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Logging in the Upper Cumberland River Valley: A Folk Industry

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Schulman,

Steven A.

1973

LOGGING IN THE UPPER CUMBERLAND RIVER
VALLEY: A FOLK INDUSTRY

A Thesis
Presented to
the Faculty of the Department of Geography
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Steven A. Schulman
May, 1973

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LOGGING IN THE UPPER CUMBERLAND RIVER
VALLEY: A FOLK INDUSTRY

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It is traditional upon completion of a thesis to acknowledge the assistance of the many people who helped in its research and writing. As a student deeply interested in tradition, I do not wish to depart from the pattern.

To the members of my committee, Drs. Albert J. Petersen and Edmund E. Hegen of the Department of Geography, and Dr. W. Lynwood Montell from the Center for Inter-Cultural Studies, I would like to express my thanks for allowing me to combine the fields of geography and folk studies in my academic work. The insights gained from this experience have aided me in my research.

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I have reserved the final word for my wife Susan. For her enthusiasm and patience, I say thank you very much.

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"To ignore common activities is to deny ordinary men their place, however humble, in the scheme of society."

--Roland F. Dickey

INTRODUCTION

The lumber industry has been closely identified with the cultural and economic development of the United States. One observer (Brown, 1947:1) has noted that, "the industry has been an essential and important one and has contributed in manifold ways to the upbuilding of the American nation." As America's population moved west, away from the Atlantic seaboard, great quantities of timber were required. The people needed lumber for houses and barns as well as fences and furniture; the railroads used wood for ties to lay rails upon, bridges to cross rivers, and fuel to power the locomotives.

To supply the ever increasing demands for timber, large tracts of timber were cut throughout the northeastern states. Prior to 1840, the center of the logging business was found in Maine, along the Penobscot River. For over two hundred years, the forests of Maine supplied lumber not only for the United States, but also for many parts of the world. About 1850, however, the industry began to shift to the south and west, first to New York--mainly in the upper Hudson River Valley--and then to Pennsylvania along the Susquehanna River. During the 1870s, the industry shifted again, this time to Michigan and Wisconsin. The last extensive lumber region east of the Mississippi River to be logged was in the southeastern states,

where production did not reach its peak until the beginning of the twentieth century.

Southern forests had been cut for lumber since the time of the settlement at Jamestown, and the first sawmill in the United States was erected in the Virginia colony during the 1620s (Brown, 1947:1). However, it was not until the end of the Civil War that the full potential of the southern forests was known. Prior to the War, logging took place only in isolated and widely scattered areas of the South where transportation was available. Very little of the total lumber production of the South was sent out of the region, and in fact many items made from wood had to be imported into the southern states. When the Civil War ended, large portions of the former Confederate states were still covered by virgin timber. English syndicates and northern-based American land companies moved into the South and bought millions of acres of forest land from farmers and mountaineers for a fraction of their true value.

One southern lumber area--the upper Cumberland River Valley of Kentucky and Tennessee--was atypical in its development. Outside interests played little if any part in the logging industry along the river. Throughout the entire logging period, from the 1870s to the 1930s, the people of the area controlled the upper Cumberland lumber industry. Lumbering in the Cumberland Valley was a folk industry characterized by part-time loggers and small scale operations, in contrast to the vast, full-time logging camps found in other

areas. It is difficult to determine why outside corporations entered the upper Cumberland area only on rare occasions. The region is no more isolated than other Appalachian Mountain areas where British and American companies bought land in the period between 1870 and 1900. And yet the forests of the upper Cumberland remained in the hands of the people who lived in the area.

The purpose of this study is to examine the logging industry found along the upper Cumberland River from the 1870s to the 1930s. Because the industry was very much a part of the economic lifeblood of the people of the region, the study will focus upon the loggers and raftsmen who worked with the timber. Any attempt to describe the lumber business alone would be futile due to the nature of the industry. It is impossible to separate the logging industry of the Cumberland from the general folk life of the area, because of the involvement of the people in the business. This study then is as much a description of the folk life of the Cumberland River Valley as it is a consideration of the logging industry.

One problem which occurs in a study of the folk life of an area is that there are few if any written records to use for reference. In trying to determine the evolution of the lumber industry of the study area, the problem was compounded by the lack of company records from the logging enterprises. Often they were not kept at all, while other timber owners used any scrap of paper available to list expenses and profits. Even when a company managed to keep detailed records, the

ravages of time have taken their toll; fires, floods, and house cleaning all conspired to destroy printed documents. Because of this, it was necessary to turn to oral history to reconstruct the methods of logging and rafting used along the upper Cumberland River.

The use of oral folk history has been successfully demonstrated by W. Lynwood Montell (1970). In his Saga of Coe Ridge, Montell used oral traditional narratives to write the history of a black community in southern Kentucky. By comparing the narratives with the written records which were available, the accuracy and validity of oral history was clearly shown. In addition it was found that "the narratives articulate the feeling of a group towards the events and persons described" (Montell, 1970:xxi).

As in the Montell study, the lack of written material for this thesis was compensated through the use of oral sources. Details about timber cutting, hauling, and raft construction were obtained from men who had taken part in the activities and who knew first-hand what life in the woods was like. The final result is a study in which the everyday life of the logger and the cultural milieu he operated in is more important than the number of board feet of lumber sent down river to the Nashville sawmills. The study reflects the folk life of the upper Cumberland River; it is more than the study of an industry, it is a study of how men lived and worked.

CHAPTER I

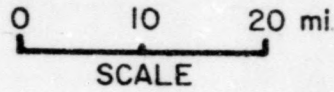
DEVELOPMENT OF THE CUMBERLAND RIVER

LOGGING INDUSTRY

The upper Cumberland River Valley (see Figure 1) contained some of the finest ash, beech, cedar, hickory, oak, poplar, and walnut trees in the United States when commercial¹ logging activities began following the end of the Civil War in 1865. Prior to the War, very little timber from the area was shipped to outside markets, and the internal utilization of forest products was limited. For the most part, the timber used in the Cumberland Valley up to the War Between the States was cut as the need arose, not in anticipation of a future demand. When the Civil War ended, there was an increased demand for lumber to rebuild the South, and the virgin forest along the upper reaches of the Cumberland offered what seemed like unlimited timber resources. One estimate of the potential of the area noted, "in all there were 13,000,000 acres of this timber . . . with an estimated value of \$130,000,000.00" (Douglas, 1960:234). When the Depression in the 1930s ended the lumber industry along the river, millions of board feet

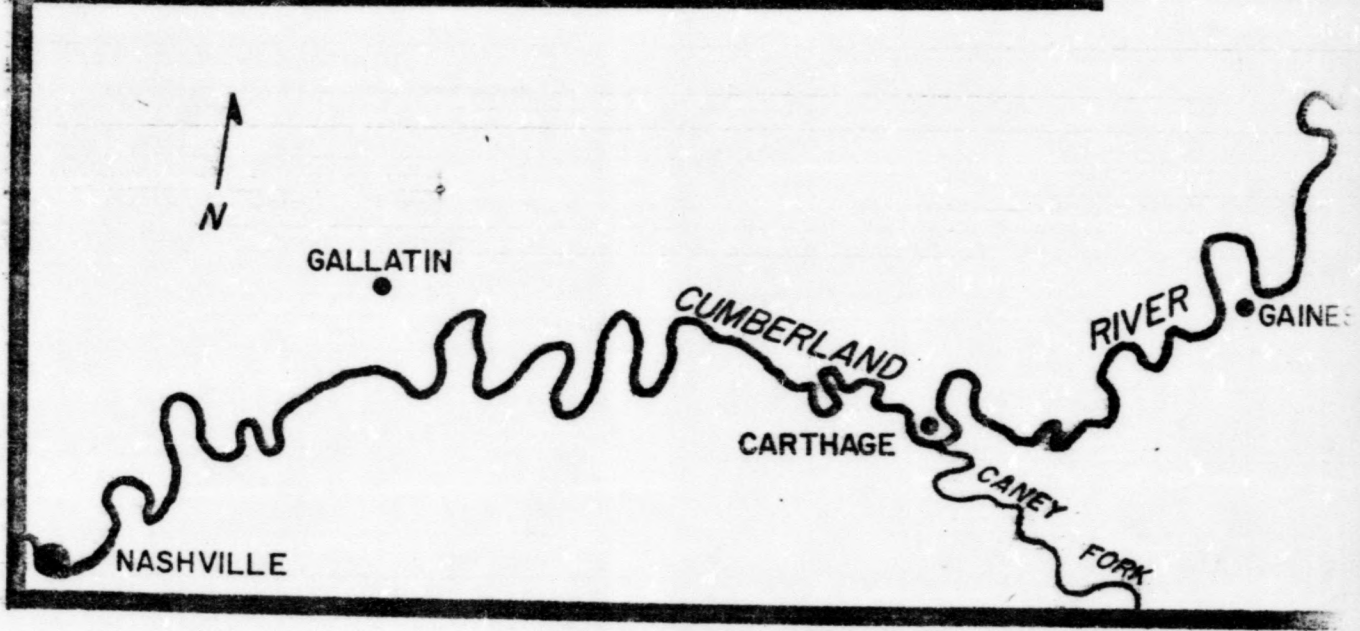
¹Commercial is used to indicate logs cut to be sold by the people rather than meaning large scale operations like those found in Maine, Michigan, and other lumbering regions.

