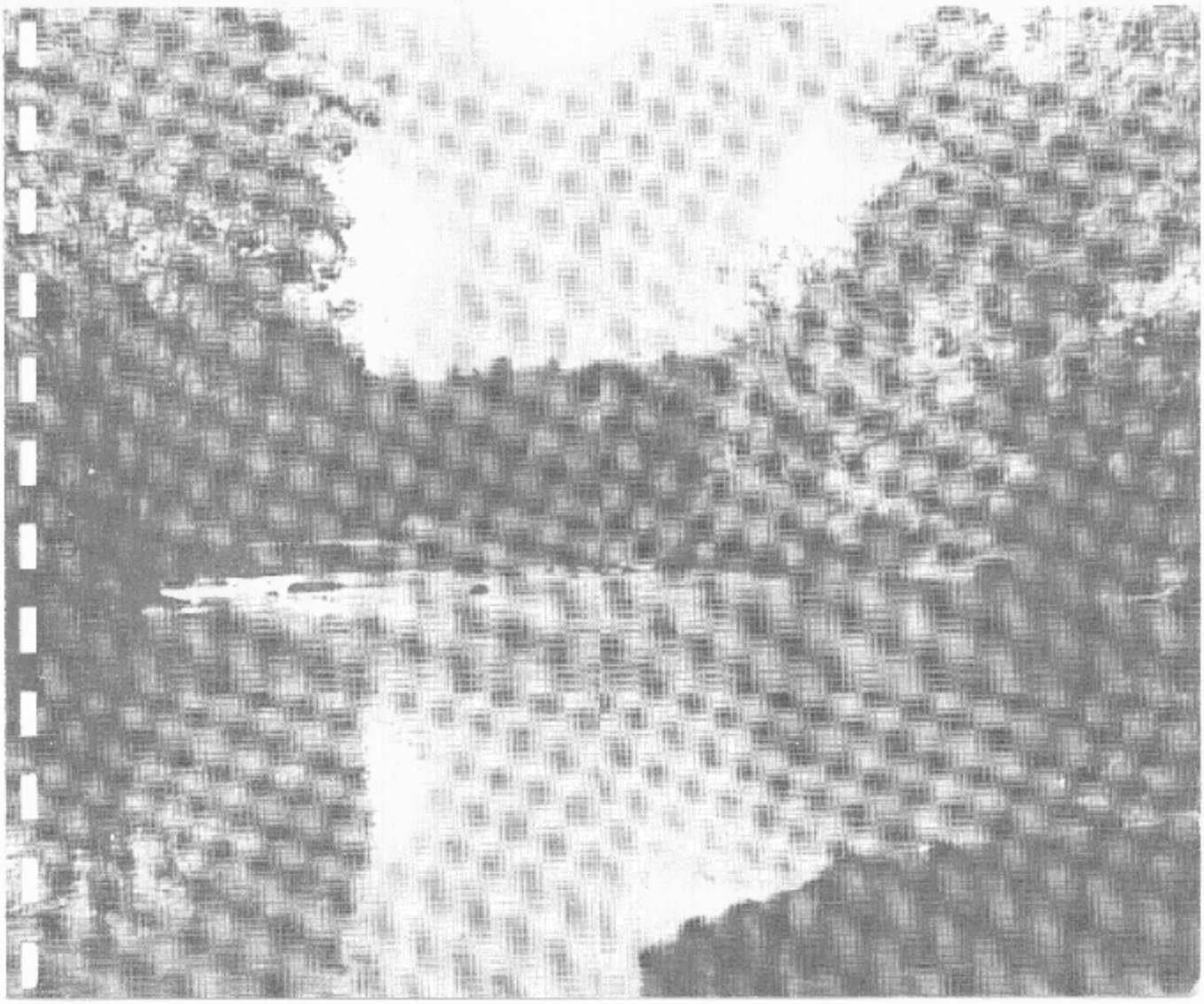
PROCEEDINGS

NEW RIVER SYMPOSIUM

APRIL 12 - 14, 1984

BOONE, NORTH CAROLINA



NEW RIVER SYMPOSIUM

APRIL 12-14, 1984

CENTER FOR CONTINUING EDUCATION

APPALACHIAN STATE UNIVERSITY

BOONE, NORTH CAROLINA

Sponsored by:

New River Gorge National River (National Park Service)
Appalachian Consortium
Wytheville Community College
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Jay Wild, New River State Park, Jefferson, North Carolina

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South Fork New River, North Carolina
William E. Cox
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NEW RIVER SYMPOSIUM
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SHOT TOWER HISTORICAL STATE PARK AND JACKSON'S FERRY

Jess Lowry
Division of Parks and Recreation
Claytor Lake State Park
Dublin, Virginia

INTRODUCTION

Jackson's Ferry and the Shot Tower are located along the New River in the eastern section of Wythe County. Although the Ferry only lives on in the memories of those who used it, a State Historical Marker was placed along Route 52 in 1932 near the Ferry's original location. All tangible evidence of the Ferry's existence has been removed or has returned to the Earth. The Shot Tower, on the other hand, still stands overlooking the New River. As part of a Virginia State Park, the Tower will be preserved for future generations. Its history will be passed on to the thousands of people who visit it each year.

The information presented in this paper includes the events prior to the time the Tower was built. These events not only had a great impact on the Tower, but also had an important influence on the western development of this Country.

I would like to thank those persons associated with this New River Symposium for the opportunity to present this information.

In the mid eighteenth century around 1756 Colonal John Chiswell discovered lead along the New River. This discovery played a major role in the settlement of the area and the future events that took place in and around this area. The discovery was made near the present town of Austinville in Wythe County. Colonel Chiswell's son-in-law, John Robinson, who was also Speaker of the Virginia House of Burges and Colonel William Byrd III of Westover became partners with Chiswell. Mining operations began soon after 1756. In the years prior to Colonel Chiswell's death in 1766, the mining property known as Chiswell's Mine and Lead Mines grew in importance. At that time lead was used for water pipe, printing type, pewter and in bullets. A supply of this valuable metal was very important to this new and growing country. Even more importantly was the fact that this supply of lead was further west and consequently not in the direct control of the British government. After Chiswell's death, the Lead Mine Company continued operation for the benefit of the estates of Chiswell, Robinson, and Byrd even though the land had never been granted to anyone. When the Revolutionary War began, the mines were operated by the Colony of Virginia which had taken over all interests. The lead was distributed as needed in support of the Colonies. After the American Revolution the Lead Mine Company was managed by Colonel Charles Lynch of Lynch Law fame. In 1791 he secured a patent for 1400 acres in the name of the Lead Mine Company.

Meanwhile, a short distance to the east, other important events had been taking place. William Herbert (original spelling Harbert) purchased land from Thomas Stanton Jr. of Culpepper in 1766. This particular parcel of land was known as the Poplar Camp Tract. This area still bears the same name and is located in eastern Wythe County. To his holdings at Poplar Camp he established land on both sides of the river for several miles up.[1] He also established a ferry over the river at Poplar Camp. I could not find the date that the ferry was started and it indeed may have been established at an earlier date.

In 1751, the name Poplar Camp was mentioned in surveys containing 86 acres below Poplar Camp and 63 acres above.[2] From another source I found that the name Poplar Camp was derived from a large poplar tree which stood near the place where travelers stayed before crossing the New River. If this is true, this particular river crossing was established at least by 1751 and quite possibly sometime before. Also, according to family records belonging to Mr. and Mrs. Thomas Jackson, descendant of Thomas Jackson who built the Shot Tower, a log house was built in 1756 along the old road just below the river crossing. This seems to also suggest that a ferry may already have been established here. In 1773 William Herbert received a license to allow this house to become a stopping place near the ferry.[3] This log house is still standing today and in fact is occupied by the tenants who operate the Jackson's farm. As you approach Shot Tower State Park and

pass by the old log house, you will be driving over the same road used by the early settlers of the 1700's.

William Herbert Sr. was a notable man during this period. In 1773 he was on the first court held in the newly formed Fincastle County. Five years later Fincastle County was divided into Kentucky, Montgomery and Washington Counties. William Herbert Sr. also had the unusual distinction of being the only man to serve as Justice in the three counties of Augusta, Botetourt and Fincastle at the same time.[4] This was between the years 1772 and 1778. The Poplar Camp Tract, Ferry, and Ferry Tract on the north side of the river remained in the Herbert family nearly forty years. Not much was written specifically about Herbert's Ferry during these years. In 1778 the price for a man and horse to cross on the ferry was two shillings. In 1779 the amount rose to four shillings and increased again in 1781 to six shillings. Herberts Ferry provided an important service since settlement of Kentucky and land further west was taking place at a tremendous rate. It is estimated that over 200,000 settlers had traveled the Wilderness Trail into Kentucky. This famous trail was referred to as the Great Road in The History of Wythe County by W.R. Chitwood and it ran only several miles north of Herberts Ferry. Thus, Herberts Ferry was responsible for transporting a number of these settlers who were coming up from North Carolina on the Carolina Road. In 1776 William Herbert's will provided a house on the ferry tract on the north side of New River for his father and mother. The will also left the ferry and the Poplar Camp tract to his son William Herbert Jr. Herbert Jr. in turn sold the Poplar Camp tract to his brother Thomas Herbert in 1794. According to the Virginia Code of 1792, Herberts Ferry had been recognized as legally established. William Carter obtained the tract on the north side of the river in 1793.

It was also during this period that William Watts, a plumber from Bristol, England had a dream. In 1782 He dreamed that he was out in the rain, and every drop of that rain was a round pellet of lead. Inspired by this dream, he was determined to try the experiment. He accordingly ascended the tower of Saint Mary Redcliffe Church and poured melted lead into some water below. The plan was successful and he sold his invention for a large sum of money.[5] This statement was originally taken from a book written by Horace Greeley, founder and first editor of the New York Tribune, and published in 1872. In another publication it says that William Watts went on to improvise a shot tower by cutting the floors away in the tower of a mansion, to allow clear space down through the wine cellars to a well below. This article confirms the date to be 1782. However, according to a statement made by the American Society of Mechanical Engineers in a 1981 dedication at the Shot Tower and on a plaque mounted inside the Shot Tower, this drop process for making shot was patented in England in 1769. I could not prove either date, but one peice of evidence leans toward the 1782 date. The original Bristol shot tower, built in 1790, was

still in use in 1940 as recorded in the British magazine "The Field", in it's issue of June 22, 1940.[6] In my opinion, if the drop process was patented as early as 1769, a shot tower would have been constructed before 1790, 21 years later.

While Colonel Charles Lynch had secured 1400 acres at the Lead Mines, Moses and Stephen Austin of Philadelphia bought out the interests of the Lead Mine Company and made an arrangement with the state to work it's share. This was in 1790.[7] This is also another area of discrepancy. Other sources say that the Austins came to the Lead Mines sometime between 1780 and 1790. Although this is vague, in my opinion, the Austins came to the Lead Mines sometime before 1790. I feel as though before buying into an operation such as this, they would have worked with it extensively. The Austins brought in technical workers from Philadelphia and changed the operations of the mines. One of these men, Thomas Jackson, was destined to leave his mark in this area. Thomas Jackson probably arrived here between 1785 and 1790. In the latter year he was certainly carrying on a blacksmiths shop at the village of the mines at the river. The late Mr. James Bell often spoke of his first employment by the Austins... 'I would carry worn tools all the way to Mr. Jackson's shop at the river.' This information was taken from an old manuacript in the Division of Parks and Recreation files. The manuscript did not show an author or date. By 1798 Moses and his brother Stephen Austin had left the Lead Mines for the richer lead mines in Missouri. Moses Austin's son, Stephen, born in Lead Mines in 1793, would be instrumental in the settlement of Texas some years later. Before leaving, the Austin's leased the property to James Newell who managed the mines until 1805.

Earlier, in 1796 Thomas Jackson purchased 660 acres from Robert Sayers. This tract of land was up river from the Lead Mines. Then in 1798, Jackson obtained the deed for 240 acres from Moses Austin. This tract was also on the New River, but it was closer to the Lead Mine tract.

It was learned that the Austins had not paid the full amount due under this contract and the state took back the mines. In 1806 the Lead Mines were put up for public sale. James Newell who had been working the mines wanted to purchase them. He was in Richmond along with Thomas Jackson who was also interested in the mines. Newell's last bid was 5,550 pounds, but Jackson's bid was 5,555 pounds or 18,517 dollars, and he was awarded the Lead Mines. Daniel Sheffey and David Pierce entered into an arrangement with Jackson to go on under the conditions to be equally interested with him in the purchase. Several lawsuits followed, and ultimately, Thomas Jackson and David Pierce became the official owners. According to the Wythe County Court records, Sheffey's share in the mines was finally released to Jackson in 1821. From the beginning, Jackson and Pierce were in disagreement of how the mines should be run. They apparently had an unwritten agreement that each man

ran his own mining operation, and each was successful. As a result of later court battles, Jackson's heirs were awarded 11/24 shares of the Lead Mine Company and Pierce 13/24.

Around this time, those involved with what was once Herberts Ferry were having their problems also. As I said earlier, William Carter purchased the ferry tract in 1793 and Thomas Herbert bought the Poplar Camp tract in 1794 from William Herbert Jr. At this point, there are further discrepancies in the history of both the ferry and Shot Tower. The following dates were taken from the deed books at Wythe County Court House.

In 1808 Jesse Evans purchased 1/4 acre from William Carter. This was the ferry landing on the north side of the river. Also, in this year Carter sold the remaining 366 3/4 acres to Stephan Saunders. In this deed it is stated that 1/4 acre is not included across from the Evans Ferry. Notice that the ferry was referred to as Evans Ferry as late as 1808. Then in 1811, Jesse Evans received the deed for 1000 acres on the south side of the New River and also that land including the Poplar Camp tract and ferry. However, it seems the ferry was running under his name earlier (1808) as I have previously stated. When Carter sold his land to Stephan Saunders, Saunders obtained from the County Court a ferry right from his land on the north side to Evans land on the opposite shore. This led to litigation and an injunction proceeding. The outcome resulted in Saunders favor. The two parties entered into an agreement where each withdrew the trespass suit he had instituted. Evans agreed to pay Saunders three hundred dollars for his ferry, with the provision that Saunders claim no other ferry right and that Evans furnish free transportation over the ferry to Saunder's family.[8] According to the ruling, the three hundred dollars was to be paid "in horses not old or broken down, one to be paid immediately of the price between sixty and one hundred dollars, the balance to be paid in one year from this date, the valuation to be made by two disinterested men, mutually chosen, who on disagreement are to choose an empire, the price to be paid in proportion to him at six dollars for one hundred pounds weight." Signed and witnessed October 15, 1813. Evans then sold his ferry and the 1000 acre Poplar Camp tract for $11,000 to Thomas Jackson. This also included the 1/4 acre tract on the north side of New River. The deeds were signed over to Thomas Jackson in 1815 as recorded in Deed Book #6, page 294. It was on this tract of land, by the river near the ferry crossing, that Jackson built the Shot Tower. Also, it is here that there is a desagreement in the historical records. This disagreement concerns the Shot Tower, the date construction was started, and the date it was completed. Here again I will restate the information I found, and I am unable to honestly verify any one of these dates.

Many sources claim the Shot Tower was started in 1807 and completed in 1812. Other sources say that the construction of the tower began in 1815 and ended in 1820. It seems that in view of

such great discrepancy, one date or the other could be proven. I feel that the proof does exist. It could be in the form of an old letter, a sales receipt or news paper clipping from that era. However, I could not find it. The theory that the tower was started in 1815 stems from the fact that Jackson did not have the deed to the land until 1815, as I stated earlier. In further support of this theory, the suits between Jesse Evans and Stephan Saunders are recorded at the Wythe County Court House as taking place in 1813. This implies at least that Jackson did not have control over the ferry at this date. Therefore, in support of this theory we could conclude that Thomas Jackson would certainly not spend five years building a structure, with such a great economic potential on someone elses land.

The evidence supporting the 1807-1812 theory is somewhat less substantial although equally persuasive. I spoke to Mr. Thomas M. Jackson, son of Michael H. Jackson, and nephew five times removed of the first Thomas Jackson. According to Mr. Jackson, all family stories concerning the tower, confirm 1807 as the date it was started. He was aware that 1815 is also used as a beginning date, but he was not concerned. As a boy, he listened to stories about the old Shot Tower. 1807 was the date used, and that is the date Mr. Jackson will stick to. There is another point in support of this theory. Mr. F. B. Kegley, writer and historian, particularly interested in the Wythe County area, spent much time with Mr. T. M. Jackson researching the towers history. The Jacksons and Mr. Kegley were always in disagreement on the construction date of the tower. Mr. Kegley had written a book and other articles using the 1815 date. Mr. Jackson told me that one day, late in Mr. Kegley's life, he was in Jackson's attic going through an old trunk. He shouted down to Mr. Jackson that he believed he could now go with the 1807 date. Mr. Kegley died a short time later and Mr. Jackson never knew what Mr. Kegley had found. Presently, information in the State Park brochure and plaque mounted inside the tower use the 1807 date. The State Historical Road Marker located along route 52 near the tower states that it was built in 1820. These conflicting dates will continue to draw questions from curious visitors, but until tangible evidence is presented, both dates should be considered ligitimate.

The Shot Tower was built from grey limestone quarried a short distance up river. It was constructed twenty feet square at the bottom, tapered to about 15 feet square at the top and rose 75 feet from ground level. The walls vary from 2 to 2 1/2 feet thick. The thick walls were required for such a structure for several reasons. A building of this size and these materials needed a strong foundation. The thick walls helped to maintain a constant temperature inside the tower. A constant temperature is necessary so that the lead droplets are properly shaped in their fall. Also, the thick walls lessen the vibrations and currents caused by strong winds outside. Much of the labor was done by slaves and according

to Mr. T. M. Jackson, during the period of construction, seven lost their lives. An old slave graveyard, barely distinguishable upstream from the tower and immediately across Route 77, was the burial place for those seven. The roof is supported by wooden log rafters, and the top room floor by large wooden timbers. One of these timbers measured 14"x10", and I estimate the weight to be over 500 pounds. These floor joists and a timber above the entrance door are the original timbers. In addition to the tower, Thomas Jackson dug a shaft in the middle of the floor six feet by six feet to a depth of approximately 75 feet. Therefore the total fall for lead droplets would be 150 feet. From the bottom of this vertical shaft, a horizontal shaft was cut to the riverbank. In later years the vertical shaft was used to dispose of farm garbage, however, it is still close to sixty feet deep. The horizontal tunnel was blocked in 1887 when the railroad laid a line below the tower and parallel to the river. The entrance door is located on the north side of the tower. Originally this was a large wooden door. Steps leading to the top of the tower were built around the inside walls. At the top of the tower there are three openings. A window was placed on the south and west sides and a door opens up to an outside balcony on the south side. Lead was carried up the steps to the top floor or was lifted up using a pulley system connected to the sturdy beams under the porch. It was melted in a built-in furnace on that floor. This liquid metal was then poured into a colander with small holes in the bottom. As the molten lead dripped from the colander, it passed through a hole in the middle of the floor and 150 feet to the bottom of the shaft, into a large kettle of water. As the droplets fell through the air, the upward force of the air against the droplets caused them to spin. The surface tension of the droplet kept it in a spherical shape, and the fall lasting nearly four seconds was long enough to allow this sphere to solidify enough not to lose it's shape when it hit the water. The hardened pellets were removed via the tunnel to the river and later sized, graded, and polished. They were then bagged and sold near the road or hauled to outside markets. $100 would take a load to Richmond.

During this era, other shot towers were being built. If indeed the Shot Tower in Wythe County was actually started in 1807 then it may have been the first attempt in this country to construct such a structure. However, in descriptions found in the diary of John G. Stuart, a riverman whose flatboat was delayed in Kentucky on it's journey to New Orleans, he wrote in March 29, 1806, that they went to see the old shot manufactory built on the edge of a precipice two or three hundred feet high.[9] In this long fall the pellets solidified enough that they weren't deformed when they landed in the soft earth at the base of the cliff. The early settlement, Fort Boonesborough, was only eight miles from this place and it was probably the main market for the lead shot. In 1808 two towers were started in Philadelphia, Pa. One was built by Paul Beck and stands 166 feet high, and the other, built by John Bishop and Thomas Sparks, was 142 feet high. In another diary, written by

Gotthold Reichel on September 15, 1815, it states that there was a shot foundry built on Natural Bridge in Virginia. He wrote that it was built by a couple of gentlemen from Richmond and Lexington. On one side of the bridge there is a little house in which the casting of the shot was done, and whence it is allowed to fall... through a long cylinder into a reservoir arranged beneath.[10] In 1829 a tower that still stands today was built in Baltimore and another tower in Dubuque, Iowa built in 1856 also is standing today. By mid 1800 other processes were invented for making shot. However, shot towers were still built and used until the early 1900's.

The Jackson Shot Tower had a relatively short productive life. When Thomas Jackson died on September 16, 1824 his estate was administrated by his nephews John Jackson and Robert Raper. At this point and probably before, I believe Robert Raper had become involved with the Lead Mines and Shot Tower. It was said that Raper traveled to the Baltimore Shot Tower to observe their operation, and in fact, persuaded one of the Baltimore men to return to Wythe County to help in shot production there.[11] If this is true, the trip to Baltimore was made after 1829 since that tower was not built until 1829. Also, in my opinion, this trip implies that the Jackson Shot Tower was in such a condition that outside help was necessary to improve it. In a memorandum of an agreement dated January 1835 between Michael and Robert Jackson and Robert Raper, Raper wanted to rent the shot tower for six years and agreed to build a factory house for manufacturing shot, paint the shot tower with lime, and put the tower in order for making shot. Though this agreement was never carried out, it does imply that at that time the tower was not producing shot. Therefore, I would say that shot production stopped sometime between 1830 and 1834.

After Thomas Jackson's death, his estate was divided equally between his sister Mrs. Richard Walton and her children and sons of his brother Michael. It was Michaels granson, honorable Michael Hastwell Jackson, who presented the Shot Tower along with a piece of land to the Daughters of the American Revolution.

The ferry also stayed on this side of the Jackson family until 1932 when the bridge over the New River at Route 52 opened. Up until that time the ferry was just a way of life for travelers wishing to cross the New River.

At one time, the nearest shipping point was Max Meadows. Merchants as far away as Surry County, N.C. had goods shipped by rail to Max Meadows, and animal drawn wagons hauled the merchandise over improved roads to the purchasers.[12] Goods produced south of the New River and into North Carolina traveled this road to the more populated areas of Austinville, Wytheville and Fort Chiswell. Mr. Thomas M. Jackson recalled an incident from the early 1900's in which a North Carolina man crossed the river at the ferry. His wagon was loaded with watermelons which he hoped to sell further north. He did this,

and on his homeward trip, he carried vegetables, supplies and spirits. According to Mr. Jackson he had already dipped significantly into the spirits and when he boarded the ferry he continued to drive his mules and wagon off the other side of the ferry and into the river. It had to have been an amusing sight as the man continued to sing and carry on while he and his wagon floated downstream. Cattle, it seems were also not particualrly fond of staying on the ferry. Quite often they would bolt in the middle of the stream and jump into the water.[13] In the early 1900's the fare for cattle was .03 per head. Sheep, which made better ferry passengers, were .01 per head. Trucks were .50 and cars, which were not exempt from ferry accidents, were .25. Mr. Jackson stated that in the early 1920's a car also went off the end of the ferry. He recalls this incident well, because he was the one who dove into 15 feet of water to tie a rope to the car. Jackson was twelve years old at the time. A team of horses pulled the car along the river bottom to the other side where it was dried out and was driven away. As automobile traffic became heavier, the ferry became more and more congested. In the later years, there would sometimes be 50 to 75 cars waiting to cross on the ferry three at a time. Also in later years automobiles equipped with lights created a problem. It was an opportunity however for Thomas Jackson. His father built a small building just big enough to sleep in. He spent many nights in that shack ferring late night travelers at double the ferry rate. He said he was the richest boy in the country and always had change jingling in his pockets.

