plains, where moisture-laden winds were restricted and changed plant species to grass dominance. The prairie vegetation, a result of little rainfall, was invaded by deciduous forest that advanced north and west from the Ozarks with increased rainfall. Missouri became ever-changing between prairie and woodland dominance, shifting as much as 300–400 miles east-west, while today prairies are mainly in north and west Missouri. Almost a third of the forests are found in the eastern Ozark Highland Region, and 85 percent of Missouri's forests are private land (USDA 1992).

Deciduous forests migrated upstream on major rivers in north Missouri including the Grand, Chariton, and Salt. They showed an unexpected distribution with the largest stands originally found on the eastern side of streams. Prairie fires, driven by a westerly wind, gradually destroyed much of the forests on the western side. The period of great forest migration must have closed with the advent of the Indian and directed fires (Gleason 1923).

The St. Francois Mountain area in the southeast is uplifted igneous rock where Taum Sauk Mountain, the highest point in Missouri, sits at 1,732 feet. Although it is vastly different from the western mountain ranges, Missourians are proud of their Ozark region. Fossils are not found in this area because of its volcanic origin,

but it was rich in minerals. Missouri became known as the "Iron Mountain State" because of its iron, lead (1798), coal, zinc (1872), and some silver. Oil was also discovered in the northwest area of the state (Nagel 1977). Strip mining of minerals brought forest destruction and ugly, long-lasting scars to the landscape



**Fig. 3.** *Much of north Missouri is covered by a rolling terrain of open fields interspersed with large, spreading oaks and adjacent forests.*



**Fig. 4.** Areas in northern and western Missouri are being restored to tallgrass prairie vegetation reminiscent of Missouri's landscape prior to settlement, creating a mosaic of forest interspersed with savannas.

while railroads spread into Missouri, 1860, through St. Louis to St. Joseph, Jefferson City, Rolla, Hannibal, and Ironton. Minerals and coal were then shipped by rail, increasing mining and Missouri's wealth. The railroad ended dependence on river travel, which antiquated Mark Twain's legendary steamboats.

Karst topography covers the southern half of the "Cave State" with over 500 caves discovered, plus sinkholes, giant springs, and underground rivers. Unique animal species like the cavefish (Springfield area), blind salamanders, and various bat species inhabit the subterranean environment. Caves were an extremely important resource throughout Missouri history. Some caves were inhabited by Ice Age hunters 20,000 years ago, and it is believed agriculture began 6000–7000 years ago because of milling stones found in them (Williams 1904). Bat guano had also been mined for manufacturing gunpowder, a valuable commodity during the Civil War.

A cycle of erosion in extreme southern Missouri created the "bald"

mountains which have glades mixed among forested vegetation. The legendary Baldknobbers established their reputation here. More erosion led to rock outcrops of sandstone and porphyries in the St. Francois Mountains creating beautiful shut-ins and crystal clear streams that are now part of the National Scenic Riverways System. This area hosts many float trips on warm, summer days and snowy, winter days for the more adventurous outdoor enthusiast.

Earthquakes centered at New Madrid rocked the Midwest during the winter of 1811–1812 and were the worst in recorded history. The Mississippi River changed its course and flowed upstream for a brief time, also forming the Mississippi Lowlands in the "Bootheel". Originally a vast wetlands area, it is now almost completely drained for rowcropping cotton and rice.

### Missouri's History

Missouri's noted role in American history is primarily due to the Mississippi, Missouri, and Ohio Rivers which originated from receding glaciers at the end of the Ice Age. St. Louis

became the "Gateway to the West" long before statehood. Migration routes of early man followed these rivers also used as first transportation routes across our nation. Originally part of the Louisiana Province and sparsely populated by the Spanish and French, Missouri remained mostly unexplored prior to 1762. Later St. Louis was established as a Fur Trade Center, 1780–1829, and pioneers began hearing stories of the West's great "Shining Mountains". Lewis and Clark (1804), Zebulon Pike (1805), Jedediah Smith (1821), Fremont (1842), departed from St. Louis in search of adventure. Missouri's fossil records recorded beaver seven feet long—wouldn't ol' Jedediah have had a time with him? Common Indian tribes were the Missouri and Osage, considered to be the Plains Indians, while Eastern Woodland Indian cultures occupied southeast Missouri.