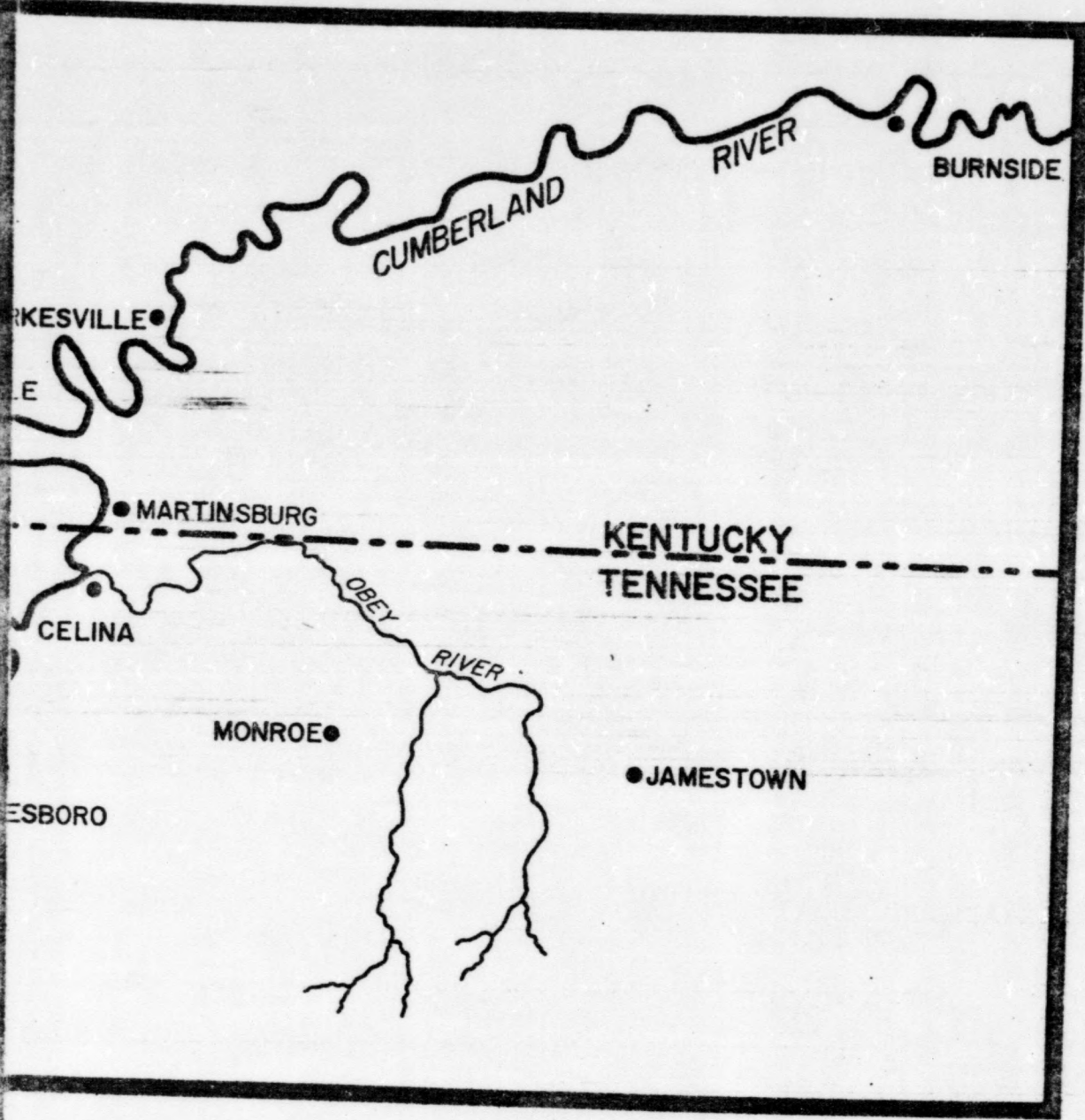
UPPER CUMBERLAND RIVER REGION



SOURCE: CORPS OF ENGINEERS, U.S. ARMY

BURK
TOMPKINSVILLE





of timber had come out of the forests. The bulk of this lumber was cut, hauled, and rafted not by professional lumberjacks, but rather by farmers who worked in the woods after harvest time.

The Lumber Worker:

For some of the farmers of the area, timber cutting was a regular part of the farm year. Logging was, for those involved, a way of life and part of a total agricultural system. It was as much a traditional element of agriculture as planting corn and stripping tobacco. The three major crops of the region were corn, tobacco, and trees, but with trees the farmer did not have to plant his crop, only harvest it. Not only were these farmer/part-time loggers able to earn extra income from the sale of timber to a dealer or sawmill, but also cleared arable land could be used for planting additional crops.

The sale of the timber was not always at a profit however, as the Kentucky State Forester's office noted (Kentucky, 1915:75):

Many farmers in Kentucky, as elsewhere, are today regretting the haste with which they got rid of stands of timber for much less than their value, in order to make room for agricultural crops.

Despite the problem of low monetary returns sometimes received for their trees, many of the farmers along the Cumberland continued to cut and sell a few logs each year almost up until the present day.

Not all the men who lived and worked along the river owned land. Many were employed as hired-hands, planting and

harvesting crops in the spring and summer and cutting timber in the fall and winter. Often, these men worked for the same person all year round. There were, however, some workers who drifted from one employer to another, cutting trees in one region and farming in another area. Nearly all the former slaves of the upper Cumberland Valley were in this category. Farm work was available to the black workers, but it was not stable and wages were low. The logging industry on the other hand did offer employment for the Negro at decent wages. At a time that farm owners were paying only eight or ten dollars a month, timber employers paid fifteen to thirty dollars per month. And yet even the hired hand, black or white, who took to the woods for part of the year was not a professional in its true meaning. This man was also a part-time logger like the land owning farmer.

This is not to say that there were not full-time lumbermen in the upper Cumberland area. But for the most part, the men who earned their livelihood in the business were buyers working for the larger companies or the sawmills in Nashville. It was rare to find an ordinary logger or raftsman who engaged in that type of work for the whole year.

The Pre-Civil War Industry:

The background for combining farming and logging can be found in the manner in which the early settlers of the region used the forest. From the time the first pioneers entered the Cumberland Valley at the end of the eighteenth century, every settler was familiar with the forest and knew how to use its

resources. It was observed (Arnow, 1960:255) that, "the ax was part of the average pioneer farmer's life from the time he was big enough to toddle about . . . until he died." If a cabin or a barn was needed, the building material was cut on or near the site. Wood products of all types--bowls and dishes as well as chairs and tables--could be made from available timber. The tools used in cutting and working timber were counted among the most prized possessions of a family. When one early settler of the region was killed by Indians, his cow and it's calf sold for six dollars while a logging chain brought four dollars (Arnow, 1960:259).

In time, woodcutting became more than a necessity; it began to develop into a way for economic gain. There was many a farmer "up river with not too much rich level land but a good supply of white oak [who] could alternate his farming with off-season work making staves . . . or barrel ties" (Arnow, 1963:284). Others in the region cut wood for charcoal or firewood. Workers skilled in the art of the maul, glut, and froe cut lumber which began to appear in the homes of the farmers along the river. Shingles and shutters were cut from logs and used in the construction of new homes for the more affluent residents. Such lumber produced in the upper Cumberland Country did not reach outside markets.

The output of a man hewing boards from a log was limited, and there were no local sawmills which could turn out anything approaching mass production. Although the circular saw came into use in the United States around 1815, its appearance

along the Cumberland must have come very late. The Southern Lumberman (December 15, 1882:1) reported that:

The first sawmill in this part of the country was situated . . . opposite the city of Nashville The next steam saw-mill was situated on the Cumberland river, in Wilson county. In the spring of 1851, the third steam saw-mill in Tennessee was . . . a few miles south of Lebanon.

The few local primitive sawmills used a whipsaw to cut lumber from logs. While the product was quicker and more uniform than the hand hewed boards the local craftsmen turned out, it was still a very slow and expensive process.

The pattern of logging activity established early along the Cumberland lasted until the beginning of the Civil War. A few sawmills were started, cutting logs into rough boards for local consumption; quite possibly a raft occasionally made its way down to Nashville to be utilized by one of the mills. But for the most part, timber cut in the Cumberland River Valley stayed in the region (Firestone, 1936:101-102).

When the effects of the Civil War began to be felt in the Kentucky-Tennessee area, logging activities came to an almost total halt. The men of the Cumberland Valley fought on both sides of the conflict as well as in the guerrilla bands that held allegiance to no one. Farms were left unworked and the only sounds in the woods were those of soldiers shooting at one another. Nearly all economic practices in the region were disrupted by the War; after the fighting some of these practices were changed, while others were gone forever.

The Post-Civil War Industry:

When the War Between the States ended, the need to rebuild meant that increased lumber was needed. Describing the post-war industry, the Southern Lumberman (December 15, 1881:4) noted that, "the lumber business was the first to revive in the South after the war, and its steady increase in volume and value . . . contributed largely to the building up of all other industries." Tract after tract of virgin timber throughout the South was cut to meet the demand. The forests bordering the upper Cumberland, which had long been ignored by all but the folk who lived there, were now viewed as a source of a much needed commodity.

Starting with the timber near the river, the loggers gradually cut their way back to the interior regions as far as it was economically practical. By 1874 in Jackson County, Tennessee, for example, "most of the poplar, and walnut near the river [had] been cut and floated down in rafts to Nashville" over two hundred miles down river (Killibrew, 1874:776). Throughout the entire region, the common practice was to go into a forest, cut down all the saleable trees, and then move on to the next timber stand. As long as there were more trees available just over the hill, the concept of conservation was never considered by the lumbermen. Land that had been cut over was left abandoned with no effort to reseed for future use. In his appraisal of the lumber industry in the South, Thomas D. Clark (1972:160) stated, "Management of timber stands meant getting the most money out of the land and leaving nature to reforest them."