In 1930, the Route 52 bridge was opened without celebration and Jackson's Ferry became history. A state historical marker was erected in 1932 by the state commission on Conservation and Development and stands as the only reminder of the ferry. I would say few people missed the ferry, it's long waits, and required fee. Few people probably stopped to reflect on the significance and impact the ferry had in this part of the country and the people in it.

The future did not look so dim for the old Shot Tower. Although it was abandoned for nearly eighty years, it still stood overlooking the New River, as a monument to the old days and a symbol of an era gone by. For this reason, the tower and 3/4 acre of land was donated in 1929 to the Wytheville Chapter of the Daughters of the American Revolution. Their plans of renovation were greatly hindered by the high cost of such repairs. Some work was done repairing the exterior walls, inside steps and top floor before the deed was turned over to the Lead Mines Ruritan Club in 1952.

Prior to this period the Shot Tower gained another deserving but short-lived reputation. Mr. Thomas M. Jackson recalls that it was not unusual to hear some of the local ladies tell about their first kiss taking place at the Shot Tower.

The Lead Mines Ruritan Club made a great effort to restore the tower with hopes of developing a county park and picnic area. They poured a concrete floor inside the tower with the shaft opening corresponding to the original, replaced the wooden beam above the entrance with concrete, added retaining walls at the exterior sides of the tower and constructed a concrete walk for the entrance. Prior to 1964, the Ruritan Club and local people raised $5,000 to buy the land, and $15,000 was later appropriated by the Virginia Assembly to establish a state park. In 1964 the deed for the Shot Tower and several acres of land surrounding the tower was turned over to the state under the care of the Division of Parks for the preservation and development for future generations. Shot Tower Historical State Park first opened in 1968. The Virginia Division of State Parks continued to make improvements to the site. Wall joints were pointed with morter, interior stairs were replaced, safety fencing was put up, the roof was repaired, the porch flooring and railings were replaced, the furnace room floor was replaced, and other work was done that was necessary to meet the minimum standards of the Virginia Division of State Parks.

The Shot Tower was honored in 1981 when it was recorded as a National Historic Mechanical Engineering Landmark by the American Society of Mechanical Engineers. The objective of this designation is to promote an awareness of technical heritage among engineers and the general public.

The Virginia Division of Parks and Recreation is continuing to improve this facility to the benefit of it's visitors. An adequate picnic area and restrooms are located near the tower with parking space close by. There is a short hiking trail and overlook on the park and of course, the Shot Tower itself. At this time, work is being done on improving the interpretive programs and displays at the Shot Tower. Much work is needed in this area and improvements are being made continually.

Conclusion

Jackson's Ferry and the old Shot Tower are an important part of the history of the New River and of Wythe County, Virginia. Their presence also had a great influence on a much wider scale. Settlement further west, trade, and transportation all were influenced in a positive way. A summarizing statement made by F.B Kegley also applies to Jackson's Ferry. "They represent nothing but the vision and enterprize of an alert businessman. They stand as a monument to the industry of a by gone day, and a relic that should be preserved to embellish the history of the country."

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In the fall of 1983, on a sunny Sunday afternoon, I made a journey to the site of what was once a small coal mining community in West Virginia. It was to be a special journey for me, because I was returning to the banks of the New River to visit the town of my youth--Stone Cliff. I had lived there, in the town of Stone Cliff, from 1930 to 1938, and, during those eight years, I was very much a part of . . .

LIFE ON THE NEW RIVER . . . . . FIFTY YEARS AGO

by Murray Shuff

As I parked my car and walked back across the bridge above the New River, it was with a sense of anticipation. I knew the town had long since been abandoned, and I was prepared to see ghost-like remnants of an old mining town. But, as I looked down into what had been the town, no tumbled-down, deserted buildings greeted my eyes. Instead, as I gazed down, I saw nothing at all. The town of Stone Cliff was gone . . . a wilderness now . . . reclaimed by nature. Only hazy silhouettes of a few old ruins could be glimpsed among the tangled vegetation (and then, only if one knew exactly where to look).

Stone Cliff, the town of my youth, had essentially vanished, and the sights I had stored in my memory had been blotted out . . . erased by time and nature. With a deep sense of regret and loss, I realized I was too late to revisit the scenes of my childhood.

Gradually, though, as I continued looking down upon the wilderness that had once been a busy little mining town, I became aware of a sound. It was the sound of the New River below me. And, as that sound penetrated my thoughts, it became familiar . . . and I realized, while familiar sights may have disappeared from my view, the sound of the river had remained. Unchanged, it was the same today as it had been fifty years ago.

I listened to the sound of the river, and let it carry me back . . . back over those fifty years. Memory after memory returned, and, as I stared at the scene below, it began to change. Excitedly, I began to pick out where the coal haulage incline must have worked its way down from the mountain top to the tipple below, where the company store must have stood . . . and the signal tower, and the schoolhouse, and the black church and the white church, the boarding house, the depot and the power station. And, yes, where our house had been.

And so, with the familiar and unchanging sound of the New River filling my ears, I was able to bring the little town of Stone Cliff, West Virginia, back to life.

Stone Cliff During the Depression: The Year is 1930

Stone Cliff was a typical coal mining community in 1930. Life centered around earning a living in the mines and going to church on Sundays. Its

citizens worked for the company, lived in company houses and shopped at the company store. Gardens were carefully tended to supply food necessities and household chores were endless.

Wages ran close to $100 a month (if you worked full-time), and the company took about $12.50 off-the-top for company housing, company doctoring, company coal for heating and cooking, the company blacksmith's services, the company hospital fund and the company burial fund.

My father was a coal miner. He followed his work and we moved with him to each new location -- in 1930, the new location was the town of Stone Cliff.

There were no frills, no electricity in the homes, no running water, no indoor plumbing. Drinking water was carried from the spring, household water was carried from the river. Outhouses sat over shallow unlimed pits, had no screens, were not whitewashed and provided fertile breeding grounds for many diseases.

While life was harsh, it was endurable. No one knew, in 1930, that life would soon become almost unendurable for many . . . because no one knew that America was sinking into what would later be called "the Great Depression".

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My life, though, was just fine. I was too young to be concerned with economics or to worry about hard times. I was but a happy, curious boy of five as my family traveled by railroad motor car from Rainelle, West Virginia, to Meadow Creek on New River and transferred to the local passenger train for the last leg of our journey to our new home in Stone Cliff.

And, as that curious boy of five, I immediately set off to investigate. My first day in Stone Cliff, I discovered by looking up you could see snow on the tops of the mountains and by wandering down to the river you could find flowers blooming on its banks. You see, spring came earlier at the bottom of the gorge. And I threw a rock, the first of many, into the New River . . . and wondered where the river came from and where it went. And I listened to the New River . . . and the sound of the river, new to me that first day, soon became a part of my life.

Other sounds became a part of my life too . . . the sounds of the trains that vibrated our house day and night.

Our house was a company house. It sat in the middle of a row of other company houses between the C&O mainline tracks and the river. There was only about 60 feet between our house and those tracks . . . and our house shook from top to bottom almost all day as the trains carried their heavy burdens of coal out of the railroad yard.

You see, the coal company hauled coal up out of the mines in cars that carried about a ton-and-a-half of coal each. An electric motor, driven by power from the power station, lifted the coal up out of the mines . . . then

each car was weighed and dumped, and the coal was transferred to a big steel monitor that would haul about five tons of coal down what was called the coal haulage incline. The monitor came down the incline on a railroad track under the control of a cable. (It was a counterweight system, with a loaded monitor going down pulling an empty monitor back up. Miners rode these empty monitors to work.) Once the coal was down the mountain and at the tipple, it was processed and loaded into railroad cars for shipment.

This process went on all day and filled railroad car after railroad car. Those cars would strain against their heavy loads, gather up speed and rumble off down the tracks . . . keeping pace with production . . . and vibrating every house and building in town.

It was a way of life, a routine, repeated in coal town after coal town in the early 1930's. And, as long as the railroad cars full of coal were moving, families were assured of work . . . and wages.

No relief from the vibrations of the trains at night either . . . because passenger trains continued to run throughout the nighttime hours. They'd roar through Stone Cliff, waking everyone in town . . . and, when you woke up, you'd know three things . . . the time (they were always on time), the name of the train (they all had names or numbers) and how long you'd be able to sleep before the next one came through.

Two of these nighttime trains were very special to me . . . the #2 (going through about midnight, headed east to Washington) and the #1 (passing our house about 3 in the morning, headed west to Cincinnati). They were special because if you waited and watched until the last car passed you would get to see a big illuminated picture glowing back at you through the night as the train disappeared. On the back of the #2, George Washington looked back at you, and on the #1, his wife, Martha Washington, did the same.

Day and night the trains moved. Their sounds were inescapable, and those sounds which might annoy a person, or rattle a dish off a shelf, or wake one from a sound sleep, were tolerated, gotten used to, and, after a while, ignored . . . as the routine of life went on.

And the sounds of the trains blended with the sound of the New River and became part of my life too.

Another powerful sound in Stone Cliff, fifty years ago, was the sound of the power station whistle.

Oh, it was loud! And it sounded three times a day . . . at 6 o'clock in the morning to signal power was ready to go for the mines, at noon, and again at 5:30 in the evening to let the miners know power would be shutting down in 30 minutes.

If the power station whistle blew at any other time, it meant an accident had occurred at the mines. Then the power station would blow a series of whistles . . . and all the women and dogs would run to the tipple to await the answer to the question on everyone's lips . . . "Who was hurt?" . . . or . . . "Who had died?"

That series of whistles also alerted the Thurmond railroad yard (the east end of which ran into the west end of Stone Cliff) . . . and a yard engine was dispatched, with a caboose, to take the injured to the McKendree Hospital (located about 10 miles east of Stone Cliff) . . . or worse, to take the dead to the Thurmond morgue.

One of my brothers was seriously injured in one of those mine accidents and wears a silver plate as part of his skull to this very day.

Our house was directly across the tracks from the power station, and the power station's whistle became another sound that was very much part of my life . . . along with the sound of the river and the sounds of the trains.

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While not a very large town (the population ran between 200-300), Stone Cliff had its share of very interesting . . . and functional . . . buildings.

First, there was the power station (with its whistle). Inside the power station were huge coal-fired boilers which turned water to steam . . . and the steam turned generators which produced electricity (but only for use by the mines).

Then, of course, there was our house, a company house, sitting directly across the tracks from that power station.

Now there was a distinct advantage to living in such close proximity to the power station. You see, one way to get hot water for washing clothes and bathing was to carry water from the river and heat it on the stove. But, you could also go to the power station and run hot water off those big boilers! And that's what we'd do . . . one of our daily chores was to scamper across the tracks and bring hot water home . . . just in time to have the big galvanized tub full and ready for our father to bathe in when he came home in the evenings from the mines.

The company houses were, structurally, all the same. They had four rooms, two up and two down . . . with a lean-to across the back. In our house, the two upstairs rooms were bedrooms . . . one for boys (there were four) and one for girls (there were three). The downstairs rooms were my mom and dad's bedroom and a general purpose room. The kitchen and laundry room were in the lean-to area. We ate in the kitchen and bathed in the laundry room. There was a two-story chimney in the center of each house . . . with four fireplaces (one opening into each of the four rooms). The houses were heated with coal bought from the company store.

And then, there was the most <u>outstanding</u> building in town! . . . the company store.

What a place! It was the grocery store, a dry goods store, a hardware store. It was also the post office and the doctor's office. And a railway

STONE CLIFF, WEST VIRGINIA: 1933

AS VIEWED FROM STONE CLIFF BRIDGE
Left of Railway -- corner of company store, depot and homes
Right of Railway -- tipple, power station and school



AS VIEWED FROM THE DEPOT -- CLOSEUP OF THE COMPANY HOUSES
Rent was $6.00 per month and coal was $1.00 per month



express agency and a ticket office for the local passenger train. And, it was run by one man . . . the company store manager.

He stocked the shelves, ordered supplies, dispensed mail . . . and dozens of other things that kept the town's daily business affairs on an even keel. If he ever got into a real pinch for an extra hand, there was only the bookkeeper to help out (the company had a small office in the store, where the company's other employee, usually a local girl, kept the company books).

Then there was the one-room schoolhouse. Multiple uses here too . . . eight grades of school for the town's white children (the negro children walked a mile to the black school in Claremont), church for the town's white folks and the civic center for town meetings.

On the east end of town stood the negro church. A two-story building, its top floor was used for special events. Two I recall, with great delight, were when the district's negro singers would come to town and we'd all attend their performance . . . and the other was the annual minstrel show of Silas Green From New Orleans . . . a show that traveled by special railroad car and arrived each spring in Stone Cliff to bring its music and magic to the townspeople.

The boarding house provided room and board to railroad people and to miners who worked in Stone Cliff during the week and returned home on weekends. The company would withhold room and board from these miners' wages and give it to the lady who ran the boarding house . . . who would, in turn, spend the money on food at the company store.

The depot was just a shelter for people to wait in for the passenger trains . . . just a few seats under a little roof.

On the west end of town was the railroad's signaling tower and switching station . . . known by the interesting initials of "CS". You see, in railroad lingo, the place where trains were signaled and switched was referred to as a "cabin". These "cabins" were responsible for supplying power to signal lights, switching devices and the railroad's telegraph system. These "cabins" were known, telegraphically, by their initials (rather than by numbers or by full-length names). Hence, Stone Cliff's cabin was referred to as the CS Cabin.

CS Cabin was a two-story building. The top floor was used for observing activities in the railroad yard and the bottom floor was reserved for a battery room. In this room, rows and rows of glass batteries were kept charged . . . a full-time job. These batteries supplied power to run the signals, some of the motors that switched the trains and the telegraph.

CS Cabin was manned twenty-four hours a day, its employees worked for the railroad and usually lived at the boarding house.

And so, as a boy of five, I led quite an exciting life. As the next few years passed, I became part of Stone Cliff . . . listening for the power station whistle, partaking in the adventures of shopping and doctoring at the company store, attending school in the one-room schoolhouse, going to church, eagerly awaiting the special shows at the negro church, visiting the mysterious switch gear and battery room at CS Cabin, peering out my window at night to catch a

glimpse of George and Martha Washington as the crack trains, #1 and #2, passed through at night . . . and wandering along the banks of the New River.

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As I grew older, I began to do more with the river than just explore it, look at it and listen to its sound . . . I began to be involved in how the river was used.

Of course, the river supplied all our household water . . . and I carried many a heavy pail of water from its banks to our house.

And the river made all the difference in our "river" garden. Each family in town had two gardens, a river garden and a mountain garden . . . and everyone helped in the gardens because those gardens were important sources of food. (I know now just how important they were to each family's survival in those depression years.) The gardens supplemented store-bought food stuffs, supplied families with fresh food, contributed mightily to our nutritional intake, provided us with food to can or preserve for winter use . . . and enabled families to stretch precious dollars . . . dollars that were becoming harder and harder to come by as the depression deepened.

The river helped by depositing valuable topsoil along its banks as the spring floods receded each year . . . topsoil that may have washed all the way from the mountain tops of North Carolina and Virginia found its way to our river gardens. (Dams had yet to be built along the New River, so a significant amount of mud, silt and debris was left behind each spring as the flood waters went down.)

These river gardens yielded beautiful crops . . . due to a combination of hard work and their annual renewal of "fertilizer" supplied by the New River.

Another memorable use of the river also occurred when the spring floods were over . . . and the waters of the New River became clear and warm again. It was the spring baptism! And, at Stone Cliff, on a sunny Sunday afternoon each spring, as many as 200-300 people would gather on the south side of the river . . . at what was called "the old sand bar" . . . singing and baptizing. Yes, the whole town participated in this event . . . and the old hymn "Shall We Gather at the River" had special significance . . . because we <u>did</u> gather at the river.

Bright Spots During the Depression: Bridge Talks

People all over the world like to get together and share stories, swap tall tales and exchange tidbits of gossip. It matters little that these stories, tales and tidbits become exaggerated in the telling . . . this only makes them more interesting as they pass along from one person to another.

And the people in Stone Cliff were no different . . . they, too, enjoyed pausing in their daily routine . . . to talk, to listen, to share, to mull over the latest bit of news.

And where did the people of Stone Cliff go to nail down a rumor? to check out the details of the latest story? to share the news? . . . why, to the Stone Cliff bridge. The bridge seemed the likely place to gather dependable information, as many of Stone Cliff's citizens crossed the bridge daily in the course of their routine affairs. (The bridge had been built in 1928 to replace a ferry boat crossing.)

And so, it was on the bridge that the people of Stone Cliff polished the fine art of what my mother labeled "bridge talk". And some of this bridge talk survives to this very day.

Three of the more famous bridge talks are recorded here:

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The "Big Fish Deal" began shortly after the lady who ran the town boarding house dropped by the company store about closing time on a Saturday afternoon.

It seemed the company store manager had overbought fish that week and still had one left in the bottom of the big fish barrel. No one had wanted it, it was too big (it was a 20 pound trout). You see, in those days before refrigeration, food had to be eaten fast (before it spoiled) and there was a limit to how much fish one could eat that fast!

But, as the store manager gave her a very, very bargain-basement price, she bought the big fish and took it back to the boarding house.

Then she started out on Monday morning with fish for breakfast. And, when she packed her boarders' dinner pails . . . in went fish sandwiches. For supper, she cooked up a delicious fish chowder.

Now, for a day or two, this would have gone relatively unnoticed. But, the fish for breakfast, fish for lunch and fish for supper menus continued through Thursday . . . with no letup in sight!

On Friday morning, as the story goes, one of her boarders came down the stairs with a suitcase in his hand. She, looking very disappointed, said "You're not going to leave me are you?" "No Mam," he said, with an absurd twinkle in his eye, "I'm just having this terrible urge to go upstream and spawn!"

The telling and embellishing of this "true story" was bridge talk for many years.

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The bridge talk about "Stanley and His Bicycle" concerned a young man named Stanley who worked for the railroad company at CS Cabin.

Now Stanley's claim to fame in Stone Cliff was the fact that he owned the only bicycle in town! (To keep the record straight, Stanley was also a bachelor and resided at the self-same boarding house described in the "Big Fish Deal" bridge talk above.)

It seemed that Stanley had fallen in love with a local girl, and, in due time, a wedding was held. During the ceremony, when the preacher asked Stanley to repeat after him the words "My earthly treasures to thee I endow . . . ", one of the prominent local gossips, punched another of her kind, and was heard to exclaim in a loud voice . . . "Well, there goes poor ole Stanley's bicycle!"

This was the stuff bridge talks were made of . . . and another "true story" was added to the Stone Cliff bridge talk repertoire.

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The annual spring baptism led to many a bridge talk. The one recounted here could be titled "When the Very Large Lady Was Baptized".

It was a sunny day, the annual spring baptism was in full swing, several hundred people were standing along the banks of the New River and a young, very large lady (weighing in at about 250 pounds) stepped forward.

Well, the preacher, who was a rather small person in stature, bravely attempted to carry on . . . but he could not get both ends of the lady under the water at the same time. You see, as he would push one end under the water, her other end would bob up out of the water. Finally, an elder stepped out into the river to help the preacher, and, together, they were able to submerge her completely.

Now, if this event had ended right there, it would have turned into an oft-repeated bridge talk in itself . . . but the story didn't end there . . . it continued . . .

It seems as the lady was brought up out of the water, she was shouting with glory and calling out "I saw my Jesus! I saw my Jesus!"

Needless to say, the crowd lining the riverbank was stunned by this revelation (baptisms being taken very seriously). There was a profound silence as they pondered her words. Then, all at once, the town drunk, who was standing right by the river's edge, shouted out in a loud voice "You're a liar! I saw it myself! It was a big mud turtle!"

That local drunk was quickly handcuffed and hauled away by the town constable . . . and, as the car passed over the Stone Cliff bridge, he could be seen through the window . . . grinning from ear-to-ear.

And so another local legend was born . . . and was passed along as "just the plain truth" during pauses on the Stone Cliff bridge.

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Bridge talks, then, were an interlude in the daily life of the people of Stone Cliff. And bridge talks became just as much a part of that life as the sounds of the trains, the power station whistle and the river.

The best bridge talks were repeated over-and-over, and became bright spots in an otherwise dreary existence . . . as the depression's grip tightened.

The Depression Worsens: The Year is 1932

Back in September 1931, my father's pay, for two-week's work in the coal mines, had been $44.16. For that amount of pay, he had loaded 68 tons of coal and moved 13 cubic yards of slate.

But the problem was, in 1932, that the men were not working year-round. As the depression worsened, and industry-after-industry folded, orders for coal diminished proportionately. Soon, coal was only mined during the winter months . . . to heat homes in the north (around the Great Lakes and in the New England States). Once spring came up north, orders were discontinued and the men were out of work (from May through September).

Of course, the company had credit to extend, to help the miners through the spring, summer and fall months . . . but the credit could only be applied to purchases at the company store. This credit was scrupulously added up, and, when the men returned to work, was deducted from their pay.

With that in mind, let's look at my dad's $44.16 (two week's wages). First, the company deducted $3.00 for rent . . . for the company house we lived in. Then, $1.00 came out for coal . . . for heating and cooking in our homes. There was 50¢ for the company doctor and another 50¢ for the company hospital fund. Take out another $1.00 for the company burial fund and 25¢ for the company blacksmith . . . who sharpened and repaired the miners' tools. This left a total of $37.91 . . . against which my father drew $28.00 worth of script . . . to purchase groceries at the company store. And, the remaining $ 9.91 was applied to reduce his debts to the company . . . run up during the summer when the mines were not working. So, out of the $44.16 . . . my father brought no money home.

In times such as these, and under conditions such as these, the miners were left with nothing . . . they did not own their own homes, they owed all they could possibly make to the company store and they could not pick up and leave because there was no work anywhere else.

The river garden and the mountain gardens became increasingly important. As money grew almost nonexistent and debts rose to the company store, those

gardens became one of the coal miners' most valuable assets . . . and those gardens literally kept starvation from the doors of many a miner's home.

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The people of Stone Cliff, like the rest of the country, did without a great deal during this period of our Nation's history . . . and it was a real and bitter daily struggle to keep hope alive.

During this time, we shared an experience that no one in Stone Cliff would ever forget . . . the town met the World War I veterans who journeyed to Washington in 1932 to petition Congress for their "bonus money".

It seemed that, back in 1920, Congress had voted what it called "bonuses" to all World War I veterans . . . but Congress had also voted not to begin paying those bonuses until the year 1945 (twenty-five years later).

Well, with the depression wiping them out, in 1932, and nowhere else to turn, the World War I veterans wanted their bonus money . . . <u>now</u>.

It was never really an organized march on Washington . . . just one that gathered momentum as the World War I veterans and their families piled onto trains and into boxcars . . . all across America . . . headed for Washington.

As I recall, thousands of these veterans and their wives and children passed through Stone Cliff . . . and the people of Stone Cliff tried to help them. (The veterans were forced to subsist mostly on handouts from well-wishers.) The trains would stop for the night and the railroad detectives would let the people out to sleep along the river banks. With little of their own, the people of Stone Cliff took food and clothing to the veterans . . . offering what comfort they could, and wished them well.

Eventually, the same veterans returned . . . on their homeward journeys . . . empty-handed. They told stories of what had happened in Washington . . . how they had set up a temporary campground and organized a march to petition Congress for their bonus money . . . and how the House of Representatives had passed a bill for immediate payment . . . but how when the Senate failed to act on the measure before Congress adjourned, the War Department, under General Douglas MacArthur (going against the wishes of President Hoover), had burned their camp, crushed their movement . . . and literally driven them out of the city.

The people of Stone Cliff once again listened, shaking their heads, passing out what food and clothing they could spare and offering, once again, what little comfort they could

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Stone Cliff Participates in the New Deal: The Year is 1933

Then, almost overnight, the depression ground to a halt. On March 4, 1933, Franklin Delano Roosevelt became President of the United States and launched America into his recovery plan for the country . . . the New Deal.

Economic reforms were initiated on all levels of life . . . and acronyms like CCC, WPA, NRA and REA became household words.

And, in Stone Cliff, we too were caught up in the country's economic recovery. Yes, Stone Cliff participated! and the town changed!

