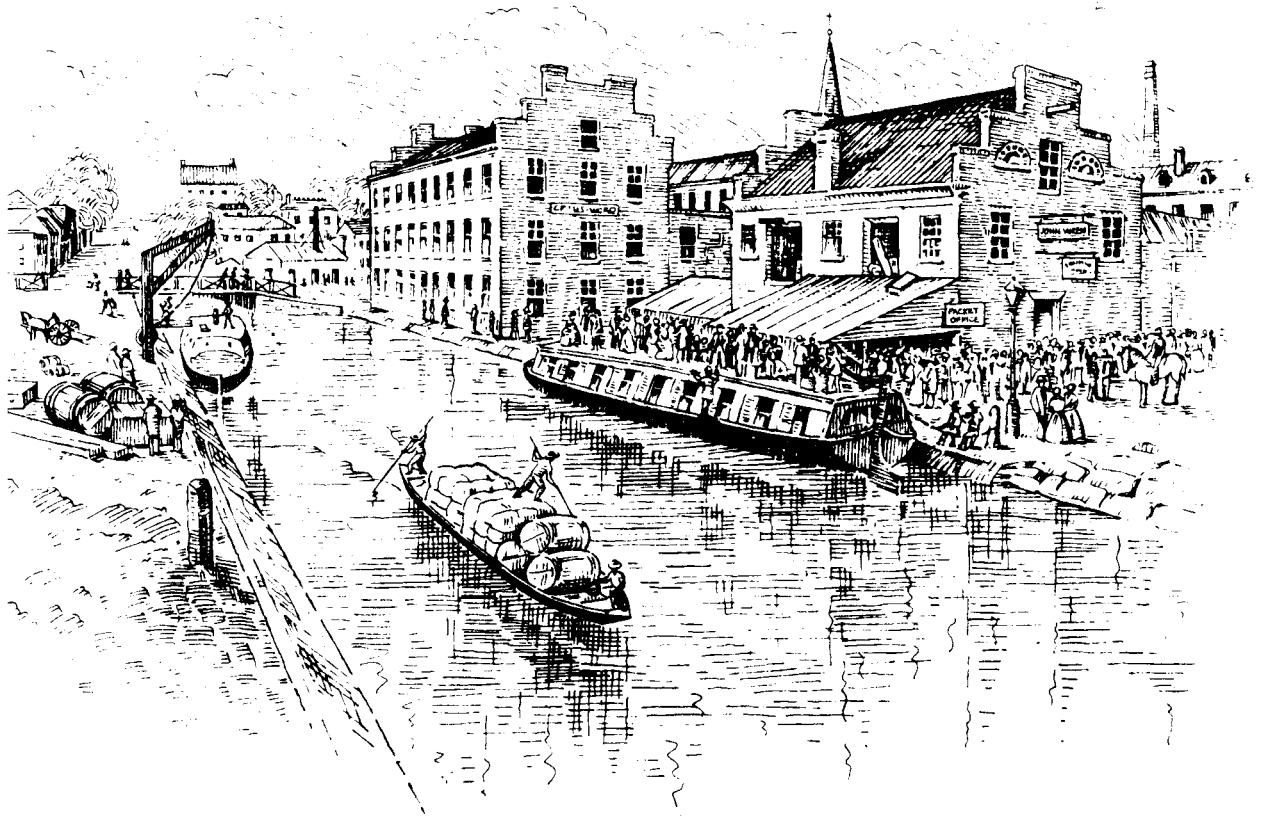


The JAMES RIVER BATEAU



Tobacco Transport In Upland Virginia 1745-1840



ECU Research Report No.7

by

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The James River Bateau:
Tobacco Transport in Upland Virginia,
1745 - 1840

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INTRODUCTION

In the late summer of 1983, a routine excavation for an office building foundation in downtown Richmond, Virginia revealed a potential cache of historical information. What had been anticipated by a small group of regional historians took developers, city officials, and state historical organizations by surprise. A combined lack of preparation, funds, and expertise resulted in the virtual obliteration of the site. This paper represents the only attempted report and analysis of any of the finds.

The excavations were at the site of the turning basin or "Great Basin" of the James River and Kanawha Canal. The remains of more than one hundred river and canal boats held potential for illuminating the cultural and economic development of one of the South's most productive regions in the eighteenth and nineteenth centuries. Had they not been destroyed, these vessels could have reflected a record of the economic growth and expansion in Virginia from the colonial tidewater plantations to the antebellum affluence of the James River Valley.

Because of a time limitation and absence of skilled professionals, intense study was focused on only a few vessels that were determined to be in the best state of preservation. Excavators had only days and sometimes hours to document the remains before they were destroyed by earthmovers. Professional archaeologists and Virginia Canal Society members, who donated their time, organized volunteers in the excavation of the boats

and collection of artifacts scattered about the floor of the basin.¹

Among the vessel remains that seemed potentially important were simple, open boats of unusually long and narrow proportions. These boats were thought to be James River bateaux, a type that had not been seen on the James in over a century. The James River bateau represented a significant step in the development of trade and transportation in upland Virginia in the eighteenth and nineteenth centuries. This boat was partially responsible for the early economic growth of the James River Valley region. It was the main freight carrier on the river until the opening of the James River and Kanawha Canal between Lynchburg and Richmond in 1840. This paper will show that the initial success of the vessel led to its adoption on all of the navigable upland river systems in Virginia and also parts of Maryland, Kentucky, Tennessee, West Virginia, North Carolina, and possibly Georgia.

This thesis will examine several facets of the history of the James River bateau. The first section will provide a conceptual framework that will attempt to delineate modes of interpreting historical and archaeological information on the James River bateau. Social and economic perspectives will be presented as a vehicle for interpreting the historical record. A strategy for interpreting the archaeological record will then be presented. By employing the writings of the late British nautical archaeologist, Keith Muckelroy, a model for perceiving

the historic remains of a James River bateau will be discussed.

Chapters Two and Three will show the significance of the geographic features of the middle Atlantic and southern United States in relation to the development of internal navigation during the eighteenth and nineteenth centuries. The regional evolution of internal navigation in the upper James River Valley will then be discussed so that the bateau's role may be properly cast. The rise of the tobacco trade in the James River Valley and the need for an adequate mode of transport will also be examined.

The James River bateau's economic role will compose the second facet of analysis. The vessel's introduction as a response to an economic stimulus and the definitive historical events relating to its invention will be established utilizing eyewitness accounts by regional planters including Thomas Jefferson and Thomas Mann Randolph. Statistical information prepared for the James River Company and laws pertaining to its operation will also be used.

Speculation on the structural lineage of the vessel from the historic literature will begin here (it will be continued in Chapter Seven with an evaluation of the archaeological remains). Finally, Chapter Four will discuss the range of use of the James River bateau on other river systems besides the James.

This study will also examine the James River bateau's role in the commerce and economic development of the James River Valley. The primary focus will be on the tobacco trade for

which it was initially developed, while the grain trade and other commercial activities will also be dealt with.

A perspective of the social history of antebellum Southern negroes will also be described in this paper. The activities of the predominantly slave crews were well chronicled and a unique aspect of slave life in eighteenth- and nineteenth-century Virginia will be presented in Chapter Six.

The final facet of this study will be an archaeological focus. Chapter Seven will involve a detailed description and analysis of the remains of a one of the boats excavated in the Great Basin. It will be compared against the historical record to determine its similarity to the James River bateau. Gaps in the historical narrative concerning construction methods and physical features will be filled in. Speculation on who built the vessels and a stylistic heritage will also be developed.

1. Richmond Times Dispatch, 28 August 1983.

Chapter 1

METHODS OF INTERPRETATION

Historical Perspectives

When confronting a body of knowledge on a historical subject, one must break down that information into cohesive divisions in order to better interpret that subject. The available record of the James River bateau, as stated in the introduction, is comprised of both documentary and archaeological information. At the time of this writing, the discipline of nautical archaeology seems somewhat fragmented by different perspectives as to the best methods of combining historical research and the archaeological record. Some endorse a social and economic interpretation of historical and archaeological data, while others pursue a structural analysis of vessels to the exclusion of cultural data. This chapter will therefore attempt to delineate the extant information on the James River bateau using both historical and archaeological perspectives. It will also attempt to illustrate how the bateau fits into various aspects of early-American history, structurally and culturally.

An analysis of the James River bateau can be divided into several models or schemes. The primary division is the historical. The written record concerning the bateau can be delineated into three contexts which are inter-related.

The James River bateau can be seen as having a role in the transformation of the Virginia piedmont frontier into an area of

agriculturally-based industry. The procession of American frontiers was discussed by Frederick Jackson Turner in his classic essay, "The Significance of the Frontier in American History." Turner wrote that the settlement of the United States was performed through a series of frontiers which almost always followed in a progression from simple to complex. He felt that in the process, a unique American character evolved.¹ After the settlement of the primary Atlantic frontier, new frontiers were created by the physical barriers of the fall line and Allegheny mountain chain.²

As the Virginia tidewater soil was exhausted by continuous tobacco farming, many planters looked towards the fertile upland piedmont lands. Turner called this region a farmer's frontier.³ He wrote that development occurred in "tongues of settlement."⁴ The James River Valley between the fall line and the Allegheny Mountains was such a tongue.

The farmers in that area required access to a market to exploit their crop surplus. The eastward-flowing upland rivers were ideal avenues of trade with the fall line markets. In addition to promoting regional economic growth they provided routes for western migration towards the new frontiers. Turner wrote,

civilization in America has followed the arteries made by geology, pouring an even richer tide through them, until at last the slender paths of aboriginal intercourse have been broadened and interwoven into the complex mazes of modern commercial lines....⁵

Thus, the James River bateau can be perceived as a vehicle of transport which assisted in the transition of the piedmont region from a frontier to a more sophisticated area of settlement and trade.

In interpreting the historical record, the bateau may also be viewed as a technological development in response to certain stimuli. George Rogers Taylor wrote that the enormous natural resources of the interior regions of the country were exploitable, only after "revolutionary developments in the techniques of transportation and communication" took place in the early nineteenth century.⁶ This transportation revolution set conditions for an "almost explosive rush of industrial expansion which characterized the later decades of the century."⁷

The James River bateau may therefore be seen as an early technological stage in a transportation revolution as it appeared in the interior regions of the southern Atlantic states. It will be seen that it was a regional adaptation to the need to move the interior produce of the Virginia piedmont, to the tidewater markets. Together with the earlier double-dugout canoe, it represented the first efficient vehicle for upland river commerce in Virginia and much of the Middle-Atlantic upland region. This response was seen also in the northern states, the Ohio Valley, and the Mississippi in various types of water craft designed to use the natural and improved navigations of upland rivers. Though laborious and expensive,

natural navigation was the first large-scale attempt to exploit the resources of the interior.⁸

Natural and improved navigation would have different effects. On the Mississippi and Ohio river systems, the western river steamboat evolved,⁹ while on many small, eastern rivers, the development of a network of canals was the economic response to the need for improved commercial transportation.¹⁰ Railroads, which would soon eclipse canals, were a major technical response to the economic stimulus of the interior economic growth of the 1830's.¹¹

The technological improvement of modes of transportation in the eighteenth and nineteenth centuries was a response to an economic stimulus. An economic perspective then, is also useful in understanding the role of the bateau and its use on the James River. Harvey H. Segal provided a model for the analysis of the economic impact of transportation improvements in a paper entitled "Canals and Economic Development." This model was used to indicate how the development of modes of transportation increased the United States' economic activity in the early nineteenth century.

Segal proposed a model in which efficient means of shipping reduced transport costs and allowed for the distribution of surplus, which resulted in increased profits.¹² The increased profits resulted in a prosperous atmosphere in which more trade and even further innovation in transportation could flourish.

He wrote that the Appalachian Mountains were initially a barrier to the development of the American economy. The difficulty in getting crops to market kept shipping costs high and held most farmers at a subsistence level; not being able to dispose of their surplus. American economic growth was hindered as it was forced to rely on an inefficient "triangular trade" by way of the Mississippi system and Atlantic coast.

Segal felt that the development of efficient trade routes from the western regions to the eastern markets stimulated economic growth by allowing the farmers of those regions to dispose of their excess crops. Thus, they began to develop a market by selling the excess off as cash crops.

The increased trade produced higher income in both the western regions of agricultural production and the eastern market areas. Higher profits led to investment in trade by eastern businessmen. Politicians encouraged profit growth by lobbying for and introducing legislation for internal improvements. The result further reduced transport costs and increased profitability. This, wrote Segal, also promoted the desirability of western settlement. The increase in western population was a boon to shipping as the demand increased for eastern commodities.

The development of successful freight carriage also required handling facilities at both ends of the route. Warehouses were needed for sheltering the concentrated goods at trans-shipment points. Bases of "financial and distributing

operation" were then required. All of this activity encouraged population concentration and inspired urban growth at points inland along the waterway.¹³ The concentration of tobacco inspection warehouses and the urban development of Lynchburg and Richmond along the James River as a result of bateau commerce replicates the pattern of Segal's thesis. The relationship of market towns on the James with river commerce will be discussed further in Chapter Five.

Archaeological Contexts

A second context in which the James River bateau may be analyzed is an archaeological interpretation. British nautical archaeologist Keith Muckelroy, developed a framework for the interpretation of shipwrecks that aids in the analysis of the potential information held within archaeological remains. Although Muckelroy wrote primarily about ships, his framework for analysis also applies to small craft. His method is useful in the interpretation of the remains of a James River bateau (Boat #28) which was excavated at the site of the James River Canal turning basin in Richmond, Virginia in the fall of 1984.

One aspect that Muckelroy discussed was the "ship as a machine." A ship or boat is a machine designed for harnessing a source of power in order to serve as a means of transport.¹⁴ If a boat is to be successful, it must harness an acceptable power source so that it can maneuver in all environmental

situations that it meets. The environment therefore determines the features and design of the vessel.¹⁵

The environment in which the bateau operated was the rapid, shallow, and rock-strewn upland rivers of the Virginia piedmont which flowed toward the eastern tidewater region. In traveling up and down the rivers, the boats either rode the downstream current or were motivated by the manual power of boatmen who pushed and pulled them with poles and ropes through the rapids and shallows. The design of the bateau, then, had to successfully facilitate the harnessing of such power by being shallow-drafted, light-weight, and keel-less in order to cross the shallows. They were pointed at both ends, which augmented their maneuverability. If one end of such a vessel was caught on rocks or shoals, it could be spun around and continue on its journey. Bateaux also had low freeboard so that the boatmen could efficiently pole them.

A second aspect of Muckelroy's model analyzed the "ship as an economic system." He wrote that, "while the requirements of the ship as a machine define its general features and design, its fundamental purpose will have been to function within a military or economic system."¹⁶

He felt that a shipwreck's position in an economic system could be best interpreted in conjunction with the combined evidence of the historic record and previous land and nautical archaeological excavations.¹⁷

The excavated bateau that was selected for study, Boat #28, was chosen from a number of wrecks because of the relatively intact state in which it was found. The vessel apparently had no cargo at the time it sank. Other bateau remains did show evidence of cargoes such as coal and lime. The historic record is enlightening in identifying the cargoes of James River bateaux and when examined in comparison with other vessels found in the basin, is helpful in placing the bateaux within a regional economic system. These studies show the bateau to be part of an integrated economy connecting the Virginia upland plantations with the fall line markets and trans-shipment points. This will be discussed in more detail in Chapter Five.

Muckelroy's third interpretive point was that a ship is a community and that information concerning the social history of communities can be gleaned from nautical excavations. He wrote that "a wreck site may also contain items relating to those on board, crew or passengers, shedding light on their circumstances and life styles."¹⁸

The nature of a vessel's structure can supply cultural information about the society on board that vessel and also the society in which that craft and crew operated. It will be seen that the James River bateau was of simple though unique construction. It was patched in a number of places and made of cheap, locally obtained woods.. An inquiry into the construction techniques and materials of Boat #28 will provide information

about the builders and users of these vessels. Structural details will indicate stylistic origins of the boats in the absence of historical information. Boat #28 was found to have a complete hearth on board and associated cooking utensils and tools. On the basis of these findings, assumptions can be made as to the living conditions and social activities taking place on board the boat.

Another useful interpretive framework is that of the bateau as representative of a society's material culture. A ship can be seen as an artifact whose design and function is a result of cultural and economic demands. Two maritime archaeologists have written on this aspect of shipwreck archaeology. Daniel J. Lenihan wrote that

The architectural elements of a [ship] represent a unique adaptive response to the demands for commerce, travel, exploration, or warfare which are internalized by a particular society.¹⁹

Larry Murphy, using the example of western river steamboats, said:

The development of vessel types, and their adaptation to river systems, is another possibility for regional analysis. The development of a unique vessel type, the western river steamboat, was a response to the environmental and social demands of the Mississippi and Ohio river drainage systems.²⁰

When considering the remains of the Boat #28, one must consider the archaeological record in conjunction with the written record. They are inter-related and only when viewed as a whole can they produce an accurate picture of the various aspects of the boat as a machine; as having economic

significance; and as reflecting social and cultural elements of a particular age.²¹

1. Frederick Jackson Turner, "The Significance of the Frontier in American History," in The Making of American History, ed. Ray Allen Billington (New York: Dryden Press, 1956), 194.
2. Turner, "Frontier in American History," 195-200.
3. Turner, "Frontier in American History," 205.
4. Turner, "Frontier in American History," 205.
5. Turner, "Frontier in American History," 204.
6. George Rogers Taylor, The Transportation Revolution, 1815-1860 (New York: Rinehart and Company, Inc., 1951), 3.
7. Taylor, The Transportation Revolution, 3.
8. Taylor, The Transportation Revolution, 57.
9. Taylor, The Transportation Revolution, 56-57.
10. Taylor, The Transportation Revolution, 32.
11. Taylor, The Transportation Revolution, 74.
12. Harvey H. Segal, "Canals and Economic Development," in Canals and American Economic Development, ed. Carter Goodrich (New York: Columbia University Press, 1961), 221-225.
13. Segal, "Canals and Economic Development," 225.
14. Keith Muckelroy, Maritime Archaeology (Cambridge: Cambridge University Press, 1978), 216.
15. Muckelroy, Maritime Archaeology, 216.
16. Muckelroy, Maritime Archaeology, 219.
17. Muckelroy, Maritime Archaeology, 221.
18. Muckelroy, Maritime Archaeology, 221.
19. Daniel J. Lenihan, "Rethinking Shipwreck Anthropology," Shipwreck Anthropology, ed. Richard A. Gould (Albuquerque: University of New Mexico Press, 1983), 55.
20. Larry Murphy, "Shipwrecks as Data Base," Shipwreck Anthropology, ed. Richard A. Gould, (Albuquerque: University of New Mexico Press, 1983), 84-85.
21. Richmond Times Dispatch, 28 August 1983.

CHAPTER II
NAVIGATION ON THE UPPER JAMES RIVER

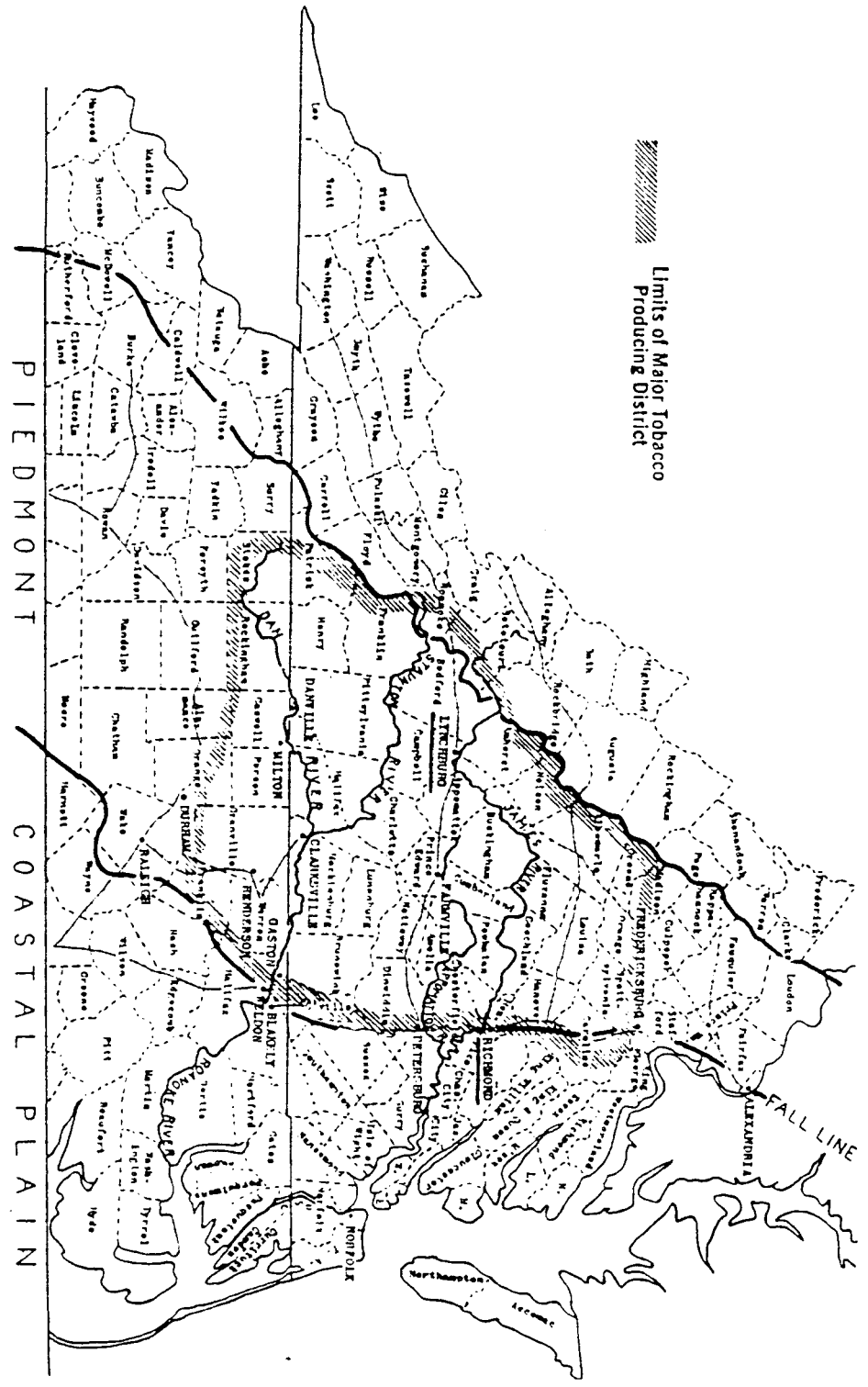
Geographical Background

The physical diversity between the rivers of the tidewater region of Virginia and the upland piedmont, was important in the development of navigation between the two regions in the eighteenth century. Tidewater rivers in Virginia are affected by the rise and fall of the ocean tides. The land is low, often marshy and swampy, and rarely rises more than a few feet above sea level. The major rivers such as the Potomac, Rappahannock, York, and James were navigable to the fall line by ships in the seventeenth and eighteenth centuries.¹ [map 1.]

The fall line is a granite ridge that runs from New York to central Georgia. It marks the beginning of the rolling piedmont hills, which extend east to the base of the Appalachian mountain chain. The fall line was a barrier to the cultivation and economic development of the piedmont region that was not transcended until the end of the eighteenth century.²

Virginia's rivers above the fall line are characterized by steeply sloped beds as the elevation of the land descends from the Blue Ridge Mountains to the tidewater. Their currents are therefore rapid. The depths fluctuate dramatically as they are influenced by runoff from the primary rivers' tributary streams. The unpredictable depths, in addition to rapid currents and obstructions of granite boulders and sandy shallows, made early attempts at navigation formidable.³

THE TOBACCO AREA OF VIRGINIA AND NORTH CAROLINA IN 1860



Map 1. Upland rivers of Virginia and Northern North Carolina; regions of James River bateau use. Reprinted from Robert, Tobacco Kingdom, 16.

Early U.S. River Navigation

The primary obstacle to the economic development of the piedmont was the lack of an adequate means transport of agricultural produce to the tidewater markets.⁴ In A History of Travel in America, Seymour Dunbar identified four phases of transportation in America. The first period was that during which all travel was performed through the utilization of natural waterways using the most primitive craft. The second period saw the use of prior overland routes, such as Indian trails, which were expanded into larger roads by the colonists. The third phase was distinguished by an elaboration of the motivation of earlier land and water vehicles by either manual labor, animals, wind, or natural water currents. In the final stage, the existing vehicles of travel were propelled by self-generated mechanical power.⁵

These phases were seen in the development of water transportation in eastern Virginia during the colonial period. As colonists settled and began developing an agricultural economy, the efficient transportation of goods was required. People who initially may have relied on simple, dugout canoes began using larger, more sophisticated, plank-built, craft to move about the tidewater.⁶

Successful navigation meant that larger loads could be transported faster. A coordinated trade network developed in tidewater because the inland landings provided direct access to the ocean-going vessels and thence to England.⁷

As will be seen, navigation of the upland rivers solved many problems of transporting goods to market as a result of exploration and settlement in the piedmont region. Until the introduction of steam-powered trains in the nineteenth century, Dunbar's third corollary (ie. the elaboration of existing modes) would be reflected on upland Virginia rivers in the use of manually-powered bateaux and horse-powered canal boats.²

Many of the vessels used on the upland rivers of the United States in the eighteenth and nineteenth centuries were similar in appearance and function. One boat type was long and narrow, and tapered to a point at both ends. These vessels were often propelled by oars, poles, and when possible, sails. Various regional types had different proportions and were known by a variety of names. The keelboat used on the Ohio and Mississippi rivers had this form⁸ as did the Susquehanna ark which navigated on many Pennsylvania rivers.⁹ The French double-ended galley bateaux were used in the fur trade on the Ohio and Mississippi rivers.¹⁰ A vessel of this description that found wide use on northeastern rivers was the double-ended Durham boat. This boat found wide use on the Delaware river.¹¹

Internal Improvements and Early Canals

By the third quarter of the eighteenth century, settlement had become established in the piedmont and eastern Appalachian Mountains. Reliance upon unimproved rivers for shipping produce to market was already seen as inefficient. Waterway improvement

was an ongoing effort that included clearing and blasting obstructions, deepening channels, installing rings to pull vessels with ropes, and construction of wing-dams and sluices.¹²

Sluices were the simplest form of upland navigational improvement short of bypassing obstructions with canals. Wing-dams were stone "arms" that partially extended across creeks and rivers, usually at oblique or right angles to the current. They guided the main body of water through proscribed channels or sluices which increased the current and deepen the sluices so that vessels could pass.¹³

Canal navigation, which had existed in Europe since the sixteenth century, was perceived as holding great potential for American inland commerce. George Washington was one of several prominent supporters of a system of American canal navigation. During his military service with the British, he had proposed a canal system that would connect the Chesapeake Bay with the western river systems of the Ohio and Mississippi.¹⁴ He was considered the first American to outline a comprehensive policy of western expansion and internal improvements.¹⁵

Benjamin Franklin was another early supporter of American canals. In 1772 he wrote, "rivers are ungovernable things, especially in hilly countries. Canals are quiet and always manageable....I warmly wish success to every Attempt For Improvement of our dear Country...."¹⁶

Secretary of the Treasury Albert Gallatin was an enthusiastic advocate of canals in the early nineteenth century. He was particularly perceptive of the need to establish inter-dependant canal networks to fully exploit the resources of the rapidly expanding interior regions. Such a network consisted of four types of canals including: the great canals from north to south and along the Atlantic seacoast, communications between the Atlantic and western waters, communications between the Atlantic waters and those of the Great Lakes and St. Lawrence River, and the interior canals that connected navigable rivers.¹⁷ In 1808 he wrote,

Good roads and canals will shorten distances, facilitate commercial and personal intercourse, and unite by a still more intimate community of interests, the most remote quarters of the United States. No other single operation, within the power of government, can more effectually tend to strengthen and perpetuate that union; which secures external independence, domestic peace, and internal liberty.¹⁸

James River

Virginia's James River has witnessed and influenced many significant events in American history. The James flows eastward from the Allegheny mountain chain to the Chesapeake Bay. Its source is the confluence of the Cowpasture and Jackson rivers. Fed by mountain streams, it quickly becomes a rapid river, dropping seven feet per mile. At Balcony Falls, in the Blue Ridge Gorge, it drops two hundred feet in four miles. It descends past Lynchburg and is joined by the Maury River, upon

which lies Lexington. Both of these towns were prominent tobacco markets in nineteenth-century Virginia. The James runs a steady course, picking up several lesser rivers including the Rivanna, which descends from above Charlottesville. The relatively placid stretch that begins at Lynchburg ends abruptly at the intersection with the fall line approximately nine miles above Richmond at Boshers' Dam. The stretch from here to Richmond is strewn with combinations of rocks, swift rapids, and shallow bars. Even so, Albert Gallatin wrote in 1808 that "the natural navigation of the river throughout that extent is considered as better than any other Atlantic river above the falls."¹⁹

Below Richmond, the James is a tidewater river that is navigable by deep draft vessels. It empties into Hampton Roads and the Chesapeake Bay. The city of Hampton, near the mouth of the river, and Norfolk on the south side of Hampton Roads, were both important colonial ports.

