

Goshen Materialism

1795 brought two major treaties that spurred growth in Illinois. After the Indian armistice of the Greenville Treaty and the right to trade on the Mississippi from the Pinckney Treaty, Anglo-Americans left the stations and towns and expanded into farmsteads. The population was further bolstered from the south. With the expansion of farming and population came greater environmental changes. Settlers hunted native animals to protect livestock and cleared forests, beginning the process of deforesting the American Bottom. Pushing these changes was the commoditization of natural resources through capitalism.

Agriculture and Hunting

Settlers in the American Bottom could farm more extensively once they felt more secure from Indians after 1795. They planted two primary crops: corn and wheat. Corn dominated the early farms in southern Illinois, with corn meal and whisky largely replacing bread and beer.¹ Corn was relatively easy to harvest and produced far greater crop yields than most other grains.²

Wheat was less popular initially, as, unlike ears of corn safe inside husks, wheat was unprotected from the elements and could fall over under its own weight. Farmers had to carefully plan when to harvest wheat; a difference of a few days could turn a profitable crop into a failed one. Still, wheat was far more profitable than corn at market, what Cronon calls “the classic cash crop of western farming.” Americans and Europeans were far more interested in eating bread than corn, which only the settlers themselves and their animals ate.³ As mills for converting wheat into flour were built and markets opened, wheat increased in popularity.⁴

Frontier Anglo-American agriculture on the surface did not differ significantly from pre-Columbian Indian agriculture. Though Americans, and the French originally, used Eurasian crops like wheat, both groups were highly reliant on maize or corn. They also followed the seasonal cycles of planting and harvest and relied on hunting and gathering to supplement agriculture. Their most significant difference lay not in their reliance on plants, but their reliance on animals. Indians hunted deer, beaver, turkey, fish, moose, rabbits, squirrels, and others, while Americans owned cattle, pigs, and horses.⁵ While Anglo-Americans also hunted

those animals as previously mentioned, over time domesticated animals came to replace them in the American diet.⁶

The use of livestock perhaps had a greater environmental impact than any other activity of Anglo-Americans, which I will discuss further in [Statehood Materialism](#). For now I will discuss the initial impact of the Anglo-American livestock and crops: hunting of wildlife. Wolf numbers and possibly other predators increased when Americans unwittingly gave them new prey that was easier to kill than deer – namely cattle and pigs. Losing a valuable cow to wolves incensed farmers.⁷



A man posing with a more than 100-pound wolf he killed in Montana in 1928. American settlers throughout the United States killed wolves to protect their livestock, including Whiteside in Southern Illinois. Image from [Wikimedia Commons](#).

Though government was limited, it encouraged the killing of carnivores to protect precious livestock. A law in 1795 rewarded \$2 for the killing of one adult wolf, \$1 for a wolf puppy, 25 cents for a fox or “wild-cat” (likely including both cougars and bobcats), and 12 and a half cents for a young fox or “wild-cat.”⁸ In 1816, Madison County residents presented a total of 121 wolf scalps, each earning 75 cents. William B. Whiteside killed the most wolves that year, earning \$10.50 for the killing of 14 wolves.⁹

The first ordinance in St. Clair County from 1793 required “every inhabitant who sows any grain of any kind shall & will shoot or kill one hundred blackbirds before next harvest... & bring the aforesaid birds” to the sheriff or else pay a fine.¹⁰ Presumably blackbirds were eating the corn crop,

serving as a nuisance for farmers.

With both economic incentive and in some cases legal requirement for the killing of native animals, populations already ravaged by the fur trade were further reduced. By the mid

nineteenth century many species totally disappeared from Illinois, including wolves, wolverines, porcupines, bison, bears, moose, and cougars.¹¹

Biome Changes

Preference for Borderlands

As settlers left stations and set up homesteads throughout the American Bottom region, they tended to settle on the edges of forests. They choose forests over the prairie for a combination of reasons:

1. Settlers were accustomed to life in forests and were unfamiliar with a prairie landscape. Prairies were further dangerous due to frequent fires and insects.
2. Conventional wisdom at the time believed, incorrectly, that forest soil was better for farming than prairie soil. The notion was that soil that supported more vegetation was more fertile, thus prairie was largely worthless for cultivation. Even educated Americans made this assumption. James Madison described the Illinois Country as “miserably poor” because of its “extensive plains.” In an 1805 petition, residents of the American Bottom described the prairies as “unfertile” and “cannot in the common course of things, for centuries yet to come, be supported with the least benefit.”
3. Most iron plows in the early nineteenth century could not cut through the tough prairie roots and sod, even for the enterprising settlers who tried to plow the open grasslands instead of clearing forests. Small patches of prairies were subdued with much labor, but until John Deere’s steel plow became popular in the 1840s and 1850s, most of the Illinois prairie remained unplowed.
4. Forests were an essential source for wood for fuel and to construct cabins, tools, furniture, and fences.
5. Farmers used forests as range for their pigs.¹²

Settlers did not avoid the prairie entirely though; usually they settled on the edge of the forest near the prairie to use it as grazing land for cattle. The edges of forests were also less dense than deeper areas of the forest, making it easier to clear the trees. In addition to seeking forests, settlers also sought creek access at first as a source of water and ice, and later as part of

a trade network. Forests also grew along rivers and creeks, meaning one ecosystem often went with the other. Generally they sought settlements at the border of multiple environments, “exploiting each to advantage.”¹³ Early frontier farms in Illinois thus dotted the edge of prairies along the forest edge, “circumscribing the entire prairie as with a belt,” as an 1838 emigrant handbook put it.¹⁴

William Bolin and Uel themselves located along the three environments: prairie, woods, and Cahokia Creek. They were also located on the boundary between the Mississippi bottomland and the bluffs.

Loss of Borderlands

Locating homesteads in forests meant that settlers had to clear trees on their property in order to both build their cabins and plant crops. Over time settlers replaced the margins between prairie and woods with cultivated farms and cabins, creating a rigid “timberline.”¹⁵



The new landscape of Illinois: fields of crops with rigid borders of forests. I took this photo on the bluffs just above the American Bottom in 2016.

These gradual borders between prairie and woods were themselves the result of human activity: Indian prairie burning. The

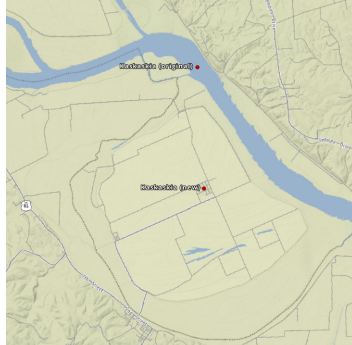
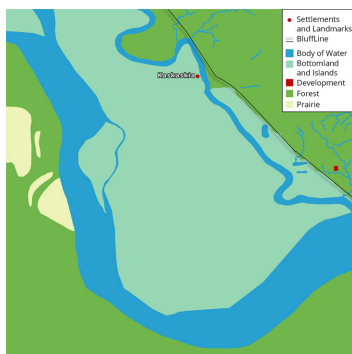
burning of the prairie extended into the woods, creating forests at various stages of development.¹⁶ Indians in New England created a similar ecosystem, resulting in what Cronon calls an “edge habitat,” as the boundaries between forest and grasslands served as an ideal habitat for a number of animals. Initially the plant life of these “edge habitats” favored herbivorous animals such as elk, deer, beaver, rabbit, porcupine, turkey, quail, and so on, which in turn led to increase in carnivores such as eagles, hawks, bob cat, foxes, and wolves.¹⁷

Biomes in Illinois were further changed as settlers worked to prevent the prairie fires Indians promoted. Preventing fires was not only a safety issue, constructing homes and fences out of wood committed farmers to stopping fires from destroying their “improvements.” Settlers used

a variety of techniques – plowing, firebreaks, mowing fields, reducing sources of fuel, and putting out small fires – to prevent fires, but likely the most effective technique was removal of Indians that started many of the fires in the first place. Without the fires to maintain them, the prairie in Illinois shrank as woods grew up in their place. As a result, Illinois gradually changed from a patchwork of woods and prairie to rigid boundaries between forest and farmland.¹⁸

Thus, a combination of farms replacing borderland ecosystems and the lack of fires to maintain them and the prairies resulted in widespread biome changes throughout the state in the nineteenth century. This did not happen entirely between 1796 and 1810; the process took many decades to develop throughout the state. But it began in this era, setting the stage for many animals to lose their habitats throughout the nineteenth century.