First, a big new sign went up in the company store window. It was an NRA (National Recovery Act) poster. It had the great big red letters "NRA" printed on the top . . . and a big blue eagle spread its wings under the letters . . . and, under the eagle, the NRA pledge WE DO OUR PART was inscribed.



Now it should be noted that all companies were advised (during the first 100 days of the new administration) to sign the NRA pledge, as this would indicate to the government that the companies were willing to comply with the new NRA policies. For instance, they would pay their workers a minimum wage, require only a maximum number of hours of work and allow workers to form unions.

To encourage the immediate signing of the NRA pledge, companies were also advised that if they did not sign the pledge, no one would be allowed to buy their products.

And so, the WE DO OUR PART pledge was duly signed by the coal company in Stone Cliff . . . and the NRA poster, acclaiming that fact, went up in the company store window.

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Under one of the New Deal programs, families received groceries . . . called "commodities". These commodities, however, were not free . . . a minimum number of hours had to be worked before a family was eligible to pick up their allotted commodities (usually flour, butter, rice, potatoes, cheese, etc.)

I remember one particular day when each family received a new kind of commodity . . . a big bag of grapefruit! Having never seen grapefruit before, there was a great deal of speculation as to how to cook them.

I overheard a lady ask my mother, "How in the world do you prepare these grapefruits? My, they're so bitter! I have tried to boil them, I have tried to brown them, I have tried everything I can think of and they still taste so bitter!"

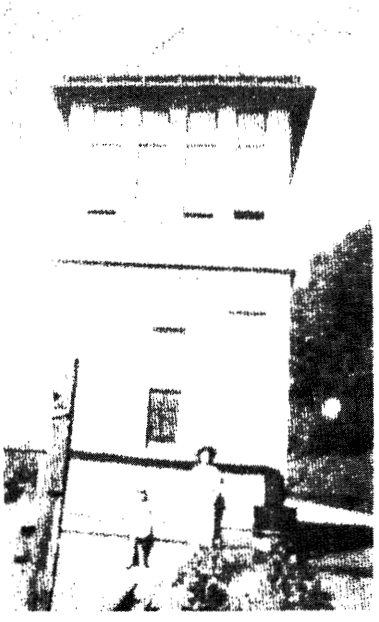
STONE CLIFF, WEST VIRGINIA: 1933

THE COMPANY STORE
In this building - company office, grocery store, dry goods store, hardware store, post office, railway express office, C&O local passenger train ticket office and doctor's office



Note NRA poster in store window (start of the New Deal)

C&O RAILWAY'S
Signal and Switching Tower
(east end of Thurmond yard)



VIEW FROM THE BRIDGE
Company store, depot, coal haulage incline and tipple



L: Bonnie Shuff Whitener, age 2, botn in Stone Cliff
R: Sister Freda Shuff Menefee, age 15

So, my mother took up the challenge of "cooking" grapefruit . . . and, at the same time, removing the bitter taste. She won too, and to this day I use her recipe . . . cut them in half, remove the seeds, add brown sugar or honey and place them in the oven allowing the sugar to melt into the grapefruit.

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Thinking back about how miners were required to work a minimum number of hours to be eligible to receive commodities, reminds me of another interesting change that occurred during the early New Deal days in Stone Cliff . . .

Now, if a miner worked his minimum number of hours in the mines, he received his wages . . . and no commodities. But, if a miner did not work the minimum number of hours in the mines, he could complete his hours by working on an approved government project . . . and then receive commodities.

Well, in Stone Cliff, the government's project, which kept miners working the required number of hours, was to build outhouses . . . yes, outhouses.

But these were not just ordinary outhouses . . . oh, no! These outhouses were built to government specifications! and were sanitary! They had concrete floors over deep pits, the pits were limed to kill germs, the houses were white-washed . . . inside and out! Bug screens covered the windows!

Yes, these outhouses were a wonder to behold. They were pleasant to use too. An added benefit was that these santiary outhouses played a key role in the decline of the spread of sanitation-related diseases all across the United States.

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Another part of the WE DO OUR PART pledge had assured the miners the right to unionize (with government protection). A local was formed in Stone Cliff, my father was a member, the new union rented out the top floor of the negro church for a meeting hall . . . and one of the first agreements they negotiated with the coal company was that, if a miner was injured, the company would provide ambulance service from the mines to the hospital. Thus doing away with whistling for a yard engine and caboose from the Thurmond railroad yard when an accident occurred.

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The school changed too. The New Deal also had a program which supplied fresh milk to school children . . . every day . . . if the school met New Deal standards.

So, our one-room schoolhouse was closed, and we walked part-way and took a bus part-way to the Claremont school . . . where we had two rooms and the

classes were separated (four grades to a room instead of eight). And each day, about noon, a train would stop and set off a pint of fresh milk for each school child.

As progress continued to roll on, we changed schools again. This time we went to a four-room school in Thurmond. We'd ride a bus from Stone Cliff to the bridge, walk across the bridge and then on to school.

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In the fall of 1936, we were let out of school one day for a very special treat . . . the Presidential race was in full swing and Alfred Landon was running against Roosevelt. Landon, and his running mate Knox, were traveling across America, on a railroad train they called "the campaign train" . . . giving speechs and trying their best to persuade Americans to vote Republican.

That day, we school children were part of one of Alf Landon's whistlestops. Oh, it was glorious! . . . Landon made a speech from the rear platform of the train, people cheered, flags waved . . . and buttons, shaped like sunflowers, were thrown to the crowd by Landon's aides.

Of course the local Democrats, not to be outdone, had plenty of FDR buttons to distribute too! (I still have those two buttons as keepsakes of my very first encounter with a Presidential candidate.)

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Before the New Deal, only the mines had been supplied with electric power (from the power station). But, with the New Deal came electricity for the rest of the town and we now had electric lights in our homes . . . and coal oil lamps disappeared (along with the daily chores of cleaning and filling them). Eventually, the power station closed altogether and was replaced by the Appalachian Power Company.

We bought our first radio . . . from Montgomery Wards . . . and life in the evenings changed even more as we sat by the fireplace listening to Lowell Thomas, Kate Smith, Amos and Andy . . . and on Saturday nights, the Grand Old Opry from Nashville, Tennessee, brought to us by radio station WSM. While we listened to these programs, we played checkers, or read . . . and had snacks.

With electricity . . . came telephones . . . and life changed even more.

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In town after town, all across America, people were pulling themselves out of the great depression and entering the era of the New Deal. And the little town of Stone Cliff, a small coal mining community on the banks of

the New River in West Virginia mirrored this progress and change . . . many old ways were set aside forever . . . new ways were taken up . . . and people looked ahead, again, to the future.

And those World War I veterans who had been treated so harshly just a few years earlier . . . well, their story, too, had a new ending. Under FDR's administration, they were treated kindly, listened to . . . and received their bonuses earlier after all.

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In 1938, when my dad took a job with another coal company, we moved away from Stone Cliff. I remember saying goodbye to the town when we left . . . it was a sad day for me . . . so many memories packed into those eight years. I had been five years old when we came to Stone Cliff . . . I was thirteen when we departed. I would miss it.

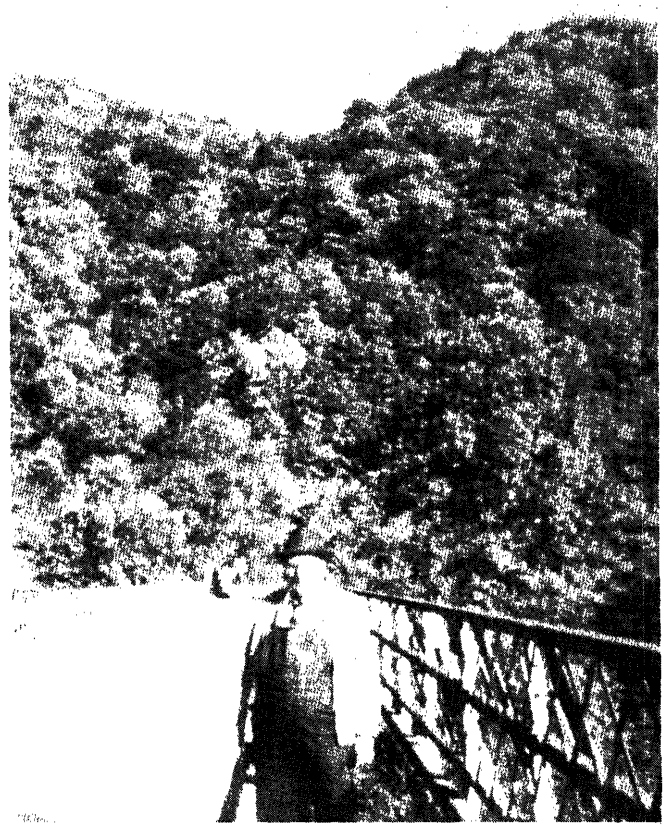
Stone Cliff Today: The Year is 1983

Now, in 1983, fifty years later, I had returned to Stone Cliff. Closer inspection along the mainline tracks revealed a few old crumbling gravestones . . . Stone Cliff had had two cemetaries, one for white folks and one for black folks, one on each side of the tracks. These graves and a few old masonary foundation corners of long-gone buildings were all the physical evidence I could find to tell of the people who had lived and died at Stone Cliff.

And, as I stood again on the bridge, looking down at what was once the busy little mining town of Stone Cliff, West Virginia, I thought how history repeats itself along the banks of the New River . . . you see, Indians lived along the New River, they are gone, the river remains. So, too, did the French fur trappers live along the New River, they are gone and the river remains. The same is true of the early English settlers. Then America's early mining industry took up residence along the New River . . . and built a town and mined coal. That town is gone and the river is, once again, the only surviving landmark.

Yes, the whistle of the power station is silenced forever, the buildings have decayed and vanished, the people have died or moved away . . . but the river and its sound remain . . . unchanged.

The Stone Cliff Bridge and vicinity after nature has reclaimed the area of the coal haulage include and tipple -- Murray Shuff returns to the town of his youth after fifty years and finds only memories.



Stone Cliff
West Virginia

1983

Showing the wilderness scene that was once the location of the town of Stone Cliff -- Clara Shuff Ashley relaxes at the scene of the "bridge talks."



About the Author:

Murray Shuff was born in the town of Thayer, on New River, in 1925. He attended school at Stone Cliff, Claremont and Thurmond. After serving in the Navy during World War II, he received an appointment to the Merchant Marine Academy and graduated with the class of 1945 as a marine engineer.

Signing on with the Gulf Oil Corporation, in research and development and foreign service, his worked carried him to many countries, including Venezuela, Columbia, Iran, Iraq, Oman, Arabia, Egypt, Brazil and Argentina. He was called back to Naval service during the Korean conflict and served with the Atomic Energy Commission.

In 1959, he returned to West Virginia, to Beckley, and was employed by the Meadows Lumber Company -- he now serves as president of that corporation.

Some of his civic activities have included being past area governor of Toastmasters International (where he received the highest honor of distinguished toastmaster) and serving as youth leadership training advisor for 4H Clubs for twenty years and advisor and director of Future Farmers of America for Raleigh County for twenty years. Mr. Shuff also helped organize the first Raleigh County Historical Society Chapter and has served as its president, and has been an advisor, for fifteen years, to the Raleigh County Vocational Education Board. In addition, he is a past president of the Beckley-Raleigh County Chamber of Commerce, has been a national delegate for the West Virginia Lumber Association and a chairman of the board of the First Christian Church of Beckley.

Mr. Shuff currently resides in Beckley and may be contacted at P.O. Box 1638, Beckley, West Virginia, 25802.

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EARLY SETTLEMENT ALONG THE NEW RIVER (NC AND VA) BASIN

William D. Bennett
Raleigh, N. C.

While this paper concerns early settlement in the New River Water Basin of both North Carolina and Virginia, my information for the Virginia area was compiled from published records which appear in the bibliography. My last research in original Virginia records was about fifteen years ago. I was trying to determine if my pre-Revolutionary ancestor Joseph Bennett, who lived with his wife Elizabeth in eastern Mecklenburg County, Virginia, and Joseph Bennett, who lived with his wife Sarah about fifteen or twenty miles to the east in Brunswick County, Virginia, was the same man with a fast horse. I came to the conclusion my Joseph was just too old to ride a race horse.

Other authors have discussed migratory routes from Virginia into North Carolina which brought waves of settlers into the colony. The last time the New River served as such a migratory route for people coming into the north into North Carolina was in pre-Columbian days. This occurred when the hostile Iroquois Indians moved out of Canada and northeastern United States into the headwaters of the Ohio River, displacing the more peaceable Sioux. The Sioux tribes split, part going down the Ohio and finally settling in the western plains. Another group of Sioux moved up the Kanawha River to its headwaters and were settled in southwestern McDowell County, North Carolina, in 1566 when found by the Pardo expedition. Because of the continued harassment by the Cherokee (of Iroquois stock), they moved down the Catawba River to the South Carolina line. These Indians were known as Catawbas when John Lawson passed their way in 1670.[1]

In discussing the New River area, for convenience, I will refer to those lands drained by the New River in North Carolina as Ashe County and those lands drained by the New River in Virginia as Montgomery County. I am fully aware that Montgomery was not formed until 1777 and was subsequently divided and that Ashe was not formed until 1799. However, the area covered by these two counties at their formation constitutes our area of interest.

Let me give a little background history. England and France had begun successful colonization of America simultaneously--Jamestown in 1607 and Quebec in 1608. By the mid-eighteenth century, they had engaged in three indecisive wars and after 1750 were bracing for a fourth. Virginia and South Carolina actively pursued trade with the Indians while, on the other hand, North Carolina had tried to dissuade advances into their hunting grounds. The attempt to remove the French from Fort Dusquesne precipitated the final war with the French. Offended by the British, the Cherokee attacked Fort George in South Carolina, Dobbs in North Carolina, and Chiswell in Virginia and captured Fort Loudon in Tennessee. Montreal and Quebec fell in 1759 and 1760 and a successful three colony campaign defeated the Cherokee in 1761. George III's Proclamation of 1763 forbade British settlement and colonial grants beyond the crest of the Appalachians and "enjoined and required" that no person presume to purchase land from the Indians. Not only did the Proclamation tend to abort plans of such Virginia land companies as the Ohio Company and its rival, the Loyal Land Company, but also many men had enlisted their services as soldiers in the militia with promises of land on the Western Waters. Whether from earlier explorers, wartime militia or later Long Hunters, every ragged colonist in Virginia and Carolina increasingly saw the

West as a variable pot of gold. It was to legimitize property holdings that the treaty was negotiated with the Cherokee at Hard Labor, South Carolina, in 1768. This line ran from Tryon Mountain in western Polk County, North Carolina, to Fort Chiswell in Virginia, then north to the mouth of the Kanawha River. But settlers continued to surge West. In 1768 the Christian-Anderson expedition which explored the Holston to Hawkins County, Tennessee, on their way out passed through almost uninhabited wilderness; on their return a few weeks later, they glimpsed cabins at every spot where range was good.[2]

Settlement of the New River area of Virginia and North Carolina, of necessity, must be discussed separately for at least two reasons. The first reason is topographical. The Blue Ridge from McDowell County north to the Virginia line is an almost impenetrable barrier. In 1752 Bishop Spangenburg, searching for a tract for the Moravian settlement, was not content with what he found along the Catawba River and decided to look further north. He procured the services of a hunter to guide him across the Brushy Mountains to the Yadkin River. The hunter got lost and led the Bishop and his party on a frontal assault of the Blue Ridge. The Bishop's diary for 5 December 1752 reads, "We climbed on hands and knees dragging after us the loads we had taken from the backs of the horses, for had we not unsaddled them they would have fallen backwards down the mountain."[3] Likewise, James Robertson, who lived just southeast of here on the Neuse River, traveled to Tennessee in 1770. It would appear that he followed the Yadkin River and crossed the Blue Ridge at Deep Gap. On his return he spent two weeks trying to find an easier route to the Yadkin. He was unsuccessful. When he returned to Tennessee with his family and friends they followed the Catawba River and crossed the Yellow Mountains.[4] As late as 1936 there were only two paved primary roads through the Blue Ridge into Ashe County.[5]

Conversely, the approach to the New River in Virginia was, comparatively speaking, a rather easy approach. There were several gaps in the Blue Ridge in Virginia. Particularly notable was a gap west of Black Water Fort and the gap used by the Yadkin Road at the head of Goose Creek. In addition, settlers migrating down the Yadkin Road could turn west and follow the Wilderness Trail.

The second reason for dividing the discussion of settlement in North Carolina and Virginia was the availability of title to land. Virginia began authorizing numerous land companies to settle lands to the west. The surge of immigrants through Philadelphia and the Chesapeake combined with the competition between land companies kept a continuous stream of settlers moving westward. With no deep-water port, North Carolina received only the overflow after the better lands to the north had been occupied. After the French and Indian War, Virginia continued issuing grants for the land. In North Carolina, the land in this study was owned by Lord Granville. Following the defeat of the Cherokee in 1761 a number of men started action to get title to lands on the Upper Catawba in North Carolina from Granville's agents. I have yet to find where any deeds were issued by Granville's Office in McDowell County, North Carolina. Following the death of Lord Granville, the Granville Land Office closed in March 1763. From then until May 1778, when the State assumed title to all vacant land and began issuing grants, it was impossible to obtain title to vacant land in Ashe County.

In addition to the closing of the Granville Land Office, the government provided more deterrent to settlement in Ashe County. The Treaty of Paris in 1763, shortly after the Land Office closing, forbade settlement beyond the crest

of the Blue Ridge. Four years later Governor Tryon of North Carolina placed even more land in North Carolina out-of-bounds to settlers when he established a boundary running from Tryon Mountain, near the town of Tryon in Polk County, through Sparta, to Fort Chiswell. This line excluded not only Ashe County but also most of Rutherford and McDowell Counties. It should be noted that in the latter two counties the line was generally ignored. Even with the Treaty of Hard Labor in 1768 opening more lands in Virginia, Ashe County was still excluded. The Treaty of Lochaber in 1770 and its revision the following year gave settlers "carte blanche" to settle most anywhere in the domain claimed by Virginia, while Ashe County remained off limits to settlers until the Revolution.

It is believed that Abraham Wood, commander of Fort Henry, present day Petersburg, Virginia, first discovered the New River during an expedition over the mountains in 1652. It is certain that an extended expedition sponsored by Wood in 1671 describes the New, the "Great River." Originally named Wood's River, this name continued in use as late as 1755. It is not known how or why the name was changed, but the 1750 Fry-Jefferson map identifies it as "New River." Grants issued in the late 1740s indicate the name New River was already in use. The first land company devoted to settlement in the New River basin was the Wood's River Company.

The lack of title to land in western North Carolina was such a problem that the North Carolina Assembly passed the following resolution 19 August 1778. "Whereas there are so few persons in Wilkes, Burke, Washington and Surry Counties who have obtained Titles to their Lands, that legal juries cannot be obtained. Resolved therefore that Reputable House Holders in the aforesaid Counties be and are hereby to be capable of Acting as Jury Men upon all Occasions within their respective Counties." Therefore, while land records in Montgomery County start at an early date, land records in Ashe County do not begin until 1778.[6]

By the Treaty of Lancaster in 1744, the Six Nations of Indians renounced their claim to all lands in Virginia and the Wood's River Grant was issued in 1745. Surveying began in March 1746; but in the same year two patents were issued to John Harrison, Jr., based on a previous survey. This survey was probably made about 1743. Others who had lands surveyed prior to 1746 were John Mills and John Buchanan. Among those well enough acquainted with the territory to have locations ready to be surveyed were James Woods, former surveyor of Orange County, Virginia, James Patton, George Robinson, James Burk, James Davis, Peter Rentfroe, George Draper, the Ingles, Charles Hart, Charles Campbell, Charles Sinkler, the Harmons and the Dunkers, a religious sect. An order of Orange County, Virginia, Court of April 1745 mentions Adam Harmon's on the New or Wood's River as the western end of a road marked off from the Frederick County line through Augusta. Road orders for the area through 1750 give an excellent idea who were settled in the area at the time.[7]

In 1749 the Loyal Land Company was organized and secured a grant for 800,000 acres beginning on the North Carolina line and running westward and northward. It would appear this company sold about 250 tracts before development ceased due to the French and Indian War and conflicting claims with the Ohio Company. Other land companies were the Greenbrier Company which received a grant for 100,000 acres on the Greenbrier River in 1745 and the Ohio Company which was granted 500,000 acres between the Monongahela and the Kanawha in 1749. Others who received sizeable grants included William Gray, 10,000 acres in 1747, Bernard Moore, 100,000 acres in 1748, Peyton Randolph, 400,000 acres in 1749, John Hiscock and John Griffin of Bristol, 100,000 acres in 1750, Adam Harmon

and others, 7,000 acres in 1750, Samuel Davis of Bristol, 50,000 acres in 1751, Thomas Lewis, 100,000 acres in 1752, Matthew Talbot, 40,000 acres in 1752, John Hayles, 64,000 acr4s in 1752, and William Byrd, 5,000 acres in 1764. Between 1761 and 1769 John Robinson and Company acquired a large part of the land allotted to the Greenbrier Company. A study of the surveys and deeds of the area through 1754 give a good idea of the explosion of the population in the New River basin.

During the early period (1745-54) on New River and Holston, there had been only minor problems with the French and Indians. Stealing furs of the early hunters seemed to be the full extent of the trouble until the fall of 1754. By the first of September 1754, Governor Dinwiddie was hearing complaints from the frontier about many parties of Indians robbing and ill-treating the people. For the residents of the New River and Holston River, 1755 was probably the worst year of the French and Indian War. From October 1754 to August 1755 twenty one individuals were killed, seven wounded and nine taken prisoner.[9] Although the preparation for the defense of the frontier continued, the inhabitants of the exposed settlements hurried away from their homes. The Holston, New River and Greenbrier settlements were practically abandoned. The exodus from the land was dramatic. The Rev. James Maury wrote at the time: "By Bedford Courthouse in one week 'tis said and I believe truly, near 300 inhabitants of this colony passed on their way to Carolina."[10]

The fortifications formed a line well to the east of the New River basin. It was the fall of 1760 before construction was started at Fort Chiswell. This fort was built on the land of Alexander Sayers on the south side of Reed Creek. It was named for John Chiswell who had discovered lead mines eight miles to the south. Chiswell had his land surveyed about the same time construction was started on the fort. According to the Proclamation of 1763, men who had served in the French and Indian War were entitled to bounty land. It was a decade later, 1774, when warrants were finally issued. Surveys for these warrants may be found in Fincastle County, Virginia, Survey Book A. In addition, there were a number of warrants for which no surveys have been found. Montgomery County, Virginia, Order Books for 1779 and 1780 give additional service records for men who were then residents of the county.

With the cessation of hostilities in the New River basin, it again swelled with the influx of families. There is no way I could summarize this period within the time limit allowed me. Nor is there need to do so. F. B. and Mary Kegley have thoroughly covered this area in the books listed in the bibliography. One comment before leaving Montgomery County, Virginia, you should be aware that a sizeable portion of the population was not in accord with separation from Great Britain. In 1777 when Virginia passed an act requiring all males over sixteen to take an "Oath of Allegiance to the State," it was noted that Capt. Thomas Burke and his entire militia company except four or five refused to take the oath. William Preston, writing to William Fleming in December 1777, said "near forty of my neighbors have positively refused the Oath of Allegiance to the State." John Griffith, who lived on the South Fork of the Holston, was the apparent leader of an intended uprising of British loyalists. He encouraged support by by claiming that the proposed alliance with France was a sell-out ti tge French king. There is also evidence that others refused to take the oath for "conscientious" reasons.[11] I refer you to the Kegleys for a more detailed discussion. General William Lenoir, referring to this same period in North Carolina, stated: "the militia in that part of Surry that now comprises the Counties of Wilkes and

Ashe was about a company and a half and a very few settled to the west of them. The scattered situation of the inhabitants and their remoteness from any proper source of information, together with the usual prejudices of a very limited education under a Monarchical Government and some of the principal men amongst them having been handled pretty roughly by said Government for taking an active part in what was called the Regulation...caused so many to be disaffected to the Glorious Cause of Liberty; that the Whigs in the Western Frontier had enough to do to defend themselves against the Indians & their more natural enemies, the Tories..."[12] It seems this desire to maintain the status-quo still prevailed strongly eighty years later when General Garnett, after unsuccessfully trying to raise a Confederate regiment in the Rich Mountain area, wrote General Lee: "These people are imbued with an ignorant and bigoted Union sentiment."[13]

Although Montgomery County, Virginia, had experienced a phenomenal growth since the early 1740s; Wheeler's History of North Carolina, published in 1850, and quoting Thomas Gimpsie's letter to Thomas Henderson dated 1811, states that the first settlers in Ashe County came in 1755. Ashe County histories imply the first settlers were David Helton, William Walling and William McClain, all of Montgomery County, Virginia, who came to the area in 1770 on a hunting trip and returned the next year to establish a permanent residence.[14] What is probably a little closer to the facts is a little of both. Andrew Baker is supposed to have moved into Ashe County in 1755. The French and Indian War forced him to leave the area. He is supposed to have returned about 1765.[15] My research leads me to believe he returned a little earlier.