Settlers began to move West by river travel and the town of Franklin became the first starting point of many land journeys, since it sat at the edge of the vast Plains. Traders began setting out by horse and packed mules in 1821. At the sight of all the silver William Becknell brought back, most of the town started rushing over the trail to increase their own wealth, thus the beginning of the Santa Fe Trail. When families moved west, transportation was needed to move households of goods—which brought about the invention of the covered wagon. At Franklin, vegetation became prairie-like as opposed to eastern woodlands, making it easier to pull wagons through these areas. In 1828 the "Big Muddy" washed away most of the town and the starting point moved to Independence, "the general port of embarkation for every part of the great western and northern prairie ocean" (Missouri Project 1941).

Since the Santa Fe Trail traversed to the southwest, the Oregon Trail went to the northwest. Settlers were on the move. Mormons moved westward along the Iowa-Missouri border. Stagecoaches thundered along the Butterfield Overland Mail route leaving St. Louis through Springfield for



places in the south. And, of course, the famed Pony Express riders (1861) carried mail from St. Joseph to points west until the advent of the telegraph made them obsolete. The infamous Trail of Tears, movement of the Cherokee Nation to reservations, traversed southern Missouri along the now-established Highway 60. In addition to trails and roads, railroads expanded across Missouri methodically avoiding the mountainous southeast Ozark region and just in time for the Civil War. After the battle at Wilson's Creek, near Springfield, North and South uniform colors were established for the rest of the war.

Christopher Columbus brought the first cattle to America in 1493, his second voyage. Everywhere colonists and settlers went so did their cattle. Strong, solid Spanish cattle from Mexico interbred with scrawny settlers' cattle creating the Texas Longhorn (American Heritage Magazine of History 1966). Southern Texas became home to about 5 million wild roaming cattle during the Civil War, worth \$3–4 per head. Prices rose to \$40/head by 1865 in St. Louis and Texans were motivated to round-up and drive them to the nearest railhead—Sedalia, Missouri, establishing the Sedalia and Baxter Springs Trail. Between forests making it difficult to drive 250,000 head and crossing settled land, this trail's history was limited to only a year. The Chisholm Trail out of Abi-

lene, Kansas, took over (American Heritage Magazine of History 1966).

### Missouri's Agriculture

Daniel Webster (1837) boasted that Missouri had "more mineral and agriculture wealth than any other area on earth....where the eastern forest and western plains come together." "If you plant a tenpenny nail there at night, hit'll sprout crow bars by mornin'" brought an influx of settlers. However, they shunned prairie regions and kept to the forests, which resulted in massive clearing efforts. There was a common belief that "corn won't grow where trees won't" (Missouri Project 1941). General T.A. Smith and William Muldrow experimented growing corn on separate prairie areas of the state. This "produced a new era in the State, and ever since intelligent farmers have regarded a prairie as the best in the world, provided they can procure at no great distance, timber enough to fence it." (Wetmore, Gazetteer of MO, 1837) (Missouri Project 1941).

After 1860, almost half the land was cultivated, but the Civil War destroyed much of the farms, crops, livestock, and buildings. Corporation farming began and independent farmers were swamped in debt from machinery and transportation of goods. Agriculture had become a business and lost the pioneer spirit of challenge and adventure. Missouri