The River and the Rafts:

The only problem faced in the logging country was how to ship the logs to the sawmills in Nashville for conversion into lumber and eventually into cash. The normal method of operation throughout most of the South was to set up sawmills in the timber stands rather than try and transport the logs to the mill. An exception to this rule occurred when railroads were available and in close proximity to the forest and the sawmill. But the trains never penetrated the upper Cumberland region from Carthage, Tennessee to Burnside, Kentucky. The tracks that linked east and west, north and south, across the United States bypassed the river country and left only one outlet to the world for the people there. The Cumberland River was to tie the inhabitants of the area to Nashville when the logging era began, just as it would when the period ended sixty-five years later. For the logging industry to develop, the river was needed. At first, the river was the only method available to the lumbermen of the upper Cumberland to transport their product. As it turned out, the river would remain the route over which the logs would be shipped for the entire active logging period.

As an avenue of commerce, the value of the Cumberland almost defies description. One lifelong riverman recalled (Knox, 1972:14):

. . . for 325 miles of river, bendin' and windin' up through the hills--past Carthage, Celina, Burkesville, Kentucky, to Burnside, Kentucky, and all those landings in between 'em--the old Cumberland come nigh-on to bein' the onliest way to ship freight and tobacco, sacked grain, hogs and cattle--and to bring plenty of sawlogs to all those mills . . .

Without the Cumberland, the people who lived up river from Nashville would have been in almost total isolation. To the residents of at least a dozen counties in Kentucky and Tennessee,¹ through which the river flows, the goods and ideas that came up river provided the only contact there was with a world outside. As the river's historian Harriet Simpson Arnow (1960:viii) has noted, "all things went down the Cumberland, all goods up" [*italics added*]. When the navigation of the stream finally did stop in the 1930s, life seemed to come to a standstill and many of the steamboat landings and smaller communities ceased to exist, no longer having a raison d'etre.

Raft Development:

The technique utilized to bring the logs down river to the mills was to build a raft and float it to Nashville. Huge rafts, containing from forty to ninety-thousand board feet of lumber, were constructed along the river banks and sent to the sawmills on the tides that occurred on the Cumberland each winter and late spring. In effect the product was also the vehicle of transportation. With a crew of five or six men, and a pilot, the craft moved with the flow of the water. All that was needed were oars at the ends of the raft to steer around sand bars and other obstacles in the river.

¹These counties include Adair, Clinton, Cumberland, Metcalf, Monroe, Russell, and Wayne in Kentucky; and Clay, Fentress, Jackson, Overton, and Pickett in Tennessee. Today, highways link this area to the outside, but the railroads never did come into the area.

The concept of moving timber to market by raft is one of the oldest methods of transporting logs in the American lumber industry. At one time or another, the idea was used on most of the major streams in the Eastern United States. Its use spread south and west along with the movement of the logging business. In the pine forests of the South rafts were utilized until the beginning of the twentieth century, about thirty years longer than in northern New England, New York, and Pennsylvania.

One of the local traditions in the Celina area is the story of how William "Uncle Billy" Hull came up with the notion of using rafts and sent the first one down river to Nashville.¹ However, as has already been noted, an occasional raft went to Nashville prior to the Civil War. Also, "hewed logs for houses, . . . known as 'house patterns,' grandfathers of the pre-fabricated homes of today, were rafted . . . into the Cumberland, and down to Middle Tennessee" (Arnow, 1963: 284). Even before timber of any type was moved down river in rafts, flatboats were constructed in much the same fashion and used to haul goods on the Cumberland as well as many other

¹William Hull is the father of Cordell Hull, United States Secretary of State from 1933 to 1945. The younger Hull in his autobiography states that his father began to raft logs in 1875, but does not mention whether or not he was the first. An interesting sidelight is that Cordell Hull worked on the rafts going down to Nashville and paid for his first law books with his earnings.

rivers. At the end of the journey, the flatboats were broken up and the lumber sold to a dealer, just as the rafts were taken apart at the sawmill.

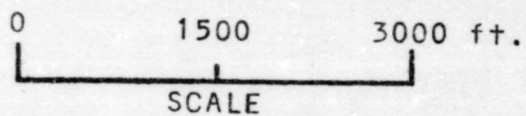
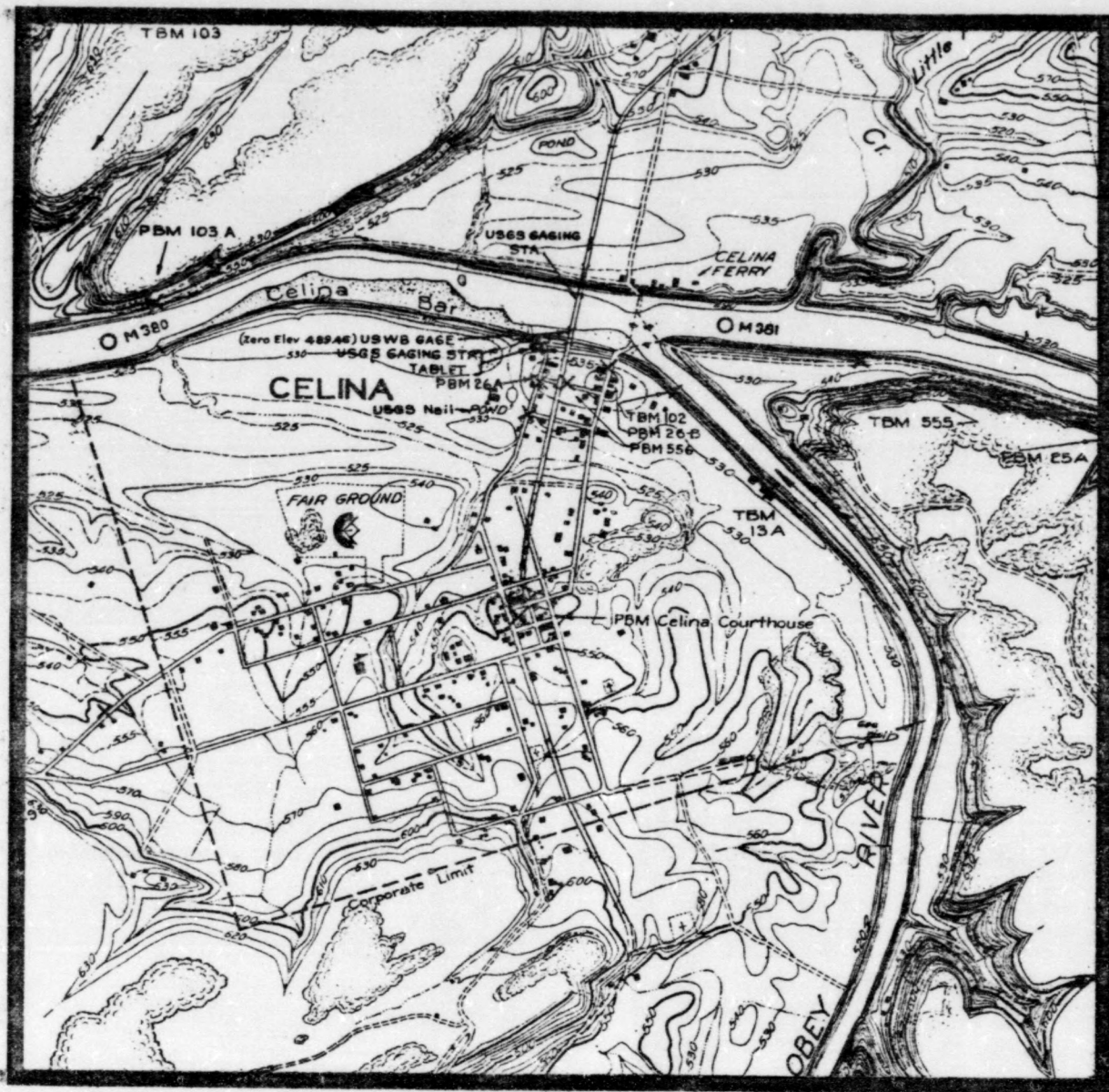
The impact of the log rafts on an area was almost always great. Villages were developed at the confluence of nearly every major tributary to the principal rafting streams (Brown, 1936:250). The Cumberland River proved to be no exception to this. Celina, Tennessee, at the junction of the Cumberland and the Obey¹ rivers was only a tiny hamlet prior to the development of the rafting business (see Figures 2 and 3). All rafts coming down stream from the log woods in Kentucky stopped at Celina as did those from Tennessee floating down the Obey.

During the rafting season, the two rivers at Celina would be filled with rafts waiting for the tide to take them to the sawmills. It was said (Know, 1972:14) about the conditions at Celina that, "sometimes you could walk six miles up the Obey River, walkin' on rafts, steppin' from one to another--they were tied off that close together." When the river rose to the level needed to run the rafts, all rafts would be turned loose from their moorings and started on the run to Nashville.

The level of the water in the river was all important to the raftsmen. If the Cumberland was at low stage, the rafts could not make the journey. When this happened the

¹The Obey River is also known as the Obed or Obed's River.

FIGURE 2



A PORTION OF CORPS OF ENGINEERS
CUMBERLAND RIVER SURVEY

SOURCE: CORPS OF ENGINEERS, U.S. ARMY



Figure 3. The confluence of the Cumberland and Obey rivers looking east from Celina, Tennessee.

Nashville sawmill operators had good reason to worry. The Southern Lumberman (December 15, 1884:16) noted that, ". . . the extraordinary low stage of water in the river, and the general conviction that there will be no rise sufficient for rafting for a long time yet, has somewhat demoralized the river log trade." High water, however, was also a problem for the rivermen at either end of the Cumberland River logging industry. In 1882, the Southern Lumberman (January 16, 1882:10) reported, ". . . the Cumberland river has put on its war paint and is raging just now . . . The high water, of course, prevents rafts from coming down, but we look for something like 20,000,000 feet when the river begins to fall."