A study of the loose papers at the North Carolina Land Grant Office gives some added information. On 3 April 1780 Andrew Baker made an entry for a tract of land on the South Fork of New River, which was surveyed a week later. In these papers reference is made to "the line of his former survey" and to his "old survey." In most instances where I find these notations in land entries and surveys made between 1778 and 1781 it indicates the grantee was in the process of obtaining a deed from the Granville Land Office when it closed in March 1763. Since it is known that entries were being made for land just to the south, in McDowell County, North Carolina, in early 1763, there is every reason to believe that Andrew Baker had returned to the New River once the threat of Indians abated.

It has been surmised by some that the first settlers in Ashe County came in because they were unaware of the location of the boundary. This may have been true in a few instances; however, the Fry-Jefferson map clearly defines the boundary in the New River area. Peter Jefferson was an active member of the Loyal Land Company and in association with Joshua Fry surveyed the North Carolina-Virginia boundary as far west as Deep Run on the Laurel Fork of Holston River. Enough attention was paid to the boundary where New River crosses that a special survey of this section of New River was included in the report sent to London.[16] It should be noted that they placed the state boundary about 3,000 feet north of its present location.

The first white inhabitants of Ashe County were the hunters. It has been estimated a hunter could earn $1600 to $1700 per season hunting and trapping game for their pelts. While this figure seems much too high, there was a good

income to be had from the sale of pelts. It was for this income and the love of the hunt that many men spent their lives just beyond the fringes of civilization as being hunters.[17] The Ashe County area was suited to their needs. There was plenty of game and in the rugged mountains there were numerous rock shelters. One such shelter known to have been used was 200 feet long, eight feet deep and five feet tall. Today the entrance is hidden by rhododendrons. This rock shelter was located about a hundred feet from the North Fork, about twenty-five feet above the water. Another such rock shelter nearby was eleven feet deep and thirteen feet high.[18] This form of shelter was suitable for the earliest Long Hunters, but by the time of the Revolution many had built shelters or even cabins at their camps. Capt. John Cox, who was prominent in Montgomery County, Virginia, following the Revolution, is quoted as saying he could remember when there were but 2 or 3 hunter's cabins from the lead mines (Fort Chiswell) to the head of the Watauga. The land entries of the 1780s are replete with references to George Collins' old cabin, William Howell's old cabin, Martin Gambill's old camp, Sizemore's Camp, Nealing's Camp, Fee's Camp, Priest Camp, Baker's Camp, Golson Stepp's Cabin, Charles Colins' old Cabin, John Robinson's Cabin, "a small cabin formerly inhabited by William Mainard and lately claimed by Archeble Mahon," and the list could go on.[19]

By the time of the Revolution the New River Valley was becoming populated by permanent settlers which tended to crowd the hunters. Because of the topography, Ashe County, North Carolina, was settled from two directions, north and south. The headwaters of the New River were settled primarily by people from the Upper Catawba River. By 1780 there was a well established route from the headwaters of the Johns River in Burke County, North Carolina, to the headwaters of New River near Boone. And, as previously mentioned, there was also access to the area from the Yadkin River by way of Deep Gap. Most of the early settlers in the southern half of Ashe County came by one of these two routes. By 1778 about 60% of the settlers in the northern section of the county were Virginians and considered themselves such to their dying day. You have a list of over two hundred land grants issued for entries made prior to 1790. While this is not a complete list for the time frame covered, it will give you some idea of the situation. Less than a third of the grantees acknowledge any improvement at all on the lands. You can find the names of many of these grantees on the tax lists of Montgomery County, Virginia, from 1771 through 1790. Gideon Lewis specified on his entry for lands in Ashe County that he was "of Virginia." Most of those who had moved to Ashe County at this time were getting away from inhabited areas.

Now, before someone starts hollering that I have placed great, great grandpa's grant in the wrong place, let me say that I am sure there are errors in the map of land grants. In old Wilkes County, North Carolina, there were three different Elks Creek; one in Alleghaney County, one in Wilkes County and one in Ashe County. I am sure that the grant to Daniel Yarnell for land previously claimed by Abner Smalley on Elks Creek is the Elks Creek in Wilkes County. There were three different Grassey Creeks and everywhere you turn there is a Buffalo Creek. Just ask the people at Appalachian State University the problems involved in trying to superimpose the surveyor's plat on a USGS map when they did such extensive research on the Sturgill lands. Even at the time, the following petition dated 3 May 1793 shows the problems the grantees were having with the surveyor. Landrine Ayers had bought a tract of land granted to William Blackburn and found an error in the surveyor's plat and description and his petition to the "Now your Petitioner Conceives himself Much Injured by a Mistake Commited by

William Johnston Who Surveyed the Land in Mentioning in his Platt Howard Creek Instead of Meet Camp Creek & Since John Brown, Esq., & William Miller have Surveyed by a warrant obtained from a Prior Date These Lands which have Taken Great Part of the Original Survey obtained by the Said William Blackburn Now your Petitioner Coneives himself Considerably Injured from the above Circumstances therefore prays your Worships to Rectify the Same by an Order of Court if agreeable to Law Directing the Secretary to Issue this Grant in the following form to Wit Lying on Meet Camp Creek the waters of New River Left hand fork..." and he then gives the new metes and bounds.[20]

The routes from the south seemed to have been the most popular for the first settlers in the area. When Wilkes County was formed in 1777 the two Justices from Ashe County were George Morris and William Colvard,[21] both of whom appear in pre-Revolutionary records of Rowan County, North Carolina.[22] At the second meeting of the County Court of Wilkes (June 1778), several more Justices from this area were appointed, some of whom can be found in the earlier Rowan records. In 1778 Ashe County comprised one militia district of which Andrew Baker was captain. He, too, had moved from Rowan County. Initially political power appears to have resolved around two locations. The first was in southern Ashe in the area of Boone, North Carolina. Andrew Baker as a Justice of the County Court and Captain of the Militia was the political leader in the area.[23] By March 1779 Ashe County had been split into two Militia Districts. Political power in the northern district centered around Penington's Mill located on Grassy Creek just south of the Virginia border. Micajah Penington, as a Justice and Captain of the Militia, was leader of this area.[24] Micajah Penington's putative father, Benajah Penington is first found on the Yadkin River in Rowan County in 1753.[25] By 1770 Benajah and Micajah Penington were on the Upper Catawba River moving into Ashe County sometime in the 1770s.[26] To give some idea of the influence of the family, Micajah was Captain of the Militia and Justice of the Peace, his father, Benajah was Constable and Micajah's son, Abel, was one of the Tax Assessors. Their combined estates were valued at £1500 in 1778 and were exceeded in the area only by the Hammons family. Both Micajah Pennington's and Andrew Baker's roles in power were short lived. It is believed the Peningtons were Quakers and were not considered ardent enough Whigs. In September 1779 Micajah's estate, along with the estates of a number of friends, was considered confiscated property; although, there is no evidence it was ever sold. In a list prepared by Benjamin Cleveland 6 October 1781 to be forwarded to the Secretary of State concerning the status of the several justices, in Ashe County only William Colvard was acting in his capacity as justice, George Morris had resigned, James Tompkins refused to qualify, Thomas Elledge, Abner Smalley and Micajah Penington were listed as Tories and Andrew Baker was reputed to have taken protection of the enemy.[27] It is not known how accurate Cleveland's judgement was concerning these people. Andrew Baker was appointed a road overseer in June 1782 and about a decade later both Baker and Penington were Justices and Penington was also a Captain of the Militia.

As in Virginia, road orders give a good indication of those living in a particular area. Attempts were made to provide paths or roads to Penington's Mill and the Boone area. In June 1778 the court ordered a jury composed of Rowland Judd, Nathaniel Judd, Barnet Owen, John Robins, Jr., John Tyrah, William Owen, Jr., John Shepperd (all of whom lived east of the Blue Ridge), John Baker, Matthew Sparkes, Andrew Baker, Jr., Thomas Calloway, Robert Baker, Zachariah Wells, Abel Pennington, James Ward and James Lewis to lay out a road

from Deep Forest in Reddies River to Benajah Pennington's Mill.[28] This road apparently was to run from Deep Fourd to Lewis Fork, up Lewis Fork and across the mountains to the South Fork of New River and thence downstream to Pennington's Mill. In September 1778 James Lewis was appointed overseer of the stretch from the South Fork to Pennington's Mill.[29] At this term of court it was also ordered to lay out a road from Reddies River to the Old Field on New River (central Ashe County).[30] In December 1778 Reubin Stringer was appointed overseer of the road from the top of the Blue Ridge to the Old Field.[31] It would appear the terrain was too rugged to maintain a road as in March 1780 the court ordered the road discontinued.[32] But in June 1781 the justices again changed their minds and ordered the road kept open.[33] In September 1779 the justices, probably realizing the difficulties, ordered a bridle path instead of a road from Roaring River to the mouth of Peak Creek.[34] All road orders were not limited to paths across the Blue Ridge. In September 1779 a road was ordered from John Webb to James Tompkin's Mill[35] and in June 1780 all hands on the North Fork and those between the fork of the river and the Virginia line were to work on the road from Pennington's Mill to George Morris.[36] In 1784 the court was petitioned to open a road from Tompkin's Mill to Benjamin Green to serve the "New River Settlement" in southern Ashe County.[37] In October 1788 there was an order for a bridle path from the head of Elk Creek to Jesse Council.[38] This would have crossed the Blue Ridge a little south of Deep Gap. In February 1803 they were still trying to make a road from Deep Fourd across the mountains when they requested a new survey for the road.[39] In October 1803 I find the first reference to an attempt at a wagon road across the mountains.[40] This road was to go from the head of Elk Creek and would serve the Boone area.

While road records give only limited references to paths of communications, there were well established routes of travel in Ashe County by 1780. I have already mentioned "the road that leads from the Three Forks of New River to Johns River in Burke County" and "the path that leads from the head of Elk to the Three Forks." There were also "the path that leads to the Cove at Buffalo from the Three Forks of New River" in the Howard Creek area, "the path from Mr. Browns to Golson Stepps Cabin," "the path that leads from the mouth of Howards Creek to the head of Cove Creek," "the path from Benjamin Gregors to the head of Elk," at the head of Potato Creek there was "the path from the Elk Creek Ridge to Daniel Richardson," "the path from the North Fork to Rones Creek," "the path from Holdbrooks to New River Settlement," "the road from Casces Settlement to the mouth of Cranberry (Creek)," and the "path from Rowark's improvements to Micajah Pennington's."[41] It will be noted that the majority of these paths lay in southern Ashe County. This is readily understandable when one realizes that Ashe County was an end unto itself, a cul-de-sac. Most settlers were headed to the Western Waters. Montgomery County, Virginia, provided a route to the headwaters of the Holston and Clinch Rivers without going through Ashe County. Settlers coming up the Catawba found one of the better routes crossing near Boone to the headwaters of the Watauga River. Both routes bypassed Ashe County.

By 1780 Ashe County had established settlers; for example, William Ray had built a mill and John Baker had previously built a pounding mill.[42] Many of the grants specify the inclusion of a mill site though a mill did not always exist there at the time. Four of the first five land entries in Wilkes County were for land in Ashe County, although one of them was caveated by William Lenoir. While some lands were surveyed almost immediately after the entry was filed, there was delay in surveying other tracts. Andrew Baird complained that a warrant granted Landrine Ayres 26 August 1780 was lost or mislaid, two others

issued to Baird in 1778 and 1784 could not be found. Benjamin Culbreth had the same problem with an entry for land on Rich Mountain.[43] Then entries were caveated when two or more laid claim to the same tract of land. Such was the problem of Timothy Purkins. On 7 April 778 Purkins entered four hundred acres on the mouth of Deep Gap Creek called the Old Fields. It included the improvements where he lived, also where Boyal Porter lived and an improvement bought of Samuel McQueen. Joseph Purkins filed a caveat claiming the land and was awarded the entry 31 July 1778. But to show how confusing the records become, Benjamin Cleveland had also filed a caveat for the land. The same day the jury awarded the land to Joseph Purkins, the same jury found that Timothy Purkins had settled on the land as an employee of Cleveland. The following was their conclusion of fact: "Whatever work he did on the land Benjamin Cleveland was to pay him for the same and he was to remain thereon during the said Cleveland's pleasure and no longer. We further find that Benjamin Cleveland said he gave up the land to Timothy Purkins in consideration that Purkins was to mind some stock for him. We also find that since then Purkins offered Cleveland a consideration for the land which Cleveland refused. Then Purkins proposed moving off the land and settling across the river on Meet Camp Creek. We further find of later date that Cleveland in company with others came to Purkins and said he just now had made a right to Joseph Couch, Joseph Purkins and William Sperrie and that he was willing to make him a right if he had pen and ink and asked Sperrie for pen and ink and could get none and for want of the same the right that Cleveland intended to make to Timothy Purkins could not be made appear which upon the whole we refer to the worshipfull court that if the law be for the said Purkins we find for him, if not we find for Benjamin Cleveland." You will note on your map that the land was granted to Cleveland, ignoring his right given to Couch, Joseph Purkins and Sperrie. Apparently Larkin Cleveland had made an entry for land claimed by Couch across the river on Old Field Creek. A caveat by Couch supposedly awarded him the land 28 February 1780. Fourteen years later Couch was still trying to get a clear title when Andrew Baker testified that he had seen Benjamin Cleveland's bill of sale to Couch for the land, but that Larkin Cleveland forced Couch to assign it to him (Larkin Cleveland) as Couch said "for fear he (Couch) should be killed."[44]

The difficulty of travel between Ashe County and the court house in Wilkes County becomes apparent when looking at the papers for a grant to Alexander Martin which was located on the Burke County line. An order was issued to the Surveyor of Burke County to make the required survey. Delays in surveying entries created even more unforeseen delays when the Glasgow Land Fraud erupted. There are many grants where entries were made prior to 1785, for which grants were not issued until after 1795, that bear the notation "the purchase money for said entry was duly paid & that the grant was obtained without fraud or collusion."

To give some idea of the sparcity of settlement, you have only to refer to the 1790 Census. The Eighth Company of Wilkes County embraced Ashe County. Here are listed a total of 77 free white males sixteen and over, including heads of households. Free white males under sixteen totaled only 107. Lest we forget the distaff side, among the heads of households were Mary Murphey, Sarah Coleman and Mary Baker. Previous estimates stated there were no more than fifty families settled in Ashe County at the end of the Revolution. However, the 1778 list of taxables includes eighty nine names.[45] While a number on the list of the northern section actually resided in Virginia, at least a

fourth of those on the list who appear in early Virginia records were included in Virginia lists of tax delinquents as early as 1773. Although a number of families moved into Ashe County following 1778, it appears the population decreased over the following six years as there were only eighty two taxables when the list was taken in 1784.[46] Even with this small a populace, in 1784 there were schools at Grassey Creek, Holton Creek, the North Fork and on Beaver Creek. Five years later there were four more schools; a second on the North Fork, one on Naked Creek, one on Nathans Creek and one whose location has not been determined.[47] No attempt will be made to discuss religious affiliations, but one of the first settlements on the New River in Virginia was that of the Dunkers from Pennsylvania. A Quaker meeting was established near the state line in 1785; Fox Creek Baptist Church, near the state line, was organized in 1782. A Methodist chapel already existed on Bridle Creek in Virginia when Asbury preached there in 1788.[48] It might appear that these religious institutions had little effect on those living near the state line in Ashe County. The Wilkes County State Docket for October and December 1778 have numerous cases of men from this area charged with fornication.[49] Many of the summons list the women who were involved with the men.[50] Also to be noted during this period are the number of men from the area near the Virginia line who are charged with swearing. Another common charge among this group was retailing liquor without a license.

Most of those obtaining land did so for their own personal use, but there were some land speculators. Among these speculators were William Lenoir, William McClain and Memican Hunt. Many of those settling in Ashe County were probably similar to John Henry Stonecypher. In 1743 Johannes Steinseiffer (1692-1757) arrived in Philadelphia from Eisenfeld, Germany. He settled in Culpepper County, Virginia. Johannes died in the early summer of 1757. Having money in their pockets for the first time, the two elder sons sometime later moved to North Carolina. Honoricus settled on Lewis Fork of Yadkin River at the foot of the Blue Ridge. His brother, Johannes Heinrich (John Henry), moved into Ashe County and was settled on Naked Creek by 1780 at which time his name had already been Anglicized to Stonecypher.

But probably more typical is the situation of the Sturgill family. James Sturgill moved to Montgomery County, Virginia, sometime prior to the Revolution. With the beginning of the Revolution, Sturgill would have nothing to do with separation from England. He refused to sign the "Oath of Allegiance." In his report listing those who refused to sign the oath, William Preston added a note after Sturgill's name describing him as "an old innofensive ignorant man." Sturgill died in Virginia about 1803 but his son, Francis, bought land in North Carolina on the north side of the New River between the Virginia line and the forks of the river in 1799. Francis' son, John Sturgill, settled on the land and shortly afterwards Francis moved in with him and died in 1807. While all the deeds have not been located, Francis Sturgill's estate was split into at least six 394 acre tracts. Prior to Sturgill's purchase, John A. McMillan, who is reputed to have come directly from Scotland, settled with his family between Potato Creek and Elk Creek. The relationship between the Sturgills and McMillans is typical of that found in Ashe County. McMillan's daughter, Nancy, married Joseph Phipps, the son of Jane Hash and Benjamin Phipps. Jane Hash was a sister of Rebecca Hash who married Francis Sturgill. This makes McMillan Sturgill's wife's sister's son's wife's father. Through marriage the McMillans were also related to the Osburns and the Coxes, but I won't go into that.[51] With the closed conditions in Ashe County it is not surprising if a researcher begins to wonder if an ancestor might not be his own grandpa.

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This discussion would leave the impression that most settlers on the New River came either from Pennsylvania or eastern Virginia. However, New Jersey should not be overlooked. On 13 April 1745 a bill was filed in a New Jersey chancery court wherein certain East Jersey landholders, including the Earl of Stair, wanted to oust settlers in the neighborhood of Elizabethtown, New Jersey. These settlers were known as the Clinker Lot Rights Men and held grants made about eighty years earlier. With changes in proprietorship some of these grants had been thrown in doubt. The suit dragged on for many years and never came to a decision, but by the time it was dropped many of those involved had left New Jersey. One of those involved was Caleb Osburn, a kinsman of Ephriam Osburn who was progenitor of the Osburn clan on New River. Other names included Halsey, Sturgis, Young, Wright, Williams and Whitehead. While first names do not all correspond, it could indicate the New River settlers were a younger generation.[52]

"After the initial settlement, the people of Ashe were locked in a timeless zone, living and farming as had their forefathers and rather oblivious to the changes in the world around them. Not until the 1880s were there any substantial changes in agricultural methods. About that time more farmers began using steel tipped plows that turned a deep furrow and discarded the homemade implements they had been using for nearly a century. Grain drills were introduced about 1884, but scarcely any commercial fertilizer was used until after 1900. Yet it should not be assumed that substandard living conditions prevailed. Ashe had neither abundance of wealth nor grinding poverty. Homes were substantial if not elegant, and the squalor and deprivation often associated with mountain societies were not prevalent in Ashe. The tendency to hold to the land reduced speculation and accumulation of large tracts, thus a more equitable distribution of land was found there. The average farm shrank over the years, but the vast majority of families owned a share in the productivity of Ashe County soil."[53]

In summary, the New River Water Basin of Virginia experienced a phenomenal growth starting in the 1740s due to the comparative ease of access and availability of land title. Development of the New River Water Basin in North Carolina did not begin until shortly before the Revolution and even then growth was slow. As a cul-de-sac between the major routes to the West, the New River Water Basin of North Carolina was never the migratory route for settlers which can be found in other sections. Contrary to tradition, it appears the initial settlement was from the Upper Catawba and Upper Yadkin of North Carolina. Apparently a sizeable majority of these earliest settlers had participated in the Regulator Movement. Following the Revolution, Ashe County received the backwash from the flood of settlers headed to the West.

