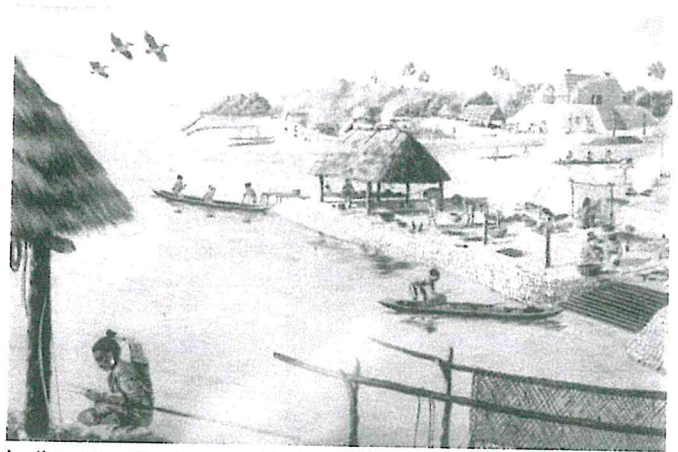


A skeleton found along the Columbia River in 1996 (named “Kennewick man” after the nearby city of Kennewick, Washington) appears to be that of an *Ainu* man who lived about 9,000 years ago.³³ The *Ainu* or *Jomon* were an ancient people who lived in Japan before the Japanese. They used kayaks and similar craft to fish and hunt for seals and walrus. Isotope measurements of the skeleton, completed in 2012, indicate that the man most likely lived off a diet of marine mammals.³⁴ In view of his diet and background, and the long stretches of harsh terrain between Japan and Washington, it appears to be very unlikely that this *Ainu* man (or his ancestors) got to the Columbia River area by walking overland. It appears to be much more likely that he (or they) traveled along the coast of the Pacific by kayak or similar craft.³⁵

Various pyramid-building civilizations flourished in North and Central America starting about 3,000 years ago, in the region stretching from what is now Illinois to what is now Panama. The pyramids they built were strikingly similar to those of ancient India and neighboring countries, suggesting migrations across the Pacific. The remains of these pyramids can still be seen at places such as Cahokia Mounds State Historic Site in Illinois, Chichen Itza in Mexico, Tikal in Guatemala, and several other locations. These ancient civilizations also built cities of stone, somewhat similar to those of ancient Greece and Rome.³⁶

As in ancient Babylon and ancient Egypt, transportation by river played a key role in the development of these American civilizations. Numerous ancient records, illustrations, and archeological digs confirm that these civilizations used canoes and similar craft on rivers for trade and for fishing, and that fish were a principal source of food.³⁷ As archeologists have excavated ancient American ruins in any one location, they have often found various small items (such as jewelry and tools) that could only have come from other, distant civilizations. These findings show that there was trading over great distances between American civilizations.³⁸



In the area that is now St. Augustine, Florida, Native Americans once fished, canoed, and built temples on small pyramids.

These civilizations built cities and towns at strategic points along rivers. Today, the Cahokia Mounds are large earthen mounds, located a few miles east of St. Louis, Missouri. However, from about 700 to 1400 A.D., they were stone-faced pyramids, in a city of perhaps 10,000 to 20,000 people, located on a bend in the Mississippi River, just downstream from its confluence with the Missouri. This was an ideal location for a capital of commerce, carried by canoes, covering a large region in what is now the midwestern United States.³⁹

River law in ancient North America

Based on ample archeological evidence, it is clear that transportation and trade using canoes on rivers, and fishing on rivers, were common practices among the ancient North American civilizations, in what is now the United States, Mexico, and Central America. It is clear that these civilizations had already been using canoes and similar craft on rivers, for transportation, trade and fishing, for thousands of years before the arrival of Europeans.

In other words, at the time that the *Institutes of Justinian* were being published in the Roman empire (regarding ancient law that confirmed public rights to use rivers in the civilizations around the Mediterranean,) the same sorts of public rights on rivers had also long been confirmed by law and custom among the civilizations of North America.⁴⁰

Today, there are still a few “windows” into the canoeing and fishing lifestyle of ancient North America. For example, the *Kuna* people still maintain their traditional homeland, *Kuna Yala*, and their own nearly-autonomous government, within the nation of Panama. Their homeland includes the San Blas Islands in the Caribbean, and the adjacent section of the mainland coast, up to the Continental Divide (which is not far from the ocean in that area.) They still use the same type of dugout canoes, for fishing and transportation, as were used in ancient America (and were used throughout

³³ **Kennewick Man:** *The First Americans: The Pleistocene Colonization of the New World*, Nina G. Jablonski, Editor, Univ. of California Press 2002, page 105.

³⁴ **Isotope measurements:** By Douglas Owsley, mrh.si.edu/kennewickman.

³⁵ **Kennewick man came by kayak:** *In the Wake of the Jomon, Stone Age Mariners and a Voyage across the Pacific* by Jon Turk, International Marine McGraw-Hill, 2005 (likely that *Ainu* people kayaked along the coast rather than walking overland, Japan to Alaska, based on research and modern-day trips.)

³⁶ **Pyramids and cities of stone:** *Ancient Maya: The Rise and Fall of a Rainforest Civilization* by Arthur Demarest, Cambridge University Press 2005.

³⁷ **Trade and fishing on rivers in ancient America:** *Archeology of Ancient Mexico and Central America: An Encyclopedia*, edited by Susan T. Evans and David L. Webster, Routledge 2000, page 115 (Ancient Mayan city of *Cerros*, next to present-day Corozal in Belize, controlled trade routes on the Rio Hondo and New River, from Yucatán to Petén. The ancient city, now in ruins, is surrounded by a stone-lined canal, where traders in canoes loaded and unloaded cargo.)

³⁸ **Trading over great distances:** Note striking similarities between the jewelry and pottery designs of North American tribes such as the Navajo and South American tribes such as the Mapuche in Chile. The items traded between North and South America in ancient times may not have been carried the whole way by the same traders, but could well have been taken in several stages by different traders. In any event, there was definitely trading between civilizations.

³⁹ **Cahokia Mounds:** See the well-illustrated web site at cahokiamounds.org.

⁴⁰ **Public rights on rivers in ancient America:** “Aztec and Maya Law: An Online Exhibit and Bibliography,” Tarlton Law Library, University of Texas. (tarlton.law.utexas.edu/exhibits/Aztec/index.html).

much of the ancient world on other continents.) They paddle up and down the rivers of their region, as well as from island to island along the coast. They use the same sorts of pointed paddles as those that were used by ancient kayakers in Asia, but are not typically seen elsewhere. Today, they are astute traders, setting an annual tribal-wide price for their coconuts, which they trade to factories in nearby Colombia for use in foods and cosmetics. It is evident that this trading tradition among American tribes originated in ancient times.⁴¹



Dugout canoes are still used today by the Kuna people in Panama.