Sawmills Up River:

As the lumber business increased in volume, sawmills up river in the Cumberland Valley began to develop in competition with the Nashville mills. The lumber produced by the mills along the upper Cumberland was shipped to Nashville on the steamboats which carried the regions products to market. Some of the local sawmills began to produce crossties, ax handles, and barrel staves in addition to boards. In Kentucky, "Pea Ridge was an early milling center specializing in ax handles, and Martinsburg became a rather important local shipping center, having a warehouse built especially for the storing of ax handles made in the Pea Ridge community of Red Bank" (Montell, 1970:148).

By 1895, however, most of the larger sawmills along the upper Cumberland went out of business completely and the tim-

ber owners sent almost their entire output of logs down river in rafts rather than by steamboat. The mills in Nashville could handle all the timber sent to them, and the owners were rarely mistreated in the amount of money received for the timber. Some of the smaller mills up river stayed in business, but their production was aimed mainly at local consumption, not to the markets outside the region.

Today, talk about logging in the upper Cumberland River Valley always leads to the rafts and the men who worked on them. The steamboats, packets, and the sawmills are only rarely mentioned in connection with the logging industry of the upper Cumberland. But then who could resist telling about the times that rafts lined the river for miles and miles--as far as the eye could see.

CHAPTER II

IN THE LOG WOODS

Timber cutting in the log woods of the upper Cumberland River region usually began near the end of August or the first part of September when the weather began to cool down. Working through the winter months in rain as well as sunshine, "or at least every day that was fit to cut," the men continued logging until the sap came up in the trees. Two reasons are normally given for starting to cut timber in the fall.

First, the cutting was delayed because logs, mainly softwoods, that were cut in the spring or summer and left lying in the woods attracted woodworms and other insects that would destroy the timber; and second, since the loggers were also employed on the farms along the river, they were needed to plant in the spring and harvest the crops in the summer.

Most of the men who cut timber however, probably felt that the cooler weather of fall was just a better time to log. As one former worker remembered, ". . . cutting trees in August, some days were so hot and humid that breathing was difficult in the thick woods . . . and on top of that we had to be continuously on the look out for rattlesnakes and copperheads" (Rich, [1972]:24).

The workday for the men along the river began at first light each day. Since most of the loggers either boarded in town or on a nearby farm, this meant that the day began well before sunrise. In later years, a few of the larger timber companies set up regular logging camps in the woods. The Kyle Brothers, one of the largest timber companies in the region, during the 1920s had sleeping quarters, a mess hall, and a cook shed on the boundary of timber they were cutting in Wayne County, Kentucky. However, this practice was developed near the end of the logging era on the upper Cumberland and never became common. For the most part, logging was a job worked by the men during the daylight hours and in the evenings they went home, away from the woods, to rest for the following days work.

Pay for working a full day in the log woods ranged from fifty cents upwards to one dollar. The range in the wage scale was due as much to the temperament of the timber owner as it was to the price of lumber, although the latter probably had more to do with the matter than the former. Very seldom was a premium paid for cutting an exceptional amount of timber during a day. A noon meal was provided, however, to the loggers by the employer. The meal generally consisted of bacon, eggs, biscuits, and butter or molasses all of which were prepared in the morning and carried to the woods in a large basket.

Cuttin' the Logs:

Once in the logging area, each man was assigned a specific job. A normal crew was made up of four or five men. Two men worked as timber cutters, one or two 'snaked the logs' to the haul wagon, and one man drove the wagon to the river's edge. The men cutting the trees were also responsible for sawing the logs into transportable lengths.

To cut the timber, the loggers used an ax, either a pole ax or a double bit ax, and a cross-cut saw. In early years, the ax was the only tool used to fell timber, but as the demand for more timber developed, more speed was needed and the ax gave way to the cross-cut saw. Various lengths of cross-cut saws were employed in the industry along the Cumberland. Some were as small as five feet in length, while others measured up to seven and one-half feet long.

When the loggers used only an ax to chop down the timber, trees were cut so that a stump waist high was left. The cutter would first notch the trunk on the portion which faced the direction in which it was planned for the tree to fall. This direction was determined so that when the tree fell, it would not catch in the branches of other trees and make their cutting difficult and dangerous. While this was the major consideration for notching, another consideration was, that unless notched, the falling timber would splinter part-way up the trunk and damage the timber.

As the cross-cut saw came into use, the loggers could start lower down on the tree--usually at a height of twelve

to eighteen inches above the ground. This enabled the men to get more lumber from each tree, in addition to increasing their overall speed. The tree was still notched with an ax, but now the bulk of the work was accomplished with a saw. After the sawyers had started the second cut on the trunk, a wedge was driven into the opening, behind the saw to help prop the weight of the tree towards the direction in which it was to fall, and also to hold the weight of the trunk off of the saw. When softwoods such as poplar or cedar were cut, the wedges were made of a hardwood, while an iron wedge was used in cutting oak, hickory and other hardwoods.

Working with both an ax and a cross-cut saw, two loggers could take down a tree up to forty inches in diameter in about fifteen or twenty minutes. However, as one ex-logger, U. G. Bowles, remembered, "a real big tree, four feet through or something like that, would take you an hour or so." During a work-day, each cutting team would cut down between eight and ten trees.

The remainder of the cutters time was spent in 'bucking' the tree into logs ranging in length from ten to sixteen feet. The length and number of logs each tree produced depended on the size of the tree. Sometimes only one log came from a tree while other trees would yield as many as five logs. If the cutters felt a tree was fit to cut (more than eighteen inches across) they took it down. In making up the logs, the men worked right up to where the branches started. This portion was discarded. When the loggers worked to remove the branches

to try and produce extra length on a log, valuable time was lost and the quality of the wood also decreased. After an area had been logged over, all that remained were stumps, tree tops, and a few trees too small for cutting.

Snakin' the Logs:

As soon as the logs were cut to size, the men who did the snaking began to move the timber to the log wagon with a team of either mules or oxen. "Oxen could go where a mule couldn't go in the woods," one observer stated. The split hoof of an ox, pulled free from the mud much easier than the one-piece hoof of a mule and therefore the use of oxen was preferred by the lumber workers. Using a team of four or six animals, lengths of chain, and some stout rope, the snaking crew worked to pull the logs out of the creek beds and gullies in the log woods.

Logs cut on the top of a hill and on the hillside, were rolled or sent sliding down to the bottom for the snaking team to move. This required additional manpower, however. Two or three men, and on occasion even more, would go into the woods when it was rainy or wet and get the logs started by lifting the logs and shaking them. Some were difficult to start, some were easy; they would go down the hill at a slow rate or extra fast rate, no one knew what to expect. A large heavy log sliding down hill on the mud and wet leaves often "would go like an express train" uprooting or tearing out small trees as well as knocking down anything else in its way (Rich,

[1972]:12). Sometimes these logs would bury themselves into the soft mud, necessitating even more work by the men to pull them free.

The operation of snaking the logs to the haul wagon often took a considerable amount of time. At times the distance involved was great--two or three miles--and the terrain muddy and uneven. When this occurred, only a few logs per day could be moved to the wagon. If the road where the wagon was parked was close, the men were able to move most of the days cutting to the loading area.

Haulin' and Brandin' the Logs:

Loading the log wagon required a great deal of lifting by the men in order to get the log up on the bed of the vehicle. To get the logs loaded, skid poles were placed against the wagon, one at each wheel creating an inclined plane. These poles were about six inches across and were made from a seasoned hardwood, mainly hickory or oak. The log was lifted off the ground and a chain was wrapped around it. The next step was to throw the linkage across the log wagon and hitch it to a team of mules or oxen. As the animals pulled on the chain, the log moved up the skid poles and on to the bed of the wagon. The workers during this time were guiding and shoving the log with cant hooks and spike poles to make sure that it rolled up the skids and didn't slide off. Depending on the size of the log, anywhere from one to five logs could be hauled at a time in the wagon (see Figure 4).