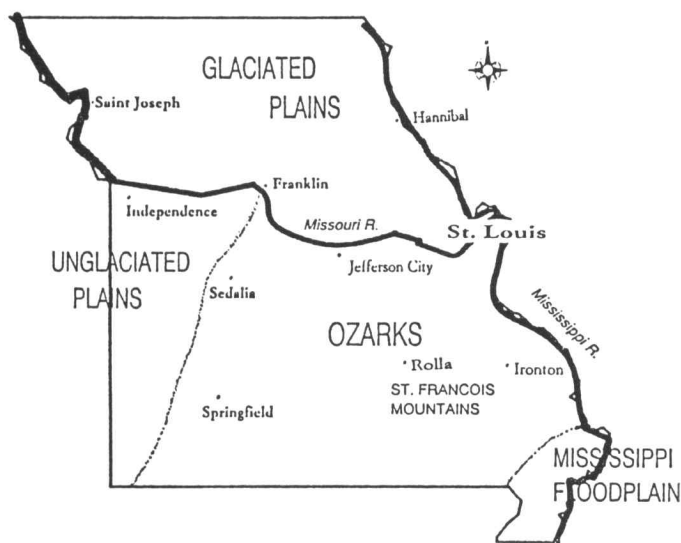
never regained agricultural dominance and its great urban migration began with the Reconstruction Period after the Civil War (Williams 1904).

Between the settlers, late 1800's, and the lumber industry, early 1900's, the state was virtually denuded of its forests by the time Theodore Roosevelt established National Forests. Many prairies had succumbed to the plow, never to regain their original vitality. The Civil Conservation Corps planted massive areas of trees in Missouri, leaving pre-forested areas to re-establish themselves.

Missouri's agricultural profile was constantly changing. In 1860, corn was grown in the northwest, tobacco and hemp grew along the Missouri River Bottoms, while cattle and other livestock ranged the rest of the state. By 1920, there was corn, wheat, tobacco, and cattle ranches. And in 1960, corn grew throughout the north with general farming in the rest of the state.

In recent years, Missouri has been the subject of vegetation restoration by Missouri Department of Conservation and Department of Natural Resources. Programs include restoration of prairies, savannas, glades, wetlands, and forests. Restoration appears only as remnants between agriculture; however, cooperation between all entities creates more restored areas each year.

Large-sized, strongly built mules are characteristic of Missouri. For this reason, the British army sent its agents to the Western Continent to buy mules, establishing a distribution center at Lathrop, Missouri, sending out 115,000 mules. These mules after serving with distinction throughout the Boer War in South Africa, are one of the most important factors in developing agriculture of that region. The Russian army also purchased mules for their war with Japan (Williams 1904). Missouri's fame grew throughout the world and having gained that recognition, St. Louis hosted the 1904 World's Fair where circumstances led to the "invention" of ice cream cones and hot dogs (Nagel 1977).



**Fig. 5.** Missouri is divided into four distinct geological regions which influence the vegetation native to each area. The cities shown on the map were historically important to Missouri's development.

## Conclusion

Many names, places, and events have gone unmentioned in this story but all were important. Nevertheless, "the spirit of Missouri is the spirit of progress, tempered by conservatism" (Williams 1904). Conservative Missourians are part of the state's heritage and continue notoriety of the "Show-Me" State. (Note: If pride seems to be oozing through the lines of this article, both authors are Missouri-born).

## Bibliography

**American Heritage Magazine of History. 1966.** The American Pictorial Atlas of United States History, American Heritage Publishing Co., Inc., N.Y. 424 pp.

**Dunlop, Richard. 1971.** Great Trails of the West, Abingdon Press, Nashville. 320 pp.

**Gleason, H.A. 1923.** "Vegetational History of the Middle West", *Annals of the Association of American Geographers*, Vol. XII. pp. 39-85.

**Missouri Writer's Project. 1941** Missouri: A Guide to the "Show-Me" State, Duell, Sloan and Pearce. N.Y. 652 pp.

**Nagel, Paul C. 1977.** Missouri: A Bicentennial History, W.W. Norton & Company, Inc., N.Y. 205 pp.

**U.S. Dept. of Agric. Forest Service. 1992.** "Missouri Forest Resources, 1989: An Analysis", Forest Inventory and Analysis, North Central Experiment Station, St. Paul, MN.

