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Article Summary: Explorers and fur traders occasionally tested the navigability of the shallow Platte in the nineteenth century. Railroads eventually made most river traffic obsolete, and the Platte served primarily as a source of irrigation water for crops.

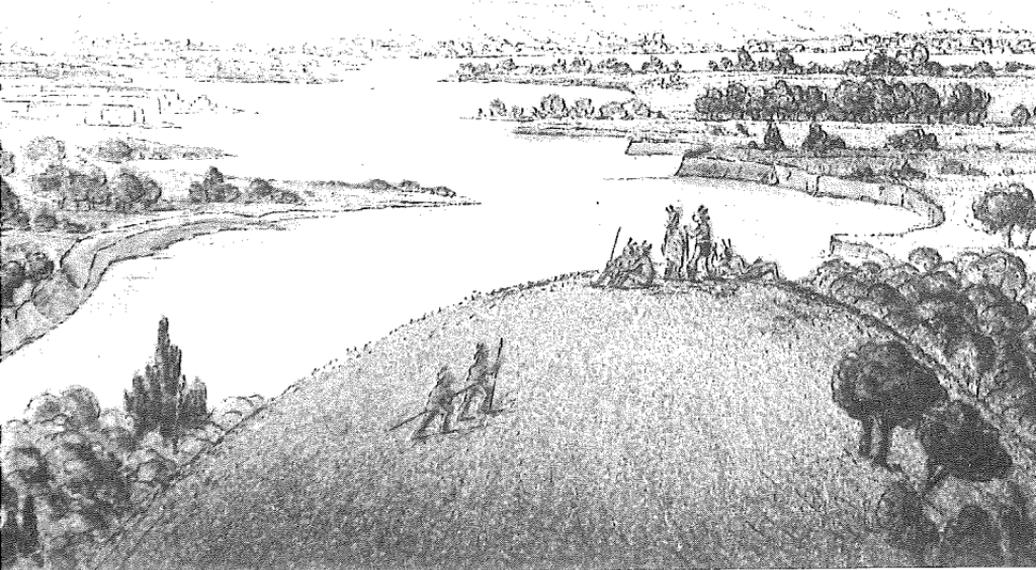
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*George Catlin drawing entitled "The Mouth of the Platte River" . . .  
(Below) North Platte River with Scott's Bluff in background.*



## “A Mile Wide and an Inch Deep”: Attempts to Navigate the Platte River

BY LAWRENCE C. ALLIN

Rising high in the Colorado Rockies, south of Denver in the South Park and near Walden in the North Park basins, the North and South Platte Rivers flow through the High Plains to join in western Nebraska to form the famous Platte River. Jocularly characterized in folklore as “a mile wide and an inch deep” and as “the most magnificent and useless of rivers” by Washington Irving, the Platte was accurately portrayed by aboriginal dwellers along its banks as being “Nebraska”—flat. The word had been gallicized as “Platte” by the time Pierre and Paul Mallet reached Grand Island in 1739.<sup>1</sup>

The Platte, draining areas of northeast Colorado and southeast Wyoming, is, except for the Missouri, the most important river of Nebraska. It is 310 miles long below the confluence of its northern and southern branches at North Platte and has experienced floods carrying as many as 124,000 cubic feet of water a second and tricklets carrying as few as 240 cubic feet per second. Its average discharge is 5,506 feet a second. The main stem, east of North Platte, drains 90,000 square miles of rolling prairie and plain in Nebraska.<sup>2</sup>

In spite of, or because of, the caveats of folklore and Washington Irving as to its worthlessness, the navigability of the Platte continued to be discussed until railroads rendered much river traffic obsolete. Given its flow of water and man's ability to control and use such a discharge, it seemed at first that the Platte might carry limited cargo. Was navigation of the stream ever attempted? By whom, when, under what conditions, and with what success? What cargoes were to have been carried on it? How did settlement patterns along its reaches affect and supply cargoes? How did settlers transport their goods? To answer these questions, one must describe the river and its uses.