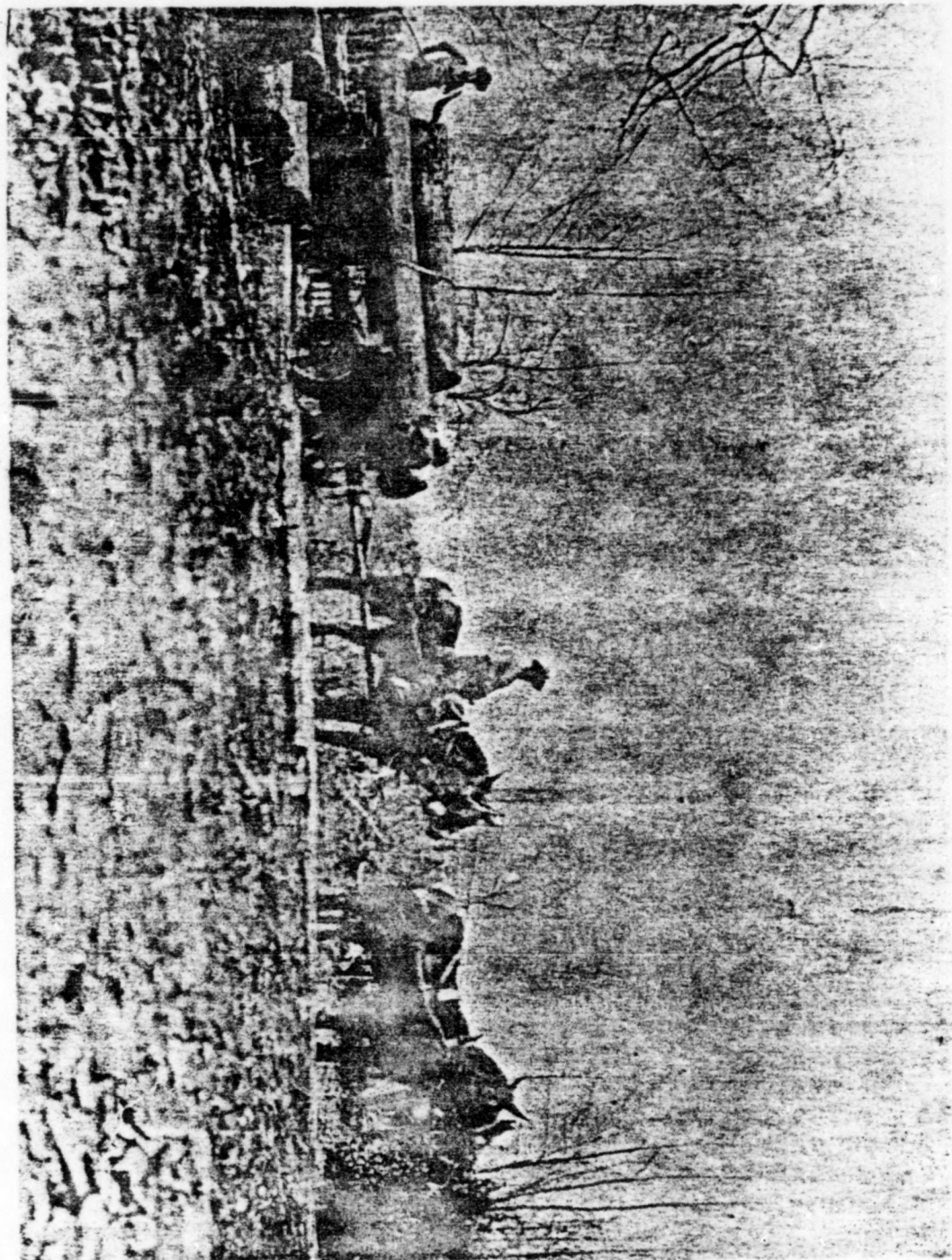


Figure 4. A log wagon on the way to the river.

Another process usually undertaken at the loading area was the branding of the logs. Sometimes the timber was marked before it was loaded, while other times the lumberman waited until the logs were on the wagon. The tool used to place an identifying insignia on the log was a branding hammer (see Figure 5). This device looked very much like an ordinary hammer except that a letter or symbol was raised on the end to make an impression in the wood when it was struck against the face of the log.

Each timber company and sawmill had their own brand, which was registered. No sawmill would buy or cut logs that carried the brand of another mill. Both Kentucky and Tennessee had statutes prohibiting the removal of a brand much in the same manner that the western states had laws against changing the brands on cattle.

The laws and traditions about removing or changing brands did not prevent this from happening however. After a flood on the Cumberland River in 1882, the Southern Lumberman (March 1, 1882:2) reported:

Mr. W. A. Nicholson, with Arch Mancourt & Co., Burnside, Ky. came to see us the 18th. Mr. Nicholson is working along the Cumberland river to recover the logs lost by his firm during the rise. The conduct of the loggers of the upper Cumberland have been a source of great vexation to him. He says they have sawed off the ends of the logs bearing the brand of his firm and sold them. He found many logs with their brand still on made into rafts, by parties having no right to them . . .

Generally, however, the brands were respected if for no other reason than the fear of legal action which might be taken.

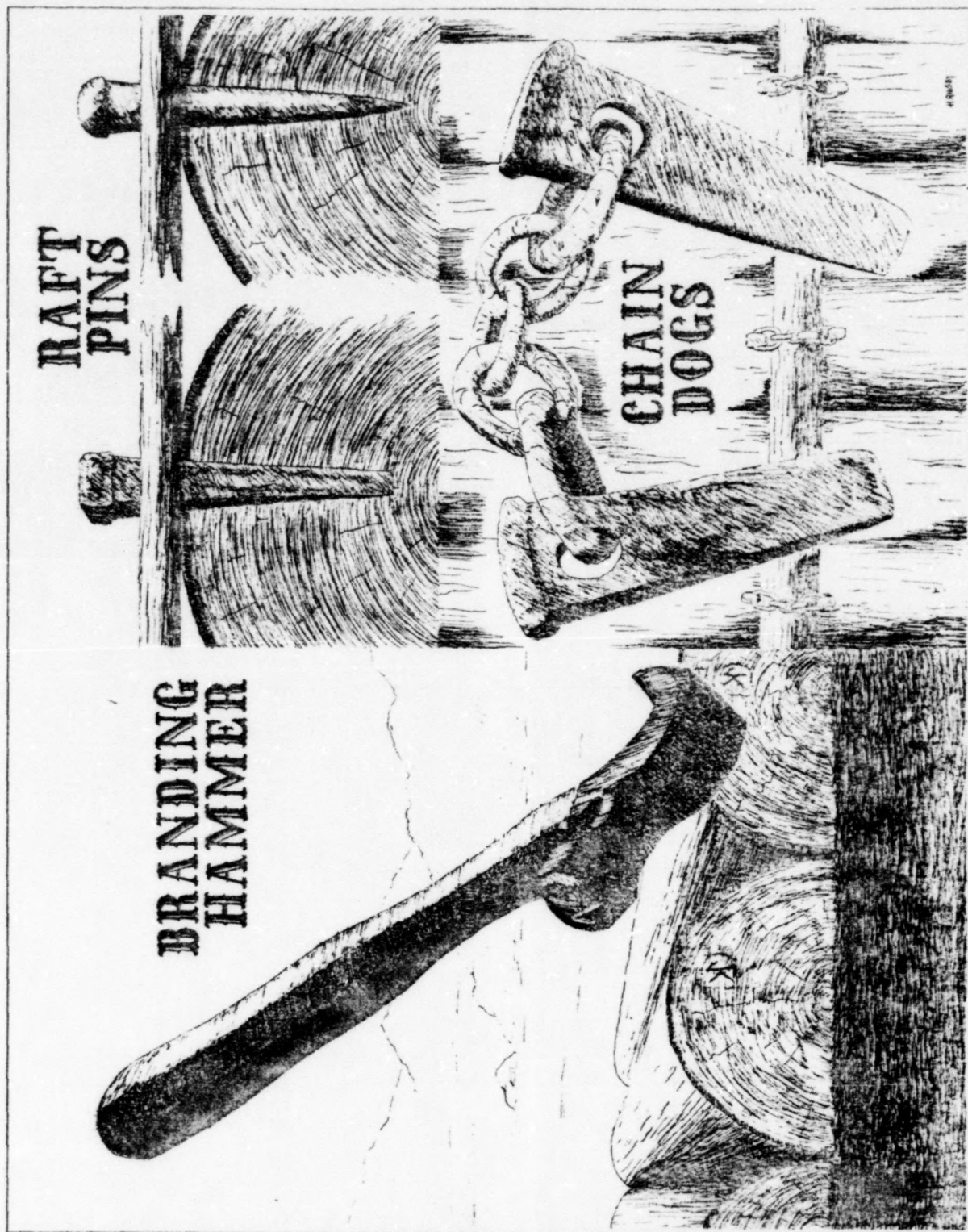


Figure 5. Three common tools used in the lumber industry along the Cumberland River.

After the wagon was loaded and the logs had been branded, the men lost no time in starting the trip to the river's edge. Early in the logging era, timber was cut close to the water and a crew hauling logs on a wagon could make as many as four to six trips per day. But, as the cutting continued, the log woods were found farther away from the river. Twelve miles was considered the maximum distance for an operation to be profitable, and many ventures worked this far from the Cumberland. When the logs had to be moved over eight miles in order to be at the site where the raft was to be built, the number of trips made each day was quite low. Sometimes only one haul a day was made and this meant starting at daybreak and returning home in the evening.

If one of the creeks which ran into the Cumberland River was near by, and it was large enough, the logger only had to haul the timber to that location and drop the logs off. When the water in the river began to rise, the creek would have enough water in it to float the logs, and the workers needed only to build a small raft out of them and float the entire block to the river. This practice saved not only time in hauling the logs, but also manpower. By working in the tributary streams of the river, anywhere from a mile to three miles were removed from the hauling distance. One hundred logs could be moved when the water was up just as easily as one log could.

Another method utilized when a creek bed was not available was to place the logs on a bluff overlooking the river.

When it came time to make-up a raft, a wide path leading from the bank to the river was cut. This path was often fifty or seventy-five yards wide and the logs were rolled down to a crew building a raft in the water. Timber was sometimes damaged in 'bluffing' the logs however, and a cart was later used to move the logs down the slope to the river. The cart was a two wheeled vehicle, strongly made, and it would be backed to the end of a log. Snake dogs [much like the chain dogs used to raft hardwood (see Figure 4)] were driven into each side of a log; the tongue of the cart was raised up as high as could be (raising the tongue caused the axle on the cart to go lower), and a chain was fastened to the snake dogs and to the axle of the cart. When the chain was drawn up as tightly as possible, the tongue was lowered back down, raising one end of the log eight to twelve inches off the ground. The log was then partially carried and partially dragged down to the water.

By the time rafting season came, the logging crew had cut four to five hundred logs and hauled them to the river to be made into rafts. For the farmers in the region who worked on their own land and cut just a few trees, the process was much the same, only on a smaller scale. The individual working with one other man, was not able to specialize, he had to cut, snake, and haul. A Kentucky farmer in recalling how he and his brother operated during the 1920s said, ". . . we worked at it here a good while in the winter and got them ready and then we racked and ran them down the river (Schulman, 1972:96).