The James River has been prominent in American history since the earliest English colonization. The lower shores were settled by English colonists in 1607 and tobacco planting soon began in earnest along its Tidewater length. Shockoe (later Richmond), on the fall line, was the site of Indian leader Powhatan's main village and became a trading post for the colonists in the mid-seventeenth century.²⁰

The town of Richmond was planned by William Byrd and became the capital during the Revolution. The antebellum years

witnessed the city's ascendancy as a thriving economic center with tobacco, flour milling, and iron working as major industries.²¹ As the capital of the Confederate States, it was the focus of much of the fighting in the Civil War.

Smaller, upland, river towns also became regional economic centers that were interdependent with Richmond's trade. Lynchburg and Columbia, among others, were trans-shipment points for upland produce and contained governmental tobacco inspection warehouses.²² Necessities of life and luxury goods destined for upland farmers were sent upriver to be dispersed at these points.

The James River Canal

The success of early navigation on the James River above the falls showed that improved navigation could be a great benefit to the planters and the fall line merchants. George Washington promoted the connection of the Atlantic Ocean and western rivers by way of the James River. Economic historian Wayland Fuller Dunaway wrote that Washington became "more interested in the western country for economic and political reasons and as a practical statesman, was the first American to outline a comprehensive policy of western expansion and internal improvement."²³

During his western surveying expeditions for Lord Dunmore in 1774, Washington found the Ohio Valley rapidly filling with new settlers. He realized that the connection of the James

River with the Kanawha River in western Virginia would provide efficient public transportation to the west. His proposal for a canal was rejected by the House of Burgesses at that time.²⁴ He continued to entertain the idea and after the Revolution he once again tried to encourage a connection with the western rivers.²⁵ Washington wrote Virginia governor Benjamin Harrison that

for my own part, I think it highly probable, that upon the strictest scrutiny, if the Falls of the Great Kanawha can be had there, it will be found of equal importance and convenience to improve the navigation of both the James and Potomac. The latter...affords the nearest communication with the Lakes; but James River may be more convenient for all, the settlers below the mouth of the Great Kanawha, and for some distance perhaps above the west of it....Upon the whole, the object is in my estimation of vast commercial and political importance.²⁶

It was through Washington's inspiration that the Virginia Assembly sought to begin work on a communication with the western rivers.²⁷ In 1785, a bill was passed incorporating the James River and Potomac Companies. Washington was elected president of both companies but declined to accept the post with the James River Company. He did not feel he could actively pursue both duties but did allow his name to stand as titular president of the company.²⁸

The deferential mood of the populace towards Washington at this time was indicated by the fact that the Virginia Assembly voted him a gift of fifty shares of James River Company stock. He objected to this gift, writing Thomas Jefferson,

there is an act which particularly respects myself:
and tho' very flattering, is also very embarrassing to

me....It has ever been my wish, and it is yet my intention, never to receive anything from the United States, or an individual State for any service I have hither to rendered.²⁹

The "embarrassing" gift was donated to Liberty Hall Academy in Rockbridge, Virginia who repaid the honor by renaming itself Washington University.³⁰

The earliest attempt to make the upper James navigable occurred in 1745 when the treasurer of the Virginia Assembly was directed to pay a number of individuals, including Peter Jefferson and Joshua Fry, "the sum of one hundred pounds intowards clearing the [James] river...."³¹ Calls were periodically made upon the population to raise subscriptions for clearing the falls. Improvement of the navigation was effected through the building of sluices and wing-dams.³²

It took the establishment of the James River Company to achieve a coordinated effort to clear the river. The state General Assembly passed a act in 1785 for "clearing and improving the navigation of the James River," so that it could be "navigated in dry seasons by vessels drawing one foot of water at the highest place practicable to the Great Falls."³³

In 1790 an act was passed placing fines upon anyone who was to "make, or cause to be made, any hedges, fish traps, or other obstructions" that would "impede or injure the passage of batteaux or canoes...."³⁴

The majority of the river between Richmond and the Blue Ridge Mountains beyond Lynchburg was initially improved with sluices and wing-dams³⁵ since canals were naturally more

expensive to construct.³⁶ Wing-dams on the James, as described above, were generally constructed of wooden cribs filled with stones or river cobbles to a prescribed height.³⁷ A pond was created to feed the sluices through which the bateaux could pass.³⁸

By 1801 most of the improvements had been completed on the James River to Lynchburg and through the mountains.³⁹ Work continued on branches of the James, such as the North (Maury) and Rivanna Rivers, until 1805.⁴⁰ The clearing of obstructions would continue as long as sluice navigation was used.

Although modified and channelled, the rapid current was always a source of headaches since unpredictable floods destroyed wing-dams and sluices.⁴¹ The current also caused sediment to build up below the sluices which severely limited navigation and the size of boats that could pass through. This was especially true during periods of drought and low water.⁴²

The James River Canal system, completed in 1795, consisted of two canals beginning six and a half miles above Richmond (below the head of the falls at Westham). Bateaux and canoes entered the first canal, which was about two hundred yards in length, and descended thirty-four feet through three locks. Upon re-entering the river, boats continued by natural navigation for three miles before entering the second canal for the remaining three and a half miles to Richmond.⁴³

In 1796 architect and artist Benjamin Henry Latrobe commented on the craftsmanship of the newly opened canal:

To avoid the delay, danger and inconvenience a canal has been projected and is now nearly completed which runs parallel [sic] to the river, and is intended to discharge the craft at Richmond into the river by means of eight successive locks....The greatest part of it is blown out of Solid Granite. It is neither judiciously, nor ornamentally managed, and there are several most gross blunders in execution. But considering it as the Work of a Man wholly self taught, one Harris, it deserves great commendation.⁴⁴

The turning basin or "Great Basin," located at the eastern end of the canal in Richmond, was completed in 1800. Surrounded by warehouses and mills, the basin was the hub of Richmond's commercial activity. It covered an area of thirteen acres and in some places was seventy feet deep.⁴⁵ The basin was separated from Richmond's tidewater port at Rockett's by a mile and a half.⁴⁶ After several faltering attempts, the city connected the two places with the Richmond Dock and Ship Canal in 1843.⁴⁷

The James River Company was initially a successful endeavor, bringing large profits to its investors. In 1808 Secretary of the Treasury, Albert Gallatin reported to the Senate that the company was regarded as one of the most successful internal improvements in the country.⁴⁸ This was not to be for long. Although the company received full tolls on the canal and the stockholders earned large dividends, the company lost money. It was noted that through the "direction of some incompetent or careless individuals, much money was spent for little benefit to the navigation of the river."⁴⁹

On the verge of bankruptcy in 1820, the James River Company officers signed the charter over to the state of Virginia and it became a state-controlled company. The state assembly passed an act calling for the clearing of the river and the uniting of its navigation with the navigation of the Kanawha River. During this phase, the original length of the canal passage was reconstructed and extended twenty-seven miles to Maiden's Adventure in Goochland County. A seven mile stretch of canal around the treacherous Balcony Falls in the Blue Ridge mountains was also built. The Kanawha Turnpike was completed in 1829 from Covington to the Kanawha River. While not completing the company's goal of a continuous canal, there was at least a completed line of communication from the Atlantic Ocean to the Ohio River so that commerce could be stimulated.⁵⁰

However ambitious the second James River Company appeared, it was doomed to follow its predecessor. By 1828 all progress, except for the turnpike, had ceased due to lack of funds.⁵¹ The company failed for several reasons. The primary one was sectional differences within the legislature. The western counties who would have benefitted most were continually checked and at odds with the eastern counties who wanted state money spent in their own interests.⁵²

Another reason for hostilities was a disagreement over modes of transportation. State Engineer Claudius Crozet was an early visionary who believed that the canal system had become obsolete and that the future of commercial transportation lay

with the recent development of the steam railway. His arguments in favor of replacing the canal with a railroad met hostile reactions in the Virginia state government. This conflict led to his resignation in 1831.⁵³

The James River Company folded in 1835, having never completed a water route to the Kanawha River. This does not mean that it was a complete failure. The improvement in navigation was profitable for the farmers of the James River Valley region who shipped their crops to market in Richmond. It was likewise profitable for the merchants in Richmond and Lynchburg who depended on the canal for shipping and receiving commodities that were dispersed into the growing upland communities.⁵⁴

A final attempt to put through a water connection to the west was made with the formation of the James River and Kanawha Company in 1835. As a joint stock company with the state of Virginia, it inherited the works and property of the James River Company. Though under the patronage of such eminent personages as Joseph Carrington Cabell, Chief Justice John Marshall, and chief engineer Charles Ellet, Jr. , the James River and Kanawha Company's operation was a continuous struggle. The completion of the canal line from Richmond to Lynchburg in 1840 provided a great opportunity for profit in trade and passenger travel. By 1860 commerce on the canal had reached its peak and the company was acknowledged as the most powerful corporation in the state.

Unfortunately it was still racked with financial embarrassments as explained by Dunaway:

[It was] not that it failed to do good business, but that its works were constructed chiefly with the proceeds of loans, the interest on which accumulated to such an extent that it kept the company always heavily involved.⁵⁵

The combined effect of the Civil War, the advance of railroads, and constant debt led to the dissolution of the company. The intended connection with the Kanawha River was never completed and by 1882, the railroad tracks of the Richmond and Allegheny Railroad lined the canal's towpath.⁵⁶

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CHAPTER III
EARLY UPLAND TOBACCO TRANSPORT

Tobacco Trade

Tobacco was already a well known commodity in Europe by the time of the British settlement at Jamestown in 1607.¹ The major supplier for the European and British market at that time was Spain, which imported the sweet, broad-leaved Oronoco tobacco from South America and the Caribbean islands.² The Jamestown settlers discovered that the Indians in the Tidewater were also growing tobacco. Small leaved and bitter, the Indians' Nicotina Rustica was held in contempt by the colonists.³

In 1612 John Rolfe planted a crop of tobacco from Spanish seeds that he had brought to the colony. The majority of the colonial population was soon raising individual export crops of tobacco spurred by the healthy profits of the first shipments to England.⁴ The effect was almost instantaneous. The Spanish Oronoco and sweet-scented tobaccos soon became tidewater Virginia's biggest export crop.⁵ As a result, settlement along the tidewater rivers increased dramatically.⁶

Virginia tobacco developed a large market throughout Continental Europe by the eighteenth century. As the demand grew and the economy flourished, new planters were essentially locked out of the tidewater system by the primacy of the large planters. The new generation of planters were lured to

unsettled frontier regions by the promise of economic opportunity available in the tobacco trade.⁷ Many left Virginia for North Carolina and although the crop flourished, the shallow sounds made it difficult to ship the crop to a larger market for dispersal. More settlers followed the Virginia river valleys into the piedmont where the richly forested land made ideal soil for tobacco and grain crops.⁸

Western settlement in the piedmont and Blue Ridge regions between the late seventeenth and mid-eighteenth centuries, was the result of several factors. Efforts by Governor Alexander Spotswood had resulted in reduced Indian threats in the piedmont. There was also a large influx of German and Swiss settlers from Pennsylvania moving down the Shenandoah Valley between the Blue Ridge and Allegheny mountains. Additionally, the steady stream of colonists from England strained the now closed tidewater tobacco system. The piedmont region beyond the fall line provided a pressure valve, allowing the excess population room to grow. Prominent tidewater Virginian names like Carter and Harrison were supplanted by Randolph and Jefferson.⁹

Another, more portentous reason for the westward migration of tobacco planting to the James River Valley was the greedy nature of the crop. Tobacco leached important nutrients from the soil. Eighteenth-century tidewater planters were ignorant of planting techniques such as crop rotation and fertilization. As a result, the soil was soon too depleted to support the

intensive European demand for tobacco.¹⁰ Nineteenth-century historian George Tucker wrote:

As this plant requires land of the greatest fertility, and its finer sorts are produced only in virgin soil, which it soon exhausts, its culture has been steadily advancing westwardly, where fresh land is more abundant, leaving the eastern land it has impoverished to the production of Indian Corn, wheat and other grain. Its cultivation has thus generally ceased in the country below the falls....¹¹

As the region of prime tobacco planting moved further up the James River, the problem of getting the crop to market became more acute. Transporting tobacco in the seventeenth-century tidewater had been relatively easy. After the crop was prized (packed) into hogshead barrels, it was usually rolled or carted to the nearest landing which was never far away. The hogsheads were then transferred to flats or small sloops and carried to ships anchored in the river.¹²

Getting tobacco from the upland plantations to a point where it could be put aboard a ship presented a substantial problem. The James and the other east-west Virginia rivers (primarily the Rappahannock, Potomac, and York) were only navigable to their intersection with the fall line.

Sailing ships were limited by their size and deep draft. Ocean and coastal vessels of approximately 250 tons could reach Port Warwick, about four miles below Richmond.¹³ Ships between 125 tons¹⁴ and 200 tons¹⁵ could make Richmond's deep water port at Rockett's Landing to receive tobacco and deliver goods.

Initially, the upland planters adapted the modes of land transportation that were used in the tidewater region. Upland transportation, however, presented a number of obstacles not encountered in the tidewater.¹⁶ The distance to market was much farther than in the coastal region. The main upland shipment point near the future site of Lynchburg was approximately 150 miles from the market at the head of navigation (Richmond).¹⁷ Transportation was further complicated since the roads in these hinterlands were little more than old Indian trails.¹⁸

Tobacco was usually shipped in hogsheads, which were large barrels which, in the eighteenth century, held approximately one thousand pounds.¹⁹ In 1765 the hogshead size was forty-eight inches, stave length, and thirty inches across the head.²⁰ By 1796 the hogshead size had expanded to fifty-four inches at the stave and thirty-four inches at the head.²¹ The sizes were standardized which made it possible to assign value and avoid confusion during the inspection and shipping process.

An early method of transporting tobacco in these areas was adapted from the tidewater technique of rolling the hogsheads to shipping points on the "rolling roads."²² The response was an improvement on the rolling hogshead. These hogsheads had tighter seams and wooden pins driven into the center at each end. The pins served as axles to which beams were attached that were harnessed to horses or oxen. A later version, the fellie, had wooden hoops or runners circumferencing each end of the

barrel. This was a cheap method and was used into the twentieth century in some areas.²³ [fig. 1]

Though cheap, this method had obvious disadvantages. The harsh treatment of rolling long distances over rocky, dusty, and muddy roads took its toll. An observer wrote in 1747 that the tobacco was "always damaged by it [rolling] & shaken to pieces both inside and out."²⁴

The common complaint about this method was that the tobacco was damaged by the dirt and water that worked through the staves. An upland planter claimed that in his nine years of rolling tobacco to Lynchburg, the streets of that place had almost ruined him.²⁵

Another mode of conveying tobacco to market was by wagon. An average wagon could carry two hogsheads of tobacco which usually weighed between two and three thousand pounds.²⁶ The wagon was an improvement over the rolling hogshead because it could carry more than a single load and keep the tobacco away from the elements. Tatham noted in 1800 that an additional advantage was the ability to backload merchandise on the return trip.²⁷

The wagon also had its drawbacks in that the narrow wheels were more vulnerable to muddy roads than the rolling hogsheads and could get stuck in ruts. The larger carrying capacity of the wagon demanded a larger team to pull the wagon, hence more of a feed bill. The availability of horses and oxen was to a great extent influenced by the availability of grain so that



Fig. 1. Rolling hogshead, late 19th century. Valentine Museum, Richmond, Virginia.

whenever the grain crop was poor "the lack of feed for the teams appreciably retarded the marketing of tobacco."²⁸

Tobacco Canoes

Although land transport was the initial mode of moving the crop to market, the harnessing of the James River was soon given serious consideration by the planters. The river presented a formidable obstacle. Unlike the deeper, open tidewater reaches, the James above the falls had a rapid current strewn with boulders and sandy shallows that created an effective barrier to efficient navigation.²⁹

There is little record of attempts to navigate the upper James before 1745. The establishment of a tobacco inspection warehouse above the falls at Westham in that year may have either been in anticipation of river trade or an attempt to stimulate it.³⁰ Richard Morton wrote in Colonial Virginia that earlier river trade was carried "on rafts and flatboats" and that "returning [upriver] with the merchandize proved painfully hard and slow."³¹ The flatboats were probably adapted from the flats or lighters used in the tidewater for ferries and transporting goods to ships.³²

The first vessels used to transport goods downriver were probably the Indian-type log canoes. Adapted by the settlers, the log canoes were usually about sixteen feet long and could carry two hogsheads lying inside of it.³³

A tobacco planter from Albemarle County, the Reverend Robert Rose, was credited with making the first significant contribution to river commerce on the James. Rose, who was also rector of St. Anne's Parish in Albemarle in the late 1740's, was the first planter to send large quantities of tobacco downriver. This was achieved by attaching two dugout canoes together and balancing the hogsheads on the gunwales of the vessels. [fig.2] James Maury wrote in 1756 that

nothing is more common than to see two of these tottering vehicles when lashed together side by side, with cords, or any strong bandage, carrying down our upland streams 8 or 9 heavy hogsheads of [tobacco] to the warehouse, rolled on their gunwales crossways, and secured against moving fore and aft by small pieces of wood drove under the bulge of the two extreme hogsheads.³⁴

Unlike the sixteen-foot-long single dugouts, the stability of the double canoes permitted longer hulls of up to fifty and sixty feet.³⁵ Maury wrote on the Rose Tobacco canoes' handling properties:

...as they draw but a few inches of water and move down a current with great velocity and leave the waterman with nothing but Palinurus' task to perform when going downward, and when they return 2 men will shove the canoes with poles as far against the stream in one day as four brisk watermen can a boat that will carry the same...in two days.³⁶

William Tatham, who chronicled much of the eighteenth-century tobacco trade on the James, described

...two canoes, each formed out of a solid piece of fifty or sixty feet in length, and perhaps an inch to the foot of length in the breadth of them. Two of these canoes were clamped together by means of cross-beams and pins; and two pieces being again placed lengthwise upon these, their tobacco was rolled on upon this platform from five to ten hogsheads, which

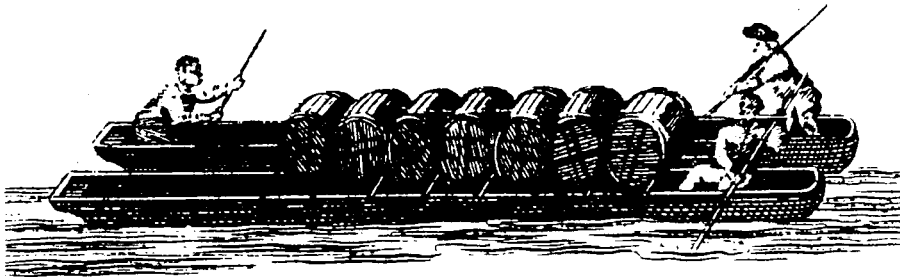


Fig. 2. Rose Tobacco canoe. Reprinted from Tatham, Culture of Tobacco, (facing) 55.

from three to five men could convey with ease the distance of one hundred and fifty miles to market, without the help of horses.³⁷

Like Maury, Tatham also commented on the method of returning upriver:

the canoes admitted to separation; and as they were seldom over burdened with heavy returns, two men could manage each canoe, in coming home again against the current, or in shooting up a narrow sluice, in many of the rapids where there is not sufficient water for a boat.³⁸

Reverend Rose developed the double-dugout sometime between 1748 and 1750 with Richard Ripley. Like Rose, Ripley owned land along the Tye River (a tributary of the James) in Amherst County. Ripley's skills included joinery and it was apparently he who constructed the canoes for Rose.³⁹ Rose's diary recorded that in March 1748, he and Ripley were involved in building canoes at Rose Isle plantation on the Tye River and that short trips were made in them down shallow tributaries of the James (the Tye and Piney rivers) to "see the nature of the Navigation."⁴⁰

During the next two years, Rose's workers were kept busy preparing for a full expedition of the length of the James to the falls, a distance of about 125 miles. Rose recorded "our people busie Making Canoes...."⁴¹

June 27, 1750 may be considered a red letter day for Virginia's upland planters. It was on this date that Rose recorded the return upriver of the boatmen who crewed the first tobacco flotilla down to Westham. Rose sent six (possibly seven) double-dugout canoes carrying "fifty and two hhds of

Tobo, 29 of which are mine, two Mr. Benger's, 6 R. Powel's, 9 Edwd Spencer's, 3 Timo O'Brian's, one Thomas Jones; one Mr. Goodwin's, and Wm. Ogilsby's...."⁴²

Thus began the profitable commerce of tobacco down the James River. The journey down from the Tye took approximately ten days. The vessels halted at Westham, where the hogsheads were unloaded and carted the remaining seven miles around the most severe falls to the warehouses in Richmond.⁴³

Rose died in Richmond in 1751, unaware of the impact that his innovation would have on the tobacco industry. The Rose tobacco canoes enjoyed wide use along the James. They were employed as far west as the Blue Ridge Gorge in the mountains, where Jefferson recorded them capable of delivering a "ton weight" of lead from mines in western Virginia.⁴⁴ Tobacco brought down on canoes to the treacherous Balcony Falls, above Lynchburg, was rolled around the falls and then placed on other canoes to complete the trip to Westham.⁴⁵

The success of the tobacco canoes soon warranted efforts to keep a clear river channel. There were numerous calls for subscriptions to clear the falls of the James.⁴⁶ These initial efforts to clear the river, were to finally evolve into the construction of the James River and Kanawha canal system.

The Rose canoes enjoyed wide use through the last quarter of the eighteenth century. Thomas Jefferson recorded the purchase of two tobacco canoes for eight pounds in 1775.⁴⁷ They were used to ferry supplies on the upper James during the

Revolution. It was noted in one wartime letter that, "there are very few left in the river of that kind, but he can purchase many old ones, which with repairs may suit."⁴⁸ Inflated prices by government contractors are nothing new as can be seen by the price charged to Quartermaster General Granville Smith in 1781 for one "halfworn" canoe - three hundred pounds.⁴⁹

A situation occurred in 1781 in which a group of upland Virginians were attempting to use tobacco canoes to keep valuable gun powder out of British hands. Stephen Southall's inspection of the barrels of powder found them

...stored, but to my great surprize in bad order[;] the Canoes not being clamped together the barrels were put in the bottoms of the Canoes and by some means...the Canoes were near half full of Water...in case more powder comes pray Order the Canoes to be Clamp'd as we must inevitable [sic] be ruined by such management.⁵⁰

Tobacco canoes experienced a rapid decline in the late-eighteenth century. One reason was a condition brought about, in part, by the vessel's own success. The increased settlement of the James River Valley and the intensive construction of the canoes exhausted the supply of massive timber required to fashion these notably long vessels.⁵¹

A second cause for the canoe's decline was a natural disaster. Three days of heavy spring rains in the mountains caused a flash flood in May 1771, known as the "Great Freshette of 1771." The flood caused the loss of much life and property along the James River including the tobacco warehouses and most of the canoes.⁵² Since the banks of the upper James had already become nearly deforested, few new canoes could be built

to replace those that were destroyed. By 1800 it was recorded that "this method [of transport] is however greatly done away by the destruction of timber and by the improvements of canal navigation."⁵³

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46. Hening, Statutes at Large, V, 877-878, and Virginia Gazette, 21 May 1767.
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CHAPTER IV
THE JAMES RIVER BATEAU

Early Development

As a healthy upland tobacco trade reliant upon river navigation evolved, many planters were undoubtedly concerned about the depletion of the large trees used to build the tobacco canoes. An Amherst County planter who would have been affected by the situation was Anthony Rucker. Rucker was from a prominent family who owned property in Amherst County, western Virginia, and Kentucky.¹ He was active in the political and economic growth of the region. During the American Revolution Rucker served as Deputy Commissioner of the Provision Law of Amherst county and in performing his duties, collected supplies for his regiment, of which he was captain. He also established a magazine on the James River at Lynch's Ferry, the future site of Lynchburg.² Rucker's status in the community was attested to in 1821, on the occasion of his death at the age of eighty-one:

He was one of the few surviving patriots of the Revolutionary struggle, and none represented more fully the characteristic honesty and simplicity of manners, of the virtuous age....Few men have rendered more important services to their country in the subordinate departments of usefulness....The offices in the gift of his country, he filled with great credit to himself and satisfaction to his constituents. None have transmitted a more unspotted reputation for honesty to posterity, than old Anthony Rucker.³

As a prominent Amherst planter family, the Ruckers were acquainted with the Reverend Robert Rose. Rucker's brother Benjamin, was given land by his grandfather, Peter Rucker, that extended from "Benj. Rucker's corner to Robert Rose's corner."⁴ Although only a boy at the time of Rose's death, Anthony Rucker would have been aware of his contribution. There appears to have been a continuity of interest in waterborne commerce among the planters in the Amherst County region during this period as will be seen.

Anthony Rucker, with the help of his brother Benjamin, is credited with inventing a vessel, variously referred to as the Rucker bateau, the James River bateau, and the James River tobacco boat.⁵ Sometime between the late 1760's and early 1770's Rucker experimented with an alternative mode of river transport that would succeed the rapidly disappearing double-dugout Rose tobacco canoe. The bateau was not officially credited to Rucker until the time of his death in 1821. By that time, as will be seen, the vessel was in wide use on a number of south-eastern upland river systems.

The story of the James River bateau's development came to light in 1821 as a result of an attempt by Rucker's heirs to secure a patent in his name. At this time Rucker's grandson, Ambrose, and Nelson C. Dawson applied ~~for~~ a patent in Anthony's name. It is unclear if this was done at Rucker's wish, or in an attempt to provide for his heirs at the time of his death. Dawson was sheriff of Amherst County and was the assigned

executor of Rucker's will which was recorded on February 17, 1821.⁶ Anthony Rucker died several days later on February 27⁷ and the patent was issued on April 3, 1821.⁸ T h e application for the patent on the bateau caused much public debate since it was by then widely used and was potentially valuable to the holder of the patent. Rucker's role in the development was apparently not well known beyond Amherst at this time. It was previously supposed that the boat was adapted from the French-type bateau used on the Ohio river.⁹ The Ruckers' claim, which was vigorously attacked by the editors of the Richmond Enquirer, prompted a printed response by John Hampton Pleasants, editor of the Lynchburg Press:

When we first heard that such a patent had been obtained, we were inclined to the belief that it had been granted improvidently...Nevertheless, when we came to inquire more particularly into the circumstances under which the Messr. Ruckers, claim the privilege of Patentees, we were convinced that their case was embraced by the amended law of the United States...on the subject of Patents. There can be no doubt that Anthony Rucker the elder, was the constructor of the James River Batteaux, and that it was a species of boat essentially different from any before that time used on the waters of America.¹⁰

Pleasants defended his opinion, which was formed by questioning a number of prominent residents of the James River Valley. Pleasants' primary witness, whose testimony presumably resolved the controversy, was Thomas Jefferson, who owned several neighboring plantations. Pleasants wrote,

Mr. Jefferson we understand is prepared to give his testimony in favor of the ancestor of the Patentees, and it is said was a spectator of the launch of the first boat of the kind ever used on James River, and which occurred somewhere in Albemarle [County]....¹¹

Jefferson's early acquaintance with Rucker and his bateau is confirmed by a descriptive entry made in his account book in 1775, "Apr. 29. Rucker's battoe is 50.f. long. 4. f. wide in the bottom & 6.f. at top. She carries 11. hhds & draws 13 1/2 I. water."¹²

Although the patent was granted and the required information was supposedly submitted to the patent office, it is no longer to be found. Aside from a record of the patent grant on April 6, 1821 all drawings and descriptions of the boat were destroyed in a Patent Office fire in 1847.¹³

Upon issuance of a patent for the James River bateau, Rucker's heirs notified the public of such and also made notice that,

...as many persons continue to use said boat without paying the patent fees thereon, the public are again notified, that the law will be enforced against each and every person who shall hereafter use such boat or batteaux without first obtaining licence for the same from some person legally authorised to grant them.¹⁴

Agents were thereafter appointed to collect money and issue licenses for the use of the vessel. The areas for which the agents were appointed was indicative of the range of the bateau's use. Captain James Ware of Amherst County was appointed collector for the "middle, eastern, and northern" states.¹⁵

Edmund Rucker of Rutherford County, Tennessee, was made agent for the states of South Carolina, Georgia, Kentucky, Tennessee, and Alabama.¹⁶ Announcements proclaiming these agents were to run for eight weeks in newspapers in Richmond,

Petersburg, Lexington, Raleigh, Columbia, Augusta, and Washington, D.C.¹⁷

Contemporary Descriptions

Descriptions of the James River bateau were recorded in several eighteenth- and nineteenth-century sources. Accounts of the appearance and use of the vessel were relatively consistent. The bateau was essentially a long, narrow, open boat that was pointed at both ends. It was keel-less and was steered with long oar-like sweeps at the ends. Illustrations, particularly in late nineteenth century publications, presented good visual indications of the nature of the vessel. The size of individual bateaux varied. Benjamin Henry Latrobe wrote in 1796 that there was "no regard being had to their proportions."¹⁸ Latrobe, who visited Richmond in the late-eighteenth century, recorded bateaux in both sketches and his journals. He wrote, "above the falls, James River is navigated by means of Batteaus. These are very light Boats about 60 feet long and 4 or 5 feet wide."¹⁹ He later wrote in 1798 that "they are from 60 to 75 feet long, & from 5 to 6 feet broad."²⁰ Jefferson, as noted above, purchased a bateau from Rucker that was fifty feet long by six feet.