Ironically, the *Kuna* territory lies scarcely fifty miles from the Panama Canal, the modern “crossroads of the world,” where large ships carry trade between the Atlantic and the Pacific, and where North America and South America meet. This modern “crossroads of the world” is very near the place where America’s ancient culture, which involved trading by canoe, still thrives today, essentially unchanged.

The European discovery of America

It is likely that the first Europeans to see the coasts of North America were Norse explorers. Shortly after the year 1000 A.D. they made several voyages from Norway to the east coast of what is now Canada. As they anchored their sailing ships in sheltered bays along the coast, they were met by native tribal people paddling kayaks. At first the explorers traded peacefully with the natives, but soon there were misunderstandings and fighting. The explorers returned to Europe and reported their findings, but in those days most Europeans apparently regarded the reports as exaggeration or fiction, or as not relevant to daily life.⁴²

These and subsequent explorers reported that the native people made their kayaks by building frames of sticks or animal bone, then covering them with the skins of seals or other animals. They used these kayaks when fishing, and also to hunt, using spears or traps, for seals and other animals. They used the fur of these animals for clothing, and the meat for food.

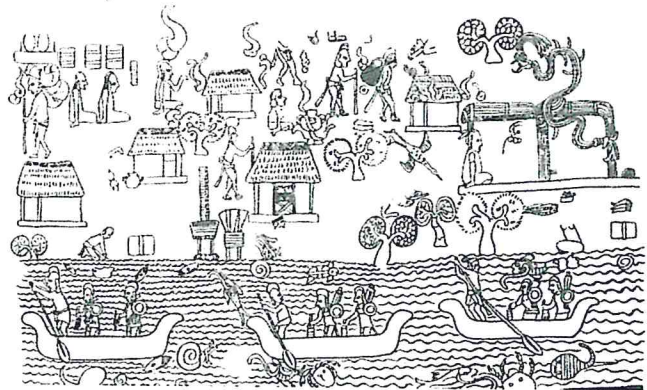
They also used kayaks for transportation. They put food, furs, other freight, and even their children inside these kayaks, then paddled them across cold, windy waters in relative safety.⁴³

As mentioned earlier, it appears that native peoples in North America had already been living in this manner, using kayaks and other types of canoes, for thousands of years before the Norse explorers arrived.

Of course, the more publicized European discovery of America was nearly 500 years later, when Christopher Columbus and his crew sailed in 1492 from Spain to what is now the Bahamas. On these islands they found native *Taino* people paddling small boats, calling them by a term that the Spanish explorers transliterated as *canoa*, from which English and other European languages got the word *canoe*.⁴⁴

Miscommunication was common between natives and European explorers, so the Spanish explorers may have been hearing a local variation of the word *cayuco*, which in turn appears to be a variation of *kayak*, *kayik*, and *kaiki*, as noted earlier. Consequently, the two modern words *canoe* and *kayak* may have come from the same ancient root word, which was similar in numerous places around the world.

In 1502, on a later voyage continuing further south, Columbus encountered a large Mayan trading canoe along the coast of what is now Honduras. The canoe was carrying goods such as jade, salt, cotton, and cacao beans. (*Cacao* is a Mayan word, adopted in Europe as *cocoa*.) This was the first known contact between the European and Mayan civilizations (and the first known European experience with chocolate.)⁴⁵



The ancient Maya used canoes for transport, fishing, and trading.

In 1520, a Spanish military expedition led by Hernán Cortés conquered the capital of the Aztec civilization, in what is now Mexico. The capital was located on an island, surrounded by a shallow lake routinely used by canoes, in the area that is now Mexico City. Remnants of the ancient lake are still visited by tourists, in small, flower-decorated

⁴¹ **Kuna life and trading:** *The Art of Being Kuna: Layers of Meaning Among the Kuna of Panama* by Mari Lyn Salvador, University of Washington Press 1997.

⁴² **Norse explorers around 1000:** *The European Discovery of America, The Northern Voyages* by Samuel Eliot Morison, Oxford University Press 1971, pg. 53.

⁴³ **Ancient kayak uses:** *Nanook of the North* by Robert Flaherty, Windmill Books 1971, based on a film from the 1920s showing Eskimo families who were still living in the ancient manner at that time.

⁴⁴ **Natives found by Columbus:** *The Tainos: Rise and Decline of the People Who Greeted Columbus* by Irving Rouse, Yale University Press 1993.

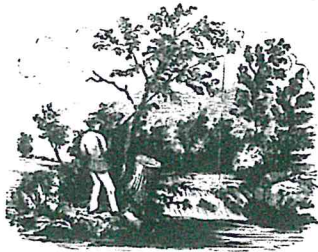
⁴⁵ **Mayan trading canoes:** “The Maya Navigators,” mayadiscovery.com/ing/history/navigators.htm. “The Maya and Cacao,” authenticmaya.com/cacao.htm.

boats, at the present-day Xochimilco gardens on the outskirts of Mexico City.⁴⁶

During these same years, Spanish explorers in the tropical regions of Central and South America found the natives making log rafts for use on rivers from the lightweight wood of a certain tropical tree. In Spanish, a raft is a *balsa*, so they called this wood *balsa* wood. (Today, it is typically used to make model airplanes.)⁴⁷

The first major European exploration of what is now the United States was in 1538, when the Spanish explorer Hernando DeSoto landed in Florida, with 620 men and 223 horses, and made a military-style overland expedition through what is now Florida, Georgia, Alabama, Mississippi, Arkansas, and Louisiana. When the expedition reached the banks of the Mississippi River, thousands of natives (who had heard of the coming invasion) were massed along the opposite shore. Natives in full war regalia repeatedly paddled past the expedition's camp in brightly-painted war canoes, shooting volleys of arrows. The expedition later crossed the river, and continued further west, but many men died, and the survivors returned home in tatters. DeSoto himself died, and his crew "buried" his body by putting it in a hollow log and sending it down the Mississippi.⁴⁸

In 1576, an expedition from England, led by Martin Forbisher, sailed to the east coast of what is now Canada, visiting some of the same areas that the previously-mentioned Norse explorers had seen nearly six centuries earlier. Again, the explorers were met by natives in kayaks, as the earlier Norse explorers had been. Again, at first the explorers traded peacefully with the natives, but later there were disputes and fighting. This time, however, the explorers captured a native and his kayak, and took him back to England. There, this displaced man demonstrated his kayaking, fishing, and fowling skills in various public performances. His performances were then portrayed by English artists in pictures, which were published in books distributed in England and other European countries at that time.⁴⁹



Fishing along the banks of rivers was customary in colonial and early American times.