Ashe County is a fertile field for a researcher with the capabilities of Mary Kegley. Much material is available. The records of the first quarter century of Wilkes have been very well preserved. Many records of the first quarter century of Ashe were destroyed by fire; however, the deeds are fairly complete and the court minutes begin in 1806. The most valuable source of early Ashe County settlement is found at the North Carolina Land Grant Office. The loose papers provide more insight into the early settlement than any other one source. Unfortunately, much is left to be desired in the preservation of these records. Some of the papers have disappeared in the past few years and

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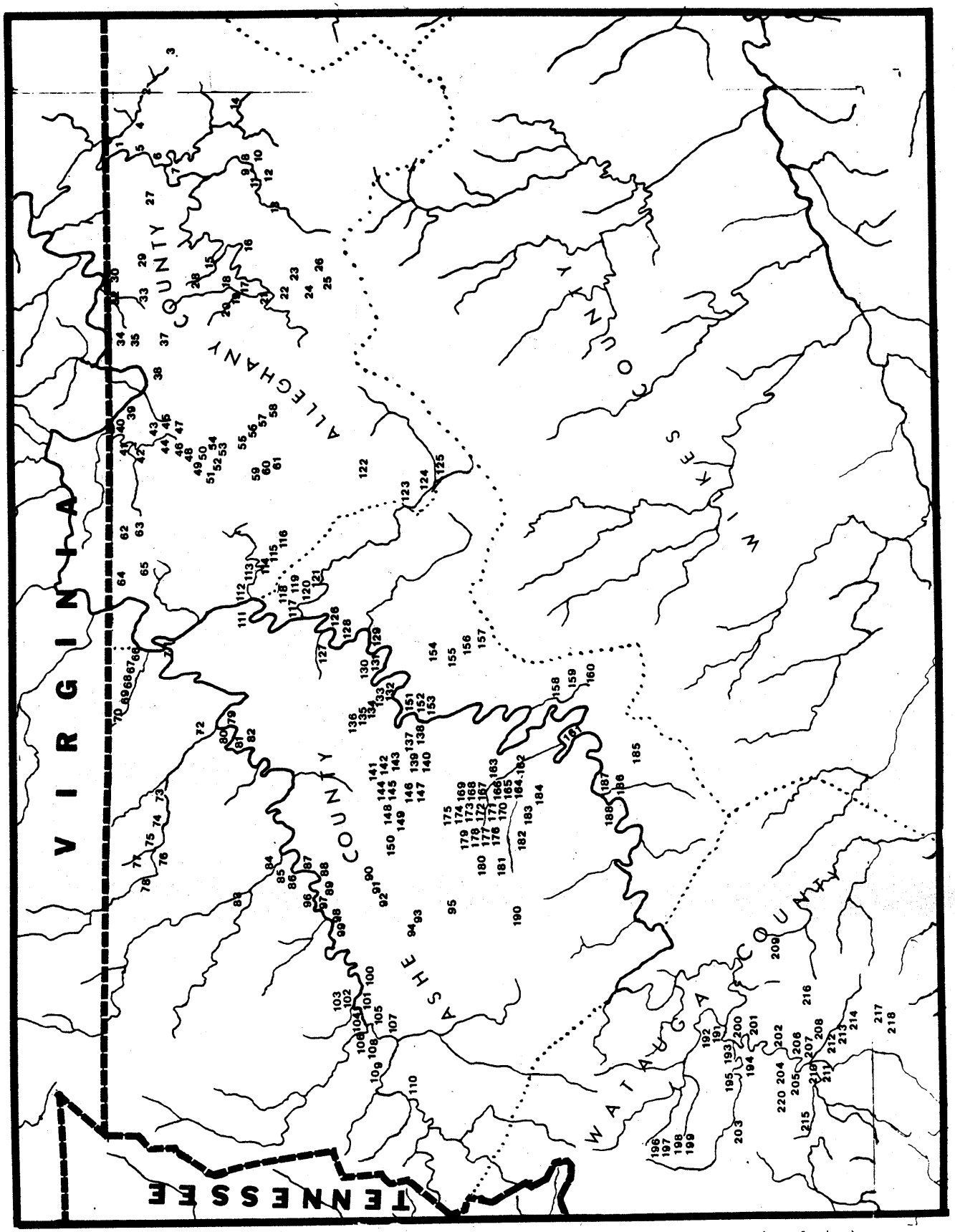
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Some Early land grants in the New River Water Basin (showing present County boundaries)

KEY TO GRANTEE MAP

Grantees	Remarks
1. William HARDIN	Ch B: Bledso HARDIN
2. Thos. ENDICOTT	Ch B: Burzel ENDICOTT Mash HARDIN
3. William HARDIN	
4. Alexander WEST	Ch B: Isaac WEST Bray CRISP
5. Joseph ENDICOTT	
6. Clezby COBB	Ch B: Adam SEBOLD David SPENCE
7. Thos. ENDICOTT	Ch B: Zeb ENDICOTT
8. Clezby COBB	Adj L: _____ HAND
9. Charles CATE	
10. Charles CATE	Adj L: Henry HAND Jacob MANOR
11. Jno EDWARDS	Ch B: Christopher MANOR Edmond FRANKLIN
12. Young EDWARDS	Ch B: Edward FRANKLIN
13. Dabney HARRIS	
14. Moses WOODRUFF	Ch B: Francis BRYAN John McBRIDE
15. John OREAN	Ch B: James GAMBILL
16. John OREAN	
17. Clezby COBB	
18. Henry GAMBILL	
19. Clezby COBB	
20. William GAMBILL	
21. John COX	Ch B: Edward SIZEMORE John COX, Jr.
22. Thomas CALLOWAY	Ch B: John CALLOWAY
23. Charles MORGAN	
24. Martin GAMBILL	
25. Martin GAMBILL	
26. William STURDIE	
27. William HALSEY	Ch B: James SEBOLD
28. Martin EDWARDS	Pr Occ: Robert NALL Jonathon HAINES Ch B: Henry WAGGONER Henry BREWER
29. Charles MORGAN	Ch B: John MORGAN Isaac MORGAN
30. William LENOIR	Pr Occ: Robert GIPSON Ch B: James CRAIG
31. [Not used]	
32. John TOLIVER	Ch B: Charles TOLIVER Thomas WHITAKER
33. Benjamin HERNDON ...	Pr Occ: George COLLINS William HOWELL
34. George REAVES	Adj L: David COLLINS
35. Moses TOLIVER	
36. [Not used]	
37. Peter WHITAKER	
38. William LENOIR	
39. John BEVERLY	
40. William ISAACS	Adj L: Ben DUGGANS
41. Micajah PENNINGTON .	Ch B: Andrew MOORE
42. Enoch OSBORN	Ch B: Zachariah WELLS
43. Nathan STANBURY	Adj L: David ALLEN Ch B: Thomas HULL
44. Moses STANBURY	
45. James FLETCHER	Ch B: Daniel FORBUSH
46. Hugh MONTGOMERY	Pr Occ: Benja ANGEL
47. Enoch OSBORN	Adj L: Jacob WELLS John HARSH
48. Samuel HALL	Adj L: Julius DUGGAN John NORTHERN Ch B: George KING
49. John HUDDLESTON	
50. Daniel YARNELL	Pr Occ: Abner SMALLEY Ch B: Joseph YARNELL Mordica YARNELL
51. Abraham ROWLAND	Pr Occ: William NALL Micajah BUNCH
52. Francis SUTTLES	Adj L: Jesse LAY Ch B: Jesse LAY, Jr. Samuel FURBUSH
53. John Marley JONES ..	Ch B: Joseph BALLINGER M. WEBB
54. William LENOIR	Ch B: James WATKINS
55. William LENOIR	Pr Occ: Beverly WATKINS
56. Sarah KINDLE	Pr Occ: _____ BEAME Adj L: Benja ANGEL _____ ROYE _____ FORBUS Ch B: William KINDLE Arthur J. FOSTER
57. William LENOIR	Pr Occ: William HOWELL _____ HARSH
58. William LENOIR	
59. Enoch OSBORN	
60. William MILLER	Ch B: William MILLER, Jr. William BEARD

*NOTES: Underlined names indicate they made improvements on the land.

Abbreviations - Pr Occ: Prior Occupants or Claimants
Adj L : Adjoining Landowners Not Listed As Grantees
Ch B : Chain Bearers As Noted in Survey Plats

Grantees	Remarks
61. Landrine EGGERS	Pr Occ: Nathan HORTON ChB: Valentine REESE Jacob REESE
62. Richard ALLEN	Pr Occ: Charles ROWRICK
63. Jacob SEIGLER	Ch B: Philip SEIGLER John SEIGLER
64. William LENOIR	
65. Elisha BALDWIN	Adj L: _____ REYNOLDS Ch B: Stephen BALDWIN Joseph COTTRELL
66. Elijah PENNINGTON ...	Adj L: "Old Mr. PENNING-ton" (Benajah)
67. Benajah PENNINGTON	
68. William LENOIR	Pr Occ: Joshua YATES Benajah PENNING-TON, Jr.
69. Ruth FARLOW	Ch B: Elias FARLOW Abner FARLOW
70. William SPENCER	
71. William LENOIR	Pr Occ: Zach WELLS Lee CROY
72. Memican HUNT	
73. William HUFF	Ch B: Julius KILLEY Absolam HANLEY
74. John RICHARDSON	Adj L: Stephen SCREECH
75. Memican HUNT	
76. Memican HUNT	
77. Isaac WEAVER	
78. William McCLAIN	Pr Occ: _____ WALLING
79. James LEWIS	Ch B: Martin SOMEBODY Benjamin PENNINGTON
80. Gideon LEWIS (of VA).	Ch B: Richard SMITH William ADKINS
81. William PENNINGTON	
82. Joshua WEAVER	Ch B: William WEAVER
83. Joseph HERNDON	Pr Occ: William SMITH Ch B: John FLANNERY
84. Paul HINSON	Pr Occ: _____ SMITH Ch B: Paul HINSON, Jr. Thomas SMITH
85. Abraham MAY	
86. John HINSON	Adj L: "Old Man HINSON"
87. Isaac WEAVER	Adj L: James HINSON Ch B: Isaac TAYLOR
88. John HINSON	Adj L: Moses SMITH
89. Andrew BAKER	Ch B: Ulbrick HESSTER
90. William LENOIR	Adj L: Joseph McCORKEL Ch B: William WHITAKER
91. Jacob HUNSINGER	Pr Occ: John PARMELY Adj L: Giles (Joules) PARMELY
92. Jacob FAN	Adj L: _____ BAKER Ch B: Jacob FAN, Jr.
93. Aaron MASH	Pr Occ: _____ PATRICK Ch B: Jacob MAY Samuel MASH
94. Lawrence YANCE	Pr Occ: _____ PRIEST Ch B: John CARVER
95. Memican HUNT	
96. Vincent JONES	Pr Occ: John FLANNERY Ch B: John JONES Isaac JONES
97. James BOGGS	Ch B: Samuel TINDALL
98. Christian SHEARER .	Ch B: Samuel SMITH
99. William McCLAIN	
100. William JONES	Ch B: William BUNYARD Ben HUBBARD
101 William JONES	Adj L: John SMITH
102. Robert OZBURN	Ch B: Ephraim OSBORNE
103. Vincent HOLLENSWORTH	Ch B: Mark FOSTER
104. Vinson HOLLANDSWORTH	Adj L: Edward SWEETEN Dutten SWEETEN Stephen ZADE Ch B: Charles LITTLE
105. Benjamin WRIGHT ...	Pr Occ: Joseph TAYLOR Benja TAYLOR Ch B: John WRIGHT
106. Stephen REED	Ch B: Joseph SEAMONS James REID
107. William McCLAIN ...	
108. William McCLAIN ...	Adj L: John CARTY
109. William McCLAIN ...	Ch B: Nickles ANGEL
110. Benjamin ANGEL	
111. James MAHON	
112. George MORRIS	
113. Owen SIZEMORE	Pr Occ: James HART James MAHON
114. James MULKEY	Ch B: Daniel RICHARDSON
115. William STURDIE ...	Ch B: James MULKEY, Sr.
116. William STURDIE	
117. Benjamin CLEVELAND.	Pr Occ: Micajah BUNCH Jonathon SMITH
118. Benjamin CLEVELAND	
119. Memican HUNT	Adj L: John COUCH
120. John COX	Pr Occ: Bernard BRUMBLEY James BRUMBLEY Adj L: Joseph MASSEY Ch B: Joshua COX
121. John COX	Adj L: James WILLIAMS
122. John CATE	
123. Joel GIPSON	Adj L: William NALL Jonathon HAINES Ch B: John HALL Joel MOOR
124. Benjamin MORGAN ...	Ch B: John MORGAN Isaac MORGAN

Grantees	Remarks
125. Benjamin MORGAN	
126. Henry HARDIN	Adj L: Reubin STRINGER Samuel COLLINS Ch B: Joseph COLWELL
127. David SMITH	Ch B: Jesse DUNCAN
128. Hugh SMITH	Ch B: Alexander SMITH
129. Martin GAMBLE	Ch B: Thomas BAKER
130. George MORRIS	
131. George MORRIS	
132. George MORRIS	Ch B: William SMITH John CARTER
133. George MORRIS	
134. George WHEATLEY	Ch B: John W. CARTER
135. Henry SHUTE	
136. William RAY	Ch B: Robert REED John HILL
137. Perin CORDWELL	Ch B: Daniel GULLET
138. John JOHNSTON	Adj L: Matthew SPARKES
139. John JOHNSTON	Adj L: William HUMPHRIES Ch B: William SPARKS
140. John JOHNSTON	
141. Henry MICHAEL	Adj L: Charles GORDON
142. John Henry STONECYPHER	Adj L: William BANKS Ch B: Joseph STONECIPHER Daniel STONECYPHER
143. William LENOIR	Ch B: Matthew SPARKES, Jr
144. John WEBB	Adj L: Frank WEBB Ch B: Mitchell CHILDERS Francis WEBB
145. John WEBB	
146. Andrew BAKER	Ch B: Burrell BREWER
147. Christian SHEAR	
148. Christian SHEAR	Adj L: Pall PATRICK ____ NICKLS Ch B: Daniel BROWN Matthew HUNYNGER
149. James BAKER	Ch B: Beverly CLARK
150. Ezra CAMRON	Pr Occ: George MORRIS, Jr
151. John BAKER	Pr Occ: Susanna BAKER
152. John JOHNSTON	Pr Occ: Robert BAKER
153. John JOHNSTON	Pr Occ: Robert BAKER
154. Frederick BLACK	Pr Occ: Nicholas ANGEL Ch B: John FOUTS
155. Conrad DICK	Adj L: Robert BAKER Ch B: John ELLER Michl HUCKER
156. Peter ELLER	
157. Peter ELLER	
158. Thomas PAYNE, Jr.	Ch B: John PAYNE Charles CALLOWAY
159. Thomas PAYNE, Jr.	Ch B: William CALLOWAY
160. John JOHNSTON	Adj L: John BROWN
161. William WRIGHT	Adj L: Samuel CARTER
162. Memican HUNT	
163. Eliphelett BARLOW ..	Pr Occ: John BARLOW Adj L: Thomas LAND Thomas CARLTON Ch B: Jacob CROUCH
164. John BARLOW, Sr. ...	Ch B: John BARLOW, Jr.
165. Thomas ISBELL	
166. Nathaniel VANNOY	
167. Francis VANNOY	
168. Elisabeth RITTER ...	Adj L: Ulrich CHASLER
169. Abraham ROWLAND	Pr Occ: John DICK Adj L: John HEASTER Ch B: Daniel RUSSELL
170. James ISBELL	Adj L: John William CROSTHWAIT Ch B: Livington ISBELL Robert HUSBAND
171. William SCOTT	
172. William COLVARD, Esq.	
173. Martin ADAMS	
174. Devalt POUTS	Pr Occ: John BAKER
175. William McCLAIN	Pr Occ: Samuel RAY Adj L: Joseph YOUNGER
176. Thomas HENDERSON, Jr.	Adj L: Edward BOON _____ PARKER _____ COFFEE Ch B: Thomas HENDERSON Sr. George EVANS
177. Joel COFFEE	Ch B: Benjamin TILLY
178. Joel COFFEE	Adj L: Peter NOLAND Ch B: Isham ALDRIDGE
179. David McGEE	Ch B: Pendleton ESBLE Daniel ESBLE
180. John Orvill LIVINGSTON	
181. John Orvill LIVINGSTON	Adj L: John WILLIAMS John COOK Ch B: Richard CROUCH
182. Francis VANNOY	
183. Francis VANNOY	
184. Catron WRITTER	Adj L: Elisabeth WRITTER
185. Samuel McQUEEN	
186. John CHURCH	Ch B: Richard EASTRIDGE
187. Moses WOODRUFF	Ch B: Gideon WOODRUFF
188. James TOMPKINS	Ch B: Silvester PROFFITT William TOMPKINS
189. [Not used]	
190. David WHEATLEY	
191. William BLACKBURN	Pr Occ: Peter BAKER Ch B: Henry MILLER

Grantees	Remarks
192. Jesse COUNCIL	Adj L: _____ WALTON Ch B: Elihu CHAMBERS
193. Phitty REESE	
194. Memican HUNT	
195. Ebenezer FAIRCHILD ..	Ch B: Abijah FAIRCHILD
196. Robert AYERS	
197. William BLACKBURN ...	Pr Occ: Benja HOWARD Adj L: Gordes HIPPS Ch B: John BROWN
198. James BROWN	
199. Zebulon BAIRD	Ch B: John BAIRD John MORRISON
200. Joseph AYERS	Ch B: Charles CLEMMONS, Sr Thomas BENGE
201. Joseph AYERS	
202. Henry CHAMBERS	
203. Casper COBLE	Ch B: Samuel BAKER Benjamin BAKER
204. Aaron ENGLISH	
205. Jesse COUNCIL	Adj L: Jesse HOGGES Jane(Jean) TILLEY
206. Mary MURFEE (widow)	
207. Jesse COUNCIL	
208. Richard LEWIS	Pr Occ: John ROBINSON Adj L: James DOUGLAS
209. Daniel EGGERS	
210. Young COLEMAN	
211. Russell JONES	Adj L: _____ CROWDER Joseph MOSS Ch B: Zeke INGLAND
212. Daniel YARNELL	Adj L: James MARTIN
213. Daniel YARNELL	Pr Occ: Abner SMILLY
214. Daniel YARNELL	Pr Occ: Baker KING
215. Jesse COUNCIL	Pr Occ: Baker KING
216. William MILLER	Ch B: Zephiniah HORTON
217. Andrew BAIRD	
218. Andrew BAIRD	Ch B: John PARR Nat HORTON
219. Andrew BAIRD	Pr Occ: Ruebin COFFIN Halde WALKER
220. James WITHERSPOON	Adj L: Thomas HODGES John LINCH Ch B: Elisha CHAMBERS

NAMES APPEARING ON ENTRIES FOR LAND GRANTS AS ACTUAL OCCUPANTS OF THE LAND

Micajah BUNCH - Cranberry Creek - 16 Mar 1780
Jonathon SMITH - Cranberry Creek - 16 Mar 1780
John CHURCH - Pine Swamp Creek - 6 May 1782
John JOHNSTON - Little Naked Creek - 2 Aug 1779
John WEBB - Naked Creek - 1 Feb 1783
Tue ROBINS - Buffalo Creek - 4 Feb 1783
Thomas COTRAL - Buffalo Creek - 7 Mar 1787
John RICHARDSON - Heltons Creek - 20 May 1782
Joshua YATES - Grassey Creek - 6 Aug 1779
Benajah PENNINGTON, Jr. - Grassey Creek - 6 Aug 1779
William SPENCER - Martins Branch, Grassey Creek - 23 Mar 1789
Benja ANGEL - Elk Creek - 7 Nov 1785
_____ DAVIS - Elk Creek - 1 Aug 1794
William HOWELL - Little Elk Creek - 6 May 1779
John FLANNERY - North Fork of New River - 2 May 1788
Moses SMITH - North Fork of New Year - 3 Aug 1782
William ELLISON - Beaver Creek - 12 Dec 1778
William COLVARD - Beaver Creek - 23 Oct 1782
Susanna BAKER - Mouth of Roans Creek - 23 Oct 1782
John CATE - Pine Swamp Branch - 1 Feb 1785
William SMITH - Great Horse Creek of North Fork - 2 May 1786
John HINSON - North Fork above mouth of Buffalo - 17 Dec 1789
Edward KING - North Fork - 6 May 1779
Charles LITTLE - North Fork - 6 May 1779
_____ SMITH - North Fork above Horse Creek - 13 Feb 1783
Abel PENNINGTON - North Fork at mouth of Horse Creek - 3 Mar 1779
P. GILLEY - North Fork below Little Old Field - 6 Sep 1790
Francis GILLEY - North Fork below Little Old Field - 6 Sep 1790
Richard GREEN - Middle Fork of Three Forks - 10 Jun 1790
_____ STRINGER - South Fork of New River - 24 Jan 1781
Morris BAKER - South Fork of New River - 25 Dec 1779
James WITHERSPOON - South Fork of New River - 7 Jun 1779

ASSESSED VALUE IN 1778 OF TAXABLE ESTATES IN THAT PART OF WILKES COUNTY WHICH BECAME ASHE*

Northern Part of the New River Basin

ADKINS, Wm.	119.00.00	COLLINS, David	41.15.00	FLANNERY, Silas	33.05.00
BOGS, Jas.	112.00.00	COLLINS, George	26.06.00	FOSTER, Mark	132.16.00
BURTON, John	431.08.08	COX, John	60.00.00	HAMMONS, Ambrose	1621.17.08
COLLINS, Ambroise	20.08.00	FEE, John	40.14.00	HAMMONS, John	45.05.00
COLLINS, Charles	44.01.02	FLANNERY, John	122.10.00	HAMMONS, John Jr.	198.02.00

*Values were based on land improvements, horses, cattle, money on hand and at interest. Shown are the names of taxables and the value of their estate in 1778 in Pounds, Shillings and Pence.

"LIVING, MINING AND NAVIGATING ALONG THE NEW RIVER (NC)"

Mrs. Jesse A. Reeves
West Jefferson, N.C.

"Ashe County is the best county in the state", to use the words of the Honorable Charles B. Aycock, who made the statement in 1900, the same year he was elected Governor of North Carolina.

This was at the time Ashe County was little more than one hundred years old, for it was in 1799 that interested citizens had brought about legislation creating a new county from the section of Wilkes County lying west of the extreme height of the Appalachian Mountains. It was named for Samuel Ashe, Revolutionary patriot and Superior Court Judge, who had recently finished his third term as Governor of North Carolina

In November 1800, fifty acres of land were selected as a site for the county seat. This selection was made almost momentarily with the election of Thomas Jefferson as president of the United States. Since Thomas Jefferson was truly the most conspicuous of American apostles of democracy, it was both fitting and proper that when the town was laid out, it was named Jefferson, thus becoming the first in the nation to bear his name.

At the time Ashe County was created it covered an area of 977 square miles. At the present time the area is 427 square miles, since much of the present County of Watauga was taken from Ashe in 1849 and in 1859, 230 square miles were cut off to form Alleghany County.

Truthfully Ashe County was very isolated in the early days of its history. The first means of access to other sections of the country was by an old turnpike that followed the streams and wound around the hills rather than over them. The Blue Ridge Mountains separated it from Wilkes County, while the Virginia state line was the northern boundary and the Tennessee state line the western boundary.

In spite of this isolation the early settlers were largely ambitious, honorable, patriotic people who took pride in self preservation, land ownership, and law enforcement. Many of them had already proved their patriotism as their Revolutionary records in the Archives in Washington, D.C. show. They were enterprising people who with the possible exception of small mining interests started out with a determination to live frugally and well largely through agricultural endeavors.

Early church records attest to their religious convictions. The history of the larger plantation owners would not be complete without recording that they were so fired with the solemnity of God's teachings they built long, log buildings to serve as "Meeting Houses" when ministers of the gospel came through to hold services. These were built near refreshing springs from which water was carried in a large vessel and was usually made available to the public by the use of one gourd or dipper to serve the entire congregation.

With ths passing of years, the time came when a visitor from Johnson City, Tennessee commented as follows about Ashe County: "One is actually surprised to find, after traveling through Ashe, so many evidences of good living and modern civilization. Kentucky throughbreds graze in peaceful pastures and short horns and Jerseys stand knee deep in the crystal streams or graze in meadows as rich in herbage as the blue grass fields of central Kentucky. Many of the farm houses are veritable mansions, all of them neat and clean."

The above description was made nearly three quarters of a century ago, but it points up to present day standards in that it is illustrative of the fruits of an ambitious heritage.

The same article referred to Ashe as having once been the "center of learning and culture in western North Carolina, the Athens of the mountains." As evidence of the desire to place the educated and learned at the top round of the ladder was their reaction to the Act of the General Assembly in 1881, requiring the election of a superintendent of schools in every county in the state. The first two, who served a period of five years each, were "two eminent lawyers who devoted time and talent to the poorly paid and exceedingly difficult job and who set high standards for their successors to follow." Today all schools in the county are under the jurisdiction of the county school board and include three large consolidated high schools, and seven elementary schools.

The panoramic view of Ashe County can rarely if ever be surpassed. Mount Jefferson State Park is all that it was in 1827 when, then as Negro Mountain, it afforded Dr. Elisha Mitchell, an outstanding geologist, a view that in his opinion had never been surpassed in beauty. At the present time it affords more, since the North Carolina Department of Conservation and Development is preparing to construct a park residence and service building and its promotion as a State Park is progressing.

In the August 1, 1872 issue of "Mountain Messenger", edited by Robert M. Dickey, Jefferson, North Carolina, the following reference was made concerning the beauty of White Top Mountain: "It is the most beautiful scenery ever beheld in Western, North Carolina. The beauty and grandeur is unsurpassed. There are several hundred acres of cleared land on the top of the mountain; it derives its name from the peculiar shade of the grass which looks white in the distance. The Corner-stone of North Carolina, Virginia and Tennessee is on that mountain; it is a great place of resort in summer time for the pleasure seekers of three states; and is visited by a large number of them every year."

Currently, North Carolina, Virginia and Tennessee are striving with renewed effort to put forth a program for the development of that area as a regional recreation center. When this is done, Ashe County will benefit from the program.

Whether it is the hope that comes with viewing a verdant landscape in the spring, perhaps at apple blossom time, the perfectness of one of Lowell's rare June days, the variety of color viewed during the proverbial "Indian Summer", or the magnificence of the snowcapped mountains that claims the artist's eye in winter, Ashe County is a corridor of unspoiled beauty.

Actually the extreme northeasterns part of North Carolina, particularly the section that became Ashe County in 1799, lay in what was for years disputed territory.

The truth is that the commonwealth of Virinia failed to get her rightful share alloted her by the King's Charters and the first constitutions of Virginia and North Carolina.

Charles McDowell, Jr., in an article in the Washington Post some years ago suggested a suitable slogan. It was "Thirty-six Thirty or Fight", for the U.S. Geological Survey said "The intention had been from the earliest colonial times to establish the boundary upon the parallel of thirty-six degrees and thirty feet. This is the wording of every legislative act relating to it. [1]

Various sections of the North Carolina - Virginia line were surveyed consecutively by the remarkable William Byrd, Peter Jefferson, father of Thomas Jefferson, Col. Joshua Frye and Dr. Thomas Walker. The result of these surveys created a section of land that was disputed territory for years and many historians have played up the fact as having furnished a refuge for criminals, tax evaders and traitors.