Isaac Weld described bateaux witnessed during his visit near Lynchburg in 1776: "The boats, in which the produce is conveyed down the river, are from forty-eight to fifty-four feet long, but very narrow in proportion to their length."²¹ One

contemporary traveller recalled in 1852 that the vessels were from seventy five to one hundred feet in length.²²

Although the dimensions varied, there was a certain continuity in proportion. Bateaux averaged approximately sixty feet in length and were about six feet in width which equalled a 10:1 length to width ratio. There was a tendency towards widening the vessels in the antebellum era. A report on one bateau that was measured on the Rivanna River in 1830 stated that "These Boats are now about 6 feet wide, when the navigation shall be improved, these Boats will in probability be increased to 8 feet...."²³ Also, in 1854, a bateau was measured at fifty eight feet long by seven feet wide. An addendum to the report said that this was "the usual length [and there are] none longer."²⁴

The typical draft of a loaded bateau was about twelve inches. A James River Company employee reported in 1816 that, "An empty boat draws about 8 inches of water. [They] Enjoyed 13 inches in [the] coal business."²⁵ An 1808 report stated that each boat required seven and a half inches "to float in" and that a loaded boat drew one foot, nine inches.²⁶

The height of the gunwale was probably left to the boatbuilder's discretion. It was most likely a function of its draft and cargo capacity. A bateau ~~on~~ the Roanoke River was recorded at three and a half feet deep.²⁷

The James River bateaux were generally reported to be able to carry up to twelve hogsheads of tobacco²⁸ although Isaac

Weld commented that the "cargo carried in these boats is always proportioned to the depth of water in the river, which varies much."²⁹ The average bateau probably had a carrying capacity of about twelve tons.³⁰ Boats involved in the coal trade generally had a capacity of about 210 bushels³¹ although the aforementioned 1808 report stated that coal-carrying bateaux could only carry 183 bushels of coal at approximately ninety pounds per bushel.³² This figure allowed a lesser tonnage of between eight and nine tons.

The bateau was elementary in appearance. Contemporary illustrations show a simple, shallow-draught vessel with sides nearly parallel and pointed ends. They indicated little to no sheer, or curve of the rail. [fig.3-8]

Only a few significant features were noted on bateaux. An awning or tarp was occasionally stretched across wooden hoops that were secured into iron rings or sockets on the sides of the vessel.³³ The awning was not a permanent structure and seems only to have been erected at night to sleep under or on occasion to keep off the rain.³⁴ The appearance was somewhat like that of a floating Conestoga Wagon. [fig.7,9,10,11]

Another feature mentioned on the bateaux were hearths. Newspaper editor and writer George Bagby reported that "their cooks galley was a little dirt ~~th~~rown between the ribs of the boat at the stern."³⁵ Another contemporary source noted that "each end of the boat was equipped for cooking and splendid

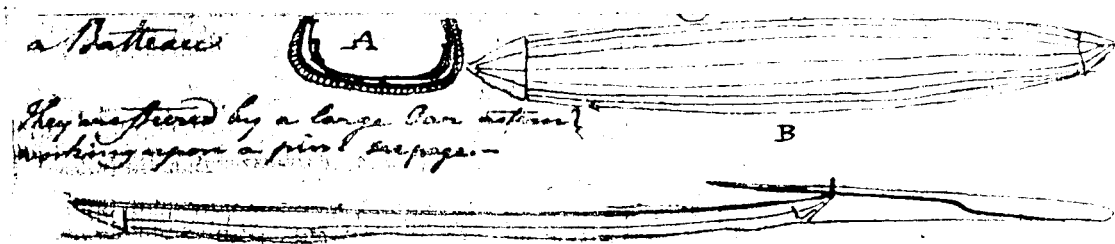


Fig. 3. Benjamin Henry Latrobe's sketch of a James River bateau, 1796. Reprinted from Latrobe, Virginia Journals, 92.

analyse me votre œuvre, signez-moi le tout. Al.



Fig. 4. Latrobe watercolor illustration of a bateau on the James River. Reprinted from Latrobe, "Essay on Landscape," 41.

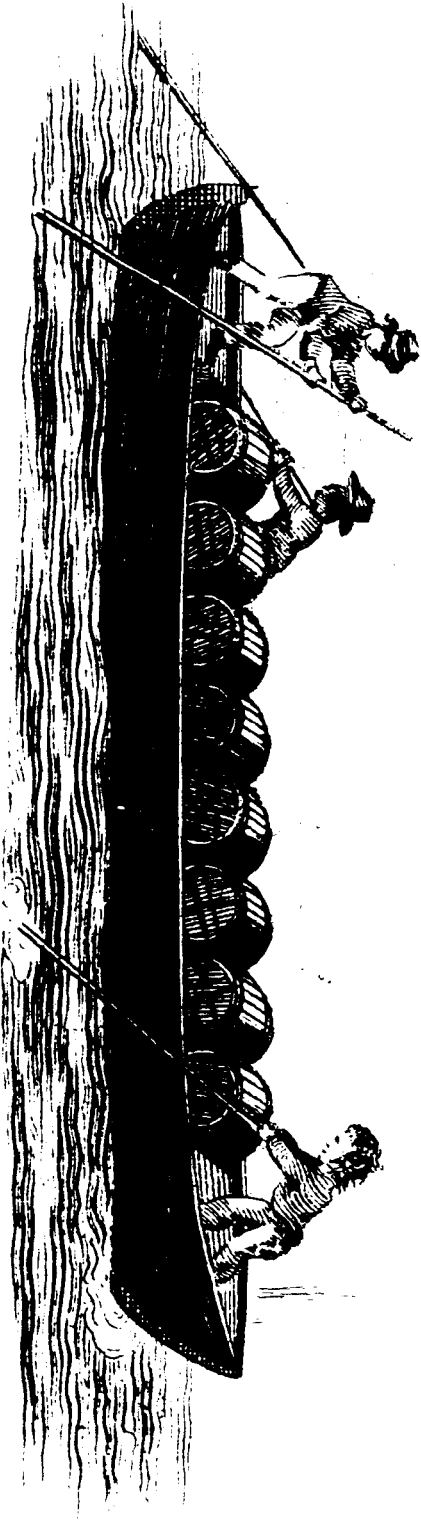


Fig. 5. James River bateau. Reprinted from Tatham, Essay on Tobacco, (facing) 55.

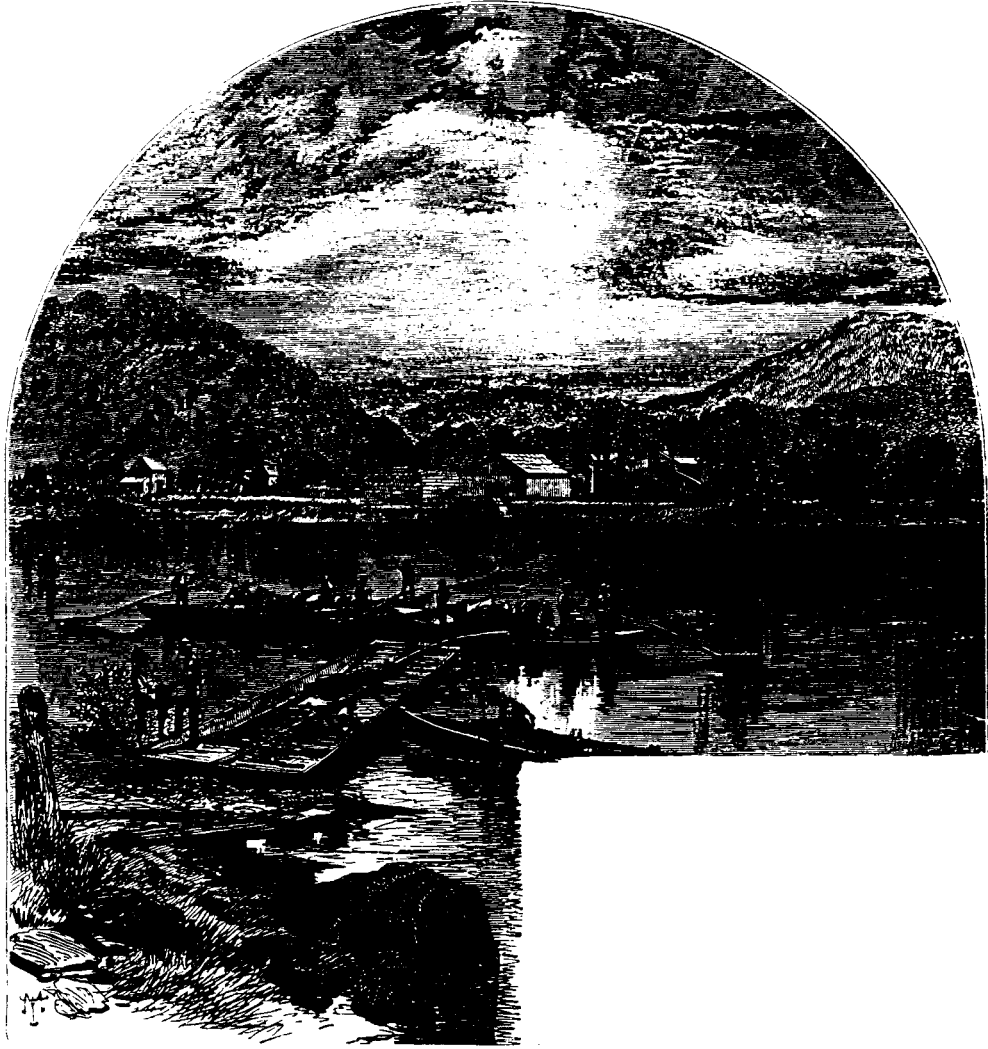


Fig. 6. Bateaux on the Greenbrier River in western Virginia. Reprinted from King, Southern States of North America, vol. 4, 670.

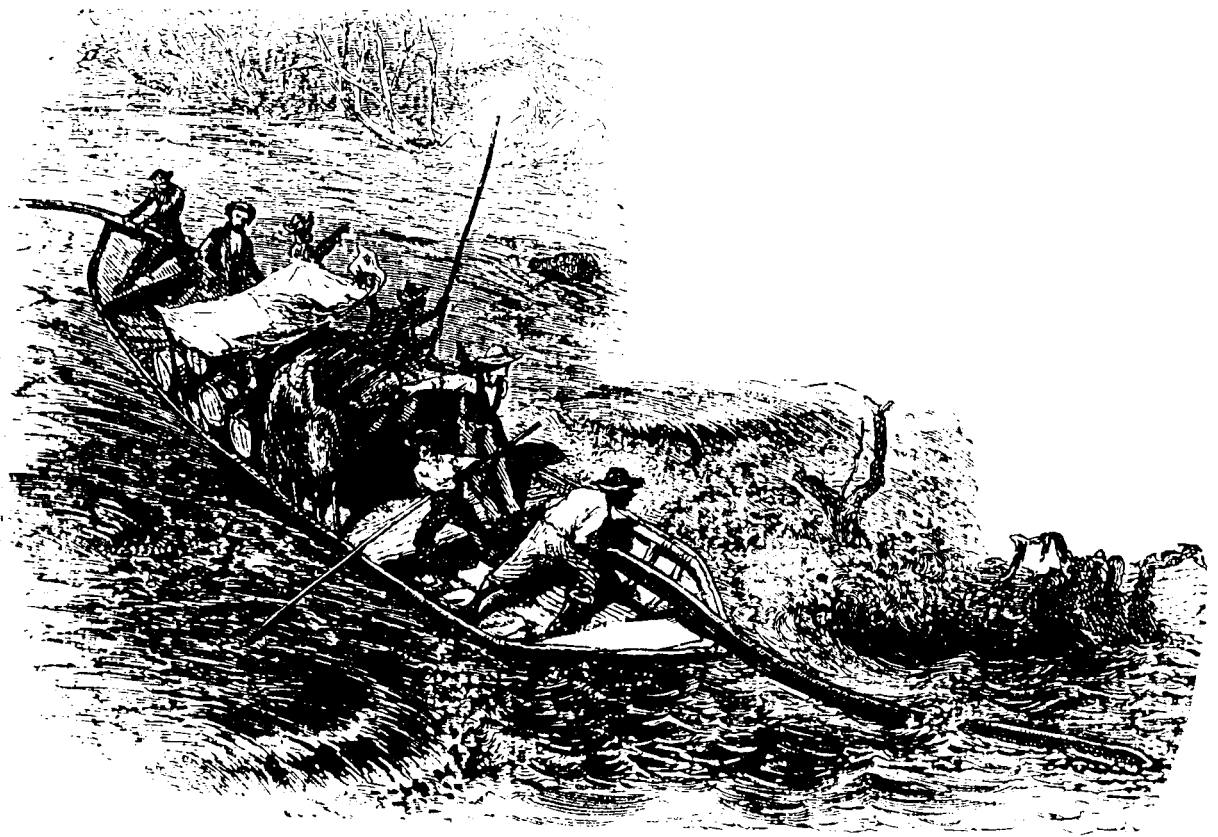


Fig. 7. Bateau descending the New River in western Virginia. Reprinted from King, Southern States of North America, vol.4, 679.

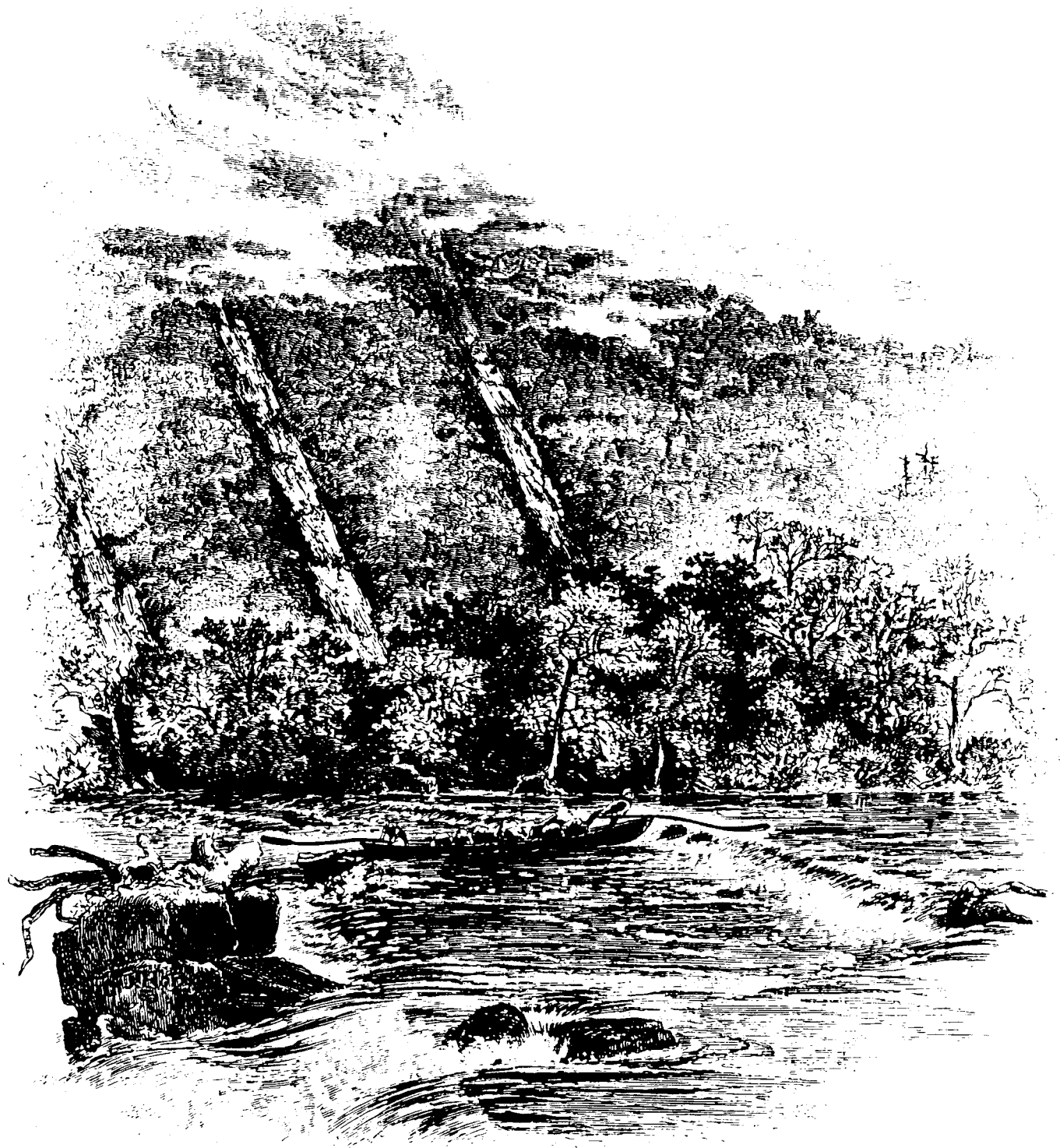


Fig. 8. Bateau with two sweeps descending the New River.
Reprinted from Bryant, Picturesque America, vol. 1,
341.

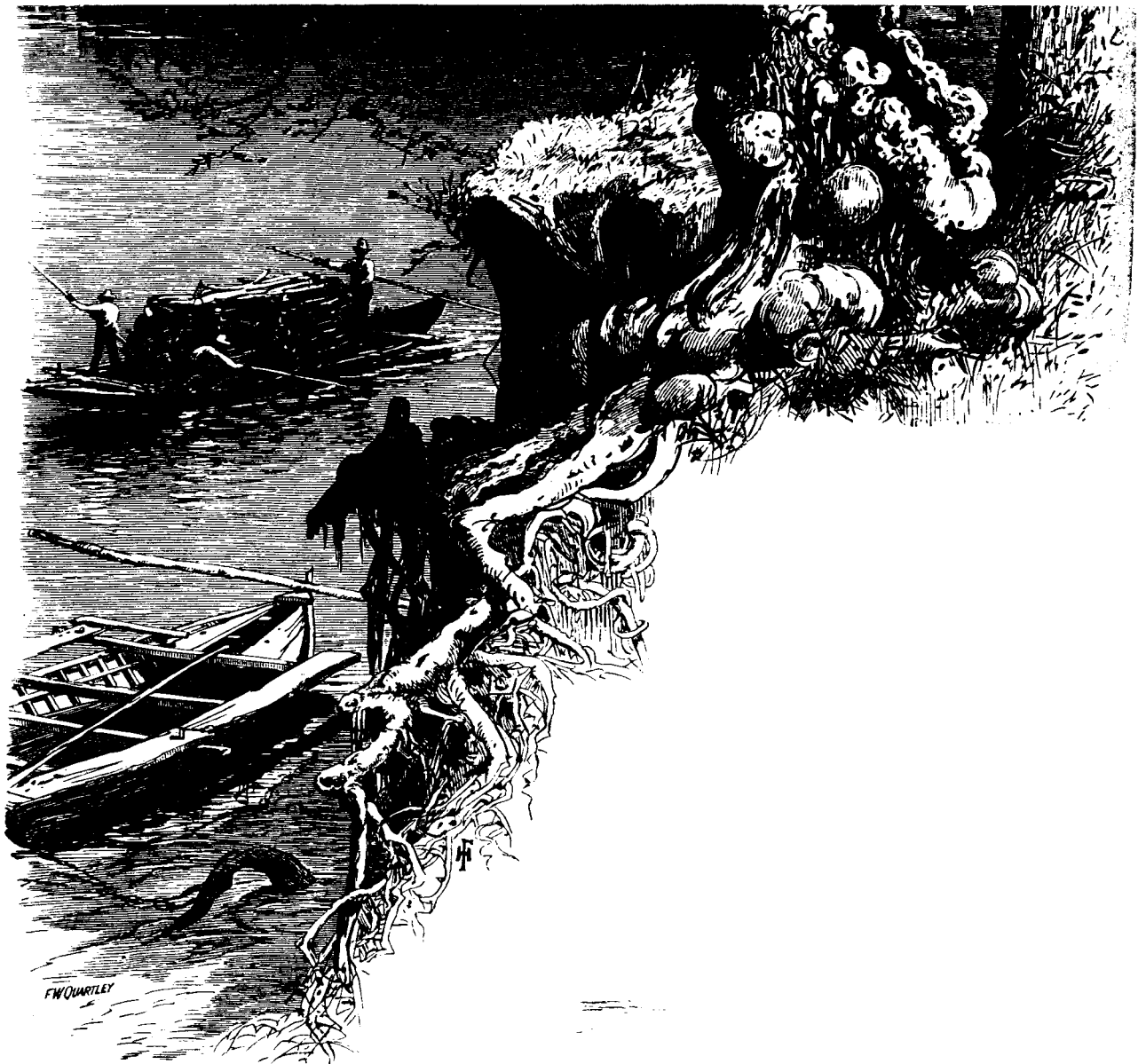


Fig. 9. Bateau on the Savannah River, near Augusta, Georgia. Reprinted from Bryant, Picturesque America, vol.1, 126.



Fig. 10. Bateau encampment on the James River. Reprinted from Crayon, Virginia Illustrated, 235.



Fig. 11. Bateaumen at encampment. Reprint from Crayon, Virginia Illustrated, 231.

meals were served."³⁶ In some cases, actual cast iron stoves were carried on board.³⁷

As noted above, bateaux were motivated by either the current or by poling. Contemporary accounts often noted boards or walkway planks laid along the gunwales from which the boatmen poled the boat.³⁸ [fig.11] An early nineteenth-century traveller's account described the appearance and use of a James River bateau:

They were pointed at both ends with round bottoms without keels. A long steering oar was used only in descending the river. In going upstream, two men pushed the boat with poles tipped with iron points—a man on each side walking on a gangway. The third man was at an oar behind. This simple craft was made to carry 12 hogsheads to Richmond. They were our only ships of commerce...."³⁹

Bateau Construction

Although there are numerous references to the use of bateaux on the upper James River, there is little record of their builders. It is possible that many were built by plantation owners, as they realized their seasonal needs. A bill in planter Thomas Mann Randolph, Jr.'s notebooks itemized planking, scantlings, and prefabricated gunwales for a bateau. It indicated that the pieces may have been ordered ready-made from saw mills.⁴⁰ It is even likely that, owing to the long lengths of the ordered timber, the material was delivered to his plantation by bateau.

There is some indication that bateau construction yards were established along the rivers. A Pennsylvania native,

Thomas Paxton, was reputed to be one of the best builders on the Maury River. Paxton was originally trained as a joiner, and his boatyard became "famous for its quality and swiftness of its work. In his day the road leading from Lexington to his establishment on the river was one of the country's best known roads."⁴¹

During the American Revolution, the Virginia State Navy's shipyard on the Chickahominy River (a tidewater tributary of the lower James) was put to work building bateaux. In 1774, Governor Thomas Jefferson had cause to employ the invention of his friend, Rucker. He wrote to General Lafayette that:

Captain Maxwell...informed me he was building a few Boats at the Shipyard on Chickahominy. I desired him to send a good Batteau builder to Colo Davies to Superintend and direct a number of hands whom he would immediately put under him for building Batteaus for the River above the Falls.⁴²

On 22 October 1777, the Governor directed "the Commissary of Stores to make Sale of twenty of the flat Bottemed Boats, built for the service of this State."⁴³

By analyzing the bill of materials noted above, it is possible to obtain some idea of the structure of the James River bateau. Randolph's "Bill of Stuff for a Batteau to navigate the Rivanna" included:

Gunwales:	48 ft. long	22 Inches wide:	3 I. thick on one edge-2 I. at the other	
5 planks	20 ft. long	16 I. wide	- 2 thick	
5 do.	30 ft. long	16	2	
5 do.	20	16	1/4	
10 pieces scantling	13 ft. long.	7 Inches by 3.		⁴⁴

The gunwales would indicate the length of the body of the vessel, excluding the lengths of the two ends (see analysis of a James River bateau, Chapter VII). As the bateau had no keel, the two-inch thick planks may have been used on the bottom and served as a "keel plank." The scantling pieces were probably cut as needed to fashion the frames that were required to give the boat shape and strength.

Randolph's account book does not record what was used to caulk his boat. A caulking of animal hair and pitch (oakum) was in common use on ships in the eighteenth century.⁴⁵ In the late-nineteenth century, tar was noted as being used to caulk bateau hulls on the Roanoke River in south-western Virginia."⁴⁶

Information concerning the work or craftsmanship invested on bateaux, like the subject of builders, did not appear much in the historical record. Individual boats did not seem to be long-lived. Randolph recorded that a bateau lasted two years and that it "made with ease 20 trips in the year...."⁴⁷ Some sources indicated that these vessels had a short life span. They were sometimes sold for lumber upon reaching market.⁴⁸

The value of bateaux declined as time passed. Randolph recorded that in 1798 "a Batteau costs \$85 complete."⁴⁹ In 1854 it was reported that a bateau cost ~~\$25~~ compared to an open freight canal boat costing \$500 (with horses).⁵⁰

Origin of James River Bateau Design

The term "bateau" had several usages in the eighteenth century. It was traditionally the French word for boat. Colonial spellings included "bateaux", "batteau", and "battoe". In colonial North America the term usually referred to any light river vessel that tapered at both ends and had a flat bottom. This form first made its appearance in the late-seventeenth- or early-eighteenth century where it was used by the French settlers along the Great Lakes and the St. Lawrence River.⁵¹

American maritime historian Howard I. Chapelle wrote that the original form was of Medieval origin in both England and Continental Europe. He stated that it is "most probable that the French name and the boat itself were taken over by colonial frontiersmen."⁵² Chapelle also noted that a nineteenth-century Chesapeake Bay sailing vessel with a distinctive V-shaped hull was also known as a "bateau". However, it is unlikely that it is from the same tradition as the James River bateau.

French-Canadian bateaux were used on the St. Lawrence River as early as 1680. They were used throughout the Old Northwest in the fur trade until the early-nineteenth century.⁵³

The colonial French type bateau was found to be ideal for troop transport in the military operations of the French and Indian War and in the American Revolution.⁵⁴ In 1756, the governor of Massachusetts established a "Battoe Service" and

enlisted boat builders from "the Chesapeake to the Gulf of Maine" to construct a frontier fleet.⁵⁵

By the time of the French and Indian Wars, the English were building bateaux for use on the western waters.⁵⁶ In 1762 General Jeffery Amherst had a number of bateaux built at Fort Pitt on the Ohio River in anticipation of an attack on the French forts.⁵⁷ In 1766, one John Jennings purchased bateaux and had others built at Fort Pitt, sending them on to Illinois where merchants, such as Baynton, Wharton, and Morgan, were involved in trade down the Mississippi River.⁵⁸

How, exactly, Anthony Rucker received his inspiration for the James River bateau is unknown. It is possible that he was familiar with the French-type bateaux used in the west. At the time of the patent dispute, James Hampton Pleasants wrote in the Lynchburg Press, "Upon enquiry, we find our selves to have been mistaken in supposing the James River Batteaux, to have been an invention of the French in their early settlements on the Ohio."⁵⁹

Rucker or someone he knew may have visited the Ohio Valley or other western waters and seen the French-type bateau. Many Virginians saw service in the Ohio River area during the French and Indian War.⁶⁰ Major Andrew Lewis, a well-known Virginia frontiersman, was from Albemarle County.⁶¹ While Anthony Rucker was too young to go, it was recorded that his brother, Ambrose, was a lieutenant in the Amherst Militia in the mid-1750's, during the war.⁶² This indicates that men of Anthony

Rucker's acquaintance were probably familiar with any vessels used to navigate the Ohio River. Knowledge of river craft from the Ohio River area might also have traveled with the influx of settlers who migrated down the Shenandoah Valley from Pennsylvania.⁶³

It is apparent that Rucker's contribution was to synthesize two distinct vessel types and adapt them to the need for a freight vessel on the upper James River. The bateau used on the Ohio River would have been too deep and unwieldy for the comparatively shallow and rocky James. The Ohio bateaux were generally about forty feet long, five feet deep and twelve feet in beam.⁶⁴ Were he familiar with Rose's log canoe, Rucker would have appreciated the handling capabilities of a long, shallow-draft vessel.

The James River bateau had similar dimensions to the tobacco canoe hulls. Tatham wrote that the canoes were "each formed out of a solid piece of fifty or sixty feet in length, and perhaps an inch to the foot in Length in the breadth of them."⁶⁵ This similarity is evident when it is recalled that the James River bateau was about sixty feet in length. The extreme length and shallowness of the canoes wedded to the carrying capacity and maneuverability of the French bateau would have produced a vessel with the characteristics of the James River bateau.

Bateau Navigation on Other Rivers

The James River bateau, as has been seen, was developed and initially operated on the James River in the late-eighteenth century. It was used on the James, primarily from Richmond to the Blue Ridge Mountains, and was even reported to have brought material through the treacherous Blue Ridge Gorge.⁶⁶ The design was so practical on the upland James that it was soon adopted on other Virginia rivers for freighting the upland produce to market.⁶⁷ The successful merging of upland agricultural production and bateau navigation also occurred on upland river systems in Virginia and other southeastern states.

