

Keelboats On the Missouri River

**Information compiled by Tim McLaughlin
Of Minot, North Dakota.**



Author on the Keelboat General Ashley

Information was compiled from historical sources to give an overview of the methods of keelboat travel on the Missouri River. Much of the Information is copied direct from historical sources noted at the end of the first article. Various writings contained different information on the hazards of travel and were combined to give a quick overview of the dangers.

The Journal of H.M. Brackenridge in the year 1811 is included as a primary source document about keelboat travel in its heyday on the Missouri River.

Information Compiled in the year 2007

Pictures from Manuel Lisa Party keelboat trip
On the Historic Missouri River of Montana in 2008.

The keelboat pictured is the General Ashley
and is the property of
Mike Nottingham
owner of
Upper Missouri River Keelboat Company
Loma, Montana



Capt. Mike

Keelboats

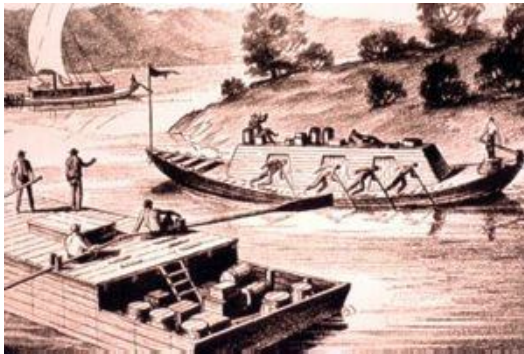
On the Missouri River

By Tim McLaughlin

In the early days of the fur trade on the Missouri River, the keelboat was the workhorse that transported the merchandise for the fur trade to the far upper river. It was also used on all important military or exploring expeditions. It was a large boat averaging between sixty and seventy feet long, and built on a regular model, with a keel running from bow to stern. It had fifteen to eighteen feet breadth of beam and three or four feet depth of hold. Its ordinary draft was from twenty to thirty inches. It was built in accordance with the practice of approved ship craft, and was a good staunch vessel. Keelboats were generally built in Pittsburgh at a cost of two to three thousand dollars.

For carrying freight the keelboat was fitted with a cargo box which occupied the entire body of the boat excepting about twelve feet at each end. It rose some four or five feet above the deck. The average keelboat could carry between 20 and 30 tons of cargo. Along each side of the cargo box was a narrow walkway about fifteen inches wide, called the *passe avant*, the purpose of which will be explained later in this article.

Keelboat and Mackinaw on the Ohio River 1800



For propulsion the **cordelle** was the main means of power. This consisted of a rope line nearly a thousand feet long, fastened to the top of the mast which rose from the center of the boat to a height of about thirty feet. The boat was pulled along with this line by men on shore. In order to hold the boat from swinging around the mast, the line was connected with the bow by means of a “**bridle**,” a short auxiliary line fastened to a loop in the bow and to a ring through which the cordelle passed. The bridle prevented the boat

from swinging under the force of the wind or current when the speed was not great enough to accomplish this purpose by means of the rudder. The object in having so long a line was to lessen the tendency to draw the boat toward the shore; and the object in having it fastened to the top of the mast was to keep the cordelle from dragging in the water, and to enable it to clear the brush along the bank.

It took from twenty to forty men to cordelle the keelboat along the average stretches of the river, and the work was always one of great difficulty. There was no established towpath, and the changing conditions of the river prevented the development of such a path. The men crashed through underbrush, scrambled across steep bluffs and slogged through muddy shallows. It was frequently necessary to send men ahead to clear the most troublesome obstructions away. In some places, where it was impossible to walk and work at the same time, a few men would carry the end of the line beyond the obstruction and make it fast, while the rest would get on board the keelboat and pull the boat by drawing in the line. This operation was called **warping**.



Manuel Lisa Party “cordelling” the General Ashley up the Missouri River (2008).

When the boat was being cordelled there stood at the bow, near where the bridle was attached, an individual called in French a *bosseman* (boatswain’s mate), whose duty it was to watch for snags and other obstructions, and to steer the boat by holding it off the bank with a pole. This man was selected for his great physical strength, prompt decisions, and thorough knowledge of the river. The **patron**, or master of the boat, stood at the rudder, which was manipulated by means of a long lever from the rear end of the cargo box. This position gave him an elevated point of view, from which he could overlook everything.

There were many places where the keelboat could not be cordelled at all, as along sandbars where the water was too shallow for the boat to get near the shore, or the alluvium too soft for the men to walk in. At such times it was necessary to resort to the **pole**, as it was called. This was a turned piece of ash wood regularly manufactured at St. Louis. On one end was a ball or knob to rest in the hollow of the shoulder, for the voyageur to push against; and on the other was the wooden shoe or socket.