A reference was made last spring in Mr. Bennett's article on the "New River System" and I quote, "with the closed conditions in Ashe County it is not surprising if a researcher begins to wonder if an ancestor might not be his own grandpa". unquote.

As a contradiction to this statement one has only to turn to Theodore Rosevelt in his "Winning of the West" at which time he spoke of the pure Anglo-Saxon blood that flowed through the veins of the early pioneers and commented favorably on their bravery, loyalty and independence of character. [2]

Unfortunately, a number of erroneous statements have been made about the early Ashe County records. First Ashe County was largely formed from the 8th, 10th and 16th companies of the 1790 census of Wilkes County. The late Col. A.L. Fletcher in his "Ashe County, a History," mistakenly gave it only as the territory contained in the 8th company. Records show that my ancestor Capt. John Cox in 1800 was apparently the richest man in Ashe County. He had 13 slaves which would represent unheard of wealth in the mountains at that time. The 1815 Tax list also shows he was by far the largest land owner 81,887 acres. He was in Co. 16 in Wilkes Co. Census 1790. [3]

Another misstated record is that a fire destroyed Ashe County records in 1865. I assume the reference is concerning Stoneman's Raid - our deed books prove that there was no fire. Our jail was burned but certainly a Daughter of the Confederacy would not want to give more credit to such depredations than actually happened. The only will book missing is Book 1 recently taken to the Department of Archives and History to be rebound. Truthfully, in recent years, a certain period of Marriage Records were either loaned and they were not returned or have become lost. Hopefully copies may be found somewhere in the future. But this much is true no fire destroyed them in 1865.

We want to regress back more than two hundred years to the year when Major Andrew Wood and his exploring surveyors crossed the beautiful Blue Ridge mountains and discovered a river running north that no one ever heard of. It was only natural that for a little while they called it Wood's River, but after thinking it over and studying its meanders, they learned that the newly discovered river was once part of the mighty Teays River, it is therefore North Carolina's oldest river and the only large river in America to flow north. Doubtless it was at this day named New River, because of its recent discovery and the realization that it, with both its North Fork and South Fork tributaries, a scenic panorama prevails.

By 1750 war was being waged between the Cherokee and Shawnee Indians and the Creek Indians were also disturbed from hunting.

Bishop Spangenberg, head of the Moravian Church in America was here, not in Ashe, Wilkes, Surry or Rowan Counties but in Anson County. For it was December 1752. It was mid-winter and no time for even "God-fearing" people to face death in an expedition at that time and place. The Bishop and his party followed the South Fork of New River and observed meadow land suitable for cattle raising. But before leaving the Bishop recorded in his diary, "the river (the New River) runs north, now south, now east, now west, in short to all points of the compass."

The years just before the Revolutionary War the white settlers were here. David Helton, William Walling and William McClain, from Montgomery County, Virginia were here on a hunting expedition and were so enthusiastic about the country they planned to build permanent homes.

James Baker became the first white man to acquire title to land in what eventually became Ashe County.[4] This was verified to me in a letter from the late Wade E. Eller in the 1950's. Mr. Eller was an authority on the early settlement of this area. He described James Baker's deed as being the first title to land, other than a tomahawk deed. Since that time other historians have agreed with his statement. Hugh Smith's will was filed in both Surry County and Wilkes County and records show that he had improved his land after settling here. The will was witnessed by James Baker and Andrew Baker and named his three sons and his son-in-law Morris Baker. We know that Hugh Smith listed as a Carolina Planter was living near the Dickson's and the Dicks, therefore it is just as reasonable to believe that Morris Baker's father, James, had done like wise - previously improved his land. When James Baker came his brother-in-law, Captain Thomas Calloway of French & Indian War fame and William Ray soon followed. These families once lived in Culpeper County and Amelia County, Virginia.

When the American Revolution began, Col. Benjamin Cleveland was captured at his Old Fields plantation.[5] His brother, Captain Robert Cleveland with the help of patriotic friends and neighbors rescued him. Captain Thomas Calloway set up a garrison at his plantation adjoining Col. Cleveland's Old Fields. His five sons and two sons-in-law; James Baker's five sons, William Ray's son, Jesse Ray were ready to fight for the cause of the Patriot in the Revolutionary War.

Religion played a great part in the lives of our pioneers. Believing that God gives man the wisdom to preach, educated ministers were not to be around for a long time. The Reverend George McNeil, like the Rev. Nathaniel Vannoy and the Reverend Andrew Baker were active in the American Revolution. He was well educated in Scotland and had come here as a Presbyterian minister, but Rev. Andrew Baker convinced him he should join the ranks as a Primitive Baptist in order to gain the faith of the pioneer. Little did they dream that years later, Paschall would write a history of the Baptists and would pen the following: "The Rev. Andrew Baker was the wisest, ablest and most influential minister in Wilkes County and the adjoining section of Virginia." [6]

By 1798 efforts were being perfected for the formation of Ashe County from Wilkes County. It had been twenty years since Morris Baker, a son of the first man to hold title to land here, was served with a writ to show why he failed to attend as a juror at Wilkes County court.[7] Morris Baker lived on fine bottom land on the South Fork of New River and he intended to stay on New River. His absence was excused since a very heavy rain had fallen, New River was out of its banks -- therefore his absence was caused by an act of God. New River was so high he could not ford the high water and he was excused, but Morris Baker resented the writ. He had worked for twenty years to get Ashe County with Jefferson as the county seat established. Three pioneer settlers were appointed to decide upon the location of the county seat: Jesse Taliferro (later Toliver), John Bower and Nathan Horton. Taliferro and Horton were Revolutionary soldiers. Bower was an "exhorter" among the Dunkards -- he would not take up arms neither would he own slaves.

Abe Stiener, a traveling Moravian preacher, visited John Bower in 1804 and found him to be an exhorter but he stated that he spoke in such a manner about religious matters and with such a strain he was unable to understand him. While there Stiener's horse got loose and Bower and his sons, Absalom and George, caught the horse. The wilderness was too much for the Moravian divine so he went on his way back to make a pre-arranged visit to the land of the Creek Indians rather than journey into the Three Forks area. One of Bower's sons showed him the best place to ford the New River. [8]

The next few years brought about changes in the lives of Bower and his sons. John Bower, who had instigated the deal for the land where on the town of Jefferson was built, soon became a slave owner. His son, Absalom Bower, enlisted in the War of 1812 and his other son, George Bower, later to be known as Col. George Bower, was to become Ashe County's largest slave owner and was to be elected State Senator from Ashe County more than any other man.

It would be remiss to fail to mention the early Lewis Family that settled in this area early on the North Fork of New River near the Peak Mountain with its 5,196 feet, the highest in Ashe.

At the time of one of the last surveys made in 1772, Robert Henry mentions in his diary that one Gideon Lewis led the surveyors from the White Top Mountain into the Watauga settlement. [9]

There were several Gideon Lewises here early. The late L.F. Tucker once stated that members of the Lewis families stated that one Gideon Lewis was in the area hunting before 1750. This probably accounts for a later one designating himself "Gideon Lewis of Virginia."

Edward King's Revolutionary record states he married Felicia Lewis while living in what was then Wilkes Co. (probably Rowan) in 1767.[10] Edward King lived next to Gideon Lewis. The Lewises were great hunters.

The Legislature of North Carolina in 1788, passed an act by which 3000 acres of vacant land "not fit for cultivation and most convenient to the county seats was granted for every set of iron works as a bounty from this state to any person or persons who would build and carry on the same." Iron works were to be erected within three years. Then when 5,000 pounds of ore were mined the grant was issued.

The progenitor of the Ashe County Ballou family, Meredith Ballou, was listed in the first Ashe County census, which was taken in 1800, only one year after the formation of the county, with one son and one daughter between the ages of one to ten years. His wife was between the age of sixteen and twenty-six and he was in the age bracket between twenty-six and forty-five.

The family record that was passed on by Napoleon Bonaparte Ballou, son of Meredith and Polly Baker Ballou, gave Meredith Ballou's birthday as having been the twenty-ninth of September 1766. Family tradition indicates that he was born in the valley of the James River in what was then Amherst County, Virginia.[11]

In a recent history of Ashe County, Col. A.L. Fletcher recorded Meredith Ballou as having come to the Ashe County area in 1800,[12] but the fact that he was married to Mary (Polly) Baker, whose father and grandfather were residing in the section in the 1770's and that she was known to have been born in the locality, seems ample evidence that he came some time between 1790 and 1795, the latter date having been the year of his marriage.

Whether he came to this remote section seeking a wife, who incidently was a daughter of one of the leading men responsible for the formation of the County of Ashe and the granddaughter of the first man to hold title to land in this area, or whether he was merely a prospector for mineral, he found both, apparently liked what he found and spent the remaining years of his life here. However, it would be reasonable to surmise that he may have made extended journeys back to his native Virginia and this is substantiated by his descendants particularly during the later period of his life.

There are numerous records that give evidence that Meredith Ballou was an enterprising citizen. He acquired a vast amount of property and would today have been considered an active real estate dealer. Most of his land deals show that he obtained all mineral rights and that he retained them for himself and his heirs even though he sold the land at various times.

To make an interesting story, any writer might describe him as a man who definitely had iron in his blood. So much so that he handed strains of it down to succeeding generations of his family.

Meredith Ballou's name appears in many records pertaining to the early history of Ashe County. His name was listed in numerous places of activity. He frequently did jury duty but in 1826 he was excused from such duty due to deafness. Whether he was handicapped by lack of hearing from that time on or if so, was it caused from injury brought about through blasting at an iron mine is not known. Since records also show that he was very active as a land surveyor, it is reasonable to believe that he could have damaged his ear drums simply from bodily exposure while carrying out his duties as a surveyor during inclement weather.

In 1827 Meredith Ballou renewed his own bond as county surveyor and that same year Thomas Calloway renewed his own bond as Clerk of Court, with Meredith Ballou as surety.[13]

Thomas Calloway, the grandson of a French and Indian War captain by the same name and the son of a Revolutionary soldier who was also named Thomas, was a man of prominence in early Ashe County. In August 1806 he served as foreman of the grand jury and was the third man to serve as Clerk of Court, his term of office having stretched over a quarter of a century. His wife was Elizabeth (Betsy) Ray, eldest daughter of Col. Jesse and Eleanor Baker Ray. Jesse Ray, served as a Private and later an Orderly Sergent in the Revolution. He was commissioned a Colonel of the Militia by the governor in 1800.

Thomas Calloway was a man of considerable wealth and was one of the first recipients of land from the state of North Carolina for the specified purpose of erecting iron works and the cultivation of iron.[14] This grant was for 3000 acres of land that had been considered by a jury of twelve persons of good character as not fit for cultivation. Iron works were to be erected within three years and when it could be showed that 5000 weight of iron had been made, the grant was issued. The date, according to Ashe County Deed Book D, p. 88, was November 21, 1807. Thomas Calloway died intestate, July 1835 and his estate gave evidence that it was one of the largest estates to be settled in Ashe County up to that time. His inventory included thousands of acres of land, numerous slaves listed by name, notes and the usual personal property required to operate a large plantation twenty-five years before the War Between the States.

The fact that Meredith Ballou was his only bondsman on occasion would suggest that he, too, was a very substantial citizen. One could also conclude that a spirited friendship existed between them since both obviously had ardent and wide mining interests.

Mention was made in "The Iron Manufacturer's Guide" in 1859 that as early as 1817 Ballou's Bloomery Forge, at Falls of North Fork of New River, twelve miles northeast of Jefferson, was built. Many land transfers concerning mineral rights were witnessed by Thomas Calloway and his sons.

While not all deeds were recorded currently and a complete check on those that were recorded by Meredith Ballou was not made, a partial list follows:

Ashe County, North Carolina Deed Book C, Meredith Ballou from State of North Carolina (Grant), Meredith Ballou from Hiram Baker (Deed), Meredith Ballou from Philip Curley (Deed), Meredith Ballou from Daniel Daugherty (Deed), Meredith Ballou from Daniel Daugherty (Deed), Meredith Ballou from Daniel Daugherty (Deed), Meredith Ballou from Daniel Daugherty (Deed), Meredith Ballou from Levi Pennington (Deed).[15]

The first State Grant to Meredith Ballou was for land adjoining Morris Baker's corner. Morris Baker was his father-in-law. It was entered 28th of November 1826 and registered the 8th of January 1827.

The deed made by Harrison Baker to Meredith Ballou was for two hundred and forty one acres of land lying on Long Shoal Creek, a branch of the North Fork of New River. The line began at a white oak in Nicholas Gentry's line. The transaction was witnessed by James Smith and E. M. Herbert.

One deed made to him by Philip Curley was for four hundred acres of land lying on Crab Fork of Little River. The deed was witnessed by Thomas Calloway and Bennet Rector.

It would seem that Meredith Ballou felt as if he had already found mineral on the land he bought of Levi Pennington before he bought it. When Levi Pennington made the deed to him on the third of September 1820, it was for "all the iron ore either in the ground or above the ground that is contained on a certain tract of land containing one hundred acres".

Daniel Daugherty transferred land to Meredith Ballou that lay on Helton Creek. At least one deed was witnessed by Sam Cox and Thomas Calloway.

There were various other properties, either registered or unregistered, belonging to Meredith Ballou as a close check of the deeds made by his heirs following his death, show.

One unique deed made by the heirs of Meredith Ballou is recorded in Ashe County Deed Book R - p. 506. The following appears:

Heirs of Meredith Ballou Deed to Jessie B. Rives (Reeves), 50 acres.

This indenture made this 10th day of April in the year of our Lord, one thousand eight hundred and forty eight, between James Ballou, Leonard Ballou, Blake M. Ballou, Baker Ballou, Thomas C. Ballou, Hugh Ballou, Edward Weaver and David Smith, Heirs of Meredith Ballou, Deceased of the one part and Jessie B. Rives of the other part all of the County of Ashe and State of North Carolina.

Withnesseth that they the said Heirs of Meredith Ballou, Deceased, for and in consideration of the sum of Eleven Dollars to them in hand paid the receipt whereof is hereby acknowledged and themselves fully satisfied and paid hath granted, bargained, sold and conveyed and confirmed unto him the said Jessie B. Rives, his heirs and assigns forever a certain tract or parcel of land containing fifty acres, the same being in the County of Ashe and the State of North Carolina.

Beginning at a chestnut on the west side of the iron ore knob running north 63 poles to a chestnut oak then east 128 poles to a Spanish oak then south 63 poles to a stake then to first station. Uniquely the price paid was $1.00 per person.

This day and date above written, assigned, sealed and delivered in presence of: T. C. Ballou, Blake M. Ballou, Baker Ballou, Hugh Ballou, James Ballou, Leonard Ballou, N. Ballou, Edward Weaver, John Ballou, Tamson Weaver, David Smith, Ester Smith. Test.: Hiram Calloway

An interesting description of Meredith Ballou is found in the diary of Rev. Elisha Mitchell, D.D., bearing the date of July 1828. Dr. Mitchell was born in Washington, Connecticut the 19th of August 1793. He was graduated from Yale College in 1813 and four years later was appointed to the chair of mathematics in the University of North Carolina. He was active in the scientific departments there for almost forty years. His death took place the 27th of June 1857 while he was attempting to climb the mountain which he believed to be the highest east of the Rocky Mountains and is now Mount Mitchell named in his memory. Dr. Mitchell had been sent to Ashe to explore for valuable minerals. His diary gives the following:

"Mounted my horse and rode to the North of Helton ten miles and fording the stream thirty-two times in the distance and then down North Fork to Col. Meredith Ballou's."

"Fell in a dispute with him about an ore of iron (the micacious oxide) which he asserted to contain lead.:

"He tells me that the first forge in this county was built on Helton Creek a little above where he lives, about twenty years ago by one Harbert. Shortly after another was built a little higher up the same creek, fourteen years ago; that on Little River, four or six years ago."

"----- After dinner Ballou rode with us two or three miles to see his ore banks, which are numerous and rich. Indeed, I judge the range of greios heretofore spoken of to be full of ore."

"Ballou inquired whether I was a professor of religion -- said he was not himself, but of the two sects into which the county was divided, he was most inclined to the Baptist. He spoke of the Methodist camp - meeting held annually near Timothy Perkins where I attended meeting." [16]

In 1954, The Skyland Post asked Robert L. Ballou to write an article of Meredith's Ballou's interest in mining in Ashe. The article follows:

It may be interesting to know that the development of the iron ore of this county dates back to the spirit of development shown by Governor Dinwiddie of Virginia when he and a courageous band of pioneers crossed the Blue Ridge in Virginia over two hundred years ago and established homes and infant industries in an undeveloped section of that state. It was there that the order of the "Knights of the Golden Horseshoe" was organized and the iron mines opened and iron furnances erected for the manufacture of iron. The pioneers had to have wagons, horseshoes, axes, mattocks, hoes, shovels, plows and other implements necessary in their new home -- things that could be made in their blacksmith shops. My great grandfather, Owen Meredith Ballou was among those pioneer Knights who cleared the forests, established homes and learned the art of manufacturing from the native ore for the use of the people, and later when the spirit of adventure led him into what is now Ashe County he found a fertile land with iron ore and water power possibilities -- an ideal place to erect an iron furnace.

He soon met another enterprising young man by the name of George Bower, later known as Colonel George Bower, and gave him one thousand silver dollars to build a catalan forge on the North Fork of New River at a place known as The Falls, about two miles below Crumpler post office, the first such iron furnace ever to be built in this section of North Carolina. This was about the time of President Washington's administration, and it was said that Col. Bower used that $1000.00 to build the old brick building that still stands in Jefferson, just across the street from W.B. Austin's office.[17] At this small manufacturing plant Meredith Ballou made iron from ore taken from the near-by iron mines and supplied the manufactured iron to the citizens of this section of North Carolina. And when he had accumulated a considerable surplus of iron, which was made into long bars suitable for wagon tires and general shop work, he would send it by six-horse wagons to Charleston, South Carolina where he found ready sale for it, and where he purchased such imported goods as he could sell on the local markets here in Ashe

County, thus giving him a load on the return trip. It took six weeks to make the trip -- and how such a trip over hills and mountains and innumerable rivers, with no bridges, and over such roads as the pioneers had in those days, could be made is more than we can understand.

But the pioneer knew no such thing as defeat. Meredith Ballou kept up the manufacture of iron until the time of his death, about the middle of last century, and supplied the manufactured iron to the trade over this entire section of North Carolina. Soon thereafter one of his sons, John R. Ballou, built another forge near the mouth of Helton Creek, where Dr. Ballou's milling property is located, and kept up the manufacture of iron for a great many years. During the war between the states he furnished the Confederacy with bar iron for making gun barrels for the army, and it was said they made the best rifles in the army. Finally, my father, J.U. Ballou, purchased the Helton Forge property and continued to manufacture iron for the benefit of the people until in the nineties, when the work was finnally discontinued, and it has been said that this catalan forge near the mouth of Helton was the last one to be operated in the world. In the early days there were other like forges operated in the county and the state would make a grant of 3,000 acres of unappropriated land to the citizen who would erect and operate a forge in the state. It was a state policy looking to development. The iron made in these catalan forges where the native ore was smelted by heat from charcoal was of superior quality, and when a sample of ore from the Piney Creek vein was sent to the World Fair at Paris, France for exhibit it took first world prize. The State of North Carolina still has this same sample of ore and has sent it to various fairs for exhibitions where it has been noted for quality, and where it has taken prize after prize.

These Ashe county ores are found in three separate veins -- the Ballou or river belt, the Red Hill or Piney Creek belt, and the Titaniferous or McCarty belt which extends from the Virginia line in a northwest direction through the county with outcroppings on the head waters of Grassy Creek, Helton Creek, and Horse Creek, respectively. The extent of these various viens and iron deposits can only be determined by extensive investigation, but it is thought that there is enough high grade iron ore in the county to command the attention of the iron and steel manufacturers of the country. That was the considered opinion of my father, J.U. Ballou, and he was thought to be the best local authority on matters of that kind and was appointed by Governor Aycock to represent the State of North Carolina in the National Mining Congress. It may not be out of place to note that he thought there was other valuable minerals besides iron ore, in the county, and the discoveries made later in the county seem to justify his opinion.

Aside from the iron ores it has long been known that there are valuable copper properties in this section, notabl the Peach Bottom copper mines, Ore Knob copper mines, Gap Creek copper mines, and the Elk Knob copper property. Meredith Ballou owned Ore Knob at the time of his death a hundred years ago, and at that time he told his sons, "Hold on to Ore Knob. There is a rich copper mine there." His judgment has been proven to be correct. From what we now know, and have long since known, Ashe County is certainly worthy of careful consideration. Not only from the minerals standpoint, but from our fine mineral springs as well.

Doubtless we would all be amazed if we could only know "What God Hath Wrought" in this good county of Ashe. We will never know until sufficient development work has been done by competent geologist and engineers. And where valuable minerals are found I hope our good people of Ashe County will receive a fair and just price for what they have to offer to industry. It would be wonderful if the local owners and the investing industrial companies could and would be fair with each other. That would insure a pleasant and workable union of interests. It would be like unto an organization of KNIGHTS OF FAIRNESS, where the Golden Rule would be the guide in their mutual dealings. How much better this would be than unconscionable expliotation so frequently parcticed in new development work in what we sometimes call backward sections of a county where people are not trained to the ways of commercialism.

So it was that Meredith Ballou, the forefather of the Ashe County Ballou family, was also the prime prospector of his day. Jesse Ray received 600 acres of land between Naked Creek and Buffalo Creek in December 1802, and later other property for the purpose of mining. There were a few other state grants but he was never as well to do as numerous people seemed to believe.

In November, 1851 W.P. Waugh of county of Wilkes and state of North Carolina made an indenture to Edward S. King of Ashe County for "a tract, piece or parcel of land, situated, lying in being a part of bounty land granted to Jesse Ray and afterwards granted to Edward King the 14th day of October, 1837 (no. 7849)."[18]

Conclusively the three earliest Ashe County citizens with extensive mining interest were Thomas Calloway, Jesse Ray and Meredith Ballou. However, Meredith Ballou out lived Calloway and Ray and his grandson Jerome Uriah Ballou obviously inhereited the mining tradition for he willed all the mining interest he possessed to his ten children and to be passed on to his children's children.

Recently a daughter of his late son Robert L. Ballou told me she is paying tax on the mineral rights on 50 acres of land in the Grassy Creek Community.

In 1960 Harriete Simpson Arnow, wrote and had published under copywrite, "Seedtime on the Cumberland". She brought forth the idea of the things that shaped our lives - the land and the river.

Before I go further may I emphasize, the land and the river. But I want to tell you she referred to "Grandpa Dick" and other grandfathers of "how many" generations back.

Later she referred to "my own people seemed to have been big hominy people, all the way back and my great-grandmother, Permelia Jane Dick born in 1819 probably made it as did her great-grandmother on New River in 1750."[19]

I have always felt gratified that the late historian, Wade E. Eller, had given my late paternal grandfather Marshall Baker's pioneer heritage at the time of his death mentioning Captain John Cox, Thomas Dickson, and John Dick whom he credited with having built the first house in what eventually became Ashe County..

I entered into correspondence with Mrs. Arnow and she shared my interest and acknowledged there was a family connection.

In Ashe County owning a good farm with a big stretch of bottom land and a fair boundary of timber gave a good birthright to a family.

It was land and water - the river, running water was the seen of activity. The subject to write about. The creek or the river was where baptism took place, the most sacred rite. Plans were often delayed because "the creek was up", weddings, births and deaths,the mail,all hedged about by the risen creek with overturned buggies and swimming horses.

I can imagine that the Ballou's and others frequently rode rafts on New River.