The navigable upland tributaries of the James were regularly traveled by bateaux. It has already been noted that there was a successful boat yard near Lexington Virginia on the Maury (then named the North) River.⁶⁸ Another tributary upon which bateaux operated was the Rivanna River. The Rivanna was navigable from above Charlottesville to its conjunction with the James at Columbia. In his essay, Notes on the State on Virginia, Jefferson wrote that the Rivanna was "navigable for canoes and batteau to its intersection with the Southwest mountains, which is about 22 miles and may be easily opened to navigation through those mountains to its Fork above Charlottesville."⁶⁹

Bateau navigation also took place on the upland reaches of the Appomattox River which was a tidewater tributary of the James. Though not as extensive as the James River system, the

Appomattox coursed through prime piedmont tobacco land.⁷⁰ Bateaux ran from the upland market towns of which Farmville was the most prominent.⁷¹ The Appomattox's fall line entrepot was Petersburg from which, like Richmond, coasting vessels could carry the tobacco to larger markets.⁷²

Both the Shenandoah and the Potomac rivers were determined to be navigable in 1793. The Shenandoah is a tributary of the Potomac and flows south through the Shenandoah Valley for a 150 miles. The Potomac Company was formed to create navigational improvements in 1784 and was headed by George Washington.⁷³

The Potomac and Shenandoah saw a number of vessels including bateaux attempt to navigate their difficult, rocky waters. A newspaper advertisement in 1772 offered land for sale on the Potomac near the "Shenando" (Shenandoah) Falls "from whence, up to Fort 'Cumberland', a hundred and ten Miles, Battoes now frequently pass, and downward...within twenty Miles of 'Georgetown'."⁷⁴

It is unknown how much influence the James River-type bateau had in this area. Much of what was reported when the locks through the rapids to Georgetown were opened in 1802 were "floats and rafts" designed "according to the harvest and the size of the locks. On delivery of the cargo at Georgetown, they were broken up and sold for firewood."⁷⁵ Vessels fitting the description of the bateau were described as "seventy by ten feet, covered with tarpaulins over hoops, and manned by crews of four."⁷⁶

A vessel known as a "sharper" saw somewhat limited and unsatisfactory use. This may have been a regional name for the James River-type bateau. Its dimensions were similar to the bateau, being recorded at "60 feet long by 7 feet wide, flatbottomed and pointed at the ends." Its poor handling abilities in shallows led to its unpopularity.⁷⁷

Throughout central Virginia and North Carolina was an area referred to as the "Tobacco Sack." This was a belt of fertile piedmont land which grew the prime Virginia tobacco. All of the main upland tobacco markets were on the rivers which intersected this area.⁷⁸ Second only to the James River system, was the Roanoke River and its tributaries which also traversed the Tobacco Sack region. Flowing out of the Blue Ridge Mountains in southern Virginia, the Roanoke is joined by the Staunton River. At the same time, the Dan River meanders back and forth through Virginia and North Carolina. Danville was the primary upland tobacco market on the Dan.⁷⁹ Below Danville, the Dan and Roanoke rivers join to become the Roanoke and intersect the fall line at Weldon. The Roanoke's tidewater outlet was in the North Carolina sounds.

In the late-eighteenth century it became apparent that the southern Virginia piedmont region could be as prosperous as the James River Valley if the slow, unproductive process of carting the tobacco to the fall line market at Weldon could be eliminated. In 1796 a council was appointed to convince the governor of North Carolina to clear the Roanoke River in North

Carolina, particularly at Weldon. After a series of bills, the Dan and Roanoke were improved so that bateau navigation could commence.⁸⁰

Danville, which was established on the Dan River in Pittsylvania County in 1793, became the prime upland tobacco market in the late-nineteenth century. Its importance even eclipsed that of Lynchburg on the James. Danville and Pittsylvania County also rivaled Richmond as the leader in tobacco marketing and manufacturing.⁸¹

In 1804 the Roanoke Navigation Company was formed in an attempt to rectify the same navigational problems that had afflicted the James River Company; being the clearing of river channels and the negotiation of the rapids at the fall line.⁸² John Hartwell Coker, an upland planter in both that region and the James River Valley (Fluvanna County), recorded the problems of navigation in his diary:

At the Great Falls [Weldon] the load is deposited and transported 8 miles by land to tidewater. The land at both ends of the portage belonging to the same individual, who has a monopoly of the storage and transportation.⁸³

Bateau navigation on the Roanoke wasn't as extensive as on the James River. In 1816, there were only six bateaux in operation on the Roanoke, four of which had been brought down from the James.⁸⁴

A publicity stunt was undertaken in 1815 by several planters on the Staunton River to illustrate the need for a canal through the rapids. Led by Samuel Pannill, a state

representative and president of the Roanoke Navigation Company, the group travelled by bateau from Campbell County down the Staunton to the Roanoke River. Passing the falls, they proceeded to Albemarle Sound and from there they traveled up the Pasquotank River through the Dismal Swamp Canal to Norfolk. They navigated approximately 370 miles in fifteen days. Their cargo was a barrel of mountain flour to be delivered to George Newton of Norfolk.⁸⁵

The Roanoke Navigation Company was typical of the navigation companies that sprang up along the upland Virginia rivers. They all engaged in channel improvement by constructing sluices and dams. The improvements were continued throughout the canal era on rivers that were too small to warrant the expense of a canal system.⁸⁶ The Roanoke Navigation Company differed from the James River Company by operating public boat companies which carried produce to market for the smaller planters.⁸⁷

The bateau was also used on upland rivers beyond Virginia. Jefferson wrote that the Kentucky River afforded "a navigation for loaded batteaux 180 miles in a direct line in the winter tides."⁸⁸ After the Civil War, bateaux were illustrated in operation on West Virginia's Greenbrier and New Rivers. [fig. 6,7,8]

The James River bateau probably appeared as far south as the Savannah River in Georgia. It will be recalled that the settlement of the Rucker patent provided for an agent in Georgia

and an announcement was to be run in the Augusta paper (among others) for eight weeks stating thusly. A vessel known regionally as a "Petersburg" boat was known to navigate the upland reaches of the Savannah between the towns of Petersburg and Augusta. This vessel, which was used to transport tobacco, was described as a flat-bottomed, plank-built boat. It was 10 to 20 inches deep, 6 feet in the beam and from 25 to 75 feet in length.⁸⁹ Nineteenth-century illustrations of these craft on the Savannah River near Augusta reveal them to be very similar to the James River bateau. [fig. 9] It is quite likely that knowledge of the bateau was introduced into piedmont Georgia by the influx of tobacco planters from the Amherst and Albemarle County areas in the decades following the Revolution.⁹⁰

1. Sudie Rucker Wood, The Rucker Family Genealogy (Richmond: Old Dominion Press, Inc., 1932), 154.
2. Wood, Rucker Family Genealogy, 155.
3. The Lynchburg Press, 23 February 1821.
4. Amherst County Deed Book, 6 October 1769, in Wood, Rucker Family Genealogy, 116.
5. Contemporary spellings included "battoe," "bateaux," and "batteau." As a debate on proper spelling continues today, this author accepts the verdict of the Oxford English Dictionary: "bateau" for singular references and "bateaux" for plural. The Shorter Oxford English Dictionary, 3rd ed. (Oxford: Clarendon Press, 2 volumes, 1980), I, 164.
6. Amherst County Will Book 6, 210, Virginia State Archives, Richmond.
7. Lynchburg Press, 23 February 1821.
8. Amherst County Deed Book, 6, in Wood, Rucker Family Genealogy, 155.
9. Lynchburg Press, 25 May 1821.
10. Lynchburg Press, 17 August 1821.
11. Lynchburg Press, 21 August 1821. Amherst County was formed from Albemarle County in the 1760's. The Tye River, where Rucker's land was, was in that part of Albemarle that became Amherst.
12. Account Book, 29 April 1775, Jefferson, Thomas Jefferson's Farm Book, 257.
13. Percy, Piedmont Apocalypse, 31.
14. Lynchburg Press, 12 October 1821.
15. Lynchburg Press, 9 November 1821.
16. Amherst County Deed Book, 6, in Wood, Rucker Family Genealogy, 155.
17. Lynchburg Press, 9 November 1821.
18. 12 April 1796, Latrobe, Journals of Benjamin Henry Latrobe, 92.
19. 12 April 1796, Latrobe, Journals of Benjamin Henry Latrobe, 92.

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CHAPTER V
BATEAU COMMERCE IN THE JAMES RIVER VALLEY

Tobacco Industry

Methods of shipping and marketing tobacco in the James River Valley changed as cultivation of the crop shifted from the tidewater to the piedmont. In the seventeenth century most of the tobacco was packed, loaded, and shipped from individual plantation landings to consignment merchants in England. This resulted in there being few towns in tidewater Virginia that were considered to be major economic centers. The main towns in the colony were governmental centers such as Jamestown and later Williamsburg. There were small river hamlets, but none was a major economic center.¹ Once the piedmont began to be exploited agriculturally, a new system of shipment evolved. The trans-shipment points for export and import moved to the heads of navigation at the fall line. Warehouses, stores, ordinaries, and taverns were erected at these places and they became centers of economic activity for the regions.² The pattern was repeated all along the fall line. Such towns arose as Baltimore on the Patapsco, Georgetown on the Potomac, Fredericksburg on the Rappahannock, and Richmond on the James. There were exceptions, such as Norfolk, which became a tidewater economic center partially to satisfy eastern North Carolina's need for a tobacco market.³

Despite fluctuations in the world-wide tobacco market in the eighteenth century, the colonies of Virginia and Maryland flourished as tobacco continued to be their primary export. There were several significant increases in the level of tobacco production in the mid-eighteenth century. Two of these increases correspond with the development of the upland tobacco trade and the introduction of methods of water-borne transport on the upper James.

The average amount of tobacco exported from Virginia rose from approximately 34,000 hogsheads between 1730 and 1740, to about 47,389 per year between 1745 and 1755. This increase occurred during the introduction of the Rose tobacco canoes into the James River Valley, which by that time had become the major tobacco producing region in the state.⁴

Between 1761 and 1775 the amount of tobacco exported from the tobacco colonies again increased significantly. The colonial tobacco export from 1761 to 1765 averaged about eighty million pounds per year. From 1771 to 1775 the average amount exported to England and Scotland increased to about 102 million pounds. This was a forty percent increase over the previous figure.⁵ Lewis Cecil Gray wrote that the increase was so sudden as to "suggest either a fault in the statistics or some change in trade methods."⁶ The increase in tobacco production at the time of the introduction of the James River bateau in 1771 may be coincidental but there is also a likelihood that the bateau allowed for intensified shipment of the upland tobacco

crop to market.

On the eve of the American Revolution in 1775, tobacco comprised over seventy-five percent of the total exports of the Chesapeake colonies. At over 100 million pounds, it represented at least four million dollars in income.⁷ At this time, approximately twenty to thirty million pounds of the exported tobacco originated from the upper James. This was about one-fourth of all of the American colonial exports.⁸ As will be seen, the use of water-borne transport of tobacco and other goods from the piedmont was integral in Richmond's expansion into a major tobacco market and entrepot.

The economic growth of the James River Valley continued in the late-eighteenth and nineteenth centuries in spite of a collapse in the tobacco trade in the 1770's. The collapse was brought on by the previously mentioned Freshet of 1771, bankruptcies in a number of British tobacco houses, and the trade embargoes between Britain and the United States during the Revolution.⁹ In spite of this the Virginia piedmont continued to be the major American exporter of tobacco even after the Revolution.¹⁰ During this time, Lynchburg became the major upland tobacco market town. Upland planters and farmers brought their produce to Lynchburg whereupon it was shipped 150 miles downriver to Richmond.¹¹ Sailing vessels of up to 200 tons could reach Richmond and transported the tobacco to its various national and world markets.¹²

In 1804 the total number of tobacco hogsheads passing down the river to Richmond (entering at the lower James River Canal) was 13,881, or approximately 9,717 tons of tobacco shipped by bateau. In the next two years, the number of hogsheads rose to 15,162 and 15,160 for 1805 and 1806. This equaled about 10,612 tons shipped each of those years.¹³ In 1806 the total state production of tobacco was approximately thirty-five thousand hogsheads or about 21,867 tons.¹⁴ This indicates that nearly half of the state's tobacco crop was being shipped by bateau down the James River.

By the period between 1816 and 1822, the average number of hogsheads arriving in Richmond by water was 15,853, or about 9,905 tons of tobacco.¹⁵ The total number of hogsheads shipped via bateau reached its peak between 1827 and 1831 when an average of 22,000 hogsheads or about 15,376 tons per year entered Richmond.¹⁶ Between these dates approximately 43,587 hogsheads or about 27,242 tons per year were delivered after inspection from Virginia warehouses.¹⁷ These figures represent a three-fold increase in the amount of tobacco shipped annually by the James River bateau between 1804 and 1831.

Individual planters' records also reflect the amount of commerce carried by bateau. In 1802 Thomas Jefferson exported a total of 18,353 pounds from his Poplar Forest plantation in Bedford County to his agents in Philadelphia at a return of \$955.00.¹⁸ In a one-year period in 1819 General John Hartwell

Cocke exported 69,427 pounds from his lands in Fluvanna County on the James.¹⁹

Shipping

The bateaux used on the James River were owned both by planters for shipping their own produce and by individuals for hire. Canal historian Alvin C. Harlow wrote that during the nineteenth century "the boats then operating on the [James] river were nearly all the property of planters...."²⁰ As noted in the previous chapter, there apparently were no public navigation companies on the upper James as on the Roanoke and other upland rivers.

There were however, individuals who owned one or several boats and hired out on a charter basis. Much of the firm of Ellis and Allan's tobacco was shipped by "Mr. Haynes Batteau."²¹ Thomas Jefferson had his own bateaux.²² During periods of peak activities, he also shipped his tobacco by hired boats including those of a W. Johnson, and J. Henderson.²³ James Cabell was a prominent planter who operated a line of bateaux from Warminister (below Lynchburg) in the late eighteenth century.²⁴ Some sources reported that many of the boats were owned by companies, referring either to charter companies or the to merchant shippers.²⁵

Although the bateau was developed and used mostly by the upland planters in the late eighteenth century, it is likely that they later came to rely upon charter from private owners or

companies to ship their goods. Melvin Herndon wrote that "the river craft, which were employed in the tobacco trade antecedent to the American Revolution, were, in a great degree, the property of the merchants or their factors."²⁶ A Rivanna Navigation Company report implied that by the nineteenth century, few planters owned boats. It stated that "the best remedy for this evil [lack of available boats]...seems to be that the farmers should have boats; so that their hands might carry their produce to market when ever they wished...."²⁷

By the last decades of the eighteenth century there were enough bateaux operating on the upper James that the state of Virginia sought to earn revenue by regulating them. A law passed in December 1791 decreed

that every person who shall be proprietor of any boat or other vessel which shall be employed in navigating the waters of James River and its branches above the Great Falls at Richmond, in the transportation of any produce or merchandise whatsoever, either raised or manufactured within this commonwealth, or imported from any other place without the same, shall, in the clerks office of the county in which the said proprietor or proprietors shall then live, enter the number of each boat or vessel so to be employed, which number together with the name of the county, and the name of the owner or owners of such boat or vessel, shall be written ar painted on each side...in large and plain letters, not less than four inches in length.²⁸

Those who neglected to do so were fined twenty shillings a day until they complied.²⁹

In the early nineteenth century tobacco transport on the James was controlled by a number of regulations concerning the packing of tobacco in hogsheads and the loading of all

commodities on bateaux. The Virginia government began enacting tobacco inspection acts in the early 1700's as a response to the loss of much of the European business due to the irregular quality of the colonial tobacco shipments. Many planters were guilty of sending scraps and sweepings, or "trash" tobacco in an attempt to augment their shipments in the face of lowering prices.

The Virginia Act of 1713 established forty public warehouses with official inspectors who insured the uniform quality of the tobacco exported.³⁰ This act was repealed in 1717 due to the planters' lack of support. The Inspection Act of 1730, which provided warehouses and official inspectors, required all hogsheads to pass through inspection warehouses before they could be shipped. Each hogshead was broken open and any "trash" tobacco encountered was burned. A note was then issued to the owner indicating the weight, quality, and type of tobacco in the hogshead.³¹

After the Revolution the public inspection of tobacco continued in much the same form as it did under the British. Public inspection warehouses were located at various points along the shipping route. During the colonial period they were initially situated at the junctions of navigation and the fall line such as Richmond, on the James.³² In the late eighteenth and nineteenth centuries they were generally established along the upland rivers.³³

Other warehouses were set up at the junctions of tributaries or points of activity such as ferry crossings. Columbia's warehouse was erected at Point of Fork where the Rivanna entered the James about fifty-six miles above Richmond.³⁴ The city of Lynchburg grew at the site of the inspection warehouse originally situated at a ferry landing on the James in Campbell County.³⁵

The warehouses were probably built either close to the river or on an adjacent creek. Though little information exists describing the locations of the warehouses, one account indicates that a warehouse was situated immediately beside the water to facilitate the removal of the hogsheads from the boats. There was described an "old beam on top of the building on which was hung a block and fall for hoisting barrels...from the rear of the building into the boats."³⁶

Laws were also passed to assure the uniformity of hogshead size so that the amount shipped could be regulated and taxed. In 1784, the weight of a hogshead was 800 pounds.³⁷ The size of the hogshead was determined to be forty-eight inches in stave length by thirty inches across the head.³⁸ By 1796 the size was increased to fifty-four inches at the stave, by thirty-four inches head diameter.³⁹ In 1834 the head was thirty-eight inches in diameter.⁴⁰ The average weight of a hogshead was 1600 pounds.⁴¹ Robert noted that the law usually was somewhat behind the actual custom and that there was much variation from district to district. He reported that average weights were

around one thousand pounds in the post-colonial and early national period and approximately twelve hundred pounds after the War of 1812.⁴²

Due to thefts of bateau cargo by boatmen, laws were passed in the early nineteenth century in an attempt to curb the losses. It was recorded that

the character of the boatmen now on the river...puts into jeopardy the property they get the charge of. Pillaging of loading and the adulteration of the more costly parts of it, are very common; and not unfrequently the entire load is stolen by the boats crew....⁴³

Among the efforts taken to stem the loss of goods was the establishment of a number of inspectors of boats at the inspection warehouses on the upper James.⁴⁴

Bonded officers were required to inspect boats loaded for shipment downriver and to notarize manifests prepared by the shippers. They were empowered to confiscate and sell any articles not included on the manifests.⁴⁵ Upon confiscation, public notices were posted before the goods could be sold. A typical notice in 1815 read,

Notice

On the 28th of November I took from on board of Charles L. Barrett's Boat (headman, Jack.) six barrels of FLOUR, branded Lynchburg superfine. The owner is requested to prove his property, pay charges, or it will be dealt with as law in that case directs.

William Piggott,
Inspector of Boats,
Lock Harbor.⁴⁶

Salary for the inspectors of boats was taken from tolls paid by operators at the start of each trip downward. They were

initially paid "the sum of two cents for every boat loaded with coal only...and the sum of six cents for every other boat passing downwards."⁴⁷ Failure to report the correct income resulted in a fine of 100 pounds.⁴⁸ If the inspector suspected a boat of transporting stolen goods or the operators to be involved in any "felonious practice," he was empowered to search the vessels and confiscate them.⁴⁹

The laws give a clue to the shipping process involved in bateau navigation. After a boat was loaded, the head boatman was entrusted with a copy of the manifest describing the contents of the boat including amounts and method of packaging (boxes, barrels, hogsheads, etc.).⁵⁰ Often traveling in fleets, the bateaux negotiated their way through the rocks and shoals of the river to the canal which took them the final stretch into Richmond.⁵¹ Upon arrival at the Richmond Basin, agents for the owners of the cargoes met the vessels and inspected the manifest. The agents would either sell the cargo at the dock or ship it to their brokers at major export centers such as Philadelphia and New York, or sometimes ship it directly to foreign markets.⁵²

Before the construction of the ship canal between the basin and the port at Rocketts, cargo bound for coastal trade was carted about a mile through the city to Rocketts to be transferred to waiting ships. The cargo was either loaded at the wharf or sent out to waiting ships on flat-bottomed lighters. These carried ten to twenty hogsheads and were loaded

in mid-river by block and tackle gear.⁵³ Many of the larger, deeper draft vessel bound for the European trade halted ten to fifteen miles further downriver at such ports as Warwick.⁵⁴

Flour Trade

Although the bateau was developed initially to transport tobacco, it was soon the vehicle of transport for all of the James River Valley's commodities. The upper James River Valley was also the main colonial exporter of wheat after 1750.⁵⁵ As Norfolk became the center of grain trade to the West Indies, demand for the valley's wheat grew.⁵⁶

The demand for the region's wheat continued after the Revolution and many planters formerly employed with tobacco production turned their efforts towards raising wheat. In 1793 a correspondent wrote Jefferson that "the planters of this State, and those on the James River in particular have almost dropped [sic] the culture of Tobacco, and turn their attention principally to the raising of wheat, the greater part of which is purchased by Merchants who are situated on Navigation [Norfolk] for that purpose...."⁵⁷

Jefferson was an influential and enthusiastic supporter of the grain trade on the James. He corresponded with neighboring farmers on the potential of flour milling on the upland river. Since bulk wheat was hard to protect from the elements and the river's destructive forces, he advocated building mills upriver.

The wheat could be converted to flour which could be shipped in water-tight barrels.⁵⁸ Jefferson wrote,

in 4 years the three little counties of Augusta, Rockbridge, and Rockingham...from having but one manufacturing mill only has upwards of 100 merchant mills in great perfection, and our adventuring farmers are coming with their Batteaus loaded down James River thro' the Blue Ridge within 3 and 4 miles of Lexington.⁵⁹

As with tobacco, flour and wheat might also be sold or auctioned off in Richmond rather than the larger markets. One of Jefferson's agents, Edmund Bacon, recalled,

I remember sending off at one time three bateau loads - between two hundred and fifty and three hundred barrels - made of new wheat. I started on horse back [from the Rivanna River] in time to get to Richmond before the flour. When I told the landlord I had new flour on the way, 'Well, Sir,' said he, 'you will be certain to get a good price for it, for there is hardly a barrel in the city.' I had notices circulated that a lot of new flour would arrive and be sold at the river at four o'clock. There was a large crowd, and I sold every barrel, at fourteen dollars a barrel, as fast as it could be rolled ashore, and it didn't begin to supply the demand. I got my money from the bank, and rode home that night. It was sixty-three miles; but I had a fine sorrel mare that Mr. Jefferson appropriated for my use, and I made it easily. As soon as I got home, I went directly to Mr. Jefferson's room with the money....⁶⁰

As the tobacco trade declined, the bateaux began to carry more wheat and flour down the river. They could ship upwards of 500 to 600 bushels of wheat,⁶¹ or 75 to 100 barrels of milled flour.⁶² One source reported that 120 to 150 barrels could be carried in a bateau.⁶³ In 1804 78,687 bushels of wheat and 50,732 barrels of flour were brought down the James River.⁶⁴ Between 1818 and 1823 an average of 111,954 barrels of flour (or 11,195 tons) and 186,260 bushels of wheat (500 tons) descended

the river representing 16,195 tons of grain trade carried by bateaux.⁶⁵

In 1834 boats shipped more than 217,000 bushels of wheat and 94,860 barrels of flour.⁶⁶ By the antebellum period, the amount of wheat and flour sent downriver in conjunction with the large flour mills built at the falls, led to Richmond's position as the second largest flour-producing center in the country, surpassed only by Baltimore.⁶⁷

Bateau Commerce and Other Industries

The coal industry also kept bateau transportation and Richmond's economic interests thriving. The Richmond Coal Basin was first discovered in 1701 by French Huguenot settlers living a few miles above the falls on the north bank at Manakin.⁶⁸ The close proximity of the coal deposits and those at Midlothian, on the southern bank of the James, to the tidewater navigation encouraged mining operations as early as 1730.⁶⁹ The closeness of the resource was one reason that Richmond was able to flourish as a center for iron manufacturing. The Tredegar Ironworks was the primary southern foundry from the antebellum era through the end of the Civil War.⁷⁰ Although the quality of the soft bituminous coal was poor, it was the most accessible deposit known, so it continued to be mined. It would only be eclipsed by the discovery of the superior anthracite coal from the Pennsylvania region after the 1840's.⁷¹

Bateau transportation of coal did not reach significant levels until the early nineteenth century. In 1808 Benjamin Latrobe recommended adapting Tuckahoe Creek in Henrico and Goochland counties to obtain access to a major part of the coal field.⁷² The Tuckahoe Creek Navigation company was organized in 1827 to facilitate the passage of coal-carrying bateaux directly into the James River Canal and on to Richmond.⁷³

In 1829, some coal from the Midlothian mines was transferred by a horse-drawn tramway to bateaux at docks on the river.⁷⁴ The majority of the southside coal however, was transported by land to the deeper port at Warwick below Richmond.⁷⁵ By 1840 boats were phased out on the Tuckahoe navigation as the railroad proved to be a more efficient mover of coal.⁷⁶

Contemporary accounts of average coal loads carried by bateaux varied. Benjamin Latrobe reported that a bateau could carry 200 to 300 bushels, "when the river is moderately high."⁷⁷ It was reported in 1816 that a good load was 220 bushels and 150 the average.⁷⁸ Between the years 1804 and 1806 an average of 1,915 boatloads of coal descended the James into Richmond each year, equalling approximately 389,600 bushels of coal per year.⁷⁹ By comparison, in 1833, 677,664 bushels were shipped to Richmond by bateau.⁸⁰

Bateau transport of coal was recognized as being inefficient from the start. In 1808, Latrobe wrote, "of what adequate use is this navigation in boats carrying at an average

200 bushels of coal only, when, if the canal were well constructed, 1000 bushels might be easily and cheaply conveyed...."⁸¹ An officer of the James River Company also noted in 1816 that the bateaux in use had too little capacity compared to the effort put into shipping coal in them.⁸²

While tobacco, grain, and coal were the main products shipped down the James, other important commodities were also transported. The abundance of iron ore in the western mountains made iron manufacture Richmond's third largest industry by the antebellum period.⁸³ Pig iron was shipped by water to the foundries from upland furnaces in Buckingham and surrounding counties.⁸⁴ Throughout the nineteenth century boats regularly shipped iron ore and pig iron to Richmond.⁸⁵

During the Revolution the Westham foundry used upland iron ore to produce cannon and shot. In 1794, the Virginia Armory, which was one of the three largest cannon foundries in the country, was erected near the junction of the James River Canal and the Richmond Basin. It operated until its destruction at the end of the Civil War.⁸⁶

Other commodities transported in abundance were lime, marble, and "freestone."⁸⁷ The vast upland forests provided corded firewood, barrel staves and hoops, and sawn planks. Additional grains and grain products were corn, hay, oats, and whiskey.⁸⁸

Considerable business was also derived from trade ascending the river. Bateaux were often "backloaded" in Richmond with

goods for the upland communities. Records of things imported by upland planters reveal necessary staples and also luxury items needed to make life in the backcountry more civilized and comfortable.

Many of the region's manufactures were also sent to upriver communities. These included grain, flour, salt, plank and shingles, whiskey and rum, and material such as lime and iron ore that was bound for upland iron furnaces.⁸⁹

Thomas Jefferson required a supply of gunpowder be sent from Richmond to facilitate rock blasting in the building of a bateau canal on the Rivanna River.⁹⁰ Other items destined for the uplands included barrels of molasses and sugar, and bags of coffee.⁹¹ Also, there were always travelers who needed to get up or down the river and did not have had access to horse or carriage. They would travel the river perched atop the bulk cargo.⁹²

In addition to staples, luxuries were also sent upriver. Jefferson, who had several large plantations including houses at Poplar Grove and Monticello, imported his window glass from Richmond.⁹³ In the nineteenth century the Reverend Frederick A. Ross of Goochland County remembered,

one Christmas time, there was a piano which had been send [sic] down all the way to be turned [tuned] in Richmond - more than 100 miles round trip by water. Then there were the innumerable things for the plantation, the house, and Christmas gifts sent by the great Santa Claus, my father. Among these was a big bag of marbles for me...⁹⁴

Backloads (material carried back upriver) were more vulnerable on the return trip and were a responsibility many owners avoided. Backloaded bateaux were also heavier and made the already laborious task of poling upriver more difficult and time consuming; the trip averaging about ten days.⁹⁵ Owners published announcements relieving themselves of any responsibility for backloaded items. Even Benjamin Rucker, heir to the James River bateau's legacy, was not immune. In 1817 he announced in the Lynchburg Press that he would not be responsible for any backloading that his boatmen took on.⁹⁶ Threat of damage or loss to the cargo was evidenced by another owner's proclamation:

I am determined to take no responsibility on my self
for any loss...or receive and compensation for
backloading confined to the care of my boatmen.
Oglesby Scrugs.⁹⁷

A typical situation was revealed in an announcement placed in the Lynchburg Press in 1814:

I will not be responsible for loading taken in by
boatman Ellick, belonging to the estate of Benjamin
Palmore.

William Burford, Admr.
Amherst, 5th of May 1814 ⁹⁸

Apparently the boatman, Ellick, took on a backload belonging to Palmore without a manifest. The main load belonged to a party represented by the announcement's author, Mr. Burford, and was recorded legally on the manifest. Something happened to

Palmore's load and Burford publicly declaimed any responsibility.

Shipping Problems

Bateau navigation, while a boon to upland commerce, was still fraught with problems and frustrations for the dependant shippers. The cargoes were vulnerable to weather, the whims of the river, and the less-than-attentive (and sometimes "overly attentive") handling of the boatmen.