Erosion and Other Consequences of Deforestation



Above: A landcover map of the Kaskaskia region, based off a plat map drawn in 1813.

Below: A map of the Kaskaskia region today. The Mississippi River changed course dramatically in the mid to late 19th century, forcing the community to move.

Initially American arrival resulted in an increase of forests that replaced prairie. Reynolds believed that there were actually more trees in southern Illinois in 1855 than in 1800.¹⁹ That may well have been true for the inward parts of the state, but it was likely not true around the settlements that concentrated along creeks and rivers, particularly in the Mississippi Valley.

Deforestation was a major problem in the Mississippi River floodplain around St. Louis in the nineteenth century. F. Terry Norris argues that the arrival of steamboats to St. Louis in the 1820s brought a massive demand for wood fuel to power the steamboats, leading to the logging of forests along the Mississippi. This in turn caused the Mississippi to widen and move laterally, destroying abandoned French colonial villages.²⁰

Though the Mississippi changing its course was by far the most noticeable change, deforestation leads to a variety of environmental changes. Cronon goes into further detail on these and, unlike Norris, how precisely deforestation leads to erosion

and changes in the watershed, which is the drainage patterns of streams and creeks that lead to larger rivers. Here is a list of the ecological consequences of deforestation:

1. The climate varied more widely in temperature, with hotter summers and colder winters. Shade from forest canopies keep the ground cooler and prevent evaporation in the summer, without trees the ground became warmer and drier. In the winter, trees reduce wind speed. In general, cleared lands were “sunnier, hotter, colder, and drier than they had been in their former state.”²¹
2. Though the temperature was colder on cleared land, radiant heat from the unshaded sun melted snow more quickly, making winter seem shorter.
3. Without snow to stabilize ground temperature, the soil froze more frequently and to a greater extent than it had in forests.²²
4. Frozen soil without tree roots and forest debris was less able to retain the water from the more rapidly melting snow. As a result, spring runoff happened earlier in the year and rainfall throughout the year produced greater runoff.²³
5. Other factors increased the amount of water flow on cleared land. Rain caught by forest leaves often evaporates before reaching the ground. The trees and other plants of the forest also absorb water, using it for photosynthesis and releasing the excess as water vapor.²⁴
6. Because of greater runoff, streams and creeks of the watershed emptied faster, increasing the amount of water flowing off the land. Increased flooding downstream frequently resulted in flooding in both New England and the Mississippi River.
7. With water flowing off far more rapidly than the gradual runoff in forests, less water was left behind in smaller streams and creeks. Upland creeks dried out earlier in the year, and some disappeared entirely.²⁵

With the increased water flow from its watershed, the Mississippi moved laterally. Banklines destabilized and channel depth decreased as the river widened. This was most pronounced between the confluence with the Missouri River at St. Louis and the confluence with the Ohio at Cairo. In 1821, the surface area of that section of the Mississippi was 109 square miles. In 1888, the surface area had grown to 163 square miles, a 50 percent increase. The cause of such

a dramatic change was not unknown at the time; river engineering expert O.H. Ernst recognized forest clearing as the cause in 1880.²⁶

Norris essentially places sole blame on steamboats requiring enormous amounts of wood for fuel. This explanation is narratively satisfying; with the steamboat as a symbol of American industry destroying French colonial towns. It is reminiscent of the railroad ending the cowboy's way of life. Yet, to borrow a term from Cronon, it is too "unicausal" and ignores other causes of deforestation in the interest of telling a better story.

Norris is probably right that steamboat engines were the primary destination for most wood cut down in the St. Louis region in the first half of the nineteenth century. Steamboats were certainly ravenous consumers of wood fuel.

Norris estimates that a large steamboat consumed enough wood to build 15 small houses in one day.

In the early 1860s 735 steamboats operated around St. Louis, all of

which consumed approximately enough wood to build 671,000 buildings, roughly four times the total population of St. Louis in 1860. Norris acknowledges that forests near cities were used for building construction and industrial fuel,²⁷ but he only frames deforestation as a means to gain wood. Anglo-Americans did not just clear forests because they desired wood products; they wanted forest land for agriculture and settlement.