The Platte gathers its waters into the hillside tributaries from melted snows or Rocky Mountain Front Range thunderstorms, then tumbles down a canyon and is metered through the Corps of Engineers' great flood-control dam at Chatfield south of Denver. Thereafter it meanders through sandy soils across northeastern Colorado into western Nebraska where it meets the North Platte. The North Platte rises in the Rocky Mountain fastness of northern Colorado and flows northward through North Park into Wyoming. It gathers force in North Gate Canyon, runs past Casper and swings southeastward through fabled Fort Laramie and Nebraska's Scottsbluff country. There are a series of dams along its route, the last one forming Lake McConaughy just before it joins the South Platte to form the river's main stem.

The single stream flows southeast to Lexington and Kearney, then begins a northeastward curve through Grand Island to Columbus. At Columbus the flow is almost straight east to Fremont. A sharp turn south brings the Platte to Ashland. Its final 25 miles are generally eastward, and the Platte at last gives up its waters to the Missouri north of Plattsmouth. It has gathered many tributaries on its journey, mainly from the north. The most important are the Wood River, the Loup River at Columbus, and the Elkhorn River north of Ashland.<sup>3</sup>

The Platte's channel is about ½-mile wide through much of its length. It widens as the stream approaches the Missouri and is about 1 mile across at its mouth. It is bordered by bottoms, alluvial lands from 2 to 6 miles in width from bluff to bluff. As a braided river, in places it runs through two to 10 channels, which form countless islands. Grand Island, the largest at 50 miles in length, is east of the town by the same name. The water shifting across its sand bed makes its channel shallow throughout most of the year and gives it the deceiving appearance of depth. This was emphasized by one of the earliest travelers on its course who, standing on its banks and seeing its waters whirling and boiling about . . . supposed that a seventy-four [standard class of sailing line of battleship of 19th century] with her full complement of men and guns, could float upon her bosom; what then was my surprise to see a man jump in and wade a considerable distance without wetting his breeches flap.<sup>4</sup>

This shallowness and the Platte's many channels were to thwart and madden those who attempted to navigate her.

The bowl of the Platte's valley has such a slight slope that most

of its tributaries parallel the main stem for miles before joining it. Its flat, broad upper basin only becomes steep walled near Fremont. A series of wooded, wind-blown, loess hills border it as it approaches the Missouri. These uplands line its southern bank, while terraces and flood plains extend from its northern shore.

While most of its basin appears “Nebraskaish”—flat—it is usually hilly and well drained. The famous Sandhills of 10 to 100 feet in height which border it, principally on its north flank, cover nearly two-thirds of its basin. These sandy, undulating, grassy dunes, once prime grazing grounds for the buffalo, now support a vast cattle industry. The Platte’s drainage catchment is rich in groundwater and Sandhills lakes because of extensive seepage through its porous soil. But deep-well irrigation lowers its water level and center pivot irrigation is threatening to desiccate the Sandhills. The historic climate and hydrology of the area, especially in the Great Drouth of the 1930s, are exceedingly complex. Too, the power channel on the Loup River at Monroe probably helped lower the basin’s water level, and it appears to have accelerated moisture losses.<sup>5</sup>

The natural grasses, which bind the Sandhills soil and afford grazing to animals, are bluestem, blue grama, needle June, and sand drop seed. Big and little bluestem grasses flourish on the Platte’s prairies, and willows, ash, elm, box elder, and cottonwood in certain supply reached up from its bottoms, mainly from islands made by the several channels of the river. Before depletion of their growth, these provided fuel for fire and materials for repair of vehicles carrying pioneers across a land which Zebulon Pike said was uninhabitable without wood.<sup>6</sup>

This abundant but fragile natural vegetation grows in a sub-humid climate which supports a necessarily adaptive agriculture. The upper basin receives up to 18 inches and as low as 7 inches of precipitation a year, while the river’s mouth is wetted by over 30 inches of moisture, as a general rule. Three-fourths of this falls as rain—and unfortunately crop-killing hail—during the growing season. The frost-free period extends from 120 to 164 days along the river’s course, and the basin’s mean temperatures range from 24 degrees to 70 degrees Fahrenheit.