The very element that made the James River bateau useful was often its worst nemesis. When the water level was adequate, the trip from Lynchburg to Richmond averaged three days down, running with the current. However, it took ten days to pole back up the river.⁹⁹ Periods of drought or little rain could slow navigation and often brought it to a halt. Periods of low water were usually expected in late summer.¹⁰⁰

During low water, the size of the cargo was diminished in relation to the depth of water. It was noted that boats rarely carried a full load in low water.¹⁰¹ Isaac Weld wrote in 1776 that "the cargo carried in these boats is always proportioned to the depth of water in the river, which varies much."¹⁰² In his analysis of river improvements and canals, Latrobe said,

Unfortunately those of our canals which have been cut to pass the rapids and falls of our rivers, partake in great measure of the inconveniences of the rivers themselves; some wanting water when the river is low, and some incapable of being entered excepting at a particular height of the water in the river....¹⁰³

A problem that was aggravated by low water was the accretion of sand bars. This resulted in many appeals for better river improvements. Latrobe's report to Gallatin commented that entrances to the small canals around the falls were often inaccessible due to the "constant accumulation of bars."¹⁰⁴

Chief Justice John Marshall, writing under the pseudonym of "a Farmer" in 1816,¹⁰⁵ noted, "I was told by the keeper of [the canal locks] that nothing was more common than to see boats in tolerable tides grounded in a hundred yards or perhaps less, from the toll gates...."¹⁰⁶ A letter to James River Company president, Randolph Harrison, also in 1816, commented that "the want of water is the greatest difficulty - boats are sometimes lost below the upper locks."¹⁰⁷

Low water and shoals often required that cargoes be off-loaded or split on the nearest shore. In 1820 it was reported that "hundreds of tons of pig-iron are lodged on the shores of the river, to enable boats to pass with the small residue of their cargoes through the shallow and narrow sluices down the river."¹⁰⁸

The trials of an individual planter with the shoals and low water of the James River is best illustrated in the correspondences of Thomas Jefferson. Low water plagued his shipments of produce to Richmond constantly. In January 1799 he wrote "the shutting of the river has prevented any tobo. [tobacco] coming here as yet...."¹⁰⁹

Jefferson often had to split loads in order to get his entire crop to market. Hiring extra boats was a costly endeavor as he observed in 1816,

My crop of flour has been waiting a rise in the river. Gilmer [a boatman] is engaged to carry it down, and promises if there is not rain in a few days he will take it by halfloads to Columbia and whole from there. This increases the expense of transportation.¹¹⁰

He wrote again in 1819,

I am really miserable at the state of our river, and the continuance of the most obdurate drought ever known....I have between 3. and 400 barrels of flour now ready and wait only for a good rain...."¹¹¹

Several months later he complained, "this happening to me now a second year, has reduced me to all but bankruptcy...."¹¹²

If low water made passage downriver a problem, transport upriver was doubly difficult. The trip from Richmond to Lynchburg and back by bateau, in sufficient water, averaged about fifteen days. During periods of low water the same trip could take up to four weeks.¹¹³ A letter in the Richmond Enquirer in 1826, complained of this and called it a "great public grievance" saying "it is not uncommon for a passage to be made from Liverpool to New York in less time than is taken to perform a passage from Richmond to Lynchburg."¹¹⁴

While low water was a hindrance to bateau navigation, high water could be equally problematic. A report on the Rivanna River in 1839 noted a situation in which an unusually wet summer encouraged more commerce than usual for the month of August. This required more boats than usual and left upland farmers with

fewer vessels to split loads on when the water level fell in the autumn.¹¹⁵

Winter ice was another natural condition that affected the movement of boats on the river. During his unending struggle with the Rivanna, Jefferson encountered a predicament in the winter of 1820 in which "the drought of the summer which commenced in June should meet the ice of the winter, without a single interval for a boat to make a trip."¹¹⁶

Goods stored in open bateaux were often at the mercy of the elements. In 1792 a shipment of Jefferson's tobacco from his Bedford plantation was rained on. The poor, loose construction of the hogsheads caused most of the shipment to be ruined by water.¹¹⁷ On another occasion Jefferson's boatman left his shipment of flour sitting uncovered at the basin in Richmond. As a result, rain caused great damage to the cargo.¹¹⁸

Dangers abounded for those seeking to ship their goods on the river. Whether from the danger of navigating among the rocks or the intentional acts of unscrupulous boatmen, hogsheads of tobacco were often lost overboard. The term for doused hogsheads, "ducking," soon found its way into the legal terminology.¹¹⁹

Jefferson's tobacco suffered numerous duckings along with most other planters on the James. An occasion was related to him concerning his tobacco in 1805:

I am sorry to inform you that 3 Hhd. [hogshead] of your Tobacco were ducked a few days ago in a Mr. Burfords boat, which evidently proceeded from carelessness; the boat having been suffered to run

upon a rock and sink after passing through the locks, and at a place where I am told there is not the smallest danger, when the river is no higher than it then was.¹²⁰

General John Hartwell Cocke recorded the difficulties of trying to salvage ducked tobacco in 1816: "Shipt 18 Hhds. of Tobacco in Tait's Boats of Lynchburg...Got one Hhd. thrown into the River by the carelessness of the Carter [carrier]. Stripped and picked it over."¹²¹ Two days later he, "found the ducked Hhd. of tobacco much injured. Hung up a greater part of it. the remainder quite damp although it was not more than one hour in the water."¹²²

Arguments in favor of completing the canal were fueled by the frequency of duckings. A report commented, "tobacco planters too, will know how to estimate the value of their being secured against the loss occasioned by ducking their tobacco, while descending the river in the present state of its navigation."¹²³

Perhaps the greatest threat to a bateau's cargo was from the boat's crew. The planters often assumed that much of the damage was done intentionally by the watermen. They were accused of "losing" the hogsheads in order to recover and sell them at some other place.¹²⁴ It was lamented that it was difficult to prove theft on the river (no witnesses) and that those who stole "go most commonly unpunished for their crimes."¹²⁵ Prosecution proved no easy undertaking as, "it is extremely difficult in any case to make the waterman pay; the frequency of such accidents I suppose creating a general

prejudice in their favor."¹²⁶ As will be seen in more detail in the following chapter, the watermen were perceived by much of the general population as being of questionable character. The common sentiment was expressed in the Richmond Enquirer:

the character of the boatmen now on the river, puts in jeopardy the property they get charge of. Pillaging of loading and the adulteration of the more costly parts of it, are very common; and not unfrequently the entire load is stolen by the boat's crew.¹²⁷

Another contemporary newspaper article stated that a bateau's crew would "very possibly, land the whole [cargo] at the bottom of the river."¹²⁸

The accumulated risks of shipping cargo in open bateaux affected the freight costs for the planters. The freightage which was considered "exorbitant in the extreme"¹²⁹ added weight to the argument favoring a completed canal upon the James which would not rely upon the whims of the river or watermen.¹³⁰

One planter wrote Governor Thomas Mann Randolph in the 1820's that "profits on many of the heavy and bulky articles...when carried to market in such small boats are almost wholley swallowed up by the freight."¹³¹

Market Town Growth

Another aspect of bateau commerce on the James was the establishment and growth of market towns resulting from the tobacco trade along the upper river. Tobacco and its influence

on urban growth near inspection warehouses has been examined previously in this paper. As noted earlier, the colonial Tobacco Inspection Act of 1730 required inspection warehouses in order to insure uniform quality of exported tobacco. Exploitation of the Virginia piedmont's agricultural resources resulted in the placement of many warehouses at the heads of navigation along the fall line. Merchant stores and storage warehouses in addition to various other accouterments of emerging civilization accumulated in these heretofore backcountry wilderness areas of the early eighteenth century.¹³²

As a result of the Act of 1730, the Virginia General Assembly provided for a warehouse at the head of the falls of the James on land owned by William Byrd.¹³³ Three years later Byrd laid the foundations of a city at "Shacco's [Shockoe] to be called Richmond" with the intention that it be a mart "where the traffic of the Outer Inhabitants must center."¹³⁴ T h e tobacco and flour trades flourished at these places. This was influenced in part by the rise of Glasgow, Scotland as the center of the world tobacco market in the mid-eighteenth century.¹³⁵ Many Scots settled in Richmond after 1740, opening stores and serving as factors for the great tobacco houses of Glasgow.¹³⁶ The large quantities of tobacco imported by Great Britain in the second half of the eighteenth century made Richmond the leading tobacco exporter in the world. The hinterlands around Richmond became the most rapidly settled

area of Virginia during the remainder of the colonial period.¹³⁷ Richmond's predominance as a tobacco shipping center continued through the early nineteenth century, with one-fourth of the entire Virginia and North Carolina crop passing down the James River to Richmond.¹³⁸

Benjamin Latrobe summed up Richmond's relationship to the James as a major route of commerce:

Nature has perhaps, done more for Richmond than for any scite where a city has been planted. For 10 miles above the city on both sides, and upon several islands of the stream, there are innumerable mill seats supplied by one of the noblest rivers in the union. Immediately above the head of the falls lies an inexhaustable treasure of coal. Every art and manufacture to which human ingenuity can employ fire and water, may be carried on with the least expense. From above, an easy and widespread navigation, collects on this spot all the raw materials which our climate can produce; below, a river capable of bearing so [such] vessels sufficient for every trade, but that across the ocean, is ready for the exportation of merchandize.¹³⁹

Upriver, Lynchburg was a city greatly influenced by Richmond's growth and whose own existence was intertwined with Richmond's fortunes. Lynchburg, at the foot of the Blue Ridge Mountains, was the site of a ferry crossing operated in 1756 by John Lynch.¹⁴⁰ Lynch also was the operator of an inspection warehouse. The area was known locally as Lynch's Ferry or Lynch's Warehouse. Together with the small town of Madison Heights, on the cliffs across the river, Lynch's Ferry became the center of the tobacco trade in the upland region.¹⁴¹ Tobacco was rolled in hogsheads and fellies or carted in from the surrounding plantations to be shipped by bateaux to

Richmond.¹⁴² The warehouses in Lynchburg became known locally as "rolling houses."¹⁴³

Lynch's Warehouse became the county seat of newly formed Campbell County and the town of Lynchburg was incorporated in 1786. A visitor to Lynchburg in the 1790's noted:

This town contains about one hundred houses, and a warehouse for the inspection of tobacco, where about two thousand hogsheads are annually inspected. It has been built entirely within the last fifteen years, and is rapidly increasing from its advantageous situation for carrying on trade with the adjacent country.¹⁴⁴

By the mid-nineteenth century Lynchburg became a major tobacco manufacturing center. It was a wholesale distribution center servicing much of the western region of the country including Kentucky and Tennessee.¹⁴⁵ During its ascendance, Lynchburg was considered the wealthiest city in the United States in proportion to its population.¹⁴⁶ It also became the third largest tobacco market town in the state, behind Richmond and Petersburg.¹⁴⁷

A number of smaller towns that were important to the tobacco trade also appeared along the James River. They grew around the inspection warehouses that were established near the conjunction of the James and its smaller tributaries. Such towns as Milton on the Rivanna¹⁴⁸ and Warminster¹⁴⁹ and Columbia¹⁵⁰ on the James, prospered during the era of bateau commerce. Most of them would disappear with the bateau.

One market town of note during the bateau era was Westham. Originally a plantation on the land of William Byrd, Westham was located seven miles above Richmond near the beginning of the

falls. An inspection warehouse was established there in 1745. Canoes and bateaux stopped there and carted goods around the falls until the first portion of the James River Canal was completed there in 1795.¹⁵¹

The Freshet of 1771 swept away all of Westham's warehouses but the settlement continued to thrive.¹⁵² The Westham Foundry was completed in 1779 and together with the State Laboratory, completed a year later, manufactured weapons and ammunition in addition to other iron implements needed in Virginia's efforts in the Revolution.¹⁵³ During Benedict Arnold's raid on Richmond in January, 1781 the foundry was destroyed and never rebuilt.¹⁵⁴ The completion of the canal between Westham and Richmond rendered the trans-shipment point unnecessary and the town soon disappeared.

The accumulated problems associated with bateau navigation encouraged arguments for a complete canal line on the upper James River. A growing agitation among planters and merchants was reflected in 1826 when an editorialist addressed the State General Assembly. He considered it "derogatory" to the state that "the navigation of James River should so long have continued in its present bad condition, when its immense trade is taken into consideration."¹⁵⁵ He stated further that "if we had a canal, decked boats would ply upon it and respectable and trustworthy persons would have the management of them."¹⁵⁶

By the 1840's, the bateau began its decline on the James. The James River Canal was completed between Lynchburg and

Richmond in 1840 and horse-drawn canal boats capable of carrying up to ten times as many tobacco hogsheads came into use.¹⁵⁷ In 1854 there were only 54 bateaux on the canal compared to 195 canal boats.¹⁵⁸ Traffic above Lynchburg continued to be carried by bateau until the completion of the canal to Buchanan in 1851.¹⁵⁹

The James River bateau remained in use on many other upland rivers until the late nineteenth century, when the railroad finally penetrated the upland backcountry and took over the commerce.¹⁶⁰ One source claimed that in the early twentieth century, bateaux were still carrying goods to the railroad bridge at Hurts, Virginia on the Staunton River, where the cargo was raised by pulley into waiting freight cars.¹⁶¹

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CHAPTER VI

BATEAUMEN

Romantic Images

Bateaux and the men who operated them were often romanticized in contemporary literature. The boatmen were not so much characterized as the grizzled thugs who plied the Mississippi, as they were romantically portrayed as a gang of rascally chicken thieves. In reality, nineteenth-century navigation on the upper James was a gruelling endeavor performed primarily by slave labor. Commerce was hampered by countless cases of theft and property destruction by the crews.

Two of the main chroniclers of the life and labors of bateaumen were regionally recognized nineteenth-century authors. They viewed life on the river from the privileged perspective of leisurely middle-class travelers. Their romanticized writings had little empathy for the true hardships of moving heavy cargo boats by hand.

George William Bagby was a journalist from Buckingham County, Virginia. Bagby served as the Washington correspondent for several newspapers in the mid-nineteenth century before becoming editor of the Southern Literary Messenger in 1860. He was known for his pro-secessionist writings as well as for being a noted humorist and satirist.¹

David Hunter Strother was a writer and illustrator who published a series of essays and sketches for Harpers New Monthly Magazine under the title of "Virginia Canaan." The

essays were collected and published as Virginia Illustrated in 1857 under the pseudonym of "Porte Crayon."²

Both authors presented jovial pictures of the boatmen that betrayed their romantic bias. Strother wrote,

The river was then crowded with boats, and its shores alive with sable boatmen - such groups! such attitudes! such costume! such character! they would have been worthy subjects for the crayon of a Darley or a Gavarni!³

Bagby was no less glowing as he gushed, "Those were the 'good old days' of batteaux - picturesque craft that charmed my young eyes more than all the gondolas of Venice would do now."⁴

Crews

The men who navigated the bateaux on the James River were predominantly black. Bagby wrote that, "if ever man gloried in his calling, - the negro batteauman was that man. His was a hardy calling, demanding skill, courage and strength in a high degree."⁵ A majority of those blacks employed on the river were slaves.⁶ Bagby said that bateau navigation was "made for slaves."⁷

Some sources reported freedmen and white men on the river as well: "The boatsmen were, for the larger number, the servants of the planters or freedmen. Sometimes they were white."⁸ An illustration of a bateau and its crew that accompanied William Tatham's Essay on Tobacco [fig. 5] depicted a crew of two white men and a Negro operating the vessel. Alfred Percy noted that the white bateaumen were considered to be a class of "toughs" in

the same league as the notorious tobacco rollers who took tobacco to market in the rolling hogsheads and fellies.⁹ One white bateaman, Dan Creasy, was remembered as one "whose name was a byword and immortalized in song downstairs in the kitchen and in the cornfield."¹⁰

The black bateamen were not portrayed in so harsh a light. They were seen as "a laughing, humorous set, liked by everybody...."¹¹ Strother depicted the crew of one boat:

The boat's crew consisted of Captain Adam and two assistants; shoeless, hatless, half-naked figures, whose massive chests and brawny limbs reminded one of the exaggerated figures of Michelangelo done in bronze.¹²

The tough physical effort of poling bateaux may not always have resulted in such Adonis-like figures; a black bateaman in 1818 was noted as "inclining to be hump shouldered."¹³

It is unlikely that many boatmen were so employed year-round. While there was demand for boatmen during part of the year, periods of low water would decrease the need. Tatham observed that some of the laborers who loaded tobacco hogsheads on the ships at Richmond were negro watermen. They were preferable because of their experience at maneuvering the heavy hogsheads. Tatham cited "several instances of middle-sized negroes, who, from an habitual slight, and practical skill, would turn three hogsheads of tobacco upon their ends at once...."¹⁴

Many watermen were otherwise employed as farmhands. Jefferson wrote of an instance in which a shipment could not go

down river "until the harvest is over because the boatmen are all employed in that [work]...."¹⁵ A Rivanna Navigation Company Report recommended that farmers possess their own boats so that "their own hands might carry their produce to Market whenever they wished and at other times be employed on their plantations."¹⁶

Bateau Navigation

The normal crew of a bateau usually numbered three men. Two of them propelled the vessel with long, iron-tipped poles while one steered from the aft end with a long sweep or steering oar. Benjamin Latrobe noted that "three men are sufficient to manage a Batteau."¹⁷ Isaac Weld also wrote in 1796 that "three men are sufficient to navigate one of these boats....They fall down with the stream, but work their way back again with poles."¹⁸

The journey downstream was relatively free of difficulties in adequate water. The bateau "floated down easily."¹⁹ The main task was to steer with the sweep in the stern. Often, another sweep would be mounted on the bow to make the vessel respond faster.²⁰ A observer on the New River near Bedford, Virginia described a bateau descending the river that was,

...managed by three negroes; the 'steersman', who guided the boat with a long and powerful oar; the headsman, who stood on the bow to direct the steersman by waving his arms; and an extra hand, who assisted with an oar in the eddies and smooth parts of the river.²¹

Some owners sought to avoid the return journey upriver. Percy wrote that if the river was particularly rough, an owner would send his boats down in groups of three, sell two in Richmond, and combine all three crews to move the one with a load of freight back upriver.²²

More often the crew faced the ordeal of several weeks of forcing the bateau upstream. Poling was the primary way to move the bateau against the current. One narrative depicted the technique of a five-man crew poling a bateau upriver:

The crew of each boat consisted of five Negro men; one in the stern guided the boat and two on each side propelled it by means of long, iron-tipped poles. On the men's shoulders were big pads on which the poles rested while pushing. The two men on one side held the boat while the other side pushed. The two men pushing would start from the prow to take their turn at pushing."²³

Bagby described a waterman maneuvering a bateau:

I can see him now striding the plank that ran along the gunwale to afford him footing, his long iron-shod pole trailing in the water behind him. Now he turns, and after one or two ineffectual efforts to get his pole fixed in the rocky bottom of the river, secures his purchase, adjusts the upper part of the pole to the pad at his shoulder, bends to his task, and the long, but not ungraceful bark mounts the rapids like a sea-bird breasting the storm. His companion on the other side plies the pole with equal ardor, and between the two the boat bravely surmounts every obstacle, be it rocks, rapids, quicksands, hammocks, whatnot. A third negro at the stern held the mighty oar that served as a rudder.²⁴

Other contrivances, were also used depending upon the requirements of the particular situation. The bateauman's options for propelling the vessel ranged from merely floating with the current to physically manhandling the boat through the

rocks and shoals. An account of a bateau trip upriver on the Potomac in 1822 was indicative of navigation on most of the southeastern upland rivers:

the boats passed the ripple with great difficulty, there being no passage affording sufficient water; the boats were lifted and dragged over, by doubling the crews, and were more than an hour in moving less than one hundred yards....²⁵

Often, the crew had to jump into the water and lift the vessel with brute strength.²⁶ Frequently in traveling upriver, tow ropes were employed. The boatmen "towed them upstream with ropes along towpaths through channels where rapids and swift currents made poling difficult."²⁷ In 1807 the James River Company noted that the only towpaths on the river were at "particular passes where the sluices are rapid; and these are only for men, no horses being used for the purpose, on any part of the work."²⁸

Tow ropes were also required when bateaux moved through the locks of the canal above Richmond. The James River and Kanawha Company passed regulations preventing boatmen from using the iron-tipped poles, presumably because of the possible damage it would do to the fragile earthen banks of the canal.²⁹ All vessels using the canal were required to have "snubbing lines, that they may be towed, with a line by men or horses...."³⁰

Social Aspects of Bateau Crews

Boatmen were usually furnished with rations intended to sustain them for the extended journey downriver and back. "The

boatman's fare, of middlings, and corn-bread, was for a time a prime luxury," wrote Strother.³¹ One source reported that a crew of three boatmen was provided with rations consisting of sixty pounds of bacon and two bushels of meal.³² A crew in 1800 was provided with money to purchase its ration of ninety pounds of bacon in Richmond.³³

One contemporary writer felt that the food allotment provided for the boatmen was too much. Insisting that it was an abuse requiring correction, he wrote "the custom is at present to give the hands of each boat with a load from Lynchburg to Richmond, 60 lbs of bacon and 2 bushels of corn or meal."³⁴ He argued that the average daily allotment for three crew members was ten and a half pounds per day per crew and contrasted the amount with a half pound a day allocated to soldiers during the War of 1812. Declaring that only thirty pounds of bacon should be allotted a crew, he concluded that "this custom, and those abuses, not only throws a loss upon the shippers of produce and owners of goods of the cost of the surplus provision, but the passage both up and down the river are rendered more tardy by them...."³⁵

Some accounts suggest that the fare wasn't always the dull fare of meal and bacon. Bagby wrote that "what they didn't eat wasn't worth eating. Fish of the very best, both salt and fresh, chickens, milk and the invincible, never-satisfying ashcake and fried bacon."³⁶ Another antebellum traveler recalled that "splendid meals were served. We had three dinners

on board; fresh fish, bacon, chicken, roast potatoes, biscuits, coffee and pie....There was no table; the cook served the plates and we sat on stools and ate."³⁷

Strother too commented on the fare of bateaumen and their passengers: "Occasionally we varied our fare by shooting a wild duck or hooking a string of fish; but fish, flesh, or fowl, all had a relish...."³⁸

Bateaux were often equipped with makeshift galleys so that meals could be cooked on board. Bagby noted that "their cook's galley was a little dirt thrown between the ribs of the boat at the stern...."³⁹ Another source said that each end of the bateaux were equipped for cooking.⁴⁰

During the bateau era, the banks of the James River were lined with encampment areas, where the crews would stop for the evenings after long days navigating the river. The evening camps were often portrayed as lively places. They were crowded with crews and passengers who had often travelled all day in fleets of bateaux.⁴¹ Bagby recalled "hauling in shore at night under the friendly shade of a mighty sycamore, to rest, to eat, to play the banjo, and to snatch a few hours of profound, blissful sleep."⁴²

On chronicler noted the colorful stories one was apt to hear at such camps:

Walking along the bank in the dusk of the evening, we heard them discussing the various merits of canoes and wagons, and telling most enormous stories of being stuck in the mud, or shooting rapids, some of which I would tell you over again, but that a good story in a batteaux don't do to tell everywhere.⁴³

Strother wrote that,

Night was the glorious time, when the boats were drawn along shore in some still cove beneath the spreading umbrage of a group of sycamores. A fleet of fifteen or twenty would sometimes be collected at the same spot. The awnings were hoisted, fires lighted, and supper dispatched in true boatman-like style.⁴⁴

He also noted the sleeping arrangements:

The couches, to which it was thought a luxury to retire, were made from fence rails laid across the boats under the awnings. But I preferred to take my blanket and stretch myself upon the tobacco hogsheads from which I could watch the twinkling of the mystic stars.⁴⁵

After meals were consumed, "the fun commenced."⁴⁶ The boatmen were always ready for a celebration: "a fiddle or two were always there for a dance."⁴⁷ Strother reported:

The sly-whiskey jug was passed about...banjoes and fiddles were drawn from their hiding places, the dusky improvisatore took his seat on the bow of a boat and pored forth his wild recitative, while the leathern lungs of fifty choristers made the dim shores echo with the refrain.⁴⁸

In addition to the fiddle and banjo, other instruments were added to the unruly sessions. Percy wrote of two "musical oddities" that were played:

One was the bones that were clacked - four bones two in each hand held between the middle fingers and rattled to the music. The other was the jawbone. This was usually the jawbone from the skeleton of a horse that had sound teeth. An iron key was stroked across the teeth in time to the music creating a thrumming sound.⁴⁹

The music of the black bateaumen was apparently removed from the more well-known spirituals of many plantation slaves (possibly due to the boatmen's distance from oppressive supervision by overseers). Strother observed the nature of the

bateahmen's music: "The music and manner of singing were thoroughly African, and as different from the negro music of the day as from the Italian opera."⁵⁰ The themes were based on incidents of plantation life and the melodies were "wild and plaintive, occasionally mingled with strange, un-couth cadences, that carried the imagination forcibly to the banks of the Gambia, or to an encampment of rollicking Mandingoes."⁵¹

The subject matter of their songs reflected aspects of the bateaman's life. A tune that was noted on one river was "The batteauxman robb'd the old woman's hen-roost."⁵²

Another song that was sung on the river was remembered as the "Song of the Bateaux." The refrain of the chorus went,

Oh, I'm gwine on down
Ter Lynchburg Town,
Ter carry my 'bacca down dar.⁵³

The lyric of one song attributed to the bateahmen reflected another aspect of the river camps, and the boatmen's pursuits:

Juggity jug,
Whar's dat jug?
Juggity jug,
Old stone jug;
Juggity jug,
Broken-mouthed jug;
Juggity jug,
Old whiskey
jug-Juggity jug.⁵⁴

The presence of the "old whiskey jug" had potential for calamitous results. Strother wrote that "the song generally wound up with an antic dance performed by the juniors of the company," and that the "mirth began to border on the riotous...."⁵⁵

Alcohol also had dire effects on bateau commerce. A witness complained that alcohol was slowing river trade and thereby causing higher shipping rates. He deplored the proliferation of "grog shops" along the river between Lynchburg and Richmond.⁵⁶ In 1778 an incident was recounted in which a bateauman went down the James with a bottle of whisky and a load of tobacco. Upon reaching Westham (pre-canal era) he was too inebriated to stop and unload his cargo. His boat miraculously survived the severest of the falls and he arrived at Shockoes, "not quite sobered."⁵⁷

Character of the Bateamen

The character and questionable integrity of the bateamen was the subject of much debate during the bateau era. Although subject to some romanticizing, they were serious issues to those who were victimized by the boatmen's disregard for private property. A citizen griped in the Richmond Enquirer that,

the character of the boatmen now on the river, puts in jeopardy the property they get charge of. Pillaging of loading and the adulteration of the more costly parts of it are very common; and not unfrequently the entire load is stolen by the boats crew...⁵⁸

Another contemporary wrote of the boatmen:

Running the river, as it was called, had not a high name for any of the cardinal virtues. The temptation to visit the hen roosts and to inquire into the condition of the pigsty were not often registered. Some of these fellows, indeed, had reputations for cunning exploits which were the talk of the great house and the Negro cabin on both sides of the James from Richmond for 100 miles.⁵⁹

Thomas Jefferson suffered from the depredations of his own boat crews. An 1803 communication to his Richmond agent implored,

be pleased also to send these by the first safe boatman a hogshead of molasses. I say safe boatman because nothing is so liable to adulteration by them as molasses. The wine should also be confined to trustworthy hands....⁶⁰

In 1808 he again complained,

the system of plunder which our watermen carry on with respect to whatever of mine is put into their hands, and which they say is a matter of right induces me to wish that these packages, and all others of mine thereafter may be reserved and put into the care of Mr. Randolph's watermen. Their credit with the family...will give a security which we can have with no others.⁶¹

Many of the notorious characteristics attributed to the Ohio and Mississippi River boatmen actually had their origin in earlier stories of bateaumen on Virginia rivers. James Kirke Paulding was known for lionizing western river boatmen as "half alligator" in his 1831 play, The Lion of the Wilderness. Paulding first used this characterization after encountering a bateauman on the banks of the Shenandoah River in 1816. His colorful description described eastern boatmen and wagoneers as "half horse, half alligator...part earthquake, and a little of the steamboat."⁶²

Tales of the larcenous habits of the boatmen were legion. While it was noted that "some few of these men are as honest as any other men," most were considered dishonest.⁶³ No article on board the boats, or property of river-side farmers was immune

to the boatmen. Some reminiscences tended to be tempered by romanticism as the reporter looked back at them over time.