River uses in colonial America

Colonial fishing. The first colonists in what is now Virginia and neighboring states, during the 1600s, survived largely on fish and game until they could grow and harvest crops. Fish were plentiful in rivers and the ocean. Native tribesmen showed them how to fish successfully, which allowed the colonists to survive.⁵⁰

Later, printed advertisements in Europe, designed to attract additional colonists to America, portrayed fish as being quite plentiful in America, and canoes as being a common and convenient way to catch them. In those times there were devastating famines in parts of Britain, Ireland, and elsewhere in Europe. People feared starving to death. The promise of plentiful fish was a powerful draw for people to emigrate from Europe to America.⁵¹

In later generations, when colonists were less concerned about mere survival, fishing for sport became common. In Philadelphia, there were at least five different fishing clubs by 1750, and books had been published about fly fishing techniques.⁵²

Colonial canoeing on rivers. As colonists moved inland, they found that much of the land was thickly forested and nearly impassable.⁵³ In many areas, rivers were the only practical routes of transportation. Again, the natives showed them how to use canoes, which could be paddled both upstream and downstream, and could be carried around obstructions in rivers. Canoeing on rivers became a key element in the westward movement of settlers.⁵⁴

Colonial logging on rivers. Colonists often used rivers to transport lumber. They felled trees in the mountains, then cut them on the spot into shorter logs, then floated the logs down rivers to crews waiting at large eddies downstream, who pulled them out of the river and used them to build new settlements.

They even used small creeks to transport logs. They would stockpile the logs along a creek during the low-water months, then send them downstream when the time of high water arrived. Note that rapids and waterfalls were not much of an obstacle for colonial loggers. They simply ran the logs down the rapids and over the waterfalls, then retrieved them from eddies further downstream.⁵⁵

Colonial fur trading. When European colonists arrived in America, native tribes had already been trading in furs for several thousand years, typically transporting them in canoes on rivers. The colonists simply linked this existing commerce to European markets. French entrepreneurs

⁴⁶ **Cortés and the Aztecs:** *The Spanish Invasion of Mexico, 1519-1521* by Charles M. Robinson, Osprey Publishing 2004.

⁴⁷ **Balsa wood:** *Spanish Word Histories and Mysteries* by the Editors of the American Heritage Dictionaries, Houghton Mifflin Harcourt 2007, page 23.

⁴⁸ **DeSoto on the Mississippi:** *Tales of the Mississippi* by Ray Samuel, Leonard Huber, and Warren Ogden, Pelican Publishing, Gretna, 1955 and 2000, pg 2 to 9.

⁴⁹ **Native kayaker taken to England:** *The European Discovery of America, The Northern Voyages* by Samuel Eliot Morison, Oxford Univ. Press 1971, page 142.

⁵⁰ **Fishing by first colonists:** *Ocean Planet* by Peter Benchley and Judith Gradwohl, Harry N. Abrams Publishers/Smithsonian Institution 1995, page 163.

⁵¹ **Plentiful fish as a draw for emigration:** *Ocean Planet* (just cited) page 164.

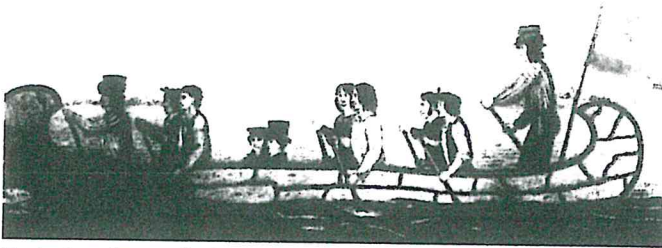
⁵² **Colonial fly fishing books:** *The Compleat Angler* by Izaak Walton 1676. *The Art of Angling* by Richard Brookes 1740.

⁵³ **Thickly-forested land:** *The Loggers* by Richard L. Williams, Time-Life Books 1976, page 28.

⁵⁴ **Colonial canoeing on rivers:** *The Rivermen* by Paul O'Neil, Time-Life Books 1975, page 19.

⁵⁵ **Logging on rivers with rapids and falls:** *The Loggers* (just cited) page 104.

started the shipping of American furs to Europe around 1600, followed by English and American traders. Fur traders traveled by canoe on rivers, taking small manufactured goods such as knives, tools, beads, and mirrors to native tribes, where they traded these items for the furs of beaver, buffalo, and other animals. Then they transported the furs in canoes on rivers back to cities, where they fetched good prices. Most of the furs were then loaded on ships bound for Europe, where they were made into hats and coats for buyers in London and Paris and other cities. From about 1600 to the mid-1800s, furs were in high demand both in colonial American cities and in Europe, and fur trading was an important American industry.⁵⁶



Early American colonists used canoes for efficient transportation.

A French “mountain man” was called a *coureur de bois*, literally a “runner of the woods,” while a fur trader was called a *voyageur*, because the trade involved long-distance “voyages” on water, by canoe. The fur traders carried or *portaged* their canoes and furs overland between rivers when necessary to complete a route. (To *portage* means to “carry” in French.)

French fur traders founded Montreal in 1642. In 1673, French explorer Louis Jolliet and Jacques Marquette, a priest, led a long expedition from Montreal south. (For comparison, note that this was when Louis XIV was expanding the palace of Versailles back in France, and Dutch forces were retaking New York from British forces.) The expedition consisted of only seven men—five Frenchmen and two Algonquin tribesmen. They made the entire trip in two birch-bark canoes. From Montreal, they paddled along the shores of the Great Lakes, then upstream on the Fox River, a river that flows into Lake Michigan. Then they portaged (carried) their canoes across the local divide, to the headwaters of a small river that flows into the Mississippi, and paddled downstream hundreds of mile to what is now the state of Mississippi. They had numerous peaceful interactions with the native tribes, even though they were visiting some of the same areas where many men had died while fighting the natives on the earlier DeSoto expedition. They then paddled the canoes hundreds of miles back *up* the Mississippi, and home to Montreal, all without losing a single man.⁵⁷

They traveled by canoe in the same manner as typical French-Canadian fur traders of the time. To modern readers, paddling a canoe upstream for hundreds of miles may sound nearly impossible, but native tribesmen had already been doing it for thousands of years. A lifetime of paddling made it more feasible for these people, but it also turns out that rivers in relatively flat country, such as most of the Mississippi, make nearly continuous bends. One ancient technique was to paddle up the eddy on the inside of a bend in the river, then ferry across the river, then paddle up the eddy on the inside of the next bend. In this manner, much of the paddling time was spent with little or no opposing current, and sometimes there was even a helpful upstream current in the eddy. Another technique, where the bends of the river were particularly close together, was to portage the canoe across the “isthmus” at the narrowest point between bends, then paddle *downstream* to the next narrow isthmus, then repeat the process, thereby making an overall trip *up* the river, even though the paddling itself was a series of *downstream* segments, interspersed with portages.