For the farmer cutting only a few trees, the work was just as hard and just as dirty as that performed by the hired logger working in a large stand of timber. The only difference was that the farmer might be able to sell the timber for more than the wages he might earn working for someone else.

CHAPTER III

RAFT CONSTRUCTION

Building a raft for the journey down river to Celina and then on to Nashville required a fair amount of skill and knowledge on the part of the worker. Many men along the Cumberland knew how to build a raft, but "there was all the difference in the world about men and rafts . . . some hands wouldn't get nothin' done and some could go right on," was the way one long time lumberman remembered it. A good crew working to construct a raft of between one hundred and one hundred and fifty logs could put it together in about two and one-half days; others who knew only the rudiments of raft building took much longer, and the quality of work was a great deal poorer.

There were two times during the year that the rafts were made-up--winter and late spring. In the winter, normally starting in December,¹ the river would begin its rise and there would be sufficient water to float the logs free from

¹The winter tide did not always arrive at the desired time. For example, in 1881 "rafts commenced arriving in October, but this was unusually early." (Southern Lumberman, August 1, 1882:12). However, in 1884 it was noted, "the water in the Cumberland river stood only eight inches above the low water marke of Sept. 5th, 1863 . . . only a slight rise is expected for the early part of Dec" (Southern Lumberman, December 1, 1884:8).

the creek beds where they had been hauled. Until the middle of February, rafts would be built and sent on their way to the sawmills. The second season for the builders was during the time of the June tide. This was a much shorter period for the lumbermen, but it did allow the logs which had been cut and hauled to the river after the last rafts of winter to be shipped. The June tide, however, was somewhat irregular and on occasion the river did not rise enough for the rafts to be sent to Nashville. If this happened, the logs had to be left on the bank or in the creek bed as there was no way to move them to market.

As the proper tides started, and it came time to begin building the rafts, the logs were moved off the bank or bluff and into the river. The timber which had been hauled and dropped in the creek beds that flowed into the Cumberland was allowed to float. To prevent the timber from getting loose and being lost, booms were constructed across the mouth of the creeks. The boom was a series of logs fastened together with chain dogs at the ends and secured to the river bank with rope. Once the men began to work on the raft, the booms were taken down and the raft was tied to the shore.

Buildin' the Raft:

With the first few logs, the work crew built the raft usually standing in the water as it was normally shallow enough to do so. Sometimes a skiff or johnboat was used if the water was deep or extremely cold. Once the raft had

started to take shape, the men could stand on the logs already in place and continue to work from there (see Figure 6). The first log put into place was the one which would be at the front end of the raft as it went down stream. This log was always a softwood or floater log, such as poplar or cedar. The floaters were used to give buoyancy to a raft which contained mainly hardwoods or sinker logs like oak, beech, hickory, or walnut. The raft builders would try to alternate floaters and sinkers as much as was possible to give the entire raft buoyancy, although at times it was not practical to do so.

To tie the individual logs together, long hickory strips called whaling were used. These strips were attached to the logs with the aid of wooden raft pins and iron chain dogs (see Figure 5). The pins were utilized on the softwood logs and the chain dogs were used on the hardwoods. Construction tools needed by the raft builders included a pole ax or a heavy mallet to drive the pins and dogs, and a one and one-quarter inch auger fitted with a long handle to drill holes in the whaling for the wooden pins.

The sawmill operators supplied the chain dogs to the raftsmen, but the raft owners were responsible for the pins as well as the whaling that was needed. Along the Cumberland, "a number of men made raft pins and sold them at twenty and twenty-five cents per hundred," stated an individual who had spent many a long night making the pins. If the raft owner choose not to purchase the raft pins, he made them himself.



Figure 6. Building a raft on the river.

On days when the weather prohibited timber cutting, and on the long nights after logging, the men who made their pins would sit with a small hand ax, a draw knife, and a shaving horse, carving their supply for the next raft trip. The raft pins were made from a piece of seasoned hickory or red oak about eight to ten inches long. When finished, each pin was of a uniform size and shape with the others made that day. Although there were many variations, there were two general forms the pins took. Some of the makers produced a round, sharp pointed raft pin, and other workers made up a pin that was more wedge shaped. Every maker was partial to his style claiming that it was the best for the purpose, but all seemed to have done their job in holding the raft together.

The hickory strips, or whaling, were made from a sapling about four or five inches in diameter and approximately twenty-five feet long. The sapling was split in half length wise, using another small tree and a froe. The piece of hickory was split at the end, and then either a mule or an ox would be used to pull the two sides of the opening around the trunk of the little tree while another man guided the split with the froe to make sure the two parts were more or less even. When this process was completed, the strips were allowed to dry or season before they were used.

To attach the whaling to the first log, it was often lashed to the log with rope to hold the pieces together temporarily. One piece of the whaling was placed at each end of the log, on the top, and secured. Then with the auger, a

hole was drilled through the hickory strip and into the log (see Figure 7). Next, a raft pin was placed in the hole and using a mallet or pole ax, depending on which tool the builder preferred, it was pounded into the log. The opening in the whaling and the log was slightly smaller than the raft pin so that after being hammered in, the pin was held tightly in place. The ropes holding the log and whaling together were removed and work progressed on completing the raft.

Each additional log was rolled under the whaling and the process of drilling the hole, placing the pin, and driving it home was repeated over and over. As each log was set into place, care was taken to make sure that when the logs were measured, the raft owner would make the maximum amount of profit from their sale. If a log was oval shaped, as many were, the long axis of the log was placed on a vertical plane and the short axis on a horizontal plane. This was known as 'sunfishing' a log because it resembled the shape of a sunfish. The logger felt that the process helped to increase the number of board feet that the log measured out to.

When a hardwood log was attached to the whaling, the men used the iron chain dogs rather than the wooden raft pins. The auger was not used with the chain dogs, as the wedges at the ends of the dogs were sharp enough to pierce the log. The links holding the two wedges together were placed over the whaling (like a staple) and then each wedge was driven into the log as close as possible to the hickory strip. The raft pins were not used in the hardwoods because they would



Figure 7. A former logger demonstrating the use of an auger.

break off too often as they were pounded into the logs. When the raft arrived at the sawmills, great care had to be taken to remove every chain dog before sending the logs through the saw. The reason for this was that the teeth in the cutting tool would break off upon hitting one of the pieces of iron. The wooden pins could be left in the softwood logs with no ill effects. The saw would just slice right through the pin.

Measurin' the Logs:

The device used to measure the logs and determine how many board feet each contained was a Cumberland River Rule-- a long stick with a hook at the end that caught under the log. The rule was designed to measure logs in the water, rather than on land as the Doyle or Scribner rules did.¹ While the origin of the Cumberland River Rule is not known, its use was confined to the river which gave it its name. Even on other southeastern logging streams such as the Green and Kentucky rivers in Kentucky, the Cape Fear River of North Carolina, and the Tennessee in Alabama and Tennessee, where rafts were run, the Doyle or the Scribner rule was used.

To measure a raft with a Cumberland River Rule, two men, one on each side of the raft, would place the "L-shaped" hook at the end of the tool under each log and read the data stamped into the sides of the rule (see Figure 8). For each length

¹There are many types of log rules, each developed in a different region of the country and each measuring logs differently. The Doyle and Scribner rules are used together today and are the most popular of all log measuring tools.



Figure 8. Measuring logs with a Cumberland River Rule.

and diameter of a log, there would be a corresponding number representing the board feet of lumber a log contained. As the men measured, their readings were recorded and the two figures averaged out. The average of the measurement at

TABLE 1
SELECTED CUMBERLAND RIVER RULE MEASUREMENTS
CONTENTS OF LOGS IN BOARD FEET

Diameter of Log	10 Foot Length	12 Foot Length	14 Foot Length	16 Foot Length
20 inches . . .	118	142	166	190
24 inches . . .	171	205	239	273
28 inches . . .	232	279	325	372
32 inches . . .	303	364	425	485
36 inches . . .	384	461	538	614
40 inches . . .	474	569	664	759

Source: "Log Rules for Board Feet Measure of Logs of Different Lengths and Diameters," Table 6, Second Biennial Report, The State Forester of Kentucky. Frankfort, Kentucky: The State Journal Company, 1913.

each end was the amount of board feet a log was said to contain. The major advantage of the Cumberland River Rule was that hidden defects in the logs were allowed for in the computation. But at the same time, sound timber was figured at fewer board feet than there actually were. In recording the number of board feet a log held, notation was also made of the type of wood.

In addition to alternating soft and hardwoods in making up the raft, some builders attempted to have all the sixteen foot logs at the front of the raft and then working toward the stern, ended up with the ten foot lengths. Most raftsmen, however, were more concerned with getting the raft built than with any aesthetic values that might be gained by sorting the logs.

Size of the Raft:

The overall length of the raft was determined by two factors. First, the locks which had been placed on the river meant that no raft could be over three hundred feet long and fifty feet wide. The normal maximum size of a raft moving down river from Celina was two hundred and eighty feet long and forty-eight feet wide. With this width, the builders could place three sixteen foot logs side by side. A raft of this nature was said to be three tiers wide and was termed a 'Cumberland River Drift' by the men who worked along the river. On the Cumberland above Celina as well as on the Obey River, the channel was narrower so that the rafts were only one or possibly two logs wide. The second limiting factor was the number of logs available to build the raft. When only about one hundred or one hundred and fifty logs were available, a 'block' or single tier raft was built. But to the raftsmen, this 'block' was never considered a real raft. Only a raft of two or more tiers was worthy of the name, and only a full size raft--three logs wide--could be called a Cumberland River Drift.