Bagby was guilty of this when he wrote:

The up-cargo, consisting of sacks of salt, bags of coffee, barrels of sugar, molasses and whiskey, afforded good pickings. These sturdy fellows lived well, I promise you, and if they stole a little, why, what was their petty thieving compared to the enormous pillage of the modern sugar refiner and the crooked whiskey distiller? They lived well.⁶⁴

Strother also recalled encouraging their activities:

When in idleness we grew capricious, we gave money to the first mate, Caleb, who, in addition to other accomplishments, had an extraordinary talent for catering. Caleb would pocket our cash and steal for us what ever he could lay his hands on: an old gander, a brace of fighting-cocks, a hatful of eggs, or a bag of sweet potatoes. As he frequently brought us twice the value of our money, we did not trouble ourselves with nice inquiries into his mode of transacting business, but ate everything with undisturbed consciences.⁶⁵

General John Hartwell Cocke, who was more materially involved with the boatmen, felt that the crimes were committed by "slaves of the worst character" and that "no man's stock of cattle, sheep or hogs are safe in a pasture bordering the River." The boatmen were occasionally so bold as to thresh shocks of wheat in a farmer's field at night.⁶⁶

The thieves often sold their spoils at grocery stores that had been erected along the river for the purpose of selling to the boatmen. One store owner in Fluvanna purchased 471 bushels of wheat and seven hogsheads of tobacco from a crew and then resold the goods to a nearby miller. This type of shady dealing prompted Cocke to recommend banishment of the grocery stores and

to call for the regulation of landings and encampment points for the boatmen.⁶⁷

Even if they were not stealing outright, the boat crews were suspected of destruction by "skimming." A letter to the Lynchburg Virginian protested, "Goods, particularly of the grocery kind, cannot be sent up our river without (some exceptions to the contrary) being pillaged." The correspondent stated that articles delivered by boatmen were "deficient in weight and measure" and that the boatmen "contend impudently for freight, as if the articles were delivered by him in good order."⁶⁸

Many accidents were perceived as arising from carelessness and negligence. Jefferson wrote of the loss of several hogsheads, which "evidently proceeded from carelessness; the boat having been suffered to run upon a rock and sink...at a place where I am told there is not the smallest danger...."⁶⁹

Boatmen were also careless with canal company property. Jefferson related another occasion on which an "ignorant or careless boatman" neglected to close a canal lock gate after he passed and a flood in the river nearly destroyed the foundation of a mill on the canal.⁷⁰

The weight of the accusations against the boatmen forced the Virginia General Assembly to enact laws to protect both the shippers and farmers on the river. In February 1811, an act was passed stating that

the watermen navigating the James River and its branches, above the falls at Richmond, are daily in

the practice of committing depredations on the property of the inhabitants of the country....⁷¹

The act covered a number of situations in an attempt to halt the thievery and lawlessness. Among them, an inspector of boats was appointed to examine the manifests and compare them against cargoes as each vessel entered the upper locks of the canal.⁷² The act called for manifests (see Chapter IV) to be prepared by the shipper or planter and carried by the "head man" of the boat.⁷³

The act divided recognition and punishment of the crimes by free and slave watermen. It provided that any free boatman who "received on board of his boat or other vessel, any produce, wares or merchandize, and shall embezzle the same, or any part thereof, to the value of four dollars and upwards, shall be deemed guilty of a felony...."⁷⁴ The accompanying penalty was a term in jail or the penitentiary of one to five years.

Theft of value less than four dollars was considered petty larceny and the offender was sentenced accordingly.⁷⁵ Any free waterman who was caught "stealing or burning rails, or other wood, already cut, cutting locust or other trees, stealing grain of any kind, livestock...or anything whatsoever" was required to pay the owner triple the value of the stolen goods.⁷⁶

The destruction or theft of cut wood and fence rails was particularly irksome to the upland farmers along the river. It will be recalled that Strother reported the bateau's sleeping facilities as "fence-rails laid across the boats under the awnings."⁷⁷ One farmer was so incensed at this practice that

he included a provision in his will that he be buried by the river so he could guard his fence from the boatmen.⁷⁸

In spite of the laws, there was considerable public frustration at the inability to enforce them. One writer complained that "most of those who navigate this river in boats are unable to pay for any damage; and those who steal go most commonly unpunished for their crime."⁷⁹ A letter in a Lynchburg paper expressed similar sentiments: "the law upon the subject of such depredations is of rigid character, but it is rarely, if ever, enforced."⁸⁰ The author wrote that if the owner or consignee of the ravaged goods were to take the initiative of pursuing the law when the grievance occurred, "we should see and hear less of depredation, pillaging and stealing of goods by the boatmen, and their claiming with threats and defiance, freights upon loads when the stealing is much greater than the carriage amounts to."⁸¹

Jefferson's shipments suffered from pilfering also. In 1805 his agent in Richmond informed him that "I am told it is extremely difficult in any case to make the waterman pay; the frequency of such accidents I suppose creating a general prejudice in their favor."⁸²

One of the most difficult problems in prosecution of the watermen was to establish the county in which the crime occurred and who had jurisdiction over the case.⁸³ The legislature made an attempt to rectify the problem in 1811 by allowing peace officers to cross to opposite river banks to apprehend watermen

and return them for trial in the county in which the theft occurred.⁸⁴ This appeared to have little effect. In 1826 a correspondent with the Richmond Enquirer called for the General Assembly to amend the law concerning felonies on the James, but no real change appears ever to have been made in the laws.⁸⁵ It is likely that the problem continued until the completion of the canal in 1840, after which the canal company could have more closely regulated trade.

The Black Experience on the River

As noted above, many of the black bateaumen who navigated the James were slaves, often the "servants of planters."⁸⁶ Another source indicated that they were sometimes "owned by companies."⁸⁷ Jefferson rented out his boatmen to other planters on the Rivanna and James. He wrote his Richmond agent,

Mr. John H. Craven, who rents my farms here & my negroes, is setting up a boat for the carriage of his own produce to Richmond. As this will be conducted by my own negroes, I would hereafter give him a preference in bringing whatever may be in your hands for me when his boat is down."⁸⁸

General Cocke also hired his slave boatmen out to the boat owner who was carrying Cocke's tobacco:

Shipt 9 Hhds. leaf tobacco on Tom Faress's boat and hired him Pompey to run the River at the rate of \$100.00 per year⁸⁹

An advertisement for a slave sale also named a slave boatman:

Waterman for Sale

Will be sold, on Saturday, the 6th day of April next, on a credit of twelve months, before the market house, in the town of Lynchburg, a NEGRO MAN, a prime waterman, and known on James River by the name of Cheatwood's Ned.

Jesse Spinner⁹⁰

The attitudes and prejudices of the whites towards the black rivermen were inherent in the writings of the period. As with the earlier-mentioned theft issue, authors' memories sometimes became more romantic with the passage of time between the event and the writing. Bagby commented that bateau navigation was "made for slaves, and we had the slaves."⁹¹ In the same article, Bagby exclaimed, "I want the batteau back again, aye! and the brave, light hearted slave to boot."⁹² Strother too, portrayed the experience of the black man on the river in a seemingly glib manner. His depiction of the, "rollicking Mandingoes" at the night camp and their "antic dance" is illustrative.⁹³ General Cocke, as previously noted, had a more jaundiced view of the watermen, calling them "slaves of the worst character."⁹⁴

It may be that the black watermen were relatively satisfied with their lot and were, as one chronicler wrote, "a laughing humorous set."⁹⁵ They did appear to lead a fairly independent existence compared to that of the plantation slave. No reference mentioned the bateaumen as having overseers accompanying them on their trips. The voyage from Lynchburg to Richmond and back took several weeks so that they were on the

river for extended periods, where they could "as carriers, make friends among all conditions."⁹⁶

They were also entrusted with responsibilities. As watermen, they were liable for the entire cargo - a business that, as we have seen, was carried out with varying degrees of dependability. They were also trusted to transact business and make purchases. Merchants such as the Ellis and Allan Company permitted their boatmen to purchase supplies.⁹⁷

In respect to the incidence of theft on the river, it was believed by some, that proof of crime was difficult, "owing to the large number of blacks employed."⁹⁸ The population's suspicion toward the black watermen was evident in the 1811 Act for Regulating the Navigation of the James River. One provision denied the right of any "free negro or mulatto" to carry fire arms on board their boats.⁹⁹ The act also provided that,

when any free negro or mulatto shall give a manifest of any loading put on board of any boat, he or she shall obtain a certificate from some respectable white person certifying the truth of the manifest.¹⁰⁰

The laws applying to slave boatmen were usually the same as those pertaining to free blacks, but the penalties were more harsh. If a free waterman was caught stealing wood, livestock or grain, he was required to pay three times the value of the stolen property; a slave convicted of the same offense would get twenty lashes on his or their bare back while his owner made financial restitution.¹⁰¹

Another provision of the law prevented all blacks from strolling away from the boats "above the banks of the river, or

any of its branches, while on a trip up or down...or at any place while loading."¹⁰² Any black man so caught would receive up to twenty lashes. The accused could release himself from the punishment if he was fortunate enough to possess two dollars.¹⁰³

Occasionally a slave was unwilling to relinquish the freedom experienced on the river. Contemporary newspapers contained numerous references to escaped slave boatmen. A notice in the Lynchburg Virginian carried a fifty dollar reward for Adam who ran away from his owner in Tennessee. He was previously employed

running the river for the last seven years. I am certain he will try to get to Richmond; but will first aim for Lynchburg, and descend [sic] the James River to Richmond."¹⁰⁴

Another announcement in the same issue was for Daniel from Bedford, who was employed for "some 2 or 3 years in [the] Boating business, which latter he prefers & is somewhat skilled in working of a Boat."¹⁰⁵

A notice in a later edition called for the return of Abram, who lived in Rockbridge County:

Abram is well known on James river as a boatman as he has been employed in running the river for many years. He will in all probability be found either lurking either about Lynchburg or on the River.¹⁰⁶

Postscript

The historic record concerning the bateaumen on the James River provides the researcher with a lesson in the

interpretation of historic resources. The caricaturish images of Strother and Bagby still yield valuable insight into the activities and societal aspects of a group of people. To consider these sources alone however, would create a false perception of the true nature of the boatmen. A full picture of life on the river is developed only after a complete analysis of nineteenth-century sources is consulted.

It should be noted further, that the analysis of historic documents does not always reveal the complete story of a subject. A social, economic, and developmental history of the James River bateau has thus far been concluded from the documentary sources. Descriptions and contemporary illustrations still give only a vague concept of the form and appearance of the boat, the life of its crews, and the cargoes it carried. An analysis of the material remains of such vessels can contribute significantly to a comprehensive picture of a unique vessel that was a primary instrument in the economic development of piedmont Virginia and consequently, much of the southeastern United States.

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CHAPTER VII

EXCAVATION AND ANALYSIS OF A JAMES RIVER BATEAU

Richmond Basin Excavation

In the late summer of 1983, a number of canal boats and bateaux were discovered in downtown Richmond during an excavation for the foundations of the James Center corporate office complex. The discoveries took place at the site of the former James River Canal turning basin, also known as the Great Basin, near the Shockoe Slip Historic District. This event provided an invaluable opportunity to study a number of nineteenth-century canal and river boats. It was also a lamentable event in that despite corporate good intentions and volunteer efforts, much information and the bulk of the material remains were destroyed.

As the terminus of the James River Canal, the basin was the main focus of economic activity brought on by the river trade within the James River Valley. [fig. 12, 13] Completed in 1800, the Great Basin represented a tremendous advance for the commerce of the region. Cargo that had previously required transfer to wagons above the falls at Westham could now be carried all the way into the city by bateau.¹

The granite-walled basin encompassed approximately thirteen acres and was nearly seventy feet deep in some places.² It was situated between 8th and 11th Streets on west and east ends and between Cary and Canal Streets on its northern and southern sides. Located between the base of Capitol Hill and the James

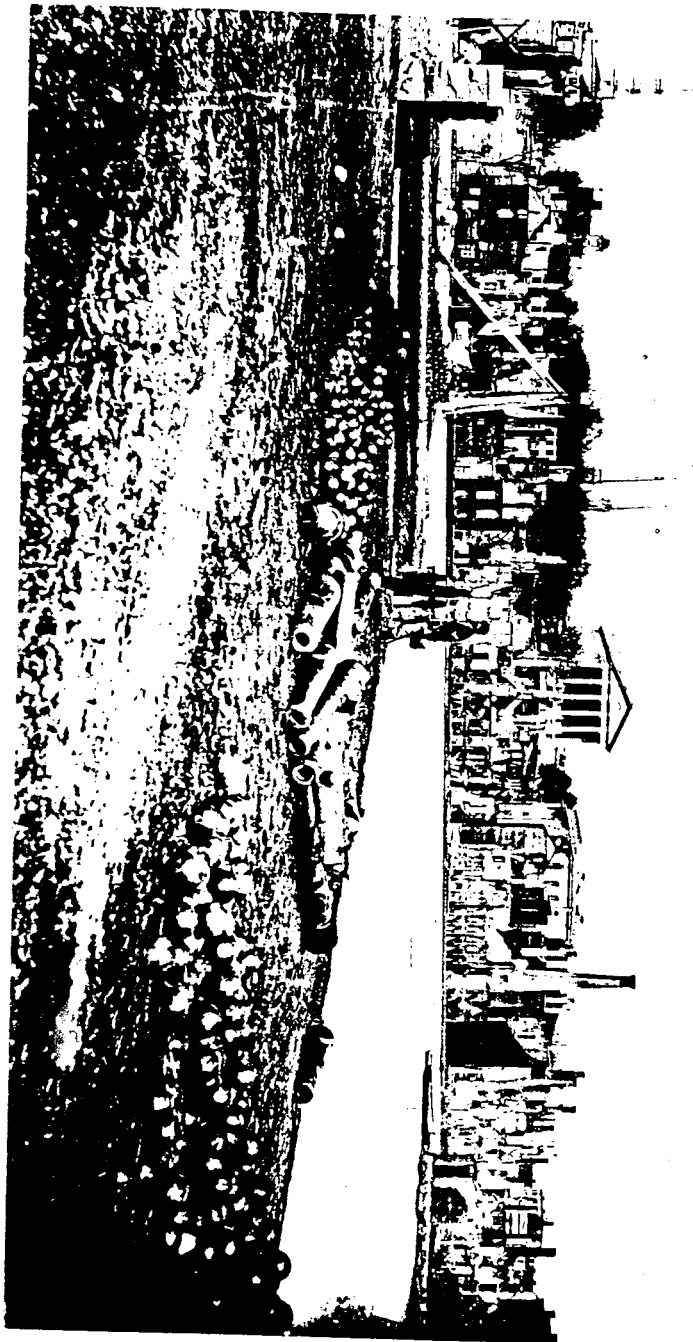


Fig. 12. Richmond Basin, from south side looking north.
Reprinted from Russell, Russell's Civil War Photographs, 52.

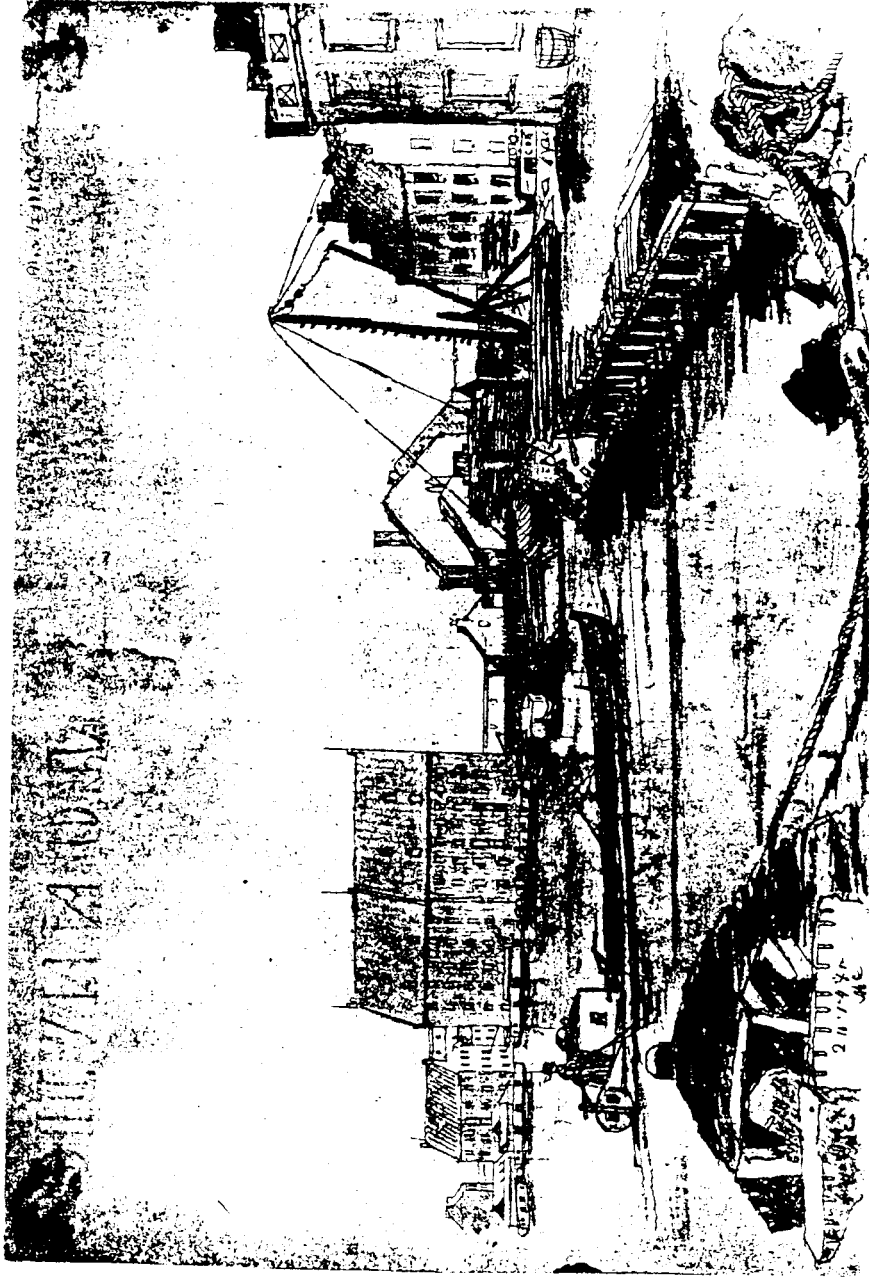
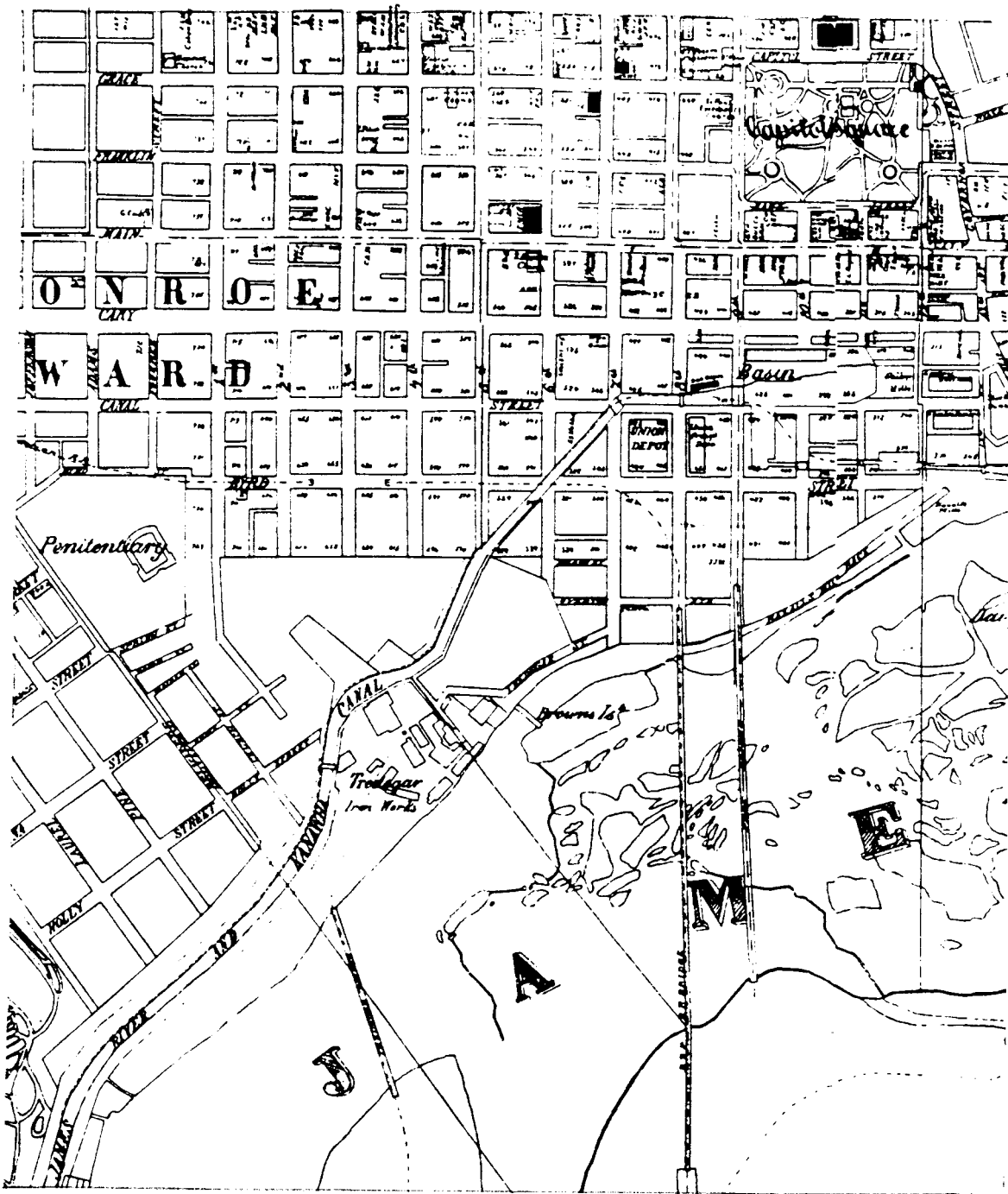


Fig. 13. Sketch of east end of Richmond Basin, 1856. Note bateau with hogsheads in front of Gallego flour mill at end of basin. Courtesy of Virginia State Library, Richmond, Virginia.

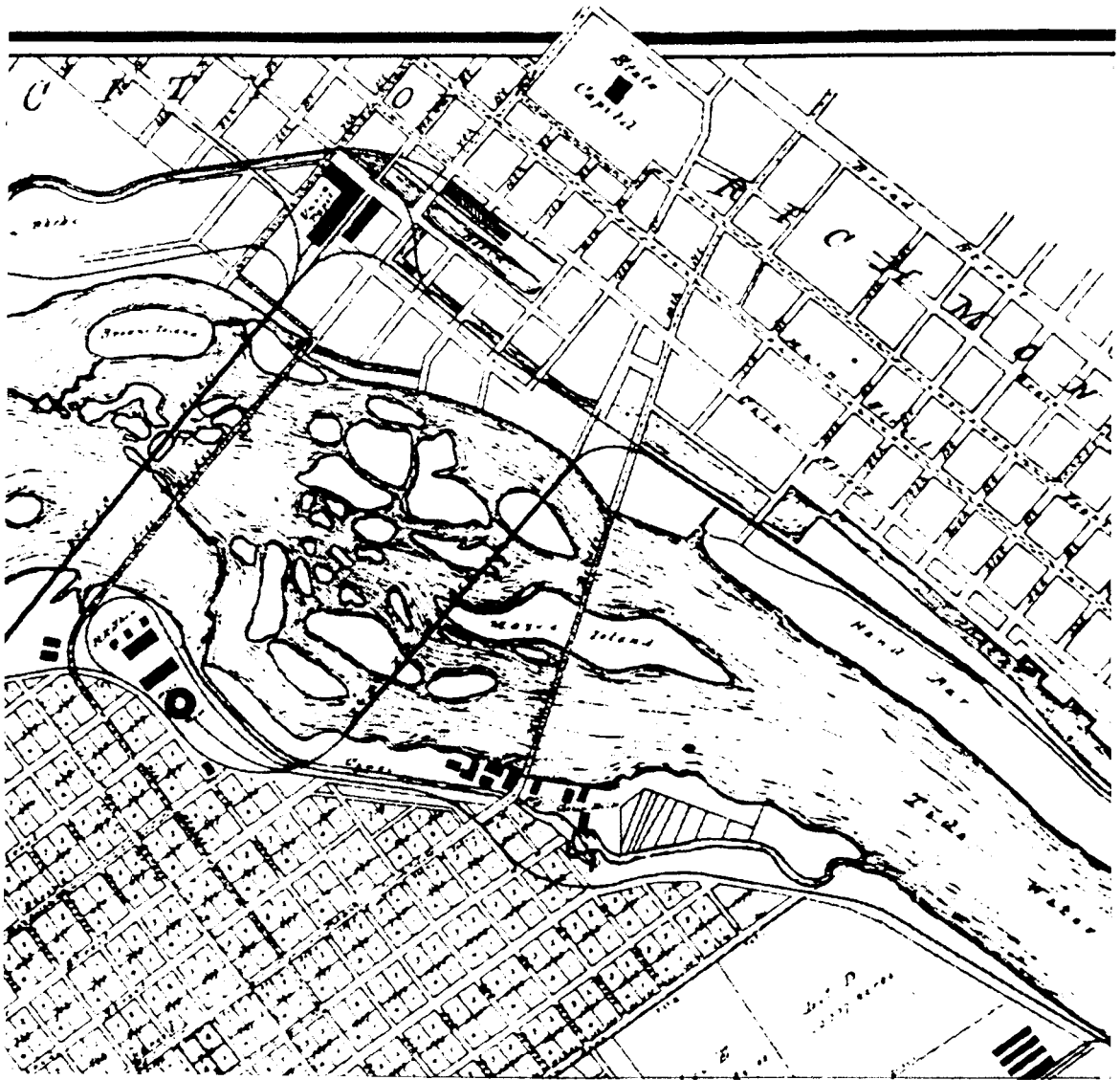
River, the basin was three city blocks long from west to east and one block deep.³ This man-made port was surrounded by flour mills and tobacco inspection warehouses in addition to numerous other warehouses and offices.⁴ The Gallego flour mill and warehouse, considered to be the largest brick building in the world during the antebellum period, towered over its eastern end.⁵

After the James River and Kanawha Canal was sold in 1880, the basin fell into disuse. The 1888 Cooke, Howard and Company Map of Richmond [map 2] and the A. J. Bradley and Co. map of Manchester, Virginia [map 3] both show the north half of the basin gone and in use as a railway depot. Upon the cessation of the canal trade, the basin was initially turned into a railroad yard built over the water on pilings. Over the years, the basin was gradually filled in.⁶ By the 1960's, much of the site was used as a parking lot.

As developers began digging the foundations for the James Center office complex in August, 1983, they immediately encountered the remains of boats that had sunk in the basin. Canal historian Dr. William E. Trout III, then president of the Virginia Canals and Navigation Society, immediately recognized the significance of the finds and began negotiating with the contractors (CSX Corporation and Faison Associates) for permission to monitor the construction.⁷ He was joined by State Highway Department archaeologist and president of the Archaeological Society of Virginia, Lyle Browning, who



Map 2. Richmond Basin (upper right quarter) shown partially filled. From Cook, Howard, and Company, "Map of the City of Richmond," 1888. Reprinted from Chesson, Richmond After the War, Plate 45.



Map 3. Richmond Basin, partially filled and covered by railroad yard. From A.J. Bradley Company, "Map of the City of Manchester," 1893. Reprinted from Chesson, Richmond After the War, plate 76.

volunteered his time to the project. The two societies were granted permission by the developer, Henry Faison, to station volunteers in the construction pit and watch the backhoes and earthmovers for any signs of boat remains.⁸

Using an amateur, volunteer crew and having virtually no funds, the group was able to excavate and record portions of nearly thirty boats.⁹ The donation of equipment and manpower by Faison allowed the group to remove several boats or portions of boats for the purposes of conservation and study. Among them were a metal-hulled canal boat and five vessels fitting the descriptions of the James River bateau.¹⁰

Due to the contractor's severe time limitations and the unfunded, amateur (although earnest) efforts of the volunteer crews, the vessels were poorly recorded and the remains of the vessels were inadequately provided for. Several vessels were placed in restored sections of the James River Canal in anticipation of the donation of permanent conservation and storage facilities. Metal and ceramic artifacts were also collected. The bulk of the boat remains were eventually destroyed due to repeated exposure to the elements.¹¹ The primary reason that the investigation was so unsuccessful was the lack of support at either the federal or state levels.¹² Although the James River and Kanawha Canal is on the National Register of Historic Places, no federal funds were involved in the James Center's development. As a result, no legislation on the federal level that could protect the site.¹³

Support was not forthcoming on local fronts either. The state of Virginia's Historic Landmarks Commission was not involved for reasons that are still unclear. Efforts at fund raising in the private sector were only slightly more effective.¹⁴ Despite good intentions, little monetary aid could be garnered.

Between September 1983 and the summer of 1985, two more excavations occurred at the eastern end of the basin site. The second phase took place between November 1984 and January 1985. The final phase was from June through the fall of 1985. Public official support was not available for these efforts either.¹⁵

During the second phase of the basin excavation the author assisted in the excavation of several vessels. In the last week of November 1984 the remains of a bateau catalogued as Boat #28 were found. Excavation of the bateau took place in halting stages due to the schedule of the contractor. The vessel was never seen in its entirety.

The south end of the boat was initially uncovered and documented. [fig. 14, 15] The vessel had to be re-excavated after a cave-in of the pit wall on November 30. During the excavation of the mid-section, the south end was disassembled so that the work of the contractor could continue. The volunteer crew, working in intermittent rain and knee-high mud, was able to uncover the remaining length of the boat by December 7. Documentation of the remaining sections progressed until a mudslide covered the vessel on December 13. Several days later



Fig. 14. South end of Boat #28 during Richmond Basin excavation, December, 1984. Reprinted from Richmond Times Dispatch, December 9, 1984.



Fig. 15. Excavation of hearth of Boat #28. Reprinted from Richmond Times Dispatch, December 9, 1984.

the rest of Boat #28 was destroyed by the construction crew.

Several factors restricted the proper documentation of some features. The aforementioned rain and mudslides retarded progress. Also, a number of other vessels were excavated at the same time, draining the limited manpower available for the examination of Boat #28. Finally, the contractor's imposed time limitations precluded using proper survey methods. As a result of these hindrances, some information is lacking in the record of Boat #28. The hull planking was not examined in detail. Neither were the fastening patterns able to be studied.