Montreal became the largest collection point for the northeastern fur trade, since it was located near the confluence of the St. Lawrence and Ottawa rivers, downstream from the Great Lakes and a short distance from the Atlantic. French fur traders also founded New Orleans in 1718. It became the main export city for the midwestern fur trade, since it was located near the mouth of the Mississippi River. They founded St. Louis in 1764, and it became the main collection point for the western fur trade, since it was located near the confluence of the Mississippi and the Missouri rivers. Note that St. Louis is just a few miles from where the canoe trading and pyramid-building city at Cahokia Mounds had flourished centuries earlier.

By the time the American colonies declared their independence from Britain in 1776, French fur traders were already in full operation in what is now the midwestern and western United States. Today, their legacy lives on in place names such as Coeur d’Alene, Idaho, and the Cache la Poudre River, in Colorado.⁵⁸

Today, novelists and movie makers often focus on conflict and warfare between native tribes and European settlers. Conflicts were indeed common in the 1800s, but during colonial times, in the 1600s and 1700s, traders usually found that the tribes were eager to trade furs for knives, tools, jewelry, and so on. Trading relationships were therefore valued by both the tribes and the European traders. Both tribesmen and traders considered it desirable for trader men to marry tribal women, and there were numerous such marriages, producing numerous children who were half tribal and half European.

⁵⁶ **European-American fur trading:** *The Forts of New France in Northeast America 1600-1763* by René Chartrand and Brian Delf, Osprey Publishing 2008.

⁵⁷ **Marquette and Jolliet expedition:** See vivid illustrations in *Marquette & Jolliet: Quest for the Mississippi* by Alexander Zelenyj, Crabtree Publishing 2006.

⁵⁸ **French fur trade:** *French Fur Traders & Voyageurs in the American West* edited by LeRoy R. Hafen, Univ. of Nebraska Press 1965 and A.H. Clark 1995.

Note that these two centuries of peaceful trading, during the 1600s and 1700s, were simply a continuation of the trading tradition that had already flourished for thousands of years among various North American tribes and civilizations, in places stretching from Illinois to Panama, as mentioned earlier.

River law in colonial America

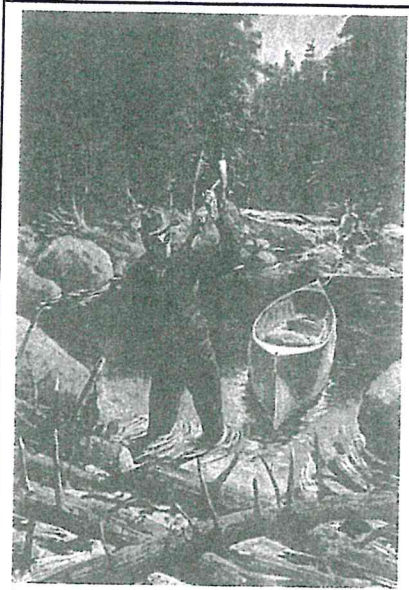
Colonial governments consistently affirmed public boating and fishing rights. In 1641, the Massachusetts Bay Colony adopted the *Massachusetts Declaration of Fundamental Liberties*, which affirmed public rights to fish and fowl on the “great ponds” (lakes in that area,) along with the freedom to walk through uncultivated private land to do so.⁵⁹ Laws of the colony of Pennsylvania, enacted from 1700 to 1768, prohibited weirs that would block the movement of fish on rivers, and confirmed public rights to fish on rivers.⁶⁰ Note that these colonial laws reflected similar provisions in *Magna Carta*, which had been signed into law about five centuries earlier, as discussed previously.

In colonial times, people living inland from the coastal cities were dispersed, and they had few commercial food sources. There were no paved highways, and no trucks bringing food to local grocery stores. Canoeing, fishing, and fowling on rivers were important methods of obtaining food, and were a part of everyday life for many people.

Colonial views regarding public rights to use rivers were influenced by the pre-existing customs and legal views of the tribes. (As noted above, relationships between tribes and colonists were generally positive.) The general view was that canoeing, fishing, and fowling on rivers were an important part of life, and that public rights to do these things were undeniable. Consequently, the law during colonial times confirmed public rights to canoe, fish, and fowl on rivers.

Founding principles of American river law

Laws of Nature. The founding fathers of the United States reaffirmed the overall premise of ancient law that the *Laws of Nature* are the source of human rights and liberties. The Declaration of Independence says that people “are endowed by their Creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness.”⁶¹ This echoed the ancient view, as expressed in documents such as the *Institutes of Justinian*, that public rights and freedoms are granted by God (or the gods,) and



In their quest for valuable furs, fur traders hacked through logjams and lined canoes through rapids.

therefore cannot be revoked by human governments, so that they are unalienable (now spelled *inalienable*.) It should be noted that many Americans fought and died in the Revolutionary War to uphold these public rights and freedoms, and to protect them from future encroachment.⁶²

The Commerce Clause. After winning independence from Britain, the states functioned for several years as a confederation of independent countries. It was not until 1787 that delegates from the various states met to draft the U.S. Constitution. A strong motivation for calling the Constitutional Convention was the need for an overall policy regarding commerce, which had become chaotic as states set up import duties and other

impediments to interstate trade, in an effort to collect revenues and protect business for their own citizens. Consequently, there were few objections to the adoption of the “Commerce Clause” of the Constitution, which empowered Congress “to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.”⁶³ The main commerce with the Indian tribes at that time was the *fur trade*, which was already centuries old, as discussed earlier. The fur trade was an important source of much-needed cash for the fledgling United States, since furs fetched good prices from buyers in London and Paris, as noted earlier. The fur trade was borne mainly by canoes on rivers. In effect, the Commerce Clause asserted national authority over navigation on rivers in canoes and similar craft. In subsequent decades, the Commerce Clause was to play a key role in the development of river law (and Constitutional law) in the United States, as discussed later herein.

Rivers navigable in canoes shall be “forever free.” In the very first Act of Congress, Congress addressed the status of rivers in U.S. territory west of the original thirteen colonies, saying, “the navigable waters leading into the Mississippi and Saint Lawrence, and the carrying places between the same, shall be common highways, and forever free, as well to the inhabitants of the said territory as to the citizens of the United States, and those of any other states that may be admitted into the confederacy, without any tax,

⁵⁹ **Public rights in the Massachusetts Bay Colony:** *Inhabitants of W. Roxbury v. Stoddard*, 89 Mass. 158 (1863).

⁶⁰ **Public rights in the Pennsylvania colony:** Cited in *Carson v. Blazer*, 2 Binn. 475, 4 Am. Dec. 463, pages 474-476 (Pa 1810).

⁶¹ **Endowed by their Creator:** Declaration of Independence, first paragraph.

⁶² **Public rights and the Revolutionary War:** See discussion by the U.S. Supreme Court in *Martin v. Waddell*, 41 U.S. 367 (1842) page 414 (discussed later herein.) See also *A People's History of the United States*, by Howard Zinn, Harper Collins 1980, page 78.