Norris does not go into precise detail on the deforestation of the land around St. Louis, likely because such records do not exist or are very difficult to find. The best he can do is look at General Land Office surveys of the floodplain near St. Louis for mentions of felled trees or stumps. One such reference from 1826 is "timber mostly all cut down near the river bank by settlers living here," among a few others.²⁸ Likely many of the references from the later surveys

The left image shows the landcover of the area around Whiteside's property in 1815, the right image shows the landcover in 1861. Only the land borders of 1815 are shown, many more existed by the 1860s. Cleared forests follow the boundaries of land properties, indicating that they were cleared for farmland. For the landcover of all of Madison County in 1861, see [this map](#) from the Library of Congress.

are the result of steamboats, but many of the felled trees from the 1826 survey were likely cut down years before the survey. The first steamboat to reach St. Louis arrived in 1817, only nine years before. Steamboat landings at St. Louis only started increasing exponentially the year of the survey, 1826. It is therefore unlikely that the earlier references to deforestation were largely because of steamboats.²⁹

Steamboats undoubtedly consumed vast amounts of the trees in the Mississippi Valley and were major contributors to the Mississippi widening and destroying French villages. However, to what extent steamboats destroyed forests as opposed to other causes is difficult to establish. What is certain is that farmers and settlers had been clearing forests for fields and towns in the American Bottom long before the first steamboat left Pittsburg in 1811. Most crucially, the mindset that allowed for steamboat deforestation already existed by its arrival to St. Louis in 1817.

Developing Capitalism in the American Bottom

Capitalism and Trees

This mindset was the commoditization of natural resources. This was especially true for trees, for in both of his works Reynolds argues for complete deforestation in Illinois. By the 1850s it was clear that the prairies made for incredibly fertile farmland. He writes:

Nature has made the prairies the finest and most fertile fields in the Union, and has prepared them ready for cultivation. If the State had been all timber, it would at this day, be thirty or forty years behind its present high and prosperous position in the Union.

There is not finer timber in America, East of the Rocky Mountains, than grows in Southern Illinois. This is the main reason that the Northern part of Illinois is growing faster than the South. But so soon as the timber in the South finds a good market, then Southern Illinois "will blossom as the rose." Where the soil is so productive as it is in Illinois, it is probable that it would be better for the state if there was not a tree in it. There is more money made by the production of corn and wheat than timber.³⁰

He further discusses the practicality of complete deforestation. He believes fences will no longer be necessary to enclose livestock, and writes:

All the timber in Illinois is not worth the fences and the continuation of the fences that now enclose the cultivated lands in the State. Stone coal will furnish the fuel and lumber and small quantities of timber that is necessary for building, will be imported.³¹

Reynolds thinks of the trees as a commodity to be sold at “a good market.” He does not even refer to them as forests, calling them timber, a word that implies their use for construction or fuel. Yet he finds their use limited, finding alternative resources for fuel and advocating importation of wood. What is supremely important to Reynolds is to clear the forests for farmland, as “there is more money made by the production of corn and wheat than timber.” Because crops hold greater market value, forests had to go.

It was this commoditization of wood that made it ideal for steamboat fuel. As a German traveler noted, “The [steamboats] on the river all burn wood, and such are the immense quantities destroyed in this manner that, had not nature provided an inexhaustible supply, some other fuel would have long since taken its place.”³² Nature however did not provide an inexhaustible supply, resulting in dramatic changes on the Mississippi.

Capitalism between 1795 and 1810

Still we must be careful not to simply apply the bourgeoisie attitude of Reynolds from the 1850s to settlers 50 years earlier. The American Bottom was still largely isolated before the War of 1812, with many settlers only acquiring goods for their immediate use. Boats had difficulty traveling upstream on the Mississippi before steamboats; consequently upstream shipping was slow, challenging, and therefore expensive. As a result, only occasional low-bulk luxury goods came to Illinois before the War of 1812.³³

The American Bottom however did start sending farm surplus and furs down the Mississippi after Anglo-Americans were given access by Pinckney’s Treaty in 1795.³⁴ With Pinckney’s Treaty, American commerce gradually developed on top of existing French markets. Some trade developed among the people of the American Bottom; for example, on January 4, 1804, an

unknown Whiteside traded with the Lewis and Clark Corps of Discovery camp at Wood River. He sold the commissary 12 pounds of tallow, beef fat used for soap making, at \$3 per hundredweight.³⁵ Though a simple one-on-one exchange, this Whiteside was already engaged in trading a farm surplus for abstract profit.