Winds blow across the Platte’s basin from October to April and bring cold out of the northwest. Warm winds flow over its valley from the south during the remainder of the year. Strong winds

are common and tornadoes a serious threat—witness the major damage done to the city of Grand Island in 1980.<sup>7</sup> Drouth is an ever-present menace in the Platte watershed, as has been repeatedly learned, and floods are frequent carriers of disaster down its valley. Severe overflows occurred on the river in 1935, 1944, 1948, 1960, and 1967. Ice jams and other phenomena account for yearly isolated inundations along the river's length. Below Loveland, Colorado, relatively little severe damage is caused by flooding, as the Platte's wide channel can accommodate great flows, but frequent cloudbursts sometimes load its tributaries to overflowing, causing millions of dollars worth of rural property damage.<sup>8</sup>

The valley supported a diverse aboriginal population. The largest tribe was the Pawnee, whose permanent villages were near the confluence of the Loup and Platte Rivers, although their hunting grounds extended westward to the confluence of the North and South Platte Rivers. The Oto and Omaha tribes dwelt along the eastern reaches of the Platte close to where it empties into the Missouri. Several nomadic groups frequented the upper North and South Platte River areas in the 1800s, including the Cheyenne, Arapaho, and the Brule bands of Dakota (Sioux).<sup>9</sup>

Probably the first European to explore the Platte was Spain's Lieutenant Colonel Pedro de Villasur, who led an expedition down the south fork and possibly part of the main stem in 1720. De Villasur's death at the hands of the Indians may have ended any Spanish scheme to float down the Platte, the Missouri, and Mississippi Rivers to New Orleans.<sup>10</sup>

Among the earliest Americans to march up the Platte Valley were members of Army expeditions directed from Washington. The first of these was commanded by Major Stephen H. Long of the Corps of Engineers. In 1819 he breasted the Missouri with the steamer *Western Engineer*, drawing 19 inches of water, and three other vessels. The difficulties encountered by his craft on the Missouri helped persuade him to march alongside the Platte during his reconnaissance rather than try to navigate it. He followed it to its forks and went up the South Platte into the Colorado Rockies. Long gave the nation its first sketchy knowledge of the area.<sup>11</sup>

In 1842 Captain John Charles Fremont, also of the Corps of

Engineers, commanded a mounted expedition on a route similar to Long's. This was the first of three great exploring expeditions led by Fremont. The official reports of his journeys up the river valley were widely distributed and served as guides to those who would use "The Great Platte River Road" as a way west. An aroused interest in Oregon—"Oregon Fever"—and Fremont's accounts of the West made the trails paralleling the Platte the principal conductors of immigrants from ports on the Missouri River to the lands along the Pacific. Its flat valley was a natural emigrant wagon highroad to the Rockies. The first large groups of westering settlers moved over it to Oregon on Fremont's heels. In the next two decades thousands followed the route. Over 30,000 persons traveled it in 1849, expecting a bonanza in the California gold fields. As one early traveler observed: "But for it [the Platte], it would be impossible for man or beast to travel these arid plains destitute of wood, water and grass, save for what of each is found along its course."<sup>12</sup>

Because of Indian settlements flanking the Platte Valley, in 1848 the Army built the second Fort Kearny, the first of a series of protecting forts on its banks. So protected, new uses were made of the Platte highroad. Among them were carrying the Overland Mail in 1850, the march of the Colorado gold seekers of 1859, the Pony Express in 1860 and the first transcontinental telegraph that same year. After explorations by engineer officers, Captains Howard Stansbury and John W. Gunnison, and Lieutenant E. B. Beckwith, the Union Pacific followed their suggested rail route along the Platte to Julesburg, Colorado, before taking its grade into the uplands.<sup>13</sup>

The earliest explorers described the Platte as almost impossible to navigate. The first recorded attempt to do so was made by Robert Stuart in 1812-1813. Returning from Astoria, Oregon, after a journey through British Columbia, where he had discovered the source of the Columbia River, he and his men were compelled to winter in eastern Wyoming. In the spring they fashioned dugout canoes from cottonwood trees and tried to float downstream. Tiring of dragging their craft through the shallows, they abandoned them and walked. Near the Elkhorn River, just west of present-day Omaha, Stuart and his men constructed other canoes and proceeded down the Missouri to their destination, St. Louis.<sup>14</sup>

Prior to 1820 Jacques Laramie, a fur trapper, reported

successfully floating bullboats filled with furs down a segment of the river on several occasions. He trapped his furs in the Rockies and carried them overland to Grand Island, where he transferred them to boats. The Platte obviously could have been of greater help to Laramie had its channel been deeper. The evidence for Laramie's exploits is scant at best.<sup>15</sup>