⁶³ **Adoption of the Commerce Clause:** U.S. Constitution, Article I, section 8, clause 3, as discussed in *The Oxford Companion to the Supreme Court of the United States* edited by Kermit L. Hall, Oxford University Press 1992.

impost, or duty therefor.”⁶⁴ In 1796, in a law governing territory that would become future states, Congress again declared that “all the navigable rivers, creeks, and waters” within the territory “shall be deemed to be and remain public highways.”⁶⁵



Fur traders traveled upstream to trap beaver and other animals that lived along small creeks in the mountains. Then they took the furs back downstream to distant buyers.

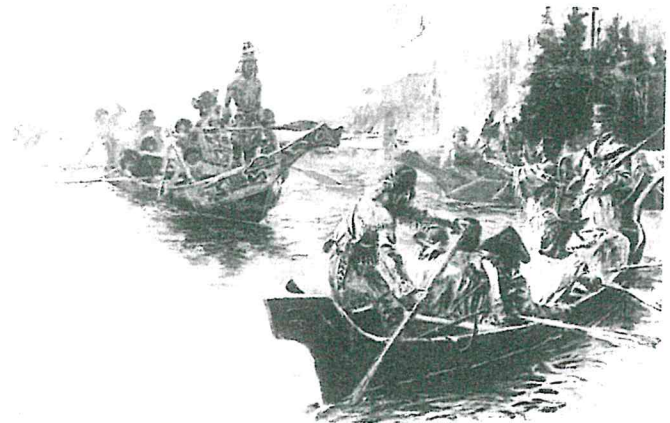
At that time, the common types of watercraft on rivers were canoes and other small, human-powered craft, used in the fur trade and for other transportation, as noted earlier. A canoe is about the heaviest watercraft that can be reasonably *carried* overland from one river to the next, and such carrying (or *portaging*) was a common practice in the fur trade. Therefore these laws about “navigable rivers” and “creeks,” and “the carrying places between the same” refer to navigation *in canoes*, not in larger craft. (Steamboats and motorboats had not been invented yet.)

Describing the rivers in question as the tributaries of “the Mississippi and St. Lawrence” may at first seem like an odd limitation, until one considers that this description covered virtually all of the rivers flowing in the territory that was claimed by the United States at that time (as well as a number of rivers in lands that were claimed by France and Spain.)

These Acts of Congress have not been repealed. The U.S. Supreme Court has repeatedly cited them as being a fundamental source of public rights on rivers in the United States today.⁶⁶

The Lewis and Clark expedition. In 1803 Congress made the Louisiana Purchase from France, buying the vast region that is now the Midwest. The next year Congress funded the Lewis and Clark expedition, to officially explore this vast area by canoe, as well as additional lands further

west to the Pacific. President Thomas Jefferson (who had previously written the Declaration of Independence) personally planned the expedition, and appointed Lewis and Clark to lead it. (Indeed, there is evidence that Jefferson had secretly planned the expedition even before the Louisiana Purchase, when the lands to be explored were still claimed by the French.) The fur trade was an important source of foreign cash for the young nation, as noted earlier, and part of the motivation for the Lewis and Clark expedition was to ensure that rivers used in the fur trade would remain open to U.S. traders, who competed for trading routes (and “market share”) with French Canadian traders.⁶⁷



The Lewis and Clark expedition traveled across North America by canoe, meeting tribes that carved elaborate dugout canoes.

It may be difficult for modern readers to comprehend the demand for furs in Europe in the early 1800s, and the resulting importance of the fur trade in those times, in what is now the Midwest. Fur trade historian Hiram Chittenden explains, “For forty years [after the Louisiana Purchase] the people of the United States were at a loss to know what to do with their new possession. It was not yet needed for settlement... The single attraction that it offered in a commercial way was its wealth of furs, the gathering of which became, and for a long time remained, the only business of importance in this entire region.”⁶⁸

The Lewis and Clark expedition also hoped to find a canoe route to the Pacific Ocean, hopefully with only a short portage over the Continental Divide—perhaps not much longer than the portage between a tributary of the St. Lawrence, and a tributary of the Mississippi, that had been used by the Jolliet and Marquette expedition over a century earlier, and had been in frequent use since then.

After departing from St. Louis, the expedition canoed upstream along the Missouri River, using the various techniques to go upstream as described earlier. Then they continued up smaller tributaries. Then they carried their canoes and gear over the Continental Divide, (which turned

⁶⁴ “Forever free.” *Northwest Ordinance of 1787*, reenacted Aug. 7, 1789, chapter 8, 1 Stat. 50.

⁶⁵ “Remain public highways.” Act of May 18, 1796, chapter 29, section 9, 1 Stat. 464, 468.

⁶⁶ U.S. Supreme Court regarding rivers being “forever free” and remaining “public highways.” *The Montello*, 87 U.S. 430 (1874) page 440. *Economy Light & Power*, 256 U.S. 113 (1921) pages 119 and 120.

⁶⁷ **Fur trade as a motive for the Lewis and Clark expedition:** *The Journals of Lewis and Clark*, ed. by Bernard DeVoto, Houghton Mifflin 1953, pgs. xxv and 89.

⁶⁸ **Fur trade was the only business of importance:** *The American Fur Trade of the Far West* by Hiram Martin Chittenden, Stanford University 1936 and 1954, also University of Nebraska Press 1986, in two volumes, over 900 pages.

out to be long and arduous,) and canoed down small rivers to join the Columbia River, and onward to the Pacific Ocean. Near the mouth of the Columbia, they built log cabins and spent the winter. When warm weather returned, they canoed and portaged their way back to St. Louis, along roughly the same route. Throughout the expedition they collected many specimens of plants and animals, and they made official contact with numerous tribes along the way (informing the skeptical tribes that they were now under the dominion of the new U.S. government.)

As they canoed down the Missouri on the final leg of their trip back to St. Louis, they met no less than eleven parties of fur traders headed upstream.⁶⁹ As noted earlier, French fur traders had already been operating in much of that area for over a century, and tribes had been canoeing and trading on these rivers for many centuries before that.

In other words, the Lewis and Clark expedition was not the initial human exploration of an untouched wilderness. Instead, it was an official fact-finding expedition, sent by the young U.S. government, to document the resources, and claim dominion, over lands that had already been occupied by tribes and pyramid-building civilizations for thousands of years. The laws and customs of these tribes and civilizations had long confirmed public rights to trade and travel on rivers by canoe, and to fish and fowl on rivers, as noted earlier. The laws of the new U.S. government essentially reaffirmed those ancient rights, although U.S. law based them on European principles such as the *Laws of Nature* and the *Institutes of Justinian*, rather than on Native American custom or Mayan codices. Either way (European or American) the net result was about the same—public rights on rivers were confirmed.