To see greater trade markets developing, let us return to the example of William Morrison, who had arrived in the French town of Kaskaskia in 1790 and founded the firm Bryant & Morrison with his uncle Bryant in Philadelphia. In the 1790s he established his main store in Kaskaskia that dealt in whole sale distribution and retail. According to Reynolds, Morrison shipped his goods from the store in Kaskaskia to merchants in St. Louis, Ste. Genevieve, Cape Girardeau, and New Madrid, all in the future state of Missouri. He accumulated great wealth trading with Indians and Indian traders. In 1800 he opened a second store in Cahokia, around which time he encouraged farmers throughout the American Bottom to cultivate wheat. Morrison then sent the wheat to Edgar's Mill near Kaskaskia, ground it into flour, and shipped the flour down the Mississippi on flatboats to sell in New Orleans. He also conducted trade with Pittsburg. To both port cities he shipped pelts, furs, lead, flour, horses, and other surplus products. In Reynolds' judgement, Morrison was responsible for shipping almost all of the surplus products from the American Bottom.³⁶

Morrison was also responsible for products coming up the Mississippi, using large barges that required forty to fifty boatmen to push the barge against the strong currents. It sometimes took four to five months for a ship to sail from Kaskaskia to New Orleans and back. Once a barge carrying fifty thousand dollars' worth of cargo had to be abandoned around Natchez, a huge loss. It was captained by Frenchman La Chappelle, of Kaskaskia, who died on the voyage, and no one else was qualified to captain the boat back to Kaskaskia.³⁷

Though Reynolds celebrates Morrison as an enterprising individual, he was not alone in commercial enterprises before the War of 1812. Captain James Piggot established the first American ferry to St. Louis across the Mississippi in 1795. Wheat farmers formed a crucial part of early capitalism in the American Bottom, growing the "classic cash crop of western farming,"³⁸ which could be milled into flour and sold throughout the country.

The accumulation of wealth through selling surplus goods had profound ecological implications. It encouraged settlers to think of natural resources as commodities to be sold to accumulate wealth and status, with the end result of Reynolds advocating complete deforestation. The possibility of abstract wealth and status encouraged farmers to grow more crops than their families needed. They planted crops and hunted not just to satisfy personal needs for food and shelter, but to satisfy market demands from New Orleans and Pittsburg, among others. Unlike the relatively basic needs pre-Columbian Indians satisfied, wealth has no limit, meaning settlers exploited resources until they were gone.³⁹

Most animals and forests in the American Bottom did not completely disappear between 1795 and 1810, with the likely exception of the buffalo. Yet in this era the processes that would result in their disappearance were put into motion, such as forests cleared for fields and organized wolf hunts. These processes would expand and consequences grow as more settlers arrived in the coming years.

For how the War of 1812 served as a turning point in these processes, see [War of 1812 Materialism](#).

For ideology during this era, see [Goshen Ideology](#).

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 5. William Cronon, [Changes in the Land: Indians, Colonists, and the Ecology of New England](#). (New York: Hill and Wang, 1983), 128.
 6. [Mazrim, 77](#).
 7. Cronon, [Changes in the Land](#), 132.
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 9. Records for 1816 are available because they were still on file in the Madison County Courthouse in 1882. B. E. Hoffmann, "Chapter IX: Civil History," in [History of Madison County, Illinois, Illustrated, With Biographical Sketches of Many Prominent Men and Pioneers](#), (Edwardsville: W. R. Brink & Co., 1882), 123.
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 21. Cronon, [Changes in the Land](#), 122 - 123
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 23. [Ibid., 124](#).
 24. [Ibid., 125](#)
 25. [Ibid., 124 - 125](#)
 26. [Norris, 81](#).
 27. [Ibid., 80 - 81](#).
 28. [Ibid., 79](#).
 29. [Ibid., 73](#).
 30. Reynolds, [My own times](#), 43 - 44.
 31. [Ibid., 598](#).
 32. [Norris, 80](#).
 33. [Davis, 18](#).
 34. [Ibid](#).
 35. University of Nebraska Press / University of Nebraska-Lincoln Libraries-Electronic Text Center, [The Journals of the Lewis and Clark Expedition](#), Entry for January 4, 1804.
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 37. [Ibid., 163](#).
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