Other fur traders attempted to navigate the Platte, among them mountain man Tom Fitzpatrick. In 1824 he and two companions tried to float their year's catch downstream in a buffalo-hide bullboat. It capsized. They cached their furs at Independence Rock, Wyoming, and walked the 500 or so miles to Fort Atkinson, Nebraska, on the Missouri River.<sup>16</sup>

The main period of attempted navigation on the Platte by fur traders is solidly documented as occurring between the years 1835 and 1846. Fort Laramie was built in 1832, and in 1835 Robert Campbell of Campbell and Sublette floated down the river. An account of his voyage was carried not only in the *St. Louis Republican* but in the nationally read *Niles' Weekly Register* as well. Campbell attempted to use the French voyageur's bateau but had to ship his cargoes in small skin boats on occasion.<sup>17</sup>

W. H. Gray, while on his way to Oregon in 1836, noted that his party found "not far from Scottsbluff . . . some hunters on their way down Platte River in boats." Gray's account indicates that Fort Laramie trappers had instituted annual voyages down the North Platte and Platte by this time.<sup>18</sup> During the spring of 1841, Joseph Williams and schoolteacher-emigrant John Bidwell reported seeing six flat-bottomed, pelt-laden boats of the American Fur Company descending the river east of Fort Laramie.<sup>19</sup> The melting snows from the Rockies in the spring provided a usually reliable flow of water.

Fremont described the effect of low water in 1842:

By availing themselves of the annual rise [the "June rise" caused by melting snow], the traders had invariably succeeded in carrying their furs to the Missouri, but this season . . . on both forks of the Platte, they had entirely failed.<sup>20</sup>

One of the unsuccessful navigating parties encountered by Fremont was led by Rufus B. Sage, whose men took two months to reach Grand Island on their descent. They often had to unload their boats to drag them over sandbars—five or six times in almost as many hours. Their progress was impeded by the maze

of channels in the river and the difficulty of selecting the deepest one. At Grand Island the continued low water forced the group to walk to the Missouri.<sup>21</sup>

The following year, William Kennerly met trappers going down river in bateaux. What Kennerly didn't say was that while the bateau was a fine craft for Maine's Kennebec and Penobscot Rivers and the north woods, it was unsuited to such a stream as the Platte.<sup>22</sup>

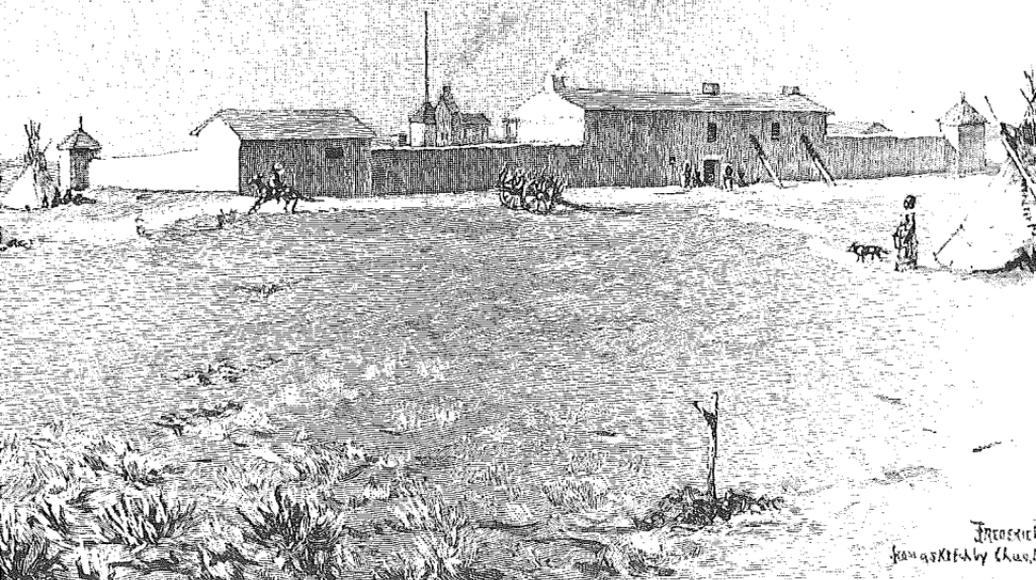
The spring rise of 1844 enabled a Major Hamilton and Frederick Lafou to send seven vessels downstream from Fort Laramie. Their boats carried 700 packs of pelts. Two craft were swamped and their cargoes transshipped on the remaining craft. Eventually the party reached the Missouri River and took a steamer to St. Louis.<sup>23</sup>