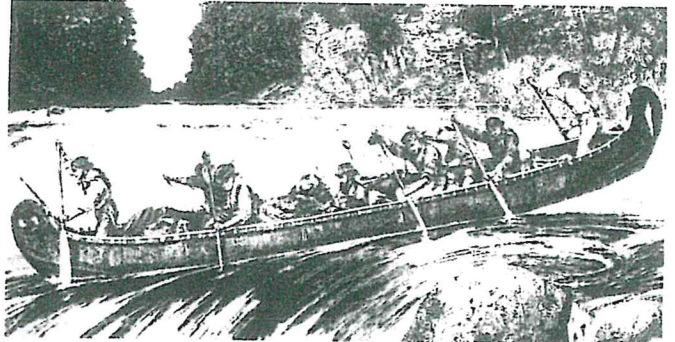
River uses in the early 1800s

It so happens that one can start from a point in western Pennsylvania, less than 200 miles from the Atlantic Ocean, and travel entirely by river to numerous points throughout the Midwest, and even to Montana. In the early 1800s, rivers provided both an important means for settlers to travel west, and also a means for them to earn a living once they got there. They could sell the products of their farms, and the surrounding forests, to commercial boatmen, who took these products by river to buyers in cities such as Cincinnati, St. Louis, Memphis, and New Orleans. From New Orleans, products were taken in ocean-going ships to buyers on the Atlantic coast and in Europe.⁷⁰

Canoes were the basic watercraft used in this commerce. As mentioned earlier, canoes were paddled upstream as well as downstream, and were carried around obstructions in rivers, as well as from one river to another.

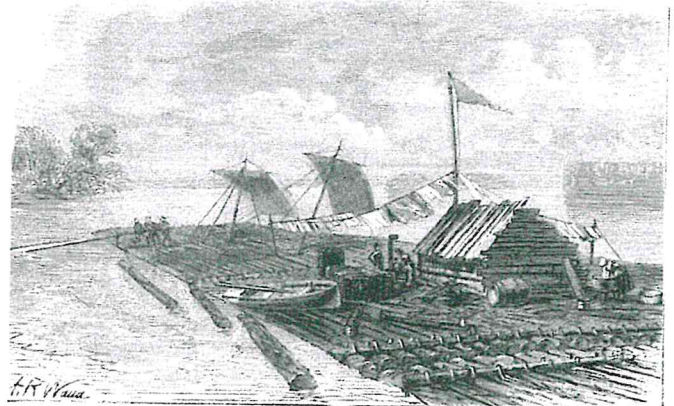
Another basic watercraft at that time was a **log raft**. These were loaded with furs, dried meat, grain, coal, metal ore, and other raw materials, then steered downstream with long sweep oars. These heavy rafts made a one-way trip, and

the logs themselves were sold as lumber at their destination. For some traders, the logs themselves were the main product, while the cargo carried on top was almost incidental. A number of historic houses in New Orleans, still standing today, were made of wood that came from Minnesota, transported down the Mississippi in the form of log rafts during the 1800s. Log rafts such as these were key elements in the classic American novels *Tom Sawyer* and *Huckleberry Finn*.



Fur traders in the 1800s canoed on rivers with rapids in their search for valuable furs, which were sold in America and Europe.

Another common boat was a **flatboat**, a boat made of thick wood boards, consisting of a flat bottom and sides. Often a roof was added over part of the boat. These wooden barges were lighter and more maneuverable than log rafts, and they provided somewhat safer transport for cargo, livestock, and passengers. Like log rafts, they were typically used for a one-way trip downstream, then sold at their destination for lumber.



Loggers in the 1800s tied logs together to make log rafts, to float the logs down rivers to market, sometimes with cargo on top.

A **mackinaw** was a long, narrow flatboat with some curvature at the ends, to make it faster and more maneuverable. With a crew of four at the oars, and a fifth man handling the rudder (which was a long sweep oar,) these boats could cover over 100 miles a day when going downstream.⁷¹

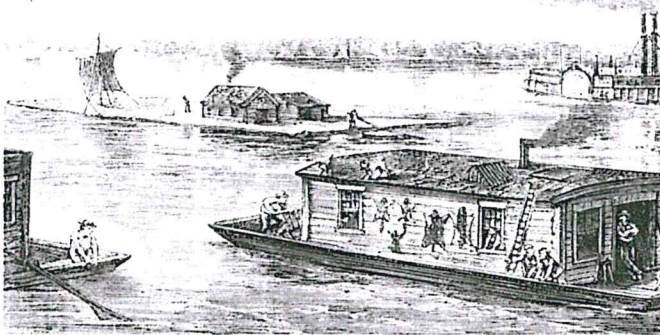
Also common were **keelboats**, which were wooden boats made with a rounded hull and a keel, more like the boats

⁶⁹ Met fur trade parties: *Journals of Lewis and Clark* (just cited) pgs. 467 to 478.

⁷⁰ Settlers, river use: *The Rivermen* by Paul O'Neil, Time-Life Books 1975, p. 20.

⁷¹ Log rafts, flatboats, and mackinaws: *Western Rivermen, 1793-1861* by Michael Allen, Louisiana State University Press 1990.

typically used on the ocean at the time. Keelboats were faster and more maneuverable than flatboats and mackinaws, and were designed for multiple trips. On the trip downstream they often carried heavy raw materials, similar to flatboats and rafts. On the trip upstream, they carried lighter, more valuable manufactured items, such as guns and tools, which were readily sold to frontier settlers. They moved upstream in four ways, briefly mentioned earlier: First, by men, mules, or oxen pulling them with a rope from the bank, called *cordelling*. Second, by men pushing off the bottom of the river with poles, while walking along the deck of the boat from bow to stern. Third, by rowing, with anywhere from four to twelve pairs of oars. Fourth, by hoisting a sail, to take advantage of common upstream winds in the afternoon. Often two or more of these methods were used at the same time. These methods had been used in Europe and elsewhere since ancient times, as discussed earlier.⁷²



Flatboats, log rafts, steamboats, canoes, and other craft navigated American rivers through the 1800s.

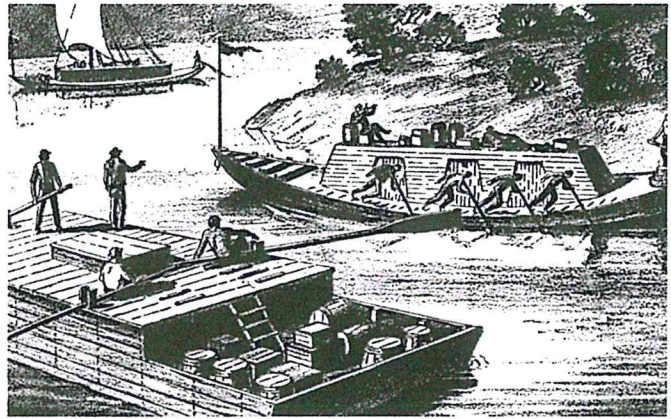
To modern readers, these methods of moving upstream sound too slow and arduous, but as noted earlier, it was simply not feasible to transport large loads on the bumpy, rutted roads of those times. There were very few paved roads until the early 1900s. Note that the heavier loads moved *downstream*, from the interior of the country to the coast. Only the lighter loads moved upstream.