The blocks that arrived in Celina from up river were often built by a group of farmers who worked together on the raft. It was common practice for the men of a community who cut timber on their own land to combine the few logs they each had. This small raft was often sent only as far as Celina where it was bought by one of the timber dealers who worked there. The farmers who owned the raft would act as the crew, but it was necessary for them to hire a pilot to guide the craft. The shares in the raft were figured on the number of board feet contributed by each man. Some farmers only had a very few logs to contribute, while others at times had enough to make up a fair sized block of their own (see Figure 9).

Outfitting the Raft:

After all the logs were in place and secured with the pins, chain dogs, and whaling, attention was turned to making up the oars needed to steer the raft on its journey; and the shanty that the men would sleep in at night. On the small blocks, there was one oar at the front or bow and one at the rear or stern. As additional tiers were added, the need for additional paddles increased. A Cumberland River Drift sometimes had five oars--three in the front and two at the rear. The bow oars were positioned so that one was in the middle tier, and the others were located on the sides of the outside sections.

To make an oar for river use, a poplar sapling was selected and cut to a length of about eighteen to twenty feet.

		3662	342	138
$\begin{array}{r} 105 \\ 120 \\ 131 \\ \hline 256 \\ 239 \end{array}$		$\begin{array}{r} 2708 \\ 1857 \\ \hline 787 \end{array}$	$\begin{array}{r} 1634 \\ 249 \\ 2839 \\ 259 \\ \hline 364 \end{array}$	$\begin{array}{r} 66 \\ \hline 178 \end{array}$
<p>MAXWELL HOUSE, NASHVILLE, TENN.</p>				
781		5387		188
		3324		
		<u>8711</u>		
	Logs			Feet
✓	Burr Carter X 15 - X			1866
✓	John Bow Jr X 12 - X			2994
✓	Bow & Cash X 13 X			1084
✓	Made Bow X 51 X			8287
✓	G & H Made X 47 X			5841
✓	Jo Sullen X 14 X			2285
✓	Robt Bow X 3 X			860
✓	Hug Made X 60 X			8711
✓	Geo Made X 4 X			439
✓	Robt Mattox X 47 X			4960
		<u>266</u>		<u>37327</u>
	H & Meene	22		3890
				<u>41217</u>

Figure 9. Shares in a community raft, circa 1880.

The most preferred timber tapered from about eight inches in diameter at one end to about four inches across at the other. When the oar stem was trimmed and ready for use, holes were drilled at the large end with a two inch auger. The blade of the device was made from a board cut from hardwood which measured eight feet long, eighteen to twenty inches wide, and three inches thick. Holes were drilled to match those in the oar stem, and then wooden pins were utilized to attach the two pieces together. The blade was at times tapered so that the width at the end was only about one inch.

The next step was to attach or position the oar on the raft. Another hole was drilled in the oar stem at the point where the log would balance. Then in a hole located where the oar was to set on the raft, a wooden rod was fitted. The oar was then placed on the pin and a section of whaling was used to hold the entire thing in place.

The shanty, or shack as it was sometimes called, was made up of rough cut boards, or in later years canvas draped over a wooden frame. Very little care was taken in the construction of the shanty and a variety of forms could be found. A typical structure was about ten feet wide and twenty feet long with a sloping roof--higher in the front than in the back. One end was open and some raftsmen built the shanty facing up river and others had the open end facing down river. The main purpose of the shanty, however, was to shelter the crew at night when the raft wasn't running. Some of the equipment the crew needed was stored in the shanty--for example,

food, bed rolls, and dry clothing--and a few crews even did their cooking inside of it, but the normal use was for sleeping. The majority of the raftsmen did their cooking on a mud and clay hearth that was built on the logs in front of the shack. With this mixture as a base, the men could build a fire on the logs without fear of setting the raft ablaze. Another benefit of the cook fire was that it helped to warm the inside of the cabin where the men were sleeping.

As the men in the crew which was to take the raft down the Cumberland got ready for the trip, they double checked to make sure they had all the supplies needed for the journey--lengths of rope to tie up at night, a skiff or johnboat, cooking utensils such as pots, pans, dishes, and cups, a gun for hunting, extra raft pins and chain dogs, an ax, and the food to feed them. All that was needed was to wait for the proper tide, and the raft could be turned loose from its moorings to begin the trip to Celina or Nashville.

CHAPTER IV

RAFTIN' ON THE CUMBERLAND RIVER

When the river reached the proper stage needed for rafting, crews from the upper reaches of the Cumberland would turn loose their rafts. To observers on the river bank watching the rafts go by, it might have seemed that every raft on the Cumberland had set out for Celina or Nashville at the very same moment. "All day long, one after another, they came round the bend," is the description given by a lifelong resident of the Tompkinsville area.

The Raft Pilot:

Each raft was under the command of a pilot who knew every bend, sand bar, and eddy in the river. Before a man was able to become a pilot, he often had to make as many as fifty trips down the river as a raft hand--a process which took as long as three or four years. Some men, however, were able to master the knowledge needed in less time. The raft pilot called out orders as to when to move the oars to guide the raft around a bend in the river or away from one of the rocky bluffs which line the river. Like his counterpart on the steamboats that sailed up and down the river, the pilot's decision meant the difference between making a successful trip and breaking up on a rock or beaching the craft on a

sand bar. Unlike the riverboat pilot, however, the raft captain did not operate with river charts and maps. All his knowledge was committed to memory as there was no time to look at a chart on a raft, and in addition, many of the pilots were unable to read.

Some of the pilots only went as far as Celina, while others specialized in the Celina to Nashville section of the river, and a third group was qualified to take the rafts through the entire stretch of river from Burnside to Nashville.

The larger timber companies and sawmills often employed their own pilots, assuring these men of several trips down river each year. There were also independent pilots who took any raft that was available to them. However, along the river it is said that a good pilot never had to look far for a raft to command, as there was always one in need of a pilot.

The Raft Crew:

There was also not much difficulty in finding a crew for the journey. The farmers who worked together on building a community raft often took it to Celina to sell, thus saving the expense of paying a crew. All that was needed was a pilot to guide the craft safely to the Tennessee town. From Celina, the farmers would walk back to their homes, often as far as seventy-five miles, in order to save the cost of boat fare.

A Cumberland County farmer recalled (Schulman, 1972:97):

We rafted 'em down the Cumberland to Celina and sold 'em to Kyles. Millard Kyles measured 'em up and gave us our checks and we walked back home then. Yeah, a heap a-times when you didn't wait for a boat, you would walk back.

Other farmer/loggers would make the trip all the way to Nashville. To be able to make contact with the outside world was as much an attraction for making the journey as was the money received. For the men along the river, "a boy was not a man until he had made the trip, spent most of his pay in the 'Black Bottom' of Nashville, and returned home deck passage" (Wilgus, 1968:296). One trip per year usually was sufficient for these men as they rarely came home with any of their wages.

Some men did work as raft hands all year long, however. If the log woods provided an opportunity for some of the workers along the Cumberland to earn extra money in the winter time, then the river and the rafts gave the same chance to another group of men. Some non-farmers worked on steamboats or ferries on the river when they were not employed on the rafts. To men like this, the thought of picking up a plow and tilling the soil was out of the question. They were Cumberland River men. Jessé Rich ([1972]:21), who worked with many raftsmen on the Obey and the Cumberland noted:

Rivermen were tough and hardy men; some of them were rude, uneducated, brave, suffering hardships with sailor-like stoicism. Some were drinkers and frolickers and pretty reckless, prodigal with their money, yet in the main, honest and trustworthy, faithful to their promises and duty, and often picturesque.

When the raftsmen came back up river after a trip, they would often take over an entire steamboat. Although the raftsmen

were a 'wild bunch' the only real trouble occurred in 1895 when a raft hand killed a steamboat captain.¹

The Trip Down River:

When the rafts were brought into the Celina area, they would be reworked into the larger Cumberland River Drifts for the journey to Nashville. Whaling, raft pins, and chain dogs would be used to join the blocks together in much the same fashion as the logs were tied together. This sometimes left gaps between the logs of each tier known as a bail hole. For the raft hand who fell into a bail hole, it meant wet soggy shoes for the remainder of the trip.

The two hundred and twenty mile trip from Celina to Nashville normally took five days. Since the pilot and crew were paid by the trip, and not by the day, pilots at times ran day and night so that they could quickly return to Celina for another raft. When the raft was run day and night, the trip took only about two and one-half days. Some of the pilots who worked in this manner would sit at the front of the raft and clap two boards together, listening to the echo to help locate the proper channel in the river. Other pilots who ran at night kept a fire burning on the raft to aid them in seeing sand bars and other obstacles. There was, however, some danger involved in 'running round the clock' and most pilots avoided the practice.

¹This incident is studied in detail in D. K. Wilgus and Lynwood Montell (1968). It is also mentioned in passing in Clark B. Firestone (1936).

When the raft entered a section of rough water, the crew was needed at their work stations, on the alert for the pilots orders. Pulling on the oars for long periods of time took a great deal of effort on the part of each man, but fortunately there were also long stretches when the river was smooth and the men could relax (see Figure 10). Life on the raft, while physically hard at times, did have many enjoyable moments. When the river was in a good stage and the pilot didn't anticipate any problems, one of the crew would be let off in the morning to walk ahead of the raft with a rifle and hunt small game to add a little variety to the evening meal. The addition of a squirrel or a rabbit to the normal diet of side meat, beans, biscuits, and river water coffee was always welcomed by the raft hands.