Joel Palmer told of meeting a company of "mountaineers" from Fort Laramie in the spring of 1845 descending the river in flat boats loaded with buffalo hides and trade goods for the Indians. But the river was so low the mountaineers were forced to interrupt their journey. Disgusted, part of the group returned to the fort for wagons to continue the trip by land.<sup>24</sup>

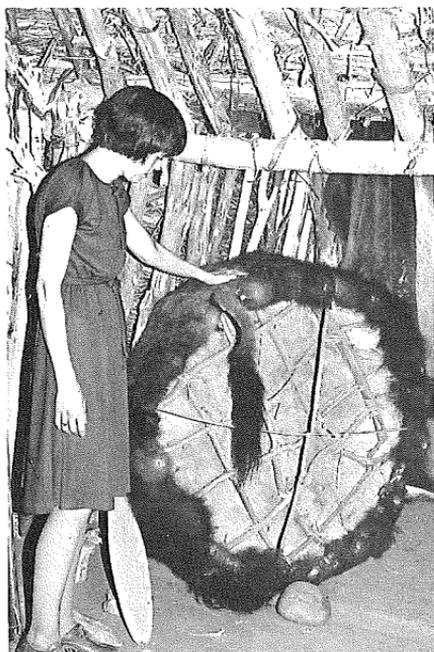
Lieutenant William B. Franklin, also an engineer, marched with Colonel Stephen Watts Kearny in 1845 to Fort Laramie and dropped south to return through the Arkansas River valley. He mentions meeting voyageurs descending the Platte but did not say whether they were afoot or afloat. He did write that they had made only 99 miles in 15 days, which was more indicative of navigating than walking time in the valley.<sup>25</sup>

There is an account by historian Francis Parkman, who met a downstream "flotilla" commanded by Pierre D. Papin in the spring of 1846. Parkman said Papin's craft "hugged close to the shore to escape being borne down by the swift current" but noted the rivermen were aground "fifty times a day." Invariably, he said, the navigator of the Platte spent 50 percent of his time upon sand bars.<sup>26</sup>

Papin's fleet included 11 vessels and 36 men. Their cargo consisted of three packs of bear and wolf skins, ten packs of beaver pelts, and 1,100 packs of buffalo hides. The latter number may be questioned, but clearly the fur trapper was becoming the buffalo hunter. And he too suffered navigational difficulties on the Platte. Papin had to abandon three of his craft and redistribute their cargoes. At Fort Leavenworth, Kansas, on



*Frederick Remington drawing of Fort Laramie in 1849.*



*Art Department staff member Alice Filbert examines bull boat displayed at the Nebraska State Historical Society, Lincoln.*

the Missouri River, he was able to transfer his party to the steamer *Tributary* and sail for St. Louis.<sup>27</sup>

Low water resulting from a scant snowfall and light rain in 1847 and 1848 forced the Fort Laramie traders to haul their pelts overland to Fort Pierre, South Dakota, on the Missouri. From there the hides were taken by steamboat to St. Louis. Thereafter, the advantages of such a transportation route caused the hide-hunters to send their wares overland to Fort Pierre—and even Fort Leavenworth. The river-borne fur trade on the Platte had ended.<sup>28</sup>

In 1849 the American Fur Company sold Fort Laramie to the federal government, and that chapter of the fur trade closed. While most “fur voyageurs” departed from Fort Laramie, E. Willard Smith was with a crew which sailed down the South Platte River through eastern Colorado in 1840. Perhaps the only voyage ever to use the south fork, its vessels left Fort Vasquez and arrived at the forks on June 12 to find the North Platte River in full rise. By June 22 Smith was at the mouth of the Platte and 11 days later was in St. Louis. He tells of making as many as 50 miles a day during his successful voyage.<sup>29</sup>