Site Dynamics

The remains of Boat #28 had several dynamic forces leveled against it as did all the vessels in the basin. The boat sank in the basin and settled at a point approximately twenty-three feet below the present street level. After the canal fell into disuse in the 1880s, the railyard was erected above the water on creosote pilings. During the excavation, pilings were found to be impaled through most of the vessels at the site. Several pilings had been driven through the bottom of Boat #28 also, pinning it to the basin floor.

At some point, the basin was filled-in with dirt, probably to create a more stable base for the railroad yard. This assisted the preservation of the sunken boats by creating a primarily anaerobic environment. The dirt and clay fill may also have had a harmful effect on the remains of the boat. The hull

was warped and twisted and the south end of the boat was pulled away from the body by about eighteen inches as a result of the shifting weight of the clay. The loose wet clay was subject to much movement and was responsible for many dangerous slides and cave-ins, such as the one that eventually halted work on Boat #28. The remains of the vessel were also pushed and shifted so that there was no definable center line. The hull was twisted and no longer had a straight alignment.

As stated, time and environmental restrictions prevented Boat #28 from being recorded in as detailed a manner as desired. No grid was erected prior to excavation. Upon removal of the initial top layer, the crew excavated with picks, shovels, and trowels. A base line was laid over the approximate center line once the vessel was uncovered (the south end first and the main body of the hull in the second stage). Hull lines and measurements were taken from the base line.

A number of artifacts were found in and around Boat #28. Since literally thousands of ceramic and glass artifacts were found scattered in the clay around the site, and at all levels of elevation, it was determined that those found in the boat could not be definitely associated with that vessel. It was decided that such artifacts either were part of the nineteenth-century land fill or were thrown into the basin as trash. Certain other artifacts, such as iron implements, were felt to have a high likelihood of association with the wreck and were recorded in-situ. It was determined however, that since none of

the bateau-type vessels so far found had been documented in any detail, the structure of the vessel itself was most important. The structural remains of Boat #28 therefore, were given the closest attention.

Component Structure of Boat #28

Boat #28, like many of the other boats found in the basin, was similar in appearance to known descriptions of the James River bateau. It was an open, keelless vessel, approximately 57 feet 8 inches long and 7 feet wide amidships. It was 1 foot 6 1/2 inches deep between frames #1 and #25. The two ends (south and north) were virtually identical in structure. Due to several features that will be dealt with later, the south end was designated the stern. As it was a double-ended vessel, it may be that there was no clear differentiation between stern and bow, but this was done to make reference easier for the excavation crew and will be treated as such here.

Several unusual features of this vessel have determined the manner in which the structure will be analyzed. The ends appeared to be constructed separately from the main hull; being almost modular. They may have only been attached in the last stages of construction. The structure of the ends will therefore, be treated separately from the main hull.

Framing

Boat #28 contained 25 complete frames and it appeared that there were none missing. Frame #13 was located in the middle of

the vessel, 29 feet from the south end. [fig. 16 and 17] An examination of the plans reveals that the frames were symmetrically spaced away from the middle frame (frame #13). This means that the distance of the spacing of one-half of the vessel was replicated by the other half. The distances were not exact, but there was a clear relationship. Therefore, frame #16 corresponded to frame #10. Frame #16 was 5 feet 4 1/2 inches from center frame #13. Its corresponding frame, #10, was 4 feet 11 1/2 inches from frame #13.

Frames #2 through #24 each consisted of 5 pieces. Each had a floor piece that extended athwartship. The floor was of one piece since the boat had no keel. The underside of the end of each floor piece rose to a position just above the turn of the bilge. Their shape defined the flat bottom and the turn of the bilge. [fig. 18 and 19] The floors had small limber holes of 4 inches by 1 1/2 inches on alternating sides to facilitate the passage of bilge water. Frames #2, #4, #6, etc. had limber holes on the port side while the odd numbered floors had them on the starboard side.

The center sections of each floor piece had the upper surface shaved down and the top edges beveled. [fig. 18 and 19] The center of each floor was 2 1/2 inches high by 2 1/2 inches thick.

Each floor had a sawn futtock scarphed onto each side. The scarph was in the forward face of the floor so that the whole floor and futtock assembly presented a smooth face. The futtock

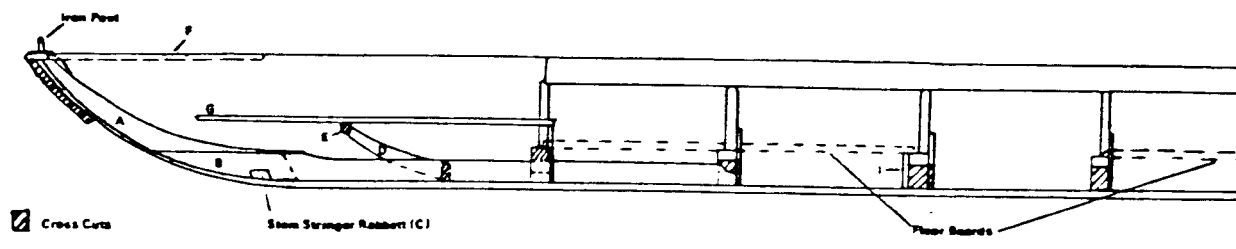
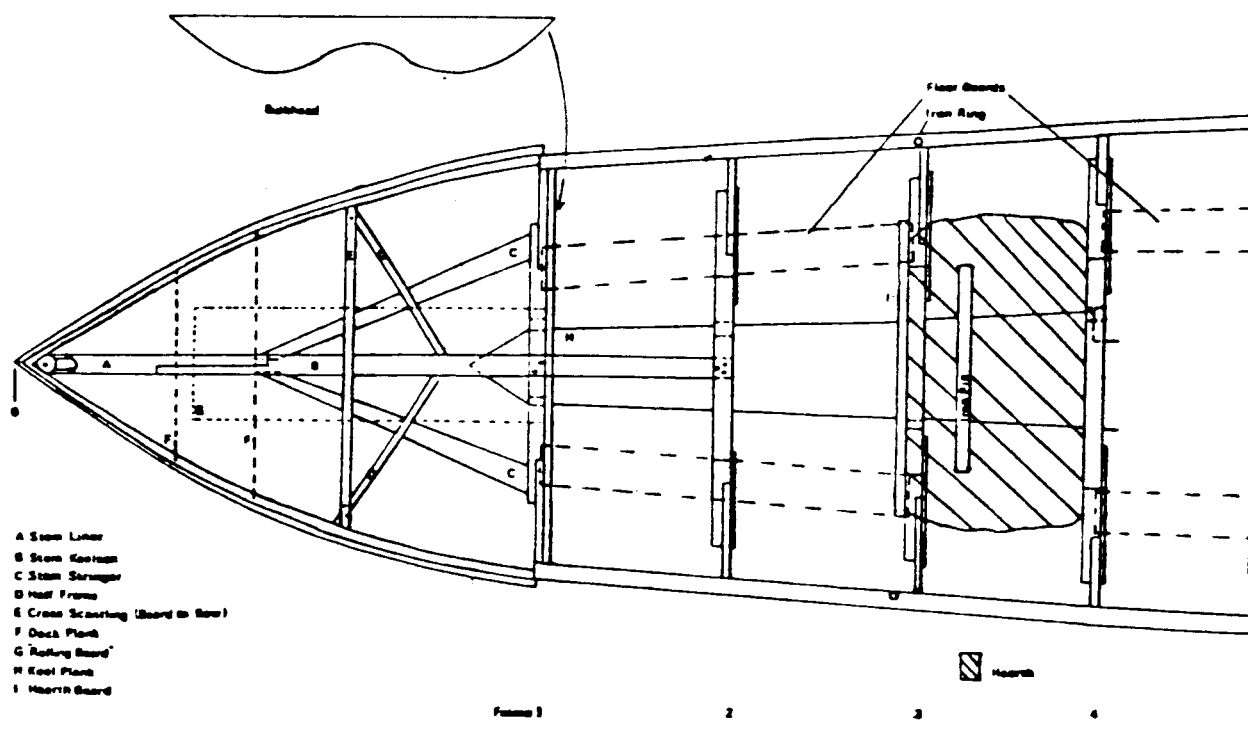
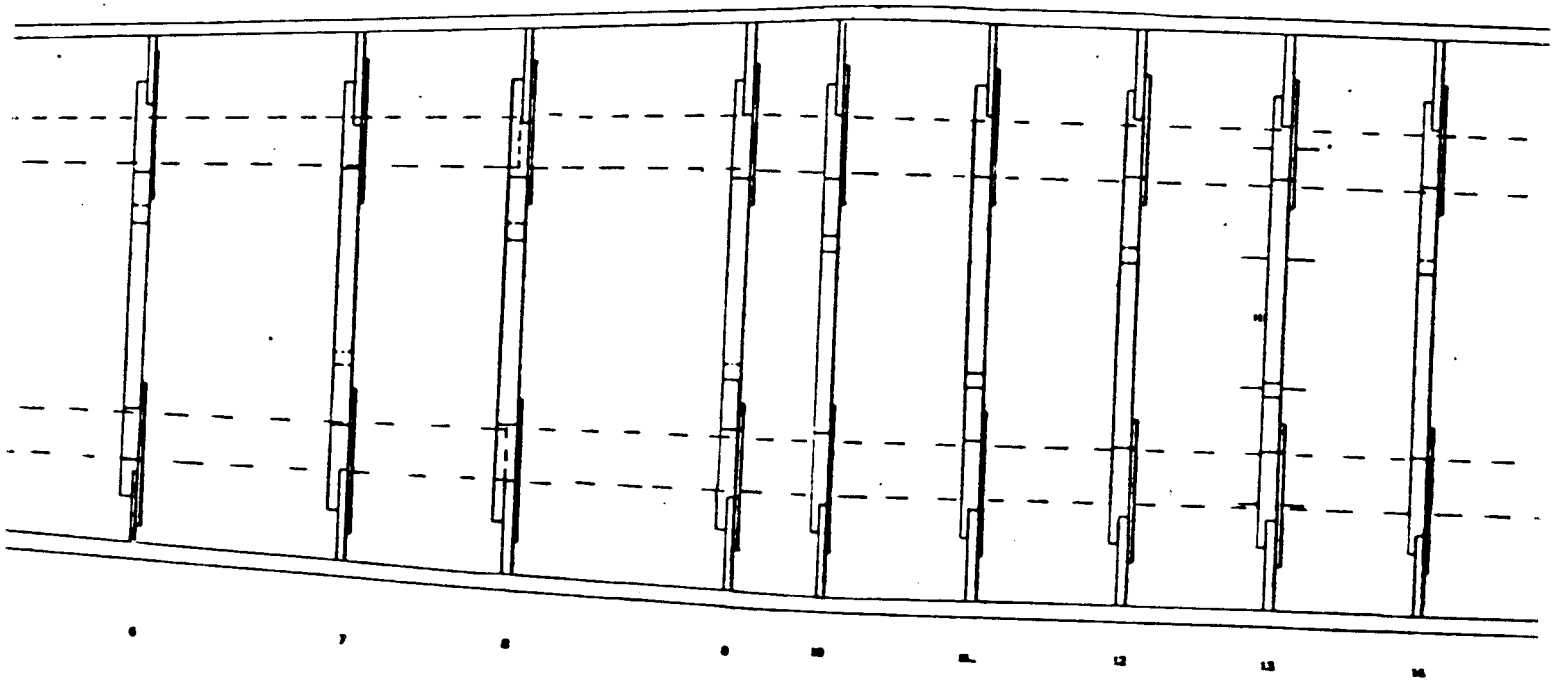
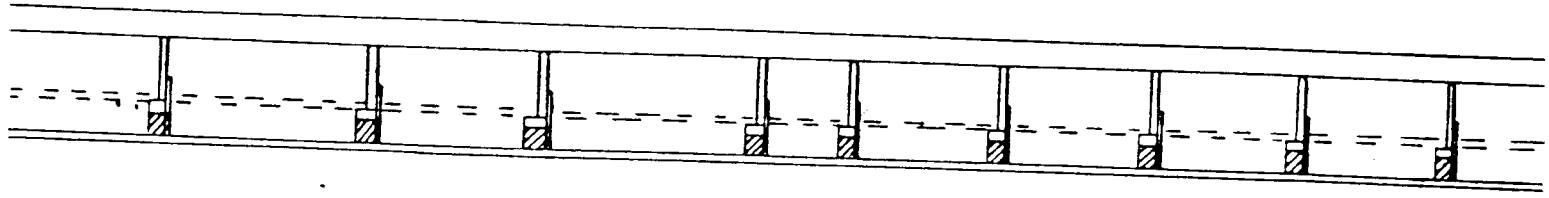


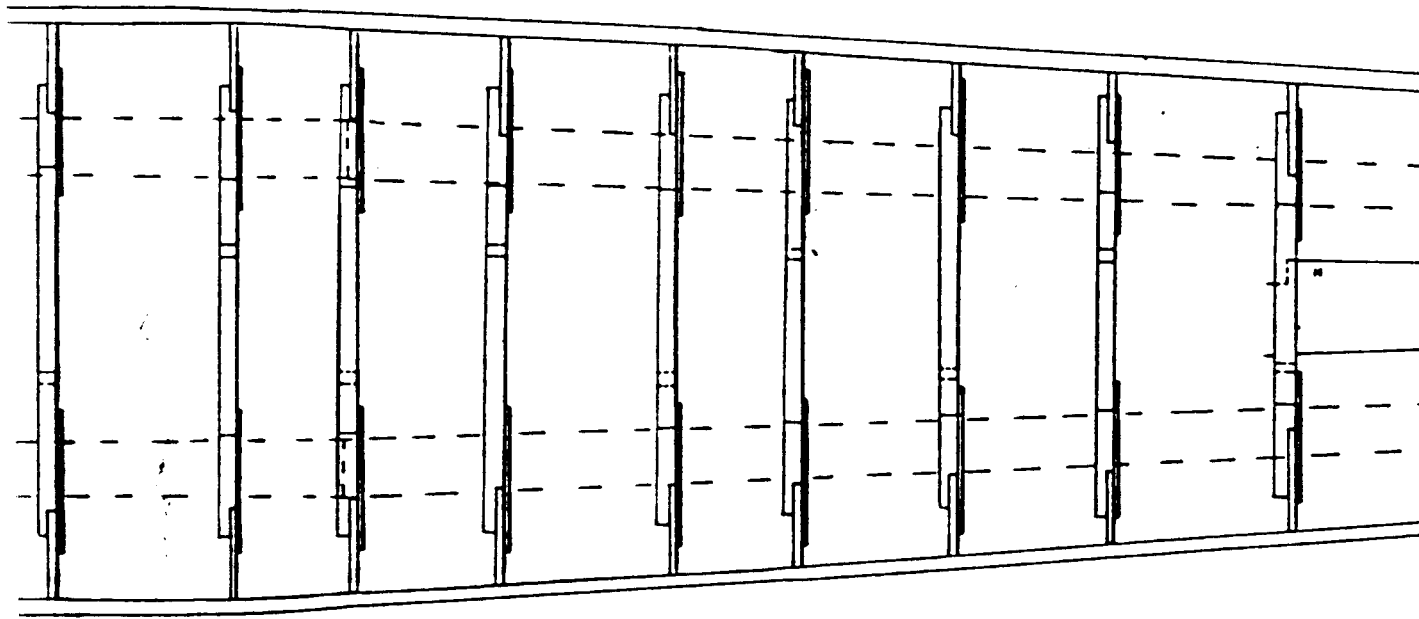
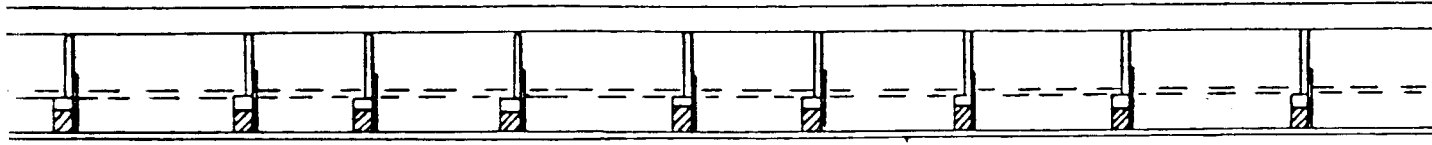
Fig. 12 Profile view.



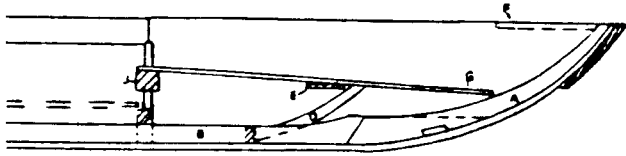
- A Stem Liner
- B Stem Keelson
- C Stem Stronger
- D Mast Frame
- E Cross Scantling (Board to Bow)
- F Deck Plank
- G Rafter Board
- H Keel Plank
- I Hearth Board

Fig. 10. Plan view. Scale 1" = 1'

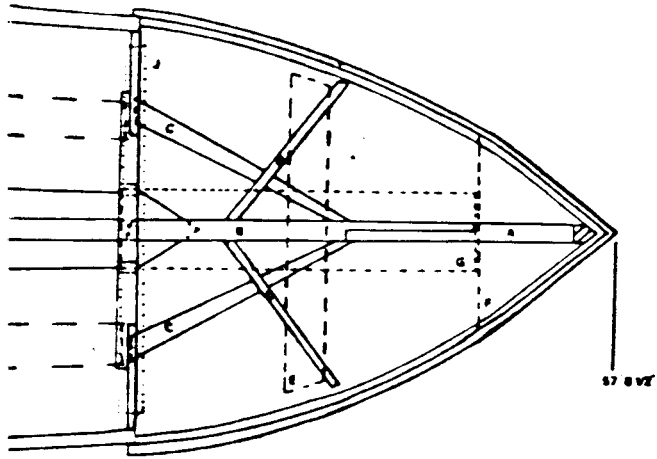




16 16 17 18 19 20 21 22 23



Bow



57 0 VZ

J Scantling

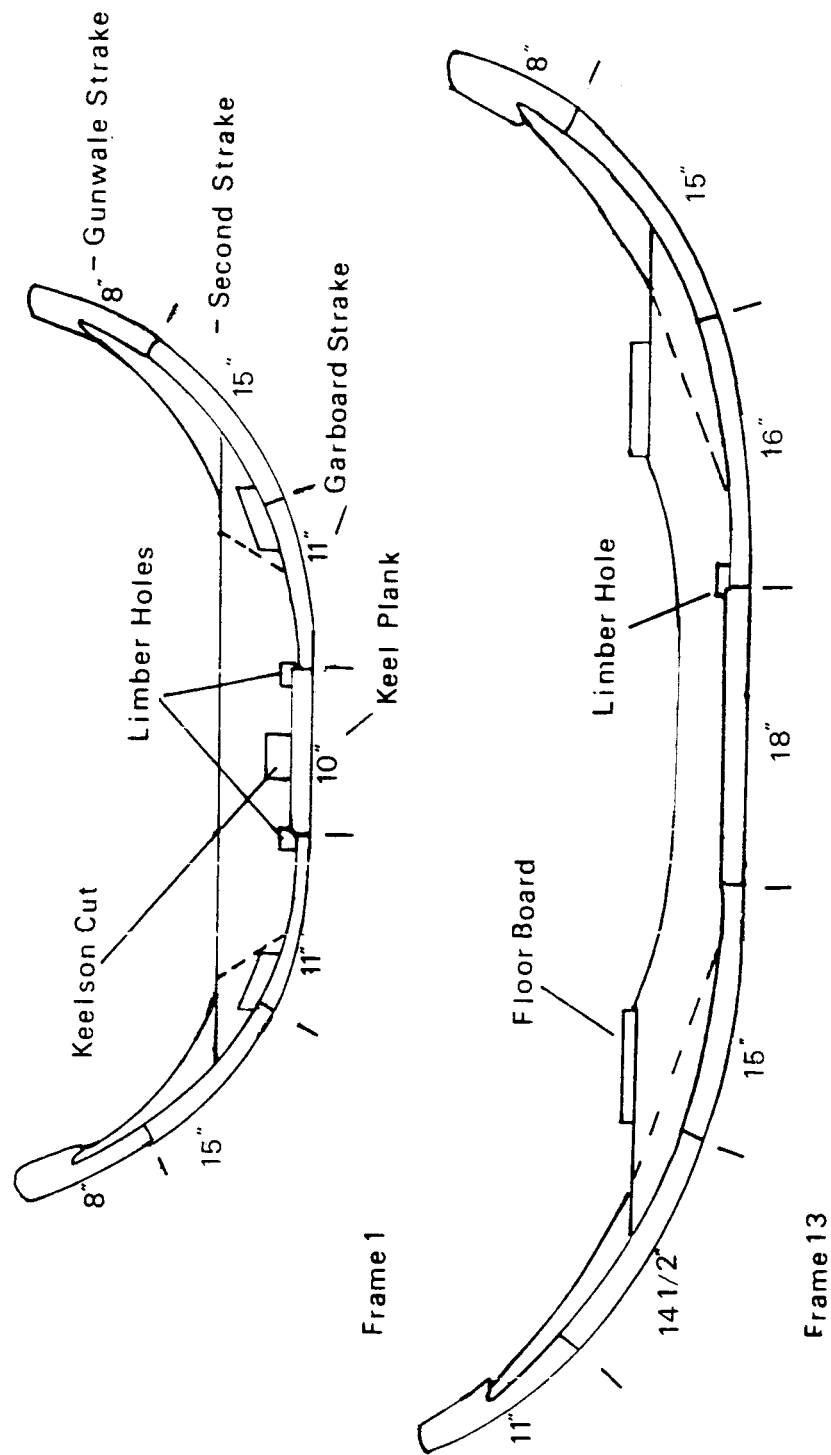


Fig.18. Cross sections. Scale 1" = 1'

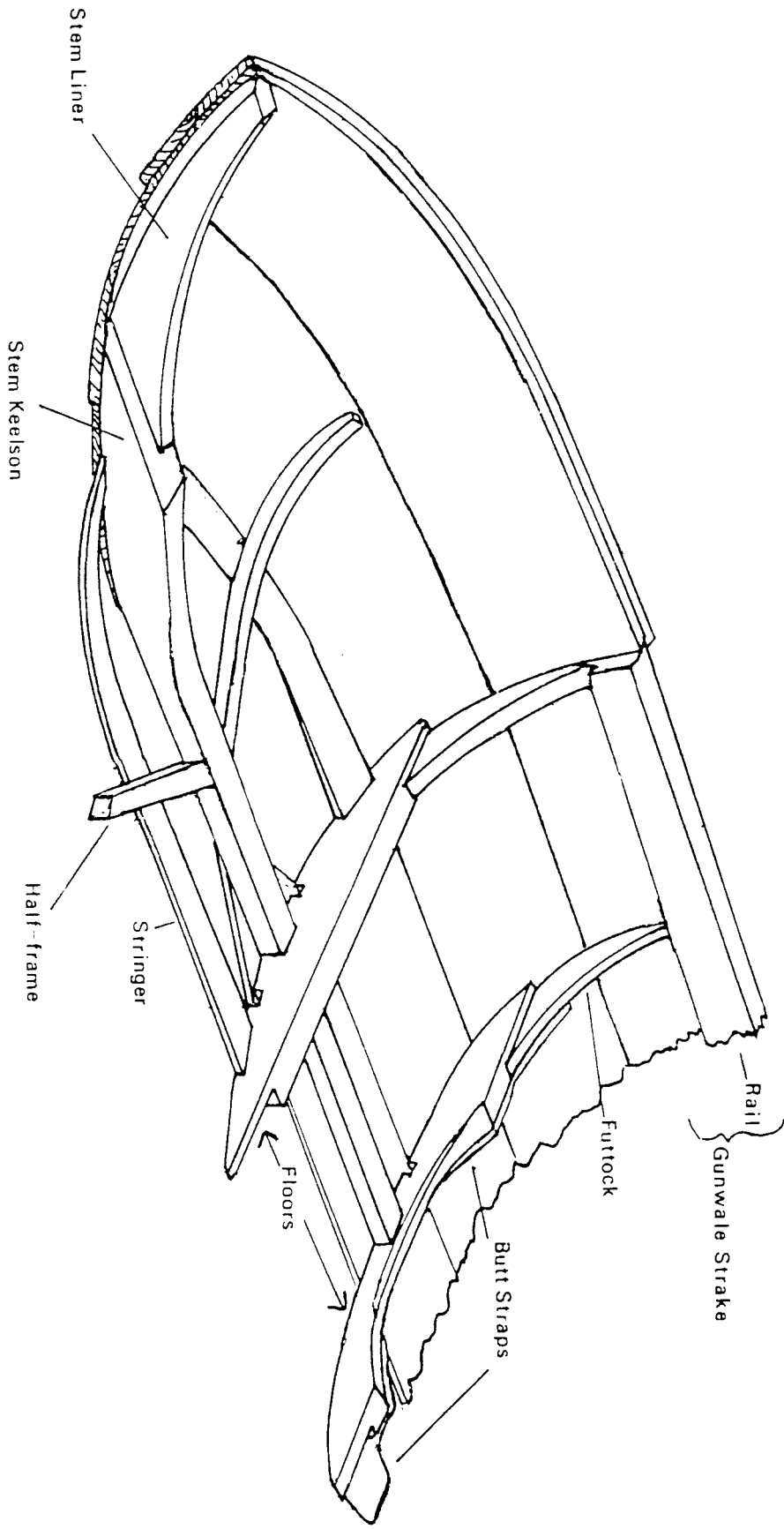


Fig. 19 Perspective view of frame (not to scale).

was fitted into the carved rail inside the gunwale strake and gave form and stability to the gunwale strake and the strake immediately below it. [fig. 19] Each futtock was 1 1/2 inches thick.

Fastened over the forward face of each floor-futtock assembly was a sort of wooden plate or "butt strap." It was fastened with four small square iron nails approximately 1/8 inch square. The butt strap was approximately 1/2 inch thick and served to prevent horizontal movement of the futtock.

Inboard of where the futtock rose away from the floor was a shelf-like platform. Single floorboards lay across these "shelves" and ran fore and aft on each side of the vessel.

Frames #1 and #25 differed from the other frames in several ways. The floors were considerably shorter, reflecting the narrowing of the vessel at the ends. The upper surfaces were not shaved and beveled like the other floors were; rather, they ran in a continuous plane between the port and starboard sides. They also did not have butt straps fastened over the scarphs of the floors and futtocks. The frames at each end were cut with two limber holes, one on each side. A notch was also cut through the bottom where the stem keelson passed. Frames #2 and #24 (the second inward from each end) were partially routed (or mortised) in the middle and the stem keelson fitted into those floors. [fig. 17]

No analysis was done on the wood used in framing the vessel but it appeared to be oak. Mr. Joe Ayers, who had previous

woodworking experience and later built two bateau replicas, asserted that the frames were of oak and that he himself had found the local white oak (*Quercus alba*) to be satisfactory for his boat.¹⁶

The frames were fastened with square, machine-cut iron nails approximately 3/16 inch square. From the quantity used there did not appear to be any shortage of iron nails at the time of the bateau's construction. An examination of the starboard scarph on frame #10 [fig. 19] revealed a total of nine nails fastening the futtock and floor. Six were driven from the aft side and three from the top. The butt strap was fastened by four nails.

There was no apparent graffiti on the floors of this vessel, but the presence of graffiti on other bateaux found in the basin requires mention. A number of other floors from recovered bateaux, in particular Boat #2, had Roman numerals inscribed on their forward faces. The numbers and dimensions corresponded with their counterparts from the opposite end of the vessel; ie., floor #2 and #24 were both marked "II."¹⁷ It is assumed that the frames were made in pairs and when used at corresponding points at the opposite ends of the boat, would have produced an almost perfectly symmetrical vessel.

Stem

Since both ends of the James River bateau were almost identical in construction, the term stem (which traditionally refers to the bow construction) will be used in defining the

construction features of the bow and stern of Boat #28. For simplification, all descriptions will be of the stern end unless stated otherwise. The stems were of two-piece construction. Both pieces appeared to be sawn. The lower piece or stem-keelson extended from its butt in a mortise at the second floor, to its scarph with the second piece. The stem keelson was scarphed to the upper stem-post or stem liner and rose evenly with the sheer of the vessel. The stem scarph was identical to the type used on the floors and futtocks. The stem liner had no rabbeting for the planks. The anterior surface where the planks of each side met was shaped in a "V" and the dorsal surface was square so that the piece was actually of a pentagonal shape. [fig. 19]

The stem keelson had one rabbet or mortice on each side immediately under the scarph with the stem liner. The stem stringers were rabbeted and extended to the outermost underside points of the first floor. The stringers were 3 feet 6 inches long. They were 3 1/2 inches wide by 1/2 inch thick at the stem and 4 inches wide at the floor. They were positioned over the seam of the stem garboard plank and the second set of planks. [fig. 16 and 19]

One half-frame was attached to each side of the stem keelson about 12 inches away from the first floor. The butts of the half-frames were cut at an angle and nailed to the sides of the stem-keelson. The half-frames were 1 1/2 inches square by 25 inches long and curved forward and upward with the chine of

the vessel. The bottom surface of the half-frames was slanted to take the shape of the rise of the hull. [fig. 19]

The half-frames did not rise all the way to the sheer plank but only rose about 8 1/2 inches from the floor of the boat and were fastened to the planking. A scantling of 1 1/2 inches by 5 1/2 inches extended athwartship between the tops of the stern half frames and was nailed to the hull planks. A board occupied this position in the bow.