(Author poling the General Ashley)

In propelling the boat with these poles, eight or ten voyageurs ranged themselves along each side of the cargo box, near the bow, facing aft, pole in hand, one in front of the other, as close together as they could walk. The whole operation was under the direction of the patron. At his command “*A bas les perches*” (down with the poles), the voyageurs would thrust the lower ends into the river close to the boat and place the ball ends against their shoulders, so that the poles should be well inclined downstream. They would all push together, forcing the boat ahead as they walked along the *passee avant* toward the stern, until the foremost man had gone as far as he could. The patron then gave the command “*Levez les perches*” (raise the poles), upon which they would be withdrawn from the mud, and the men would walk quickly back to the bow and repeat the operation. All steering was done while the poles were up, for the boat could not change direction when the men were pushing. It was always essential to give the boat sufficient momentum at each push to keep her going while the men were changing positions. The *passee avant* had cleats nailed to it to keep the feet from slipping, and the men, when pushing hard, sometimes leaned over far enough to catch hold of the cleats with their hands, thus fairly crawling on all-fours.

In some places where the water was too deep for the poles and were cordelling was impracticable, **oars** were resorted to. There were up to five or six of these on each side of the bow. They often furnished assistance also when the boat was being cordelled or poled.

A great reliance in propelling the keelboat, strange as it may seem considering the nature of Missouri River navigation, was the wind. A mast was rigged with a **square sail spreading about one Hundred square feet of canvas:** which often gave sufficient power to propel the boat against the swift current of the river.



**Members of Manuel Lisa Party rowing the keelboat
General Ashley from the bow.**

Unless the directions of the wind were altogether wrong, the sinuous course of the stream would every now and then give an aft or quartering breeze. In some places the wind seemed to follow the bends, blowing up or down the river clear around.

The Missouri River was often described as too thin to plow and too thick to drink. It had a personality all its own, and was seemingly bent on destroying every boat that attempted to conquer its murky brown waters. The current of this giant river was about four miles per hour, much too strong for the clumsy, hand-powered keelboats, and so the vessels were forced to navigate close to the bank, usually the furthest one from the main channel.

Not content with leaving the men to their tedious and back-breaking means of propulsion, the cantankerous river did everything in its power to stop them completely, and, failing that, to sink the boats. When the crews would bed down for the night along a relatively quiet stretch of water, they might be awakened in the blackness of midnight to find a raging torrent lapping not too gently at their blankets. Overhanging trees would sweep men from the decks; banks would cave in without warning, putting the boat in danger of being crushed by the fall of immense trees; the channel would shift from one side to the other in a matter of minutes. In addition, the river set snares to catch the unwary steersman. **Sawyers**, whole trees swept into the stream at some point above, and anchored to the river bed by their roots, bobbed menacingly in the current, now above water, now hidden under the surging waves. Should one of them come up under a boat, it could slash the bottom open from end to end, or flip it over in less time than it takes to tell. Another potential danger was the **embarras**, a floating aggregation of tangled trees, dead buffalo, and flotsam of all kinds. A crushing force while being swept downstream, the embarras was an even greater menace when hung up in midstream on a sawyer or rock. There it formed a veritable island, constantly increasing in size, breaking the current around itself to either bank, making keelboat passage almost impossible. The river also had a nasty habit of piling up an embarras between the upper end of an island and the lee shore, causing the crew, who

preferred these quiet channels, either to cut a path through the tangle or to retrace their steps and pass along the current side of the island, both of which methods caused delays of from hours to several days. Much of the time the men were tormented by hoards of mosquitoes. The Missouri was a river to make strong men weep and rich men poor.

Thus, by means of the cordelle and pole, the oar and sail, the sturdy keelboat worked and worried its way up the turbulent Missouri, averaging about 15 miles a day upstream. It was a slow and laborious process at best. A keelboat trip to the upper river was practically an entire summer's operation.

Captain La Barge (1815-1899) often remarked that it would be wholly impossible in this day to get men to undergo such exertions as were required of the keelboat crews. They worked early and late, in water and out, and often to the very limit of endurance. Their food was of the plainest description, consisting mainly of pork, lyed corn, and navy beans. From this allowance, slender as it was, meat was cut off as soon as the game country was reached. The cooking was done at the night camp for the following day. On top of the cargo box there was sometimes placed a cooking stove, in a shallow box filled with ashes or gravel to protect the roof from fire. The men's baggage was stored in front of the cargo box, where there was also a place for anyone to lay down who might fall sick. It was, however, a very poor place to be sick. There were no medicines, no physicians, no nurses or attendants, and nothing but the coarsest food. The prospect itself was enough to frighten everyone into keeping well.

The hired laborers who did the work on these river expeditions were called **voyageurs**, and were generally of French descent. They were an interesting class of people, and presented a phase of pioneer life on the Missouri which has become wholly extinct. They were a very hard-working class, obedient, cheerful, light-hearted, and contented. It was a marvel to see them after a hard day's work dance and sing around the evening campfire as if just awakened from a refreshing sleep. The St. Louis Creoles were regarded as more desirable boatmen than the French Canadians. The American hunter was not as useful in river work as the French voyageur, but was far more valuable for land work and in situations involving danger or requiring the display of physical courage.

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