Hiram M. Chittenden helps answer the questions of who, when, under what conditions, and with what success, the Platte was navigated. This author, a Corps of Engineers officer and historian of both the fur trade and navigation on the Missouri River, concluded that only one in 10 Platte voyages undertaken in the 12-year span, 1835 to 1846, was successful. There is no evidence of navigation in 1837, 1838, or 1839. From Forts Platte and Bernard, Wyoming, both on the North Platte, 30 to 40 despatches of furs could have been made in this period. There is documentation of only these “successful” voyages on the North Platte—Campbell, Papin, Hamilton, Lafou and Smith. Most of the failures occurred on the North Platte in Nebraska before reaching the main stem at North Platte. Fremont also mentioned a similar foundering on the South Platte near Fort Vasquez, where Smith had been successful. In summing up, Chittenden said:

Low water, the vicissitudes of a braided river and possibly poor construction of the rivercraft account for these failures. The increasing presence of steamboats at Fort Pierre and Leavenworth also offered an attractive alternative to the difficult and finally abandoned downstream navigation on the Platte.<sup>30</sup>

It is obvious that downstream navigation to the Platte’s main

stem was difficult. Chittenden claims that traders frequently floated to the Missouri from the mouth of the Loup after trading with the Pawnee. This is but a short reach of the river (50 miles), and Chittenden does not mention upstream traffic nor does he cite a reliable source for this Pawnee trade on the Loup.<sup>31</sup>

In 1859 and the 1860s many frustrated gold seekers—turnarounds—probably attempted to float down the Platte on a journey of frustration to their homes. Of this, the *Omaha Republican* said: “We would advise all, that such an enterprise is attended with great difficulties and often results in the total abandonment of the boat after many weeks of fruitless effort to reach the Missouri.”<sup>32</sup> One authority claims success attended such efforts during the unprecedented flood of 1864, when some parties built flat boats in Denver and set sail. They supposedly arrived at the Missouri River after a “long and tedious journey.”<sup>33</sup> A later voyage from Denver is documented. In 1874 a party floated from Denver down the Platte and the Missouri to Kansas City. This was said to have been in a year of exceptionally low water.<sup>34</sup>

There are fewer records of upstream navigation on the stream. There is Edward E. Hale’s myth that a steamboat, the *El Paso*, ascended the Platte and its North Fork to Laramie on the high water of 1853. According to Chittenden, an *El Paso* of 180 x 28 feet, 267 tons, was wrecked at Boonville, Missouri, in 1855. No record of another *El Paso* on the Missouri or Platte has come to light. No steamboat the size of the *El Paso* could have made such a trip because the sidewheeler’s overhanging sponsons would have been a very real impediment in a river so filled with sand bars. In 1855 a steam-powered attempt to forge the Platte on its easternmost segment ended in disaster. The *Mary Cole* left Quincy, Illinois, on a trip that was to have taken her via the Mississippi, Missouri, and Platte Rivers, then up the Elkhorn River to Fontanelle. She ran aground on the Platte before reaching the Elkhorn.

The following year the Nebraska Territorial Legislature requested that Congress grant 20,000 acres of river bottom land to John A. Latta on condition that he build and operate a steamboat to sail between the mouth of the Platte and Fort Kearny. His vessel was to be afloat by October 7, 1861. The craft, a “little one-horse affair,” was on the river by early May of 1859, but there is no further record of the small steamer.<sup>35</sup>

Thus, as demonstrated, 19th century navigation attempts on the Platte were relatively few and usually unsuccessful. But one can ask, "What were other historical processes which affected navigation on the Platte?" Among those are the processes of developing transportation, farming practices, and crop production. These processes began at Bellevue. It was established by fur traders in the 1820s a few miles north of the Platte's confluence with the Missouri. Some emigrants on the Great Platte River Road chose to stay near Bellevue and farm the Missouri River bottomlands. By the 1850s settlers had pushed up the Platte River and its short tributaries. In 1857 German immigrants founded Grand Island. Bellevue competed strongly with Omaha to be the terminus of the transcontinental Union Pacific Railroad as settlers moved farther up the Platte Valley.

As the rails of the Union Pacific pushed west along the Platte, such cities as Fremont, Schuyler, Columbus, Central City, and North Platte were founded and grew according to the strength of the agricultural and cattle industries of the area surrounding them. Their yields of corn, hay, wheat, oats, and alfalfa produced high-bulk, low-value cargoes, which were ideal for the cheapest means of transportation—water carriage. The movement of cattle by boat was not feasible. The proximity of the Union Pacific and the unnavigability of the Platte resulted in these cargoes going over iron rails. Even the larger rivers, the Missouri and Mississippi were less used as carriers as the railroads built a network across mid-America.