Modern readers may also wonder how perishable merchandise was preserved on these long river voyages. The meat was dried, and the furs were tanned. These and similar products were then compressed into bundles and tightly wrapped with protective leather covers. The presses used to make these bundles can still be seen at various “living history” sites in the Midwest and the West.⁷³ The resulting bundles could withstand rain, sun, dust storms, and other rigors during their long journey to distant buyers. If the vessel sank in the river, these bundles would float, so with luck they could be recovered from an eddy somewhere downstream.

⁷² **Keelboats:** *The Keelboat Age on Western Waters* by Leland D. Baldwin, University of Pittsburgh Press 1980.

⁷³ **Presses used to make bundles:** See the photo of the “pelt press” at sangres.com/colorado/national-parks/bents.htm

The fur trade in the early 1800s. During the early 1800s the western fur trade grew quite large, as fur trading companies based in St. Louis hired numerous teams of men to head up the Missouri and its tributaries and acquire large quantities of furs from tribes.⁷⁴ Various watercraft were used, as follows:



In the foreground, a flat boat heads downstream with a sweep oar as a rudder. In the middle ground, men push off the bottom with long poles to propel a keel boat upstream. In the background, another keel boat catches some helpful wind.

Bull boats. Throughout the Midwest, early fur traders found the native tribes using *bull boats*. These consisted of a frame made of flexible branches, then covered with the hide of a bull buffalo. They were often built along the banks of a river, then used for a one-way trip down the river carrying furs and other products. Fur traders copied this technique, also making bull boats and using them to float their furs down rivers for long distances.



A frame of flexible branches, covered with the hide of a bull buffalo, made a bullboat.

Bull boats were quite similar to *coracles*, the rounded boats which had been used for fishing in Wales for centuries, as mentioned earlier. The great similarity between these two watercraft fueled the widespread belief, now discredited, that Welsh explorers in the 1100s, led by Prince Madoc, settled in the Midwest, and that their descendants

⁷⁴ **Fur trade during the 1800s:** *The American Fur Trade of the Far West* by Hiram Martin Chittenden, Stanford Univ. 1936-1954; Univ. Nebraska Press 1986.

were the members of the Mandan tribe (whose skin color was lighter than that of other tribes.)⁷⁵

Some fur traders made “giant bullboats,” large **skin canoes**, 25 to 30 feet long. A framework of willow poles was lashed together, then covered with buffalo hides sewn together, and the seams were sealed with buffalo tallow and ashes.⁷⁶

Dugout canoes were also common in the fur trade at this time. They were typically carved from the trunk of a large cottonwood tree. They were usually about two inches thick at the bottom, and one inch thick at the rim, and they had solid partitions of wood inside, as bulwarks. They were usually propelled by two men paddling forward, and a third man steering by means of a long paddle trailing from the stern. In other words, they were essentially the same as the dugout canoes that had been used on many of the same rivers, and on other continents, for thousands of years previously.

Two dugout canoes fastened together, a short distance apart from each other, and decked over with rough planks, made a catamaran-like boat that the voyageurs called a **pirogue** (a French word for a small boat.) Large pirogues were about thirty to forty feet in length, and six to eight feet wide. They were steered by an oarsman who stood in the stern and used a sweep oar. To go upstream, they were propelled by oars, or towed by a line from shore, typically covering ten to fifteen miles a day. They covered more miles when going downstream, with the help of the current. A square sail was also used when feasible.



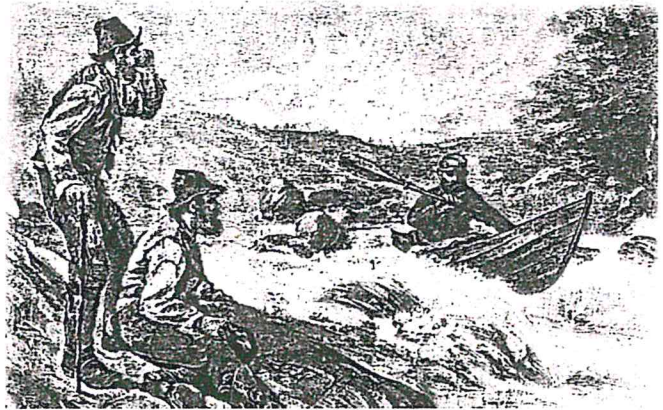
Fur traders in the 1800s carved dugout canoes from the trunk of a large tree, as people have done for thousands of years.

The voyageurs also used a type of **log raft** which they called a **bateau** (a French word for a boat.) Built of cottonwood logs, this heavy and rather unwieldy craft was typically ten to twelve feet wide and fifty to seventy feet

long. A bateau was usually equipped with sweep oars, poles, lines, and sometimes a sail.⁷⁷

Traders in this region also used **keelboats**, which were typically *cordelled* upstream by some thirty or forty voyageurs walking along the bank, as explained earlier.

A traveler in the 1830s described this assortment of river activity, writing an account of his trip through what is now Montana. He wrote that near the confluence of the Flathead and Bitterroot rivers, “we found a party of young half-breeds, who had returned from their fall hunt, and brought in their furs for delivery.” (Note that the “half-breeds” would have been the sons of fur trader men and their tribal wives, bringing furs for delivery to a fur trader.) He also reported that nearby there was “quite a village of Indians,” where “most of the families have light canoes, with which they glide about on the river, and gather roots and berries.” Later he saw canoes carrying “whole families and their baggage down the stream with surprising velocity.” He noted that the canoes “were managed by the squaws, who, with their paddles, direct their course with great steadiness, astonishing rapidity, and apparent ease and dexterity.” Later he saw groups of fur traders on the Bitterroot River. “A long line of Mackinaw boats, loaded with furs and peltries, were proceeding down the river, the whole surface of which was covered [with mackinaws, canoes, and similar watercraft.]”⁷⁸



Kayaks were used during the 1800s by natives and prospectors.

Kayaks were also used during these years on rivers, and in the commercial hunting of sea otters—which was yet another component of the fur trade—along the Pacific coast, from California to Alaska, from the late 1700s to the 1840s. Sea otters have the thickest fur of any animal, and these valuable furs came to be known as “soft gold,” fetching high prices in markets ranging from China to London. Native tribesmen had been hunting sea otters in small quantities for

⁷⁵ **Welsh coracles and Mandan bull boats:** *Prince Madoc, founder of Clark County, Indiana* by Dana Olson, self-published 1987, and “Madoc” at madoc1170.com (these accounts are generally discredited by historians.)