Certainly, three sons of the late Jerome Uriah (J.U.) Ballou, namely James Larkin Ballou, Robert Lucine Ballou, and Geroge Newton Ballou built their own boat called the Cadetta, launched it with their belongings to make a trip to West Virginia by navigating the New River and on into the Kanawha. Mr George Newton Ballou kept the following log of the trip; Thursday, September 17, 1901 (the three Ballous) left by boat to West Virginia on their way to school; James L. Ballou to medical school at Nashville,Tennessee, Robert L. and G. Newton to Eastern College at Front Royal, Virginia.

Reached Grayson Sulphur Springs Saturday, the fourteenth at 11:45 A.M., had lunch with Dr. G.W. Kernadle at Riverside Inn, across the river from the health resort. Left the inn at 3:00 P.M.; at 3:33 P.M. arrived at the rapids, a fall in the river of twelve to fifteen feet.

It was at the rapids the picture of the Ballou brothers and boat was made.



The picture which was taken of the three Ballou brothers reveals three well dressed young men. Each was wearing a black derby hat which Mr. G. Newt Ballou, in his ninetieth year related "proved to be quite an asset when in rough water we would get water in the boat and would be compelled to bail it out with our derbies. They were used more than once. Quite an experience!".

In conclusion, may I say along with Ella Wheeler Wilcox in her poem entitled "Will"

One ship drives east and another west
With the self same winds that blow;
'Tis the set of the sails
And not the gales
Which decides the way to go.

Like the winds of the sea are the ways of fate
As the voyage along through life;
'Tis the will of the soul
That decides the goal,
And not the calm or the strife.

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IRON MINES AND FORGES ALONG THE NEW RIVER AND ITS TRIBUTARIES (NC)

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Smoke began rising from ironworks on New River in North Carolina soon after Ashe County was formed, in 1799. By 1802, the Iron Age in Ashe County had begun, with mining, processing and hauling iron as far as Charleston, South Carolina.[1]

The manufacture of iron was an important industry along the New River in North Carolina for more than 80 years.[4]

Early Iron Making in North Carolina

As late as 1764, no forges or furnaces had been erected in North Carolina,[3] but beginning in the 1700's, ironworks, mostly furnaces, began appearing in the Piedmont area and spreading into the foothills.[2]

In 1772, the Surry County Court ordered an ironworks road opened from Long-bottom, at the foot of the Blue Ridge, to Little Elkin Creek, where David Allen was setting up ironworks.[3]

Near the end of the Revolution, a limited number of men were exempt from military duty to manufacture iron at David Allen's and at certain other works.[2]

To encourage iron making, a North Carolina legislative act of 1788 offered for every set of ironworks erected, a bounty grant of 3,000 acres of vacant land certified as unfit for cultivation by the county court. It promised tax exemption for a decade if works were set up within three years of the grant and produced 5,000 weight of iron annually.[2]

Early Ironworks in Ashe County

Several ironworks in Ashe County qualified for the grants, especially works of the ancestors presented by Mrs. Jesse Reaves, including Thomas Calloway, Col. Jesse Ray and Meredith Ballou.[4]

The August, 1807, term of the county court issued the first approval of a land grant, to Daniel Daugherty "for the use of iron works built on 'Bigg' Helton."[4]

Bloomery Forge on Helton

Meredith Ballou stated that the first forge was built in 1807 "by one Tarbert," meaning Herbert or Harbard, with spelling following the British pronunciation, even though Herbert was a second generation American. In 1802 he had applied for a grant and received grant no. 528 for 100 acres on Little Horse Creek, where he may have built a forge, but by 1807 he preferred the mouth of Helton Creek on the North Fork, where he erected Harbard's Bloomery Forge, with the help of Robert Thompson.

For the bounty grant, Herbert filed the entry in 1808,[5] declared that the production was "upwards of 5,000 weight of merchantable iron" in 1810 and received the grant in 1812. The large acreage was needed for hardwood to provide charcoal so essential for the alternate red-hot heating and beating of a bloomery.

After operating seven years, Herbert sold his North Fork holdings to Meredith Ballou in 1814.[6] The forge was washed away in its tenth year, 1817.

Similarity of Ballou and Herbert

The circumstances of these two pioneer iron masters, Meredith Ballou and William Herbert, Jr., were similar in several respects: both were natives of Virginia, who came to Ashe early in search of iron, found it and forged it; both had fathers involved in mining, Ballou's a mining engineer, and Herbert's a superintendent of the lead mines; both held important public offices, Ballou an early justice and county surveyor, and Herbert, a state legislator, representing Ashe in 1825; both passed on their interest in iron, Ballou, to his sons, and Herbert, to his son-in-law, Robert Thompson.

Forges and Furnaces, 1810, 1811

Although at least two furnaces had been erected in this mountainous region before 1810,[2] the forge was more suited to this area. The furnace produced castings for skillets, pots, pans, etc.; forges turned out tools and implements.[2]

By 1811, five successful iron furnaces were in operation, according to Thomas McGimsey.

Since most iron masters were also farmers or planters, they operated their ironworks only part of the year, especially furnaces, which were blown in the first of the year and kept in operation until late spring when plowing and planting demanded attention.

Forge on Little River, 1815-1884

In 1815 William Herbert, Jr., and Robert Thompson, his son-in-law, set up a forge on Little River, near Gap Civil, and employed 10 men in 1820.

Herbert sold his interest in the forge in 1823 to Joseph Woolfolk Alexander, who committed suicide in 1847 and was succeeded in the business by his son, A. B. The forge was still listed as Thompson and Alexander until 1884.[7] After 1859 it was in Alleghany County instead of Ashe.

The hammer of the forge was kept in the Thompson-Bledsoe family until World War II, when it was donated to the scrap iron drive.

Recently Jack Thompson, a descendant of Robert, photographed the site of the Herbert-Thompson-Alexander mine and the Little River below, where the ore was loaded on rafts to be sent downstream to the forge.

Forges of the Teens and Twenties

In 1817 Ballou's second bloomery forge was set up at the falls of the North Fork but was ashed away in 1832.[4]

In 1825 the North Fork Forge was erected eight miles west of Jefferson but was abandoned in 1829 and washed away in 1840 and rebuilt later.

In 1829 the Helton Bloomery Forge was set up 12 miles north of Jefferson. It produced 15 tons of bars in 1856, but was washed away in 1858 by an ice freshnet.

Forges of the Thirties and Forties

By 1830 only four ironworks were in operation during part of the year. Four others had been either abandoned or washed away, and perhaps as many more had produced their little quota and had disappeared unrecorded.[2]

Nearly two decades later, in 1847, Laurel Bloomery Forge was erected 15 miles west of Jefferson, only to be abandoned in 1853.[4]

In 1858 a forge was built first by John Ballou on Helton and rebuilt in 1871 by W. J. Paisley, called the Paisley Forge. It was abandoned.

Forges of the Sixties and Seventies

The need for iron in the Civil War prompted the building of the Elk Creek Forge built and operated by "Osborne (C) and Fields (A)" in the sixties and operated by Caleb Osborne in the seventies in Alleghany County, near Gap Civil.[7] Tons of iron went to the Confederate arsenal from the Ashe and Alleghany forges.

The last New River Forge, on the South Fork one-half mile above its junction with the North Fork, was set up in 1871 but was washed away in 1878.[4]

Iron Mines 1872-1896

Up to this point, the mines that fed the forges have been taken for granted but not mentioned. Owners and locations of mines were listed in Branson's North Carolina Business Directory, 1872-1890.

In Ashe County there were the following: at Crumpler, two, owned by J. C. Plummer and by H. and Polly Ballou; at Grimsley, one by Eli Bower; at Helton, Ore Bank Mine, by ___ Plummer; at Jefferson, one by Jesse Colvard; at Sturgill, one by B. Sturgill; at the Mouth of Buffalo, four by C. F. Ashley, by Calvin Graybeal, by J. Stuart, and by Wyatt Rose.

The mines in Alleghany at Edmonds were owned by Hester Collins and James Galion.

Mining practically ceased in 1887, mainly because of transportation costs.[4] The opening of the Virginia-Carolina Railroad in 1914, caused a flurry of mining interest and some ore was shipped from mines near Lansing, but by 1922 this activity had ceased and no mines were operating.[4]

In 1896, only blacksmiths were listed: 13 is Ashe and two in Alleghany.

Finally iron making was becoming a forgotten industry along the New River in North Carolina.

Early in the twentieth century iron making along the New River in North Carolina became a forgotten industry.

FOOTNOTES

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ORE KNOB COPPER MINE

"Of the outlaws and the killing
And the grief they left behind"

In January 1982, the Nashville Flame, Johnny Sands, recovered two bodies from a gaping abyss--the open pit remains of Ashe County's once prosperous Ore Knob Copper Mine located ten miles east of Jefferson. Sands' subsequent ballad of the intrigue and murder rang as a death knell for a mine that had excited its original developers and promised instant wealth to a handful of Tennessee speculators before the Civil War.

In the summer of 1853, John Mason Lillard of Decatur (Meigs County), Tennessee, announced his candidacy for a seat in the Tennessee House of Representatives on a promise to extend railroads to the recently opened copper mines in Ducktown (Polk County), Tennessee. He won the Democratic primary on August 4th and entered into an agreement on the 22nd, along with Robert R. Davis, to test for minerals on the land of John Nichols in the 6th Civil District of Meigs County (on Sewee Creek). A veteran of the Mexican War and a recent graduate of the University of Pennsylvania Medical School, Dr. John Lillard foresaw the possibility for greater internal improvements in his portion of East Tennessee provided its educated citizenry took advantage of the copper and railroad speculation and organized into a commercial venture.

From October 3, 1853, through March 6, 1854, Dr. Lillard served admirably in the lower house of the Tennessee Legislature where he was instrumental in introducing or supporting bills to incorporate six separate mining companies: Cherokee, officially incorporated on January 26, 1854; the Decatur, the Tocoee, and the Allegheny Mining Companies, passed as rider amendments to Senate bill no. 118, January 16; the United Consols Mining & Smelting Company, incorporated March 1; and the East Tennessee & Maryland Mining Company, also passed on March 1, 1854.

Following his return to East Tennessee from the winter legislative session of 1853-54, John Lillard channeled his resources into the Decatur Mining Company. On April 14, 1854, several of Dr. John's acquaintances in Meigs County formed the Meigs County and Virginia Mining Company. In July, Dr. John M. Lillard witnessed an agreement between James A. Mitchell of the northern portion of Meigs County and Thomas B. McElwee, owner of the Sewee Cotton Mill (Meigs County). The agreement made Mitchell and McElwee equal partners in leasing mineral lands in North Carolina following Mitchell's trip to that state. Apparently, during the last summer of 1854, Dr. John and other Meigs County speculators were in Ashe County, N.C., for Edward J. Wood, a former Tennessee legislator and investor in the Decatur Mining Company, received a letter from Lillard that indicated the company had "cut Copper." Once the company found or "cut Copper," the stockholders were to pay a "call" from the company which would provide the capital for the opening of a mine. Edward Wood had recently married and did not have sufficient cash to meet the "call." He wrote that "Copper speculations are a sight of trouble." "Can you find me a purchaser." Writing from his home in Woodbury, Middle Tennessee, Edward Wood asked, "what County Ore Knob is in?"

Dr. Lillard lost no enthusiasm for his mining speculations. He set out for Ashe County and managed the original opening of the Ore Knob Mine: "began shaft Tuesday 6th" (February 1855). Between February 1855 and November 1856, many workers were paid to dig in the shaft. Typical pay was $15 to $25 per month, or $10 plus room and board per month. A partial list of the original miners exists in the tattered "Time Book":

Ore Knob Copper Mine

F. Alexander	John Doherty (Daugherty)	J. Poe
Eli Bare	John Daugherty	George Richards
Wiley Bare (Bear)	William Ellis	A. Sheets
Joe Bear	Henry Greenwell	William Sheets
Wiley Bear	Joseph Garber	Isdom Sheets
William Barker	Emmanuel Glemps	Wiley Sheets
Henry Bear	John Griffin	Charles Sheets
Jonah Bird	Sam Johnston	H. Sullivan
Thomas Burgess	William Johnson	Archibald Smith
John Burgess	John M. Johnson	Hardin Sullivan
John Black	Samuel Johnson	Cain (Cam) Stringer
Alven Cook	John Johnson	Missouris Stringer
William Cox	Elisha Johnson	Hiram Stamper
B. Creasy	Elijah Jennings	Absalom Stringer
Nimrod Creasy	Hamilton Lile	Madison Stringer
Neill Chancy	John Lomon	Calvin Shoemaker
George Creasy	J. Logins	Mat Stringer
Leander Cox	W. Miller	A. B. Stringer
Levi Cayton (Caton)	William Martin	A. G. Taff
Felix Cox	William J. Martin	David Taylor
James Calloway	John Mash	E. Taylor
Levi Caton	William Miller	H. Taylor
William Dillard	Jonathan Miller	L. Talifaro
R. Davis	J. Patrick	E. Toliver
Neill Darcey	William Porter	Eli Wyatt

This intense "copper" fever paralled the 1849 gold rush in California and the 1855 gold excitement in the Oklahoma Territory around Witchita Mountain.

As soon as a fair sample of ore had been extracted, Dr. John rushed it to Dr. C. A. Proctor, State Assayer for Tennessee in Nashville. Proctor's reply is recorded in full:

State Assayor Office
June 18, 1855

Dr. Jno M. Lillard
Dr. Sr.

I have carefully analysed the ore you gave me from Ash Co, N.C. and find No. 1 ore as marked & sampled worth 16.06 per. cent of pure Copper. No. 2 ore worth 8.21 per cent of pure Copper--which would make a mixture of those ores worth 12.13 1/2 per cent.

You required me to hasten this process so much that I found a trace of Copper which was held in solution after the first Filtration. This I did not discover untill after the decantition (decantation?) of the ore--

If you will give me untill the last of the week I will reexamine the ore--No 1, is now worth in Baltimore $67.25 drs per ton. Ore has not advanced of late.

Yours truly
C. A. Proctor

To Jno M Lillard MD

Ore Knob Copper Mine

Jasper Leonidas Stuckey, writing in 1965, states that the Ore Knob Mine was opened in 1855, and that "four shafts were sunk on the property to depths of 90, 40, 30 and 40 feet and enough ore that assayed 19 percent copper was mined to make a profit of $9,400." The distance of 63 miles over "poor mountain roads" to the nearest railroad prevented the mine from being profitable. It was closed in 1856. Actually, proceedings in the fall 1856 term of Ashe County's Superior Court of Equity reveal additional reasons for closure of the mine.

M. Buchanan, agent for the Decatur Mining Co., wrote a lengthy explanation of the situation in Ashe County to Prior Neill, president of the company, who resided in Meigs County, Tennessee. Buchanan stated, on July 26, 1856, that the mine had ceased "turning ore" because of a difficulty amongst the partners. The employees were cleaning up the yard and still sending out some ore. No prospect for sale of the mine existed in Ashe County.

Buchanan then explained the legal hearing: Caswell Lea and others vs. R. McKenzie and others which was scheduled as a bill of complaint to be heard in the September Court of Equity (1856) at Jefferson, N.C. J. B. Reves (Reeves?) of Ashe County owned a tract of land (fifty acres) known as Ore Knob. Caswell Lea, Henry B. Davis, James Sloan, Mark J. Parrot, and Mary Pickens, through their legal agent Caswell Lea, made a parol (word of mouth) agreement with J. B. Reves on the 14th of April 1854, by which oral agreement Reves agreed to lease and sell to Lea and others all his mineral interest and rights in the Ore Knob: Reves would lease one half interest for three years and then sell them the other half for a sum of $4,000 if Lea and his friends elected to purchase after their testing of the minerals. Caswell Lea confirmed the agreement which was entirely oral and nowhere written down. Yet, J. B. Reves did not have clear title to one half the property. He postponed a formal written agreement for three weeks so he could acquire the entire property and make a full lease/sale agreement all at once.

Caswell Lea, plaintiff, accused R. McKenzie of the Decatur Mining Company secretly of learning the value of the minerals in Ore Knob and approaching J. B. Reves, thereby proposing to lease and purchase Reves' share of the property which Reves orally had promised to Caswell Lea and others. Reves declined to make an agreement with McKenzie, for he said he had promised the land to Caswell Lea. Reves claimed that McKenzie misrepresented Lea and said he, McKenzie, had knowledge of Lea's bad faith and desire to abandon the oral agreement.

The bill of complaint also alleged that McKenzie induced Reves "to drink excessively of ardent spirits and to become intoxicated and by these means induced Reves to let" McKenzie have the property before Lea's three weeks were out when the oral agreement between Reves and Lea would have been written.

When Caswell Lea approached Reves concerning their oral understanding and requested transfer of Ore Knob, Reves "informed him that he had one or two days previously leased to McKenzie as agent of the Decatur Mining Company." The stock holders of the Decatur Mining Company were subpoenaed to appear in the Ashe County Court of Equity following the Superior Court session (September 1856): R. McKenzie, Thomas McElmer (McElwee?), George W. McKenzie, Robert S. Baldwin, Stephen Taylor, John M. Lillard, David E. Galespie (Gallespie?), William W. Lillard, John R. Neal, and John Eldridge. Agent Buchanan concluded by defending the actions of his Decatur Mining Company: "I have no kind of doubt but we will fully sustain our agent as an honorable high minded gentleman... and prove that Reves was out drunk."

Ore Knob Copper Mine

The Ore Knob Mine, once the economic hope of the leading citizens of Meigs County, Tennessee, failed to operate after July of 1856. Dr. John Mason Lillard's one benefit for having managed the mine operation was his marriage to Mary C. Jane (Jennie) Thomas of North Fork, Ashe County, on the 14th of May 1856. Dr. John did not return to Ashe County for the Court of Equity hearing in September 1856. He did, however, write several letters of inquiry, probing investors for the possible sale of the Ore Knob Copper Mine. His most promising reply came from Samuel Congdon, once a speculator in Polk County, Tennessee, and then Managing Director of the Union Consolidated Mining Company, living in New York City. Congdon expressed an interest in the mine but could promise little cash following the economic crisis of 1857. He suggested that Doctor John manage the mine operation directly, thereby turning a liability into an income. Doctor John, however, was by now married and less interested in moving permanently to Ashe County to manage a copper mine that was far from rail transportation. From other letters, there is reason to believe that a settlement had been reached giving the Decatur Mining Company 2/3's control of the property and Caswell Lea 1/3 control. David Keener, of Baltimore, also expressed an interest in the Ore Knob property but wanted to know who controlled the "other 1/3d -- & if it is likely they would sell also." The Civil War interlude put a halt to further mining speculation at the Ore Knob Mine for over a decade.

For a brief period (1855-56) black ores were extracted from the Ore Knob site similar to the ores of Ducktown, Tennessee. T. Sterry Hunt, writing in 1874, established that S. S. and J. E. Clayton of Baltimore reopened the mine in 1873. In the month of July 1873, "about 1400 tons of ore" were raised, "averaging more than 25 per cent. of copper." Apparently, J. E. Clayton acted as site superintendent and was chief owner of the property in that year. The Decatur Mining Company made an effort to collect and record all outstanding deeds to the Ashe County property in 1867 following the legal confusions created by the Civil War and the death of Dr. John Lillard. Clayton must have purchased the company's 2/3s interest by 1873.

The Ore Knob Mine was worked briefly before 1860. The Claytons re-established the operation from 1873 through 1883. Other periods of operation include 1896, 1913, 1917-18, 1927, 1942-43, and 1953-62, when the mine was "completely worked out" and "abandoned." Eben E. Olcott, in 1875, described the method employed in the reduction works. The ore was sent to Boston and to Baltimore. In 1874, "the Revere Copper Company purchased the greated part of the 400,000 pounds of copper produced by the works at Ore Knob."

In 1881, T. Egleston, moreover, commented on the method of mining. He found a large number of Negro employees working the mine--"better than white labor, and much more tractable." "The wages paid are low, but the work performed is equal to that done elsewhere."

Ore Knob Mine remains a symbol of mountain wealth, exploited by outside interests. Its entrance is a large gaping hole, a "cavernous opening scopped out by pick and shovel decades ago," wrote Bruce Henderson (Charlotte Observer). From the mine, two bodies were recovered on January 25th, 1982, those of Tom Forester and Lonnie Gamboa. How many other lives were lost at the Ore Knob Mine? And, can we include the failed ambitions and lost fortunes of the original Decatur Mining Company stockholders who made little from the 1850's dig and witnessed the destruction of their way of life during the 1860's?

--- Stewart Lillard

Ore Knob Copper Mine

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CREESTON (NORTH FORK)

For two centuries, settlers and their descendants have engaged in farming and mining activities beneath The Peak and Three Top Mountain and along the Big Laurel Creek and the North Fork of the New River. In return for their produce, the inhabitants exchanged goods at the community store. The record of these transactions, these aspirations, becomes a ledger of recorded history. Stephen Thomas established a store and tavern and was appointed the first postmaster of the North Fork community on January 18, 1830. David Worth, a tanner and merchant, became a prosperous citizen and followed Thomas as postmaster and storekeeper. Zachariah Baker farmed and traded livestock. The Graybeals and the Elders contributed to the success of the village. From this early 19th century beginning, the community of North Fork (present Creston) emerged in west central Ashe County, at an altitude of approximately 2,850 feet near the crest of the mountains along the Tennessee border. Highway 88 is its only link to the county seat of Jefferson.

Stephen Thomas owned a frame house ("Sunnyside") to the west of Three Top Creek and ran the only tavern between Jefferson and the Tennessee line. It was a one-story structure, two rooms deep, with a rear L-shaped extension and a large front porch with three entrance doors. "Sunnyside" was torn down in the 1920's, the planks being used to build a sidewalk along the lane from the Methodist Church to the Thomas farm.

David Worth of the Centre Friends Community (in present Randolph County) moved to North Fork about 1830. He may have bought roots and herbs for his relatives' drug firm in Greensboro (David Worth/Sidney Porter). David Worth and Stephen Thomas formed the first store at North Fork about 1835, "Thomas Worth & Thomas." David Worth married Stephen Thomas' daughter Elizabeth Thomas on January 18, 1839, and the Worths acquired a frame house with two brick chimneys. In later years another four rooms and two more chimneys were added, as well as a front porch. The kitchen was a separate L-shaped building at the rear of the house. A bathhouse and laundry room stood nearby, where running water flowed by gravity from springs to be heated by the bathhouse stove. The Worth home became known as "Silent Shade."

In the 1840's, goods for the store were hauled by wagon from Fayetteville, N.C., requiring several months of work. In the 1850's the Norfolk & Western Railroad link through Abingdon, Va., greatly shortened the transportation problems for the store. Folks who traded at the "Thomas Worth & Thomas" store before the Civil War included:

N. L. Allen	John Eldreth	Blanch Madern
Moser Brooks	William Foster	William Miller
Saal M. Brewer	Thomas Farmer	Marshal Nelson
Andren G. Brooks	Joshua Green	Almago Noall
Samuel Camel	Finley Grier	Enoch Osborn
James Cahoon	Harrison Gilly	Aaron Osborn
Edward Clawson	Zachariah Hiatt	John S. Osborn
F. A. Cahoon	Andrew Hampton	Hogen Pendergrass
A. J. Carpenter	Philip Lewis	Alfred G. Parks
William Cox	John Lyons	Dannie Penington
Andrew Daugherty	Aaron Latham	John Phillips
C. H. Deginnatt	Stephen Mulis	Jonathan Philips

Creston (North Fork)

Andrew Penington	R. G. Robinson	Matthew Vanover
Thomas Poke	T. M. Robison	Cornelius Vanover
Michael Roark	David Straley	Charles Vanover
Ephraim Rark	G. P. Straley	William Ward
William Ray	Britten South	Franklin Wright
Emory Rominger	William R. Todd	Eli Weaver

In 1807, the state issued to Thomas Calloway 3,000 acres of land known as the iron works bounty. This land was not fit for cultivation. The iron works were to be erected within three years and made to produce 5,000 weight of iron before the grant was finally issued. In 1854, David Worth, William Daniels, Moses L. Michael, and R. Muchison bought this Calloway bounty land. David Worth also acquired land on Three Top Mountain, Big Laurel Creek, Big Horse Creek and Little Horse Creek, often in exchange for bad debts at the store.