Eventually irrigation with Platte water, principally in western Nebraska, bore significantly on water flow. Irrigation began almost with first settlement but did not become widespread until the 1890s. High rainfall below Columbus in eastern Nebraska (about 30" per year) makes irrigation there unnecessary, but a combination of surface and ground water irrigation further west in Nebraska reduces the flow which reaches the lower Platte. This deprives the stream of surface water, makes it even more shoal-filled and navigation only a dream. Furthermore, the 20th century development of US Highway 30 and Interstate Highway 80 as the Great Platte River Road has further obscured the 19th century obsession with Platte River navigation.

Federal and state governments have been actively involved on the Platte for years. The Soil Conservation Service has held much of its area to be irrigable. There are six dams without locks on the

North Platte which make its navigation impracticable. These dams are the Seminole, Pathfinder, Alcova, Guernsey, Glendo, and Kingsley. With Chatfield on the South Platte are the Eleven Mile and Cheeseman Dams. These supply water for Denver as well as Platte basin irrigation, hydropower, and recreation. They could be used to stabilize navigation flows on the Platte.

The Bureau of Reclamation plans to place two more water diversion dams across the Platte. The Army Corps of Engineers, the primary federal agency to promote river navigation, has no authorization to improve sailing on the stream. The Corps maintains the Platte is navigable to Kingsley Dam but has concerned itself mostly with providing flood control assistance for the river and its tributaries.<sup>36</sup>

Some conclusions can be drawn about the stream, its history, and its practicality as a navigable conduit. There is evidence that the Platte was used by fur traders, although E. Willard Smith was the only trader to leave a first-hand account of his attempt. Such efforts were desperate gambles. Their success depended upon two rolls of the dice—making a shallow-draft craft and finding a spring rise high enough to carry it. Traders may have attempted to cordelle keel boats up the river in the hide-trade era. This was a process by which 10 to 20 men trudged the bank or riverbed at the end of a 1,000 foot towline, hauling their vessel against the current. The shallow, braided Platte foiled such attempts.

The typical "voyage" consisted as much of portaging as it did of sailing. Such odysseys, full of frustration and failure, were probably made regularly at the height of the fur trade, when trappers lacked draft animals and equipment to carry skins across land. With Oregon emigrants came wagons, oxen, and mules which could transport heavy buffalo robes. When so supplied, the traders turned their backs on the river. Steamers such as the *El Paso*, the *Mary Cole*, and even Latta's "one-horse affair" would face such a multitude of structural, engineering, and economic difficulties as to make their forging the Platte an impossibility.

Two quotations from men well acquainted with the Platte offer summaries of the problems. Kansas City District Engineer Theodore Wyman of the Corps of Engineers said: "The extreme low-water discharge, the steep slopes, the broad, shifting channel, and the heavy silt content of the river render the development of this stream in the interest of navigation entirely

impracticable."<sup>37</sup> Of more importance, perhaps, is Hiram Chittenden's benediction: "Despite its uselessness as a stream, the Platte has won a permanent place in the history of the West. If boats could not navigate its channel, the 'prairie schooner' could sail along its valley where lay the most practical route across the plains."<sup>38</sup>

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18. W. H. Gray, *A History of Oregon, 1792-1849* (Portland: Harris and Holman, 1870), 116.

19. John Bidwell, *Journal of a Trip to California in 1841* (Weston, Missouri, publisher unknown, 1844), 5; Joseph Williams, "Narrative of a Tour from the State of Indiana to the Oregon Territory," in L. R. and Ann Hafen, eds., *To the Rockies and Oregon, Vol. III of The Far West and the Rockies Historical Series* (Glendale: Arthur H. Clark Co., 1955), 222.

20. Fremont, *The Exploring Expedition to the Rocky Mountains, 1842* (Washington, DC: 1845), 17. The official version.

21. L. R. and Ann Hafen, eds., *Rufus R. Sage: His Letters and Papers; 1836-47* Vol. V of *The Far West and the Rockies Historical Series* (Glendale: Arthur H. Clark Co., 1956), 19-45.