On occasion, the raft was forced to tie up for an extended period of time because of a back tide moving up stream on the Cumberland. When this happened, the food supply might run out and the men had to buy a new stock from one of the stores located along the river. Since the men normally had no money to pay, the sawmill operators and timber dealers had arrangements made with the shop keepers to charge the food and send the bill to Nashville or Celina at the end of the month. When a general store was not nearby to purchase supplies, the raftsmen would sometimes steal a chicken or a calf from a farm. There are tales of raft hands stealing a turkey or

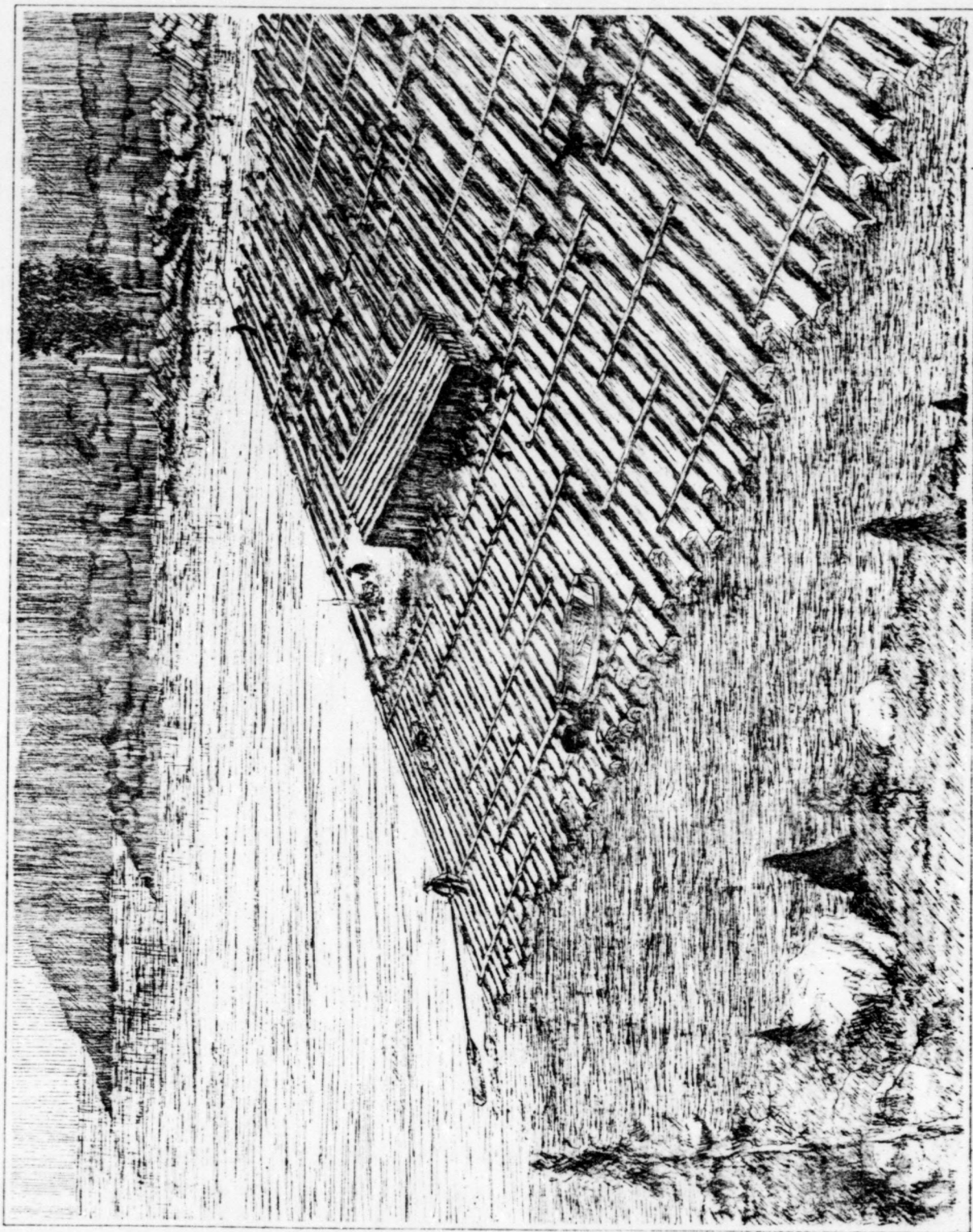


Figure 10. Floating down river on a Cumberland River Drift.

chicken from a local farmer who had been tricked into thinking that he was helping the raft crew recapture escaped cargo.¹

The trip down river to Nashville ended at the area known as Shelby Park, about two miles above the location of the sawmills. The crew would load the skiff with the remaining supplies and equipment and row to the Nashville wharf where they were met by the timber owner to be paid off. Wages in the logging era for a raft hand ranged from eight to fifteen dollars with the pilot receiving a bonus from two to five dollars. Once the crew was paid off, some of the men caught the first steamboat going up river, a few walked home, while others stayed in Nashville and spent their time and money in just about the same manner as do sailors the world over. When the pay received for the trip ran out, the men would head home to work another Cumberland River Drift down to the sawmills of Nashville.

¹See for example Ken Overstreet, "The Saga of Robert Robertson Riley," The Clay Statesman (Celina, Tennessee), September 30, 1971, 11-14. Riley was a timber owner from the Celina area who liked to pilot his own rafts. Although he had enough money to pay for supplies, he 'was full of mischief,' and he would often steal a chicken, turkey, or even a calf to feed his crew. Later he would return and pay the farmer for what he had taken.

CONCLUSION

The purpose of this study has been to describe the lumber industry found along the upper Cumberland River from the early 1870s to the mid-1930s. However, in trying to analyze the logging which took place in the region, it was discovered that it is difficult, if not impossible, to separate the industry from the general folk life of the upper Cumberland. To many people of the area, logging was more than an occupation; it was a way of life. Because of this, the study was focused on the day to day activities of the loggers and raftsmen--details which are normally ignored by geographers--rather than on the structure of the industry. The attention paid to the commonplace activities of the loggers serves to place the lumber industry of the upper Cumberland into its proper cultural context.

Time has been virtually ignored in this study because it had very little meaning in the Cumberland Valley during the period covered by this study. Although the industry lasted for over sixty years, the years tended to have a sameness about them. Some years were economically good and some were not but the practices developed in the 1870s were nearly identical with those used in the 1930s. Once the lumbermen perfected their techniques, change was very limited in the industry. Only the different seasons of the year were

important. Logging, rafting, and farming each took place during a specific season of the year. It was not important what year it was.

Although the industry in the upper Cumberland region developed at the same time as the entire southern lumber business, logging along the Cumberland was atypical. Generally forests in the South were owned by large English syndicates and American land companies. However, along the Cumberland, ownership was retained by the indigeneous population. Even the largest timber companies in the area were controlled by people from the upper Cumberland country. Most of the timber in the region, however, was held by farmers who worked as part-time loggers during the fall and winter months. Logging along the upper Cumberland was a folk industry, operated by small-scale farmers and their hired hands. Dependence on the outside world was limited to the sawmill operators in Nashville. When the mill owners stopped buying logs from the lumbermen up river, the upper Cumberland lumber industry ceased to exist--at least in its original form.

The new lumber industry which developed in the upper Cumberland Valley has not been discussed in this study. It is grist for a follow up study, but it lies outside the scope of this thesis. When the rafts stopped going down the river to Nashville, the industry returned to the use of small local sawmills set up on the site of the timber cutting. Sawmilling became an occupation, but it would never become a way of life.

It is hoped that the research in this study will provide a basis for understanding the historic culture found in the upper Cumberland Valley. Without knowledge of the past the geographer will not be able to fully observe the present. He will miss much of what he can see on the cultural and physical landscape unless he has a concern for and sense of the past. Future researchers should be better able to understand the upper Cumberland lumber industry of today because of the historic illuminations provided by this study.

APPENDIX A: SKETCHES OF THE INFORMANTS

Boyles, U. G.; Tompkinsville, Kentucky; born 1876; interviewed June 17, 1972. Mr. Boyles took part in nearly all facets of the logging industry during his lifetime. He was involved in both logging and rafting and his knowledge of the business was extensive. I spent nearly a full day listening to him describe how to cut trees and build rafts.

Coffey, Bedford McMillan; Burkesville, Kentucky; born 1886; interviewed November 1, 1972. B. M. Coffey never worked in the lumber industry, but he was acquainted with many loggers and raftsmen as a youth.

Farris, Willis H.; Nashville, Tennessee; born 1889; interviewed June 13, 1972. Willis Farris is the last of the old-time sawmill operators in Nashville. Farris joined his father's business in 1908 and he has knowledge of the industry before that date.

Hamilton, Cal; Celina, Tennessee; born 1907; interviewed June 24, 1972. The grandson of the man considered by many to be the greatest of all the raft pilots, Hamilton went down river many times as a raft hand.

Kyle, Hugh; Celina, Tennessee; born 1900; interviewed August 5, 1972. Hugh Kyle is the surviving member of the Kyle Brothers Lumber Company, the largest upriver timber dealers during the logging period. Mr. Kyle worked as a raft hand as well as a timber buyer.

Langford, Thomas; Celina, Tennessee; born 1907; interviewed August 16, 1972. Mr. Langford was in the lumber business with his father-in-law Robert "Uncle Bob" Riley. Langford spent most of his time in the hauling of logs, although he did make a few raft trips "to see Nashville."

Rich, Jesse W.; Monroe, Tennessee; born 1896; interviewed June 25, 1972. Jesse Rich worked in the lumber industry along the Obey River. Deaf since the First World War, the interview with Rich was limited. However, he has written a booklet which proved to be very valuable.

Winfrey, Howess Dewey; Burkesville, Kentucky; born 1898; interviewed February 8, 1972. Mr. Winfrey was involved in logging during the 1920s. He cut timber, as many farmers of the region did, to help earn extra income and to clear land for planting.

Wise, Willie; Aaron, Kentucky; born 1901; interviewed January 15, 1972. Mr. Wise worked in the log woods and on the river until the end of the logging era in the 1930s.

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