The wood composition of the stem pieces and frames was the same hardwood used on the floors and futtocks; probably white oak. The composition of the cross scantling is not known but it is thought that the cross board in the bow was pine.¹⁸

Hull Planking

Complete recording of the planking of Boat #28 was prevented by the cave-in. Enough was recorded, however, to reveal some details. The plank width was documented at frames #1 and #13. The lengths of the planks are unknown and any possible scarphing pattern used is also unknown.

In the absence of a keel, the boat had a 2 inch thick keel plank which was 46 feet 5 inches long. It extended from 8 1/2 inches beyond the south stem, aft of frame #1, to 8 1/2 inches forward of frame #25. It is regrettable that better information was not obtained on the planking as it is not known whether this plank was continuous or composed of several pieces of wood. It was measured at 10 inches wide at frame #1, 11 inches wide at frame #2, and 13 1/2 inches aft of frame #4. It is known that

it cut in underneath the floor of frame #4 and was only 8 inches wide at the forward side of frame #4. Whether it continued in one piece or was scarphed to another plank is unknown, but it was recorded at 18 inches amidships at frame #13. At frame #23 (symmetrical counterpart to frame #4) it was 10 inches at the point aft of the frame and 13 inches forward of it and had another square scarph underneath it. The keel plank was 2 inches thick and appeared to be of a denser wood than the rest of the planks, again, possibly white oak.

This boat was carvel planked, that is, the plank sides were fitted edge to edge. Accumulated mud made it difficult to determine if the seams were caulked.

Counting the keel plank, Boat #28 had seven main planks composing the longitudinal hull section. Outboard of the keel plank were the port and starboard garboard strakes, which began to turn with the bilge. [fig. 18] Above these were the second set of port and starboard strakes. These continued to follow the turn of the bilge and traversed under the scarph joints for the floors and futtocks. The garboard and second strakes were 1 1/2 inch thick and made of either pine or poplar.¹⁹ The planks were fastened to the frames with two iron nails each (3/16 inch square), driven from the outside.

The final pair of planks had an unusual feature. The top of the gunwale strakes were thicker, creating a sort of rail, and the lower part was shaved down to the thickness of the other planks. [fig. 18 and 19] While the gunwale strakes, like all of

the other planks, were of sawn timber, the thinner section appeared to have been worked with a hand adz. The gunwale strakes were 1 1/2 inches thick where they joined the second strakes, and 3 inches thick at the top to the gunwale. Four and 1/2 inches below the top of the gunwale, these strakes were cut down to 1 1/2 inches with squared edges. The top of the frame was fitted up into the corner for approximately 1 1/2 inches. [fig. 18 and 19]

The corresponding pairs of strakes on the opposite side of Boat #28 were not of similar widths. At frame #1 the garboard strakes were both 11 inches wide, the second strakes were 15 inches wide, and the gunwale strakes were 8 inches. At frame #13 a discrepancy was apparent. Here the port garboard strake was 15 inches wide and the starboard was 16 inches. The port second strake was 14 1/2 inches wide and the starboard second strake was 15 inches. The port gunwale strake was 11 inches wide and the starboard strake was 8 inches.

Stem Planking

The most unique structural feature on Boat #28 was the relation of its stem planking to the body of the vessel. All of the hull planks except for the keel plank ended at the first and last frames (#1 and #25). There were only two points where the stem structure and the hull structure overlapped. The keel plank, as previously noted, extended 8 1/2 inches beyond the end frames into the stems. Each end tapered into a point; the taper beginning under the end or first frame and the point ending

under the stem keelson. The stem keelson ran through the first frame and butted under the second floor. It was fastened with two iron square nails (3/16 inch) at frame #1 and three nails at frame #2.

The width of the stem planks corresponded to those of the hull planks but were separate and were all fastened to the end frames. The frame ends of the stem planks were all rectangular where they butted with the hull strakes. The outside edge curved upward and the inside edge angled where they met at the stem keelson and stem liner. [fig. 19] There was no evidence of any extra timber attached outside the seam at the stem, like a cutwater. The planks ended at the liner and were fastened into it with iron square nails.

All of the stem planks were 1 1/2 inches thick and, like the hull strakes (except for the keel plank), were of pine or poplar. The outside of the end of the gunwale strake was notched inward 1 1/2 by 2 inches.

This permitted the outside sheer plank of the stem to overlap the main sheer plank for 2 inches and strengthened the stem of the vessel somewhat. This extra plank may have had a strengthening function or it may have been a sort of rub rail.

Other Features

This vessel had several boards fastened along the rails which seemed to serve the function of decks. Fastened atop the stem sheer planks on each end were two boards on the stern and

only one on the bow which formed a small deck area. [fig. 16 and 17]

Under each deck was an unfastened board, which was supported by the half-frames. The aft board was 4 feet 3 inches by 1 foot 4 inches by 1 inch thick and the bow board was 4 feet 2 inches by 11 inches by 3/4 inch thick.

Forward of frame #1 lay a piece of wood that was evidently shaped to form a bulkhead. It had no sign of fastenings, but was finely formed to lay athwartship and rise over the stem keelson. It was 7 1/2 inches at its deepest point and 3 3/4 inches deep where it passed over the stem keelson. It was 4 feet 6 inches long and 1 1/2 inches thick.

The bow-end frame had no bulkhead, but had a beam measuring 3 inches by 3 inches by 4 feet 3 inches fastened between the two futtocks of frame #25. On both this beam and the bulkhead rested two unfastened boards.

Other notable features of this boat were pairs of floor boards, which ran the length of the vessel. These boards rested on the "shelves" formed at the scarp of each frame assembly. They ended on the last set of frames. These boards were present in most of the bateaux found in the basin.²⁰

An interesting feature of this boat was the presence of a hearth. It was situated on the floor between frames #3 and #4 where the floor boards fell out. [fig. 16] The hearth appeared to be composed of a layer of grass covered by a layer of mud and then charcoal. The depth of the feature was about four inches.

A 2 foot 5 inch long by 2 inch by 3 inch pig of iron lay immediately forward of frame #3 and a board 3 feet 5 inches by 4 inches by 1 inch butted up just aft of that frame, probably to contain the overflow of the hearth. The board and the upper edges of the floor of frame #3 were black and singed from use. When the hearth was removed, there was no apparent blackening of the keel plank.

Several metal features were associated with the boat. An iron post was fastened to the top of the "stern" stem liner. It was approximately 4 inches high and 1 inch in diameter. It had a 3 inch round base and a 4 inch by 2 inch tongue that was fastened over top of the end of the stem liner to secure it. This feature was not found on the stem liner on the "bow."

There were also two iron rings just inside the top of the gunwale strakes above frame #3. They were each 2 inches in diameter, the metal being approximately 3/4 inch thick, and were held in place by iron staples. A short leather thong was tied to the starboard ring.

Boat #28 seemed well used. A patch was nailed over a crack in the port gunwale strake (below the rail) between frames #5 and #6. A thin, 2 inch wide by 8 3/4 inch long iron plate was nailed over the starboard futtock and gunwale of frame #6. At the bow between frames #24 and #25 were two apparent patches. On the starboard gunwale strake below the expanded rail area was a 2 1/2 inch square tin patch nailed at each corner. It may have been some sort of support; there did not seem to be a hole

on the other side of it. There was a 1 1/2 inch diameter hole even with the patch on the starboard side of the keel plank that was also stoppered with a wooden plug.

Artifacts Associated With Boat #28

It was previously stated that many artifacts in and outside Boat #28 were not determined to be associated with the boat. The basin, it would seem from the excavations, was an enormous trash dump for nineteenth-century Richmond. Thousands of bottles, ceramics, and shoes were strewn about. There were however several artifacts that, due to their location in Boat #28, can be reasonably associated with it.

This applies primarily to the hearth area. Lying in the hearth were several iron utensils apparently used for cooking on board the boat. A three-legged iron skillet with a handle, an iron skillet lid, and a rough iron plate (possibly a skillet with the sides intentionally knocked off), all lay on the hearth between frames #4 and #5. A three-legged cast-iron pot also lay on the starboard side between frames #1 and #2.

A shovel blade was found between frames #3 and #4 next to an axe head which held the remains of a broken handle. In addition to these, several cone-shaped iron pieces were found in the stern and bow sections under the deck boards, indicating that they were probably associated with the boat. They were believed to be iron tips for the bateau poles. They were of a single piece of iron and had apparently been hammered around a

pole to form a cone. No poles were associated with them.

Finally, a wooden-handled knife was found with its blade wedged between frame #20 and the gunwale strake. Various other unidentifiable iron pieces, a horseshoe, and pieces of slate were also found in the hull.

Feature Analysis

The remains of Boat #28 appeared to be remarkably intact. There was no indication of damaged or missing elements. It is assumed therefore that this vessel was not disturbed (except for the pilings and landfill) after it sank. Apparently no cargo was on board at the time of its sinking and little residue or artifactual evidence existed to imply what sort of cargo it may have been carrying. A small accumulation of slate fragments indicated that it may have carried slate at one time, but that deposit may have been intrusive. Since the vessel did not have ceiling planking or decks, it could have been kept relatively clean of bilge residue.

Many of the features and structures of this vessel corresponded with historical descriptions and illustrations of the James River bateau. The boat was open, double-ended, and keelless as was the James River bateau. At 57 feet 8 inches by 7 feet, Boat #28 fit almost exactly the dimensions of the bateau measured in 1854 by James River Company engineer Edward Lorraine. The one he measured was 58 feet by 7 feet.²¹

The dimensions of Boat #28 also approximate those of the

bateau pieces ordered by Thomas Mann Randolph Jr.²² The pre-fashioned gunwales for Randolph's vessel were 48 feet long. The gunwale strakes were 3 inches wide at the top edge and 2 inches at the bottom edge. The gunwales of Boat #28 were approximately 46 feet long. The gunwale strakes on this vessel were 3 inches wide at the top and 1 1/2 inches wide on the bottom edges. The total lengths of the stern and bow from the outside edges of the frames were 6 feet 2 inches and 5 feet 6 inches respectively. If the stem portions of Boat #28 were to be attached to the gunwale of Randolph's vessel, the Randolph bateau would be approximately 59 feet 8 inches compared to the total length of 57 feet 8 inches of Boat #28. The Randolph bateau then, would appear to be very close in dimensions to Boat #28 and the Lorraine bateau.

There are no historic illustrations that reflect the precise details of the construction of the James River bateau but several do give indications. Two contemporary illustrations show the frame futtocks fitting into the gunwale strake rail. [fig. 5,7] They are not detailed enough to indicate whether the rail is part of a one piece gunwale strake (as it is on Boat #28), but it would appear so.

The structure of the stems was reflected in another Latrobe illustration. [fig. 4] While it did not illustrate the interior construction, it did show a seam between the stem planks and the long hull planks. This coincides with the construction of Boat #28's stem.

The presence of the deck planks at either end of Boat #28 corresponds also with contemporary illustration. Tatham's plate [fig. 5], which dates from 1800, shows short decks as does the illustration of a bateau on the New River. [fig. 7]

The discovery of the hearth in Boat #28 was significant. It will be recalled that Bagby recorded that "their cooks galley was a little dirt thrown between the ribs of the boat at the stern...."²³ Bagby's description and the fact that the hearth was found between frames #3 and #4 were two of the main reasons that the south end was determined to be the stern end of the vessel.

Bagby also wrote that the "galley" was covered by "an awning on occasion to keep off the rain...."²⁴ The "Botetourt lady's" account of 1852 also recorded the "tarpaulin which was supported by great wooden hoops that rested in iron sockets on each side of the boat."²⁵ Other descriptions²⁶ and illustrations [fig. 7, 10, 11] portray bateaux with covered wagon-type awnings. Boat #28 had no iron sockets or wooden hoops, but the iron rings found opposite each other at the hearth may have been to facilitate the rigging of a shelter over the hearth as described in the historic record. It was recorded that several other boats found in the basin dig contained holes in the gunwales, presumably for tarpaulin poles. They also contained brick and clay hearths.²⁷

There were some features on Boat #28 that did not completely jibe with the historical descriptions, but did have

some similarities. Most descriptions and illustrations of the James River bateaux indicate that they were steered down river with long wooden sweeps affixed to the stern and (sometimes) the bow. No sweeps were found in Boat #28. The iron post found on the south end may have facilitated the use of a sweep. This did not correspond with the lyre- and "U"-shaped sweep-locks found scattered about the basin, but may have been used in a different configuration.²⁸ Its presence also supported the theory that the south end was probably the stern.

One other feature was the single line of floorboards, which rested on the floor scarphs. Many contemporary descriptions and several illustrations portrayed the walkboards mounted atop the gunwales of the bateaux upon which the bateaumen would walk as they poled the bateau up the current of the rivers.²⁹ [fig. 7] Other illustrations, such as Latrobe's [fig.3] and Tatham's [fig. 5], show the boatmen poling the vessel from inside of the boat. It is possible that the interior boards in boat #28 were to facilitate the boatmen's movement inside the vessel.

These boards may have served another function. It will be recalled that at each end of the vessel a board about 4 feet in length rested on the half-frames without being fastened. It can be postulated that these boards were rolling boards. They would have been particularly useful in rolling tobacco hogsheads down into the vessel. It will also be noted that the centers of the frames were sculpted out. This would have reduced the area that the bouge (bulge) at the center of the hogshead would have had

to roll over. The boards laying on the floors would have made the task all the more easy. Were this the case, an argument could be made that boat #28 was a bateau employed in tobacco transport.

Construction Analysis

The seemingly symmetrical construction of Boat #28 is worthy of discussion. The presence of the previously mentioned enumerated frames on other bateaux, while not present on this vessel, gives weight to assumptions concerning the construction techniques of these vessels.

It is probable that the floors were prepared in pairs. The builder would have made pairs of frames to the same dimensions. He could have then seated them upside down and fastened the keel plank to them. The archaeological record indicates that they were nailed to the keel plank with iron nails from the outside of the hull; hence the belief that the construction of the vessel was begun in an inverted position. After the keel plank was laid, the garboard strakes were probably fastened. They would have conformed to the shape of the turn of the bilge as determined by the pre-cut floors. Preparation of the floors would have ensured a consistent shape along the continuum of the hull.

While the floors were being cut in pairs, the stem pieces would also have been cut in pairs. They would have to be done at the same time as the floors to guarantee that the mortise

cuts in the first floors (#1 and #25), and their butts in the second floors (#2 and #24) were correct. It was previously noted that the scarph in the keelson/stemliner configuration is identical to the scarph in the floor/futtock assembly. This indicates little evolution in complexity as might be seen over time in an area having an extended boat building tradition. It reinforces the historical evidence of the James River bateau being the product of a short-lived boat building tradition; less than one-hundred years.

The stem keelson would have been attached before the keel plank assembly since the keelson was nailed into the first and second floors from above. The keelson and first floor would have then been mortised to accept the stem stringer. At this point the small stem garboard planks would have been fastened to the keelson stem and along the first floors (#1 and #25).

After the garboard strakes were fastened, the bateau would have been turned over. The futtocks could then be shaped and fastened to the floors. Their curve could be faired by the remaining few inches of floor, which protruded over the garboard. Next, the second strakes would have been attached to the floor and futtocks. The butt straps would probably have been fastened as a final stage to lock the frames.

The gunwale strakes would have had to be prepared at this time. After the heights of the futtocks were faired and made consistent, the notches would be put into the inside of the rail of the gunwale to insure a tight fit. The gunwale planks may

have been left a little wider and then, once trial fittings were completed, planed down along their length until they seated over the second strake and fit securely over the futtock ends. The planing might account for the greater difference in width dimensions between the two gunwale strakes as opposed to the other strake pairs. The garboard and second strakes varied by only an inch to a half inch in width between the port and starboard pairs. The gunwale strakes however, had a variation of 3 inches between them (starboard - 8 inches and port - 11 inches). [fig. 18]

Following the completion of the hull planking, the stem liner would have been fastened to the stem keelson and faired. The stem planks would have been cut to fit and the butted to their corresponding hull planks on the first frame. They would then be nailed to the stem liner and the first floors and futtocks. The stem half-frames would have been fastened and the stem stringer, which fit over the seam of the stem garboard and stem second planks, could be fit in.

The abrupt end of the hull planks and the attachment of the short stem planks on the first futtocks has a tenuous appearance. There may have been a valid reason for pursuing this type of construction. Although the historic record is vague on the builders of the bateaux, it can be assumed that the boats were built by upland workers unfamiliar with many of the shipwrights' ways. It is likely that they were built by slaves, possibly plantation carpenters (at least initially). This

method of hull construction would eliminate the need of steam chests for bending planks. The hull planks had a relatively straight run and the stem planks had only a slight twist as they fastened to the stem. Although Boat #28 had smoothly tapering lines at the ends, several bateaux excavated in the basin, as did some contemporary illustrations, had a definitive wedge shape to the stems.³⁰ [fig. 7] Bent planks would not have been able to attain such an extreme angle.

It appears that the modular stem construction, lack of keel, and extreme length might have rendered the bateaux weak. A boat that operated on the severe environment of upland Piedmont rivers would seemingly require great structural integrity. The fact that the bateau only had seven planks in the hull may have provided much of the integral strength. Also, the strength of the frame scarphs at the turn of the bilge in addition to the tightly fitted, heavy, gunwale strakes may have provided a box-girder-like construction. Four longitudinal sets of points were created that could absorb the twisting stresses when the boats passed down the rapid rivers. It may be that a degree of play was desirable so that the long vessels could "snake" over and around the rocks and shoals in the river.

Dating Boat #28

An approximate date of Boat #28 can be reached through a process of elimination. It is known that the basin opened in 1800. The vessel may have been built a few years previous to

that. Thomas Mann Randolph wrote that a bateau lasted about two years,³¹ so the earliest possible date of construction was somewhere in the mid-1790's. The boat could have been built as recently as the 1880's, when the basin ceased to be used and the filling in process began. This time range can be narrowed somewhat. Several of the bateaux found in the basin were fastened with rose-head nails and one had treenails. These were both used in the eighteenth and early nineteenth centuries and pre-date machine cut nails. Cut square nails of the type found in Boat #28 did not come into common use until after 1830.³²

It is also known that the completion of the James River Canal to Lynchburg in 1840, rendered the bateau inferior to the larger-capacity, faster, horse-drawn canal boats. Bateau use on the James River diminished after this time. This would suggest that Boat #28 does not date much beyond the 1840's.

The wooden-handled knife found wedged underneath of the starboard futtock of frame #20 might help date the vessel also. An 1843 Senate report on the canal recorded a regulation that "no boat or float shall navigate the canal, unless it shall have a knife or other sharp metallic instrument so affixed to its stern or bow as to cut apart any tow rope which might otherwise pass over it...."³³ This might have little bearing on dating the boat since this would be a convenient place to store one's knife, regardless. The knife is currently in the curation of the Virginia Canal and Navigation Society and no attempt has been made thus far to date it.

Another regulation might explain the lack of poles in the excavation of Boat #28. In 1843 it was ruled that "no boat or float shall, under any circumstance use or have on board any iron-shod or sharp-pointed setting pole on the canal."³⁴ It will be remembered that only pole tips were found associated with Boat #28. It may be that upon entering the canal, the watermen had to relinquish their wooden poles but retained the iron tips and reclaimed the poles when they returned up the canal and entered the river.

In consideration of above information, it might be possible to date Boat #28 to sometime in the mid-1840's. Further examination of the hearth remains and artifacts in the vessel might render a more accurate date.

Comparative Studies

The most recognized authority on American small craft to date is Howard I. Chapelle. While apparently unfamiliar with the James River bateau, Chapelle did write about eighteenth- and nineteenth-century British and French bateaux. He discussed features of small craft that were similar to Boat #28 and could possibly shed light on the origins of the James River bateau.

Chapelle mentioned two classes of flat-bottomed, double-ended vessels. One was the bateau model and the other was the flat-bottomed skiff or sharpie.³⁵ Boat #28, as the name indicates, is a bateau. Two divisions in the bateau classification were the lumberman's bateau and the dory.

The James River bateau seems to have had little in common with the lumberman's bateau which was of lapstrake construction.³⁶ Chapelle wrote that the flat bottom and hard chine at the bilge were typical of vessels built upright, and that "this style of building...appears to have been universal in English flat-bottomed boats."³⁷ Further evidence that Boat #28 was not descended from the English bateau tradition may be seen when comparing these remains with those of several colonial English bateaux recovered from Lake George in New York in the 1960's. These vessels had the hard chine and flat bottoms discussed by Chapelle and had little in common with the bateaux recovered in the basin dig, other than being double-ended.³⁸

The James River bateau has more in common with a vessel of French descent that Chapelle called a fisherman's dory. The dory, he noted, was closely related to the bateau both historically and in construction.³⁹ He described the hull structure:

The existence of a complete transverse frame system in this class has led to the use of rounded sides, between bottom and gunwale, in many craft; the beach skiff is a good example. The obvious trend resulted: the sides got more and more rounded, and the bottom got narrower until it became no more than a wide, plank keel.⁴⁰

He also wrote that "the skiff-build...invariably has straight flaring sides [and is] caravel-planked in American small craft."⁴¹ He also wrote that the dories were initially built upside down and finished in a righted position.⁴²

Chapelle's description of the skiff seems to have more in common with Boat #28 than the English bateau.

Chapelle noted that the dory stem was two-pieced and not rabbeted but had a V-shaped stem liner.⁴³ The dory usually had a cutwater, unlike the James River bateau, indicating that the bateau was probably a cruder vessel.

In his analysis of dory construction, Chapelle wrote about a Nova Scotian sailing dory that was double-ended and had rounded sides, a flat bottom, and carvel planking. They also had transverse frames and stemliners, which were common in dories and bateaux. These vessels were common in New England and were from a French, rather than a British, tradition.⁴⁴ It is evident that structural similarities exist between Chapelle's descriptions of dories of French descent and the James River bateau.

While it is acknowledged that the term "bateau" is somewhat generic, there is a continuity of form and structure between dories (as a bateau type), French and British colonial bateaux, and the James River bateau. Furthermore, it has been noted in a previous chapter in this paper (Chapter II) that various double-ended boats navigated the unimproved and pre-canal rivers of North America between the seventeenth and nineteenth centuries. The nineteenth-century Ohio River keelboat, Susquehanna Ark, Delaware River Durham boat, and James River bateau may all reflect regional solutions to the problem of transporting inland produce to accessible markets by boats

capable of navigating rapid waters. If they did not have their own indigenous vessels, the western settlers would likely have adapted the closest practical model; that being the colonial-French bateau. The historical and archaeological record both indicate that the James River bateau was the response of the upper James River Valley to such a need.

1. Robert, Tobacco Kingdom, 58.
2. Richmond Standard, 22 February 1879.
3. The Tiller (pub. by the Virginia Canals and Navigations Society, Inc.), 4 (September 1983), 3.
4. Samuel Mordecai, Virginia, Especially Richmond in By-Gone Days (Richmond: West and Johnson, 1860), 326, 330.
5. Chesson, Richmond After the War, 9.
6. "Touring the Richmond Canals", pamphlet (Richmond Chapter, Virginia Canals and Navigation Society, 1984).
7. James S. Wamsley, "The Boats of August," Richmond Times Dispatch, 28 August 1983, 6.
8. Wamsley, "Boats of August."
9. Wamsley, "Boats of August."
10. The Tiller, no.2, 3.
11. Dr. William Trout, interviewed by author, December, 1984, notes included with field notes in possession of Virginia Canal and Navigation Society, Richmond.
12. Wamsley, "Boats of August."
13. Wamsley, "Boats of August."
14. Lisa M. Antonelli, "Losing a Legacy," Virginia Business, I (April 1986), 30-66.
15. Antonelli, "Losing a Legacy."
16. Mr. Joe Ayers, interviewed by author, January 1986, notes in possession of author.
17. Tiller, IV, no.2, 3.
18. Joe Ayers interview.
19. Joe Ayers interview.
20. Tiller, IV, no.2, 2-3, and William Trout interview.
21. Journal, 21 September 1854, Lorraine Papers.
22. Randolph Notebook, 15.

23. Bagby, Canal Reminiscences, 11.
24. Bagby, Canal Reminiscences, 11.
25. Fincastle Herald, 28 February 1933.
26. Crayon, Virginia Illustrated, 232.
27. Tiller, no.2, 3.
28. Tiller, VI, no.3 (December 1985),1.
29. Perrins, "Kanawha Canal in Goochland," 35, and Bagby, Canal Reminiscences, 9.
30. Tiller, VI, no. 2, 2.
31. May 1798, Randolph Notebook.
32. Ivor Noel Hume, A Guide to Artifacts of Colonial America (New York: Alfred A. Knopf, 1980), 253
33. James River and Kanawha Company, Report of the Committee of the Senate on the James River and Kanawha Company (Richmond: 1843), 129-130.
34. Report of the Committee of the Senate, 130.
35. Chapelle, Small Sailing Craft, 46.
36. Chapelle, Small Sailing Craft, 46.
37. Chapelle, Small Sailing Craft, 46.
38. Baldwin, Keelboat Age, 50-51, and National Fisherman, May - July 1967. In 1960 several British-type bateaux, built during the French and Indian War, were recovered from Lake George and are currently in the Adirondack Museum.
39. Chapelle, Small Sailing Craft, 85.
40. Chapelle, Small Sailing Craft, 47.
41. Chapelle, Small Sailing Craft, 47.
42. Chapelle, Small Sailing Craft, 47.
43. Chapelle, Small Sailing Craft, 48.
44. Chapelle, Small Sailing Craft, 42.

CONCLUSION

This study of the historical record of the James River bateau and the analysis of the archaeological remains of Boat #28 permit several conclusions to be made. A number of problems, also, that are not fully answered, are seen in a clearer perspective,

It can be stated with assurance that the vessel known as the James River bateau was unique to the upland Virginia rivers. It was developed on the James River in upland Albemarle county by planter Anthony Rucker. Its development was a response to the burgeoning agricultural trade between the eighteenth-century upland planters and merchants at the market center in Richmond. The trade was initially successful, due in part to the development of a vessel of trade (the Rose tobacco canoe) that could navigate the rapid upland James River. The exhaustion of large timber and the great destruction cause by the flood of 1771 created the need for another vessel that could continue the river commerce. That niche was filled by Anthony Rucker's bateau.

The bateau's success was reflected in the wide range of its use on other Virginia rivers and on many upland rivers in the Middle Atlantic and Southeastern United States. Another testament to its value was its role in the urban growth of

Richmond and Lynchburg, Virginia in the late-eighteenth and nineteenth centuries.

The expansion of the James River Canal reflects both the success of the bateau and its limitations. It stimulated economic growth but the demand it created outstripped its ability to be a reliable and consistent form of transportation. A completed canal navigation permitted larger horse-drawn vessels to carry on the upland commerce and phased out the need for the bateau.

An examination of the James River bateau also provides an opportunity to observe a little known aspect of free blacks and slaves in antebellum Virginia. Traditional prejudices and suspicions were present, but the life of a slave bateauman permitted freedoms unknown in other aspects of the slave's existence. Unsupervised labor on the river was a luxury to many slaves, but it was also an irresistible lure to seek freedom and commit acts of vandalism and theft. The wantonness was not limited to slaves but was tempting to all boatmen.

It is certain that the archaeological remains of Boat #28 were those of a James River bateau. The analysis of this vessel and others like it from the Great Basin in Richmond has resulted in a better understanding of the origin of the vessel and its use. The structural remains examined in conjunction with the historical record strongly suggest that it was descended from French vessels employed in the Ohio Valley and in the French Canadian fur trade, which began in the seventeenth century.

This is interesting because it was used by a predominantly British culture in colonial Virginia and immediately thereafter. It is also notable that a French boatbuilding tradition in the piedmont existed "next-door" to an almost exclusively British boatbuilding tradition in the Chesapeake Bay.¹

The historical and archaeological evidence indicates that bateaux were cheap to build and probably not intended to last more than a year or two. The simplicity of their design and construction imply that they could be built quickly and required few workmen or specialists. The elementary structural features suggest that while the French-type bateau was used for several centuries on western waters, its offspring, the James River bateau, was of a short lived boatbuilding tradition and did not see much evolutionary refinement in its design.

When the historic significance of the James River bateau is considered, the lack of support for the basin excavation and subsequent loss of most of the remains of the basin boats is disturbing. There is some hope for future examination of other boats that may remain in undisturbed areas of the basin. Portions of the basin are still untouched by contemporary development but the present urban activity over these sites precludes any excavation in the near future. Other Virginia cities that had canals and turning basins, such as Lynchburg, Fredericksburg, and Petersburg, may yet contain the remains of bateaux and canal boats. It is hoped that city planners and

state historical agencies will take this into consideration when considering future development.

Interest in Virginia's upland navigation is currently experiencing a resurgence due to the basin dig. Many enthusiasts have been active in the past several years constructing replicas of James River bateaux.² Most of the replicas are sponsored by the local counties along the James and Appomattox rivers and financed by private donations. Many have been built using the plans prepared from the basin dig that are presented in this paper. Bateau races have been held every summer since 1986 between Lynchburg and Richmond assuring, for the present at least, continued interest in the nautical heritage of the upland watermen and vessels of the James River.

1. Chappelle, Small Sailing Craft, 49. Chappelle's chapter, "Colonial and Early American Boats," contains a discussion on the English boat building tradition in Colonial America.

2. Tiller, VI, no. 1 (April 1985), 2.

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