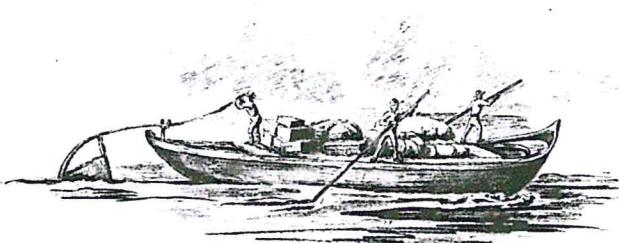
⁷⁶ **Large skin canoes:** “The Skin Canoes of the Great Plains and Rockies” by James A. Hanson, *The Museum of the Fur Trade Quarterly*, Vol 16 No 1, 1980.

⁷⁷ **Dugout canoes, pirogues, bateaux:** See descriptions and illustrations in *Original Contributions to Western History* ed. by Nolie Mumey and illus. by Inez Tatum, The Westemers 1952, pages 180-187. Also *West of the River* by Dorothy Gardiner, Thomas Crowell Company 1941, pages 34-35.

⁷⁸ **Eye-witness account of river traffic:** *Life in the Rocky Mountains, A Diary of Wanderings on the sources of the Rivers Missouri, Columbia, and Colorado, 1830-1835* by Warren Angus Ferris, reprinted 1983 by The Old West Publ. Co.

centuries. Russian entrepreneurs started acquiring these furs from the natives in the late 1700s, then founded Fort Ross, California, in 1812, as a base for hunting sea otters. The sea otter population soon shrank due to over-hunting, and the Russians left Fort Ross in 1842. Their legacy lives on in the name of the Russian River in California, which reaches the coast near Fort Ross, and is a popular canoeing and kayaking river today.⁷⁹

As noted earlier, relations between European fur traders and native tribes were generally peaceful in colonial times, but as more Europeans poured into tribal areas during the 1800s, tensions increased. Greater use of alcohol as a trade item added to the conflicts and fighting. Some fur companies hired their own crews of trappers to gather furs, thereby cutting the tribes out of the deal, which the tribes greatly resented. Finally, the growing competition for land and resources led to actual warfare.⁸⁰



A keelboat with a large rudder, loaded with cargo.

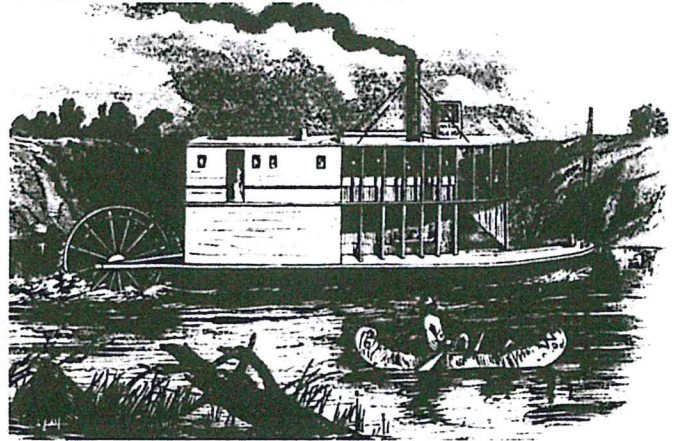
The steamboat era. In 1812, the first American steamboat went by river downstream from Pittsburgh to New Orleans. It then operated on the Mississippi River, between New Orleans and Natchez, Mississippi, for less than two years, until it hit a *snag* in the river and sank. Snags are fallen trees, half buried in the riverbed. Their branches break off and leave sharp stumps sticking up toward the surface of the water. If a steamboat hit a large snag, it was likely to sink, so snags were a fundamental problem for early steamboats, preventing widespread use. It was not until 1829 that the first “snag boat” was built, a sort of “catamaran steamboat” that could straddle a snag then hoist it up on deck with a crane. Through the 1830s, the federal government paid for snag boats to clear snags on the Mississippi and other rivers. Steamboats then became more common on rivers in the 1840s. They traveled up the Missouri River as far as Montana, and went up numerous smaller rivers.⁸¹

On these smaller rivers, steamboats often got stuck on sandbars. To free themselves, they used a system of timbers and cables, winched by their engines. This process was

called *grasshoppering* because it resembled a giant grasshopper.⁸²

Steamboats became a major form of long-distance public transportation, for passengers and freight, in the mid-1800s. Although novels and movies typically dramatize the role of covered wagons in the settlement of the Midwest and the West, historians estimate that in reality, more settlers came west on steamboats, and other smaller boats, than in covered wagons.⁸³

Even during their heyday, steamboats did not replace canoes, log rafts, flatboats, and keelboats on rivers. The fur trade was still active, using canoes, throughout the steamboat era. Logs were still typically taken down rivers in the form of log rafts, not as freight on steamboats. Flatboats and keelboats still hauled heavy loads, doing so more economically than steamboats. Steamboats were mainly for passengers and lighter freight that needed to get to their destinations more quickly, at a higher cost. The situation was somewhat analogous to the difference between highway trucks and airlines, in today’s world.



Some steamboats were large and ornate, but others were small and practical. They frequently ran aground but quickly backed off.

The development of river law in the early 1800s

River law in the U.S. was shaped by U.S. Supreme Court decisions from the early 1800s to the present, which in turn were influenced by certain state supreme court decisions. The following discussion of these decisions is lengthy, because these decisions are the foundation of public rights on rivers today. Readers who want to more quickly proceed to actual answers about current public rights on rivers (including which rivers are navigable in which senses) can skim over the following discussion and proceed to Chapters Three and Four. However, the answers in those chapters necessarily refer back to the following landmark court decisions. In addition, readers who must respond to the claims of lawyers who oppose public rights on rivers will find that it becomes necessary to know what the following

⁷⁹ **Kayaks and fur trade:** “History of the Russian Settlement at Fort Ross, California,” at parks.sonoma.net/rosshist.html

⁸⁰ **Fur trade and warfare in the 1800s:** *The Fur Trade of the American West, 1807-1840* by David J. Wishart, University of Nebraska Press 1979 and 1992.

⁸¹ **Snag boats and steamboat history:** *Tales of the Mississippi* by Samuel Huber and Ogden, Pelican Publishing, Gretna, 1955 and 2000, pages 25-53.

⁸² **Grasshoppering:** Described in *Original Contributions to Western History* by Nolie Mumeay and illus. by Inez Tatum, The Westerners 1952, page 209.

⁸³ **Settlers coming west by steamboat and other smaller boats:** *The Rivermen* by Paul O’Neill, Time-Life Books 1975.