22. W. C. Kennerly, *Persimmon Hill: A Narrative of Old St. Louis and the Far West* (Norman: University of Oklahoma Press), 148.

23. *St. Louis Reveille*, June 27, 1844. *The Reveille* is probably inaccurate as to the swamping. No swamped boat would be abandoned. Vessels built at Fort Laramie for a one-time voyage on the Platte were probably built of inappropriate lumber. The voyage required almost a month's time; vessels could become water-logged, incapable of floating, and too heavy to carry.

24. Joel Palmer, *Journal of Travels Over the Rocky Mountains to the Mouth of the Columbia River Made during the Years 1845 and 1846* in R. G. Thwaites, ed., *Early Western Travels 1748-1846* Vol. XXX (Cleveland: Arthur H. Clark Co., 1906), 50. The Clark firm published a secondary account of these voyages in L. R. Hafen and F. M. Young, *Fort Laramie and the Pageant of the West, 1834-1890* (Glendale: 1938), 113-115 *passim*.

25. *March to South Pass: Lieutenant William B. Franklin's Journal of the Kearny Expedition of 1845* (Washington, DC: Historical Division Office of Chief of Engineers, 1979), 9-10.

26. Francis Parkman, *The Oregon Trail*, 4th ed., (New York: Random House, 1949), 67-68. Parkman was the meanest sort of uncomprehending snob in judging the West through a very narrow Eastern myopia.

27. *Missouri Republican* (St. Louis), July 7, 1846.

28. Hafen and Young, *Fort Laramie and the Pageant of the West*, 130-132. Elisha

Douglass Perkins gave a highly dubious account of encountering American Fur Company mackinaw boats on the Platte in 1849. This description of the craft is worth repeating: "They are barges some 40 or 50 feet in length roughly and slightly put together, loaded with furs which are piled up in the middle, 10 feet high, and covered with tarpaulins leaving a space at each end for oarsmen and cooking operations." T. D. Clark, ed., *Gold Rush Diary; Being the Journal of Elisha Douglass Perkins on the Overland Trail in the Spring and Summer of 1849* (Lexington: University of Kentucky Press, 1967), n. 3.

29. Hafen and Hafen, *To the Rockies and Oregon*, 189, 191.

30. Hiram M. Chittenden, *The American Fur Trade of the Far West* (Stanford: Academic Reprints, 1954) Vol. II, reprint of 1902 edition, 771. See his *History of Early Steamboat Navigation on the Missouri River: Life and Adventure of Joseph La Barge*, 2 Vols., (New York: Harper and Company, 1902), *passim*.

31. Chittenden, *The American Fur Trade*, Vol. II, 771.

32. *Omaha Republican*, August 15, 1860.

33. *Platte River*, 378.

34. *Greeley (Colorado) Sun*, July 1, 1874.

35. Appendix WW, "Report on Steamboat Wrecks on the Missouri River" in the *Report of the Missouri River Commission in Annual Reports, Mississippi, Missouri River Tributaries* (St. Louis: Office of Missouri River Commission, 1897); Edward Hale, *Kansas and Nebraska* (Boston: Phillips, Sampson and Co., 1854), 161; W. J. McDonald "The Missouri River and Its Victims," *Missouri Historical Review*, 21; Wyman, *Platte River*, 378; *Nebraska Advertiser* (Brownville), May 12, 1859. Recovery of logs of this vessel and of the *El Paso* would contribute to documenting these offices; McKinley, "The Influence of the Platte," 32.

36. *Missouri River Basin Water Resources Management Plan* (Omaha: Missouri River Basin Commission, 1980), 7-1-7-23. Examples of plans and programs which would hamper Platte River navigation are found in "Platte Plans Could Affect Bad Habitat" and "Platte Valley Drawing National Attention," *Omaha World-Herald*, May 21, March 18, 1980; "\$42 Million Dam Project Planned in Nebraska" and "Nebraskans Gird for New Battle over Platte River Diversion Scheme" in *Engineering News Record*, October 11, 1951, January 26, 29, 1953; *Sioux City (Iowa) Journal*.

37. Wyman, *Platte River*, 379.

38. Chittenden, *The American Fur Trade*, Vol. II, 171.