In addition to buying land for iron works, David Worth and his wife Elizabeth installed a carding machine run by water power from Three Top Creek. Elizabeth "trained slaves and others to fashion the cloth into clothing for men and boys, and sold the clothes in her husband's store." They also established a carriage and furniture factory housed in a large frame building on the bank of Three Top Creek.

Both the Thomas and the Worth families were slave holders during the 1850's. Stephen Thomas gave his daughter Elizabeth Worth one Negro child called Martha (18 months of age) in 1857. During the war years, Stephen Thomas' wife Mary Thomas died (1861); his daughter Mary C. Jane "Jennie" Lillard died (1862); his son-in-law Col. John Mason Lillard was killed at Chickamauga (1863); and Stephen died in 1864. Most of the slaves left Creston after 1865. Only the very old and very young Negroes remained by 1866: Ally and Andy lived in their house and Ally washed and milked for Elizabeth Worth. Rans and Becca lived in the tan yard house but they were facing eviction as David Worth had hired a new miller to live in that house. Lid and Dick lived in their same old house. Dan and his family were living in Taylorsville, Tennessee, but "sick of their freedom already." Aunt Mira had Maggie Parmer living with her. Maggie Parmer was described as "quite a smart girl." Louise stayed with Aunt Mira and slept in her kitchen; Joe and Lize lived in her dining room.

W. W. Farmer, who once lived in Ashe County before the Civil War, wrote from Mississippi that he thought most of the folks around North Fork "belonged to the Union or Tory Party" during the war period. David Worth, who remained neutral, soon regained his reputation in the community in the last 1860's: "I am not much for moving about, I still think we can live here and do well enough provided we manage well." "The people here appear quite friendly with me now and I think they will remain so if I do my duty." He repaired his carding machine and wrote in 1866 that there were "no marriages about here lately as nearly every body is married that can."

A church was organized in North Fork in the 1850's on land donated by David Worth and may have been known as Worth's Chapel. In his will of 1885, David Worth separated one acre of land containing the chapel from his other property. The present Creston Methodist Church was constructed after 1902. The Methodist denomination also held camp meetings in the fall of each year, meetings that lasted a week. In the fall of 1865, it was noted that "Alex

exercised his gift a good deal, Charlie Miller is such a good little preacher, Tisha joined the church, and Sam Jones' daughter was married on Sunday of the meeting (went to her father's in law to be married)." In October of 1868, at the Helton camp meeting, the Worths "all tented together, had two very comfortable tents joining--used one for cooking and the ladies sleeping apartment, the other for bunks, boxes, and gentlemen--10 sleeping apartment." "There was not as many persons there as last year, though there was an many as could be comfortable situated, we entertained as many or more than the other tent holders." "Mr. Baize the Grayson circuit preacher was the most eloquent speaker I ever heard, about twenty seven years old, very delicate-looking, has hemorrage of the lungs nearly every time he preaches, he described in one sermon how he imagined Heaven looked, said he could not give any location in particular."

If folks did not marry at the camp meetings, they could elope. "Calvin Younce went to Tennessee (in 1868) and brought Millie Jackson over, they were married at Mrs. Goss's this morning about day light, she threw her clothes out at the window, then glided out herself mounted a horse he had for her and away they come, about midnight when they left; after they were married by a low down radical magistrate they left for Jefferson, where I think they intend spending the winter."

North Fork had a post office, a store, a carding mill, circuit ministers, and a physician: Dr. J. O. Wilcox lived near the community and operated a "home medical school," where his students read medicine at his home office and regularly visited his patients.

On February 23, 1882, the post office at North Fork was renamed Creston at the request of Thomas James Lillard, nephew of Elizabeth Worth, and new store partner of David Worth. The firm of "Worth & Lillard" occupied five acres on the North Fork River and included a store building, work shops, and other out buildings. When the February snows fell in 1880, David Worth had not finished his new mill which he felt would be the best mill in the county. He was also jubilant over rumors that "a very wealthy Northern Company had purchased the Copper Mine near Arthur Cowles and was making extensive preparations for work." Another Northern Company had bought Mr. Balow's farm below Jefferson for making a superior quality of iron. David Worth, in his old age contemplated working his Elk Knob Copper Mine near the Tennessee line.

By 1884, the Creston store was reorganized as "Worth, Lillard, & Thomas" to include John Dixon Thomas, grandson of Stephen Thomas. The firm dealt in "general merchandise, flour, bacon, grains, and live stock and manufactured wagons, furniture, doors, sash, blinds, shingles, etc." It was during the early 1880's that David Worth's grandson, Jasper Worth Lillard, of Decatur, Tennessee, recorded his visit to Creston via Abingdon, Virginia, where he got off the train: "But when I had eaten my breakfast the next morning, I began to look around for some way of getting over to Creston. Directly I unexpectedly came across a young man from Creston, whom I knew. He was driving my grandfather's wagon and had come after goods for the store, which my grandfather owns. So I started out with him about ten o'clock, but as he had a heavy load we only drove about sixteen miles during the whole day. On that night we camped on the Laurel creek about twelve miles from Taylorsville. As the driver was a good cook, we soon had supper, and after feeding the horses, we got into the wagon and went to sleep! But about midnight it commenced of raining, so we would have got wet, if the wagon had not been covered with good

oil cloth. The next day we drove about twenty miles, and camped on the top of Stone Mountain. Then we only had six miles to go before reaching Creston, at which place we arrived about nine o'clock the next morning." "Creston is bounded on every side by mountains...the Peak justly celebrated for rattle-snakes and gin-seng."

Thomas James Lillard left Creston about 1887; David Worth died December 10, 1888, and left an estate of about $88,000 value; and Newton Jackson Lillard, son-in-law of David Worth, obtained the store through inheritance and purchase. He reorganized the operation as "N. J. Lillard" (Successor to Worth & Lillard) dealer in general merchandise, produce and lumber, with a freight and express office in Abingdon, Va. N. J. Lillard returned to Tennessee in 1905 and Joe Worth took over the store as "Worth Brothers: Live Stock" where he traded hereford cattle. Portions of the wagon and furniture mill continued until the First World War. In 1916, the creek water had been high: "got up in the factory, destroyed a lot of what they had in the factory but did not injure the machinery much." Mud had to be removed from the factory before it could operate again. The flood of 1940 finished the factory for good and washed away most of the buildings.

In conclusion, it is important to mention the establishment of schools along the North Fork River. From David Wood's diary we have a brief record of a "log structure, bark-covered" which was used as a school during the summer months (1784).

A century later, the trustees of Creston Public School included Thomas James Lillard, Thomas Clarkson Worth, and Marian Goss, who bought from Marshal Baker a parcel of land for the construction of a school house. The school was to be open to children from outside the school district. Subscribers to the Creston school included: David Worth, T. J. Lillard, T. C. Worth, Marian Goss, Marshall Baker, Marian Prather, Thomas Pless, John Baker and Mrs. R. C. Worth. This 1885 effort may not have fared well. One parent wrote in the fall of 1886: "the school closed last Friday--I don't know whether we will have any more school or not--they are talking of getting Miss Emma Baker to come, but she cant teach Latin nor dont know much about Algebra, I do wish we could get a good teacher, we have to give her twenty dollars a month...so I wish we could get a teacher that would stay two or three sessions, then I think we could get a good school here."

On April 19, 1894, the Creston Academy's closing exercises included Bessie Lillard, Emma Baker, Carrie Goss, Ida Graybeal, Clora Goss, Albina Graybeal, Emme Goss, Trixie Johnson, and Ella Wagoner who competed for a silver medal in elocution. James A. Riddle, Thomas S. Goss, George Cheek, and Willie F. Perkins debated the querry--"resolved that foreign immigration should not be prohibited in the United States" and David Wiley Lillard and Thomas L. McCoy served as assistant marshalls. Education certainly had a foothold in the community.

Creston, during the nineteenth and early twentieth centuries, was a center of commerce and a seat of learning. When Charles Dudley Warner, world traveler and literary critic, made his American journey in the mid-1880's, he rode horseback from Tennessee into Ashe County, spent the night at the home of Squire David Worth in Creston, then continued up Three Top Creek on his way to Boone in Watauga County. Warner's description of this journey was later published in his On Horseback: A Tour in Virginia, North Carolina, and Tennessee (1889), pages 24, 29-32. Several excerpts from that visit to Creston

confirm the preceding anecdotes and social life of the village: "Our road was a sort of by-way up Gentry Creek and over the Cut Laurel Gap to Worth's, at Creston Post Office, in North Carolina,--the next available halting place, said to be fifteen miles distant, and turning out to be twenty-two, and a rough road...."

"What a lovely country, but for the heat of noon and the long wearisomeness of the way! -- not that the distance was great, but miles and miles more than expected. How charming the open glades of the river, how refreshing the great forests of oak and chestnut, and what a panorama of beauty the banks of rhododendrons, now intermingled with the lighter pink and white of the laurel! In this region the rhododendron is called laurel, and the laurel (the sheep-laurel of New England) is called ivy."

"At Worth's, well on in the afternoon, we emerged into a wide, open farming interval, a pleasant place of meadows and streams and decent dwellings. Worth's is the trading center of the region, has a post office and a saw-mill and a big country store; and the dwelling of the proprietor is not unlike a roomy New England country house. Worth's has been immemorially a stopping-place in a region where places of accommodation are few. The proprietor (David Worth), now an elderly man, whose reminiscences are long ante bellum, has seen the world grow up about him, he the honored, just center of it, and a family come up into the modern notions of life, with a boarding-school education and glimpses of city life and foreign travel...." "Our travelers (Warner and a companion) did not expect to find a house in this region with two pianos and a bevy of young ladies, whose clothes were certainly not made on Cut Laurel Gap, and to read in the books scattered about the house the evidences of the finishing schools with which our country is blessed, nor to find here pupils of the Stonewell Jackson Institute at Abingdon...."

Warner then recorded the events of one drowsy summer afternoon in Creston: "as they sat on the long veranda, the voice of a maiden reading the latest novel to a sewing group behind the blinds in the drawing-room; and the antics of a mule and a boy in front of the store opposite; and the arrival of a spruce young man, who had just ridden over from somewhere, a matter of ten miles' gallop, to get a medicinal potion for his sick mother, and lingered chatting with the young ladies until we began to fear that his mother would recover before his return; the coming and going of lean women in shackly wagons to trade at the store; the coming home of the cows, splashing through the stream, hooking right and left, and lowing for the hand of the milker...." Such were the activities Warner and his companion observed.

"The traveler in this region must be content to feed on natural beauties...." "We were riding along the west fork of the Laurel, distinguished locally as Three Top Creek,--or, rather, we were riding in it, crossing it thirty-one times within six miles; a charming wood (and water) road, under the shade of fine trees, with the rhododendron illuminating the way, gleaming in the forest and reflected in the stream, all the ten miles to Elk Cross Roads, our next destination." After a family dinner with old man Tatem, Warner and his companion soon reached Boone, the county seat of Watauga County.

--- Stewart Lillard

Creston (North Fork)

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HINTON HISTORICAL DISTRICT

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PREHISTORY

Hinton, West Virginia is located at the southernmost end of the New River Gorge National River. Its position in the New River Valley is accessible from many directions including the Bluestone and Greenbrier river valleys and the plateaus and mountainous areas for miles around. In fact the Legislative Acts which created Summers County required that the county seat be located at the mouth of the Greenbrier River.

Hinton became a town after the C. & O. Railway came through the area in 1872-73, but human occupation in the vicinity has been documented to the PaleoIndian Culture of almost 15,000 years ago. Two sites in the region, Richmond Bottoms (46-Su-104) and Meadow Creek Bottoms (46-Su-107), on lowland upper New River terraces yielded surface-gathered Clovis points and Cumberland fluted lancelote points of the PaleoIndian Culture which occupied the region during the Late Wisconsin glaciation. These hunters likely roamed the New River valley following large game animals like mammoth, mastodon, giant beaver, giant sloth and carribou.

Archeological research in the Hinton-New River valley area has yielded artifactual evidence of four other culture traditions: Appalachian Archaic; Carolina-Piedmont; Laurentian; and Kanawha traditions. Artifacts include projectile points and flint flakes, pottery sherds, knives, ax heads, scrapers, drills, pipes, human skeletons and evidence of cooking fires. Evidence has been accumulated to trace connecting links between New River peoples and those from distant cultures in the east and south.

It has been difficult to determine the Protohistoric (or Early Historic) period (ca. A.D. 1500-1675) time frame of the New River region. Archeological and early historical evidence in the area is very limited and little can be said about continuities between prehistoric and historic cultures. Certain historic Siouian groups like the Saponi, Occanuchi, and Tutelo tribes of nearby southwest and south-central Virginia are likely direct descendants of cultures known in the archeological record, such as the Clarksville culture. The Protohistoric occupation in the New River area occurred at the same time as the "Clovis phase" (ca. A.D. 1450-1650) which was centered in the Lower Kanawha and mid-Upper Ohio Valleys.

There is some speculation that around A.D. 1450 some of the people of the late Bluestone phase gradually moved from the New River Valley above Hinton to join their kindred in the Upper Kanawha Valley (Graybill- pers. comment). Further speculation suggests that if this group represented the mysterious "Salt-maker" Indians, so cautiously approached by the Batts and Fallam explorers in 1671, then it is possible to speculate that New River Protohistoric peoples were related to the Clover-like phase occupation in the Upper Kanawha Valley. There was also a probable relationship between "Salt-maker" Indians and the Moneton whom Gabriel Arthur met in the Lower and Middle Kanawha Valley during his capture and ordeal with the Tomahittan

(or Cherokee) Indians in 1674.

Before Batts and Fallam started their expedition it is likely that Abram Wood's guides or other local Indians knew about, or possibly had traded with Moneton Indians as early as the late 1650's. Salt was dried in Clover phase salt pans and was a very valuable commodity to both the Indians and whites. Siouian-speaking tribes like the Tuleto, Occanuchi, Saponi and even the Susquehannock (Iroquoian speakers) were all sources of information about the Monetons, since they were known to be middlemen in trade between Virginians and other Indians.

Further speculation is that the Moneton, and by association, the Kanawha Valley Clover phase people, were an Algonquian-speaking group like the Shawnee. If this speculation should be correct, it may be possible to develop a cultural relationship between the Bluestone phase people and the Shawnee. It was the Shawnee people with whom the first white settlers had to deal.

SETTLEMENT

Tradition holds that Col. Abram Wood was the first white man to enter the New River valley. This exploration occurred in about 1654. The first serious exploration of the valley was in 1671 when the House of Burgesses of Virginia commissioned an expedition for "ye finding out of the ebbing and flowing of ye waters behind the mountains in order to the discovery of the South Sea." This was the instruction for the famous Batts and Fallam expedition which penetrated the valley only as far as Peters Falls near the present Virginia-West Virginia border. Explorers who visited near Hinton included Dr. Thomas Walker, who camped near the mouth of the Greenbrier river in June 1750 and Christopher Gist who crossed the New river about eight miles north of the mouth of the Bluestone river on May 7, 1751.

The earliest settlements in the region were near Alderson (1763) in which all inhabitants were killed by Indians, and the Graham settlement at Lowell in the 1770's. Other early families in the area were the Lillys, Meadows, Farley, Kellers, Kincaid, Mathews, Maddy, Harvey, Shumate, Ellison, and others.

The land on which Hinton, Avis and Bellepoint are located was once owned by its first settler, Isaac Ballengee, who received a land grant for 210 acres from the Commonwealth of Virginia in 1777. Shorly after the Revolutionary War he left Botetourt County with his family to claim his grant. He first settled somewhere near the Bluestone river but Indians drove him away from this original site, so he moved to the mouth of the Greenbrier river and claimed all the land which now comprises Hinton, Avis and Bellepoint. This was 1785. Again, the Indians tried to discourage him by burning his first home, but he built another log house which survived until about 1942 when it was taken down during construction of the Bluestone Dam.

Unfortunately, Isaac Ballengee did not live long on his new land. He died in 1792 leaving his wife and their three sons, Isaac, Jr., George, and Henry, among whom Isaac's land was divided. Isaac, Jr. settled in the Hinton area, building his house near where the C. & O. Railway shops are

located; Henry settled in the Avis area, later selling his land to John (Jack) Hinton, and moving west; George located at the mouth of the Greenbrier river in what is now Bellepoint.

DEVELOPMENT

The Ballengee house in Hinton and the John Hinton house in Avis were the only dwellings in existence in the area when Summers County was formed. When the railroad came through the area there were still only six families in the vicinity, but when the town was laid out and lots were sold, the population grew rapidly - as many as 300 persons in one year. The railroad was the attraction due to Hinton being planned as a major terminal yard on the main line.

The Isaac Ballengee, Jr. property was sold at public auction on November 6, 1871, to the C. & O. Railway Company for $3,600. On January 23, 1873, the C. & O. conveyed all of the property, except what it needed for railroad operations and five other lots, to the Central Land Company for $12,000. Thus the groundwork was laid for the development of the City of Hinton. The town was laid off into town lots by civil engineer Bennett R. Dunn, and the Central Land Company began to sell lots.

The original plan of Hinton consisted of five named streets running in a direction roughly parallel with the C. & O. Railway tracks (northeast to southwest) and nine numbered streets perpendicular to the named streets. The plan contained 178 lots. Corner lots sold for $300. with inside lots selling for $250.

The earliest buildings erected in the new city were along Front Street (named Front because it faced the railroad and river with lots on only one side). Buildings along Front Street were primarily service-oriented toward the railroad and its on-the-go work force. There were hotels (Hinton House was the first), taverns, mercantile stores, boarding houses, shoemaker, drug store, etc. During early years the town reflected its surrounding agricultural environment (cows, hogs, and horses were still pastured within town limits) but the increasing commercial establishment and rapidly developing coal and timber industries influenced a remarkable change in the scene.

Hinton was incorporated in 1880 with W. R. Benedict as mayor, a position he held for three terms. The county government had been seated in the town when a new courthouse was built in 1875 on land donated by the C. & O. Railway Company. The first few years of incorporated history saw the development of city government facilities and services including a city hall, a jail, and a new water system. The C. & O. Railway shops were completed on August 1, 1892, consisting of a roundhouse with 17 engine stalls and a car shop holding forty cars. The roundhouse employed 370 men and the car repair shop, 170 men. The payroll of the shops pumped a monthly payroll of $84,000. into the Hinton economy. The C. & O. also built a large YMCA building (one of the earliest in the nation) near the passenger depot in 1891.

Industrial and commercial activity and railroad expansion were causing an accelerated population growth, challenging the Hinton government with the task of providing facilities to meet the demands pressed upon them. By the

early 20th century the city had established a sewer system and an electric company. Streets were paved with brick (most of the brick streets still serve the town traffic). A new brick high school was opened in 1893 and cultural needs had been addressed by entrepreneur Col. Joseph Parker who built an opera house in 1885.

A great building boom occûred from 1895 to 1907, fed by the prosperity of Hinton and its citizens. Most of the extant structures in the Historic District date from this period. After the major building boom ended in 1907-1908, building slowed down considerably but several notable buildings were erected in the years following the boom. Among these were the Andrew Carnegie Library (1913), the Hub Clothing Store on Temple Street (1915), the Post Office (1926), the Ritz Theatre on Ballengee Street (1929), and the Memorial Building on First Avenue (1934), a county government building.

In 1907 the population of Hinton was about 6,000 and by 1925 the area had grown to over 8,800. The New River coal fields kept the trains rolling and the economy of Hinton stable into the years following World War II. In the 1950's, however, changes in coal mining methods, the working out of some of the older mines, the abandonment of coke making, and the conversion of locomotive power from steam to diesel all worked together to drastically alter the social and economic life of Hinton. The C. & O. Railway Company laid off hundreds of workers who had been specialists in the maintenance of steam engines, and the Hinton population declined.

The Bluestone Dam, completed in 1949, and its companion Bluestone Public Hunting and Fishing Area and Bluestone State Park, the later development of Pipestem State Park, and the New River Gorge National River have all served to stabilize population at about 5,000 and redirect the focus of economic development. The railroad continues to use Hinton as a terminal yard. More recent developments in transportation, namely the location of an Interstate 64 highway interchange near Sandstone, should enhance the city's posture as a focal point in the growing tourist industry.

THE HISTORIC DISTRICT

The Hinton Historic District, which is now listed on the National Register of Historic Places, generally incorporates the downtown portion of the original town layout of 1874.

Except for the loss of most of the original Front Street structures, there has been little change in the original fabric and character of the neighborhoods. The character of Hinton architecture reflects nearly all the design philosophies of the period with respect to commercial and industrial architecture.

Where the architecture is stylistic, there is a typical Victorian eclectic blend of Classical Revival styles with more elaborate decorative trim. Masonry materials are used with taste and elegance, including brick corbeling and stone trim such as window lintels and sills, copings, columns, keystones and belt courses. Stone appears in both smooth and rockfaced surfaces, and brick

occurs in a variety of colors and textures. The builders used cast iron, formed and pressed galvanized iron cornices, terra cotta, current styles and construction methods.

Residential buildings run the full range of styles from simple vernacular one-room deep buildings to elaborate eclectic Victorian gems. Most residential units, whether simple or multi-family buildings, are two stories in height complete with one- or two-story porches. The residences in the district reflect the individual tastes of owners and the prevailing construction techniques and preferences of local carpenters and builders. There is an abundant use of "gingerbread" or pierced and patterned decorative wood trim. All types of columns, from the classical orders to box or turned vernacular styles are used to support single or two-tier porches and verandahs.

Most of the residential properties are marked with fences, walls, or shrubbery, and landscaping is tastefully and appropriately done, for the most part using plant materials which fit the residential scale. Several properties are still outlined with old cast iron fences.

The institutional buildings in the Hinton Historic District are almost all constructed of brick with stone trim and clothed with the finest in classical detailing. Examples of the various styles seen in the district are: the Second Baptist Church on James Street - an outstanding example of Classical Revival style with brick belt courses, dentiled cornice work, pedimented gable end interrupted by the bell tower and a Byzantine roof form on the tower lantern; the Big Four building with its brick detailing, imposing classical stone entry and deep metal cornice; the First Presbyterian Church, which has excellent proportions in its Greek Revival architectural statement; the First Methodist Church, the St. Patrick's Catholic Church and Ascension Episcopal Church, which all use various applications of the Gothic Revival style; the Summers County Courthouse is an eclectic version of Victorian Romanesque; the U.S. Post Office is also Colonial Revival with columned entrance, brick arched fenestration and belt courses; the Memorial Building is Greek Revival with even a suggestion of the Temple form; the Hotel McCreery tastefully blends several classical elements into a very pleasing facade even though some of the principle architectural elements have been removed; the C. & O. Railway Passenger Depot retains much of the Victorian trim elements used by the designer to create an interesting railroad landmark; and the Hinton High School is a good example of traditional lines used to express function in a contemporary building.

SUMMARY

The history of Hinton is compact, beginning essentially with the advent of the C. & O. Railway main line in 1872-73. The railroad determined that the accessibility of the area relative to the nearby river valleys, and its location with respect to potential industrial growth made the spot ideal for a major terminal yard. Another plus factor for growth was the selection of the mouth of the Greenbrier river as the Summers County seat of government. These factors led the city into a spectacular early growth. Most of the buildings extant in the district date to the early building boom era of Hinton history (1895-1907).

The architectural character of the Hinton Historic District is pleasurable, with varierty of style and ornament that reflect the exciting times during which it was developed. The lack of major renovation and desruption of that character demonstrates that citizens of today respect the taste of former owners. This attitude will maintain and enhance the historical and architectural value of the Hinton Historic District.

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TWO PENCE SPRINGS HOTELS

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Note: This symposium presentation consists of 35 mm slides, accompanied by narration. This written document is the script that accompanies the slides.

SLIDE NARRATION

1. Establishing shot. West Virginia Department of Highways Historical Roadside Marker showing the location of the second Pence Springs Hotel-West Virginia State Prison for Women. Pence Springs is located near the Greenbrier River, a major tributary of the New River System, in Summers County, West Virginia.

2. Map illustrating the location of: the Pence Spring, the first Pence Springs Hotel, and the second Pence Springs Hotel. Raw data extracted from USGS 7.5 Alderson Quad.