**Williams, Walter. 1904.** The State of Missouri: An Autobiography, Press of E.W. Stephens, Columbia, Missouri, 608 pp.

## President's Notes *(continued from page 51)*

the Society is a culmination of the beliefs of its aggregate members. I hope you as individuals, believe in at least most of the list I presented. As the rangeland we manage is a biodiverse ecosystem, so is the Society to which we belong. While we must appreciate all aspects of the ecosystem, our efforts are often concentrated on a few components. The beliefs presented here are broad, and were intentionally not placed in any specific order, hierarchy, or importance. The detail of each is subject to interpretation as to value and application. This is the way it is with the ecosystem we manage. Just as passive management will not work in the ecosystem, passiveness in the Society will not bring the positive results we desire. Just as we develop a management plan to guide and prioritize our efforts on the land, we are developing a Strategic Plan to prioritize our beliefs, efforts, and resources within the Society. Just as we need quality input into a management plan, we need member input into the planning process of the Society.

We have just published an excellent invited synthesis paper on biodiversity and have completed a symposium on the topic. Hopefully this will be our springboard for a policy statement. We have active task groups working on the Futures of Range Management Education and Unity in Concepts and Terminology. The Wildlife Habitat Committee is working to develop an SRM-published book on wildlife habitat. The publication of the symposium on livestock grazing held in conjunction with AIBS is progressing smoothly. We have produced information and sources of contact for small tract landholders. Technology Transfer is discussing ways to provide information on riparian management. The Conservation Reserve Program is developing a network of activities within the sections to increase involvement at the grassroots level. The Grazing Lands Initiative is under way. Coordinated Resource Management has completed its training manual and has several new training sessions planned. These are a few of the activities that will be ongoing this next year.

*Individuals do make a difference!* Most of the work presented thus far was initiated by individuals or groups of individuals recognizing the interdependence of each other, and thus informal partnerships. Individuals, (rather than individualism) concentrating on their strengths can do much for the profession and Society. If a niche doesn't seem immediately apparent at the parent society level, don't overlook your Section. Many good ideas can, do, and should come from the Sections and flow through the Advisory Council. One such example which has helped substantially in the finances of the Society is the *Cowboy Cookbook*

I am reminded of the situation where the prairie chicken saw an egg at the side of the nest. Being a good mother, she placed the egg back in the nest where it hatched with the rest. The mother observed the newly hatched chick was different from the rest of the brood. The chick was larger, more stately and of different character. With the guidance of the mother bird, it was readily accepted by all of the chicks and the other prairie chickens. He was looked upon as a source of inspiration and was the protector. However, every day that the bird was out scratching in the ground, he would look upward and marvel in awe at the eagles soaring overhead. As the days progressed he continued to look upward and wished he too could soar with the eagles, but recognizing his position with the prairie chickens he was content to scratch in the dirt. Since he never tried his wings, he never knew that he too could fly and soar with the eagles. You see the bird egg that had been found by the prairie chicken was that lost by an eagle. What the eagle experienced was that while greatness could be thrust upon one, excellence must be achieved! He had done a lot of good but was letting his good block the best.

Our membership is up, our attendance at meetings is high, the interest expressed by individuals to work and assist with committee functions is the best ever. We have established the process of strategic planning and have it off the ground. The Strategic Plan is a continuing process. It is dynamic and requires participation by all. Through the process our annual plans of work will be developed with sharper focus on the mission at hand, including our support for rangeland management, education, and research; ways to increase our sources of revenue which limit our ability to pursue a worthy cause and to exert timely professional leadership on rangeland management issues. Now is the time for the Society, through the "partnering" of each of us to be heard more effectively than ever before.

There is a lot yet to be done. Congress and the executive branch have yet to establish a path for us to evaluate. This is the greatest change on the political scene in twelve years! I call on each of you to assist in this regard. I am certain that I will be contacting some of you specifically and task forces or ad hoc committees may be established to pursue yet unknown activities.

Remember, I believe the strength of the Society is through its individual members and collectively we can make a difference! Feel free to contact me, the Denver Office, or the appropriate committee with your ideas.

With your enthusiasm and insight perhaps it is possible to hope for harmony and understanding regarding the assessment, management, and use of the rangeland ecosystem. **Do we dare soar with the eagles?** Thank you for the opportunity to serve as your President and I am happy to accept the challenge.—**Gary Donart**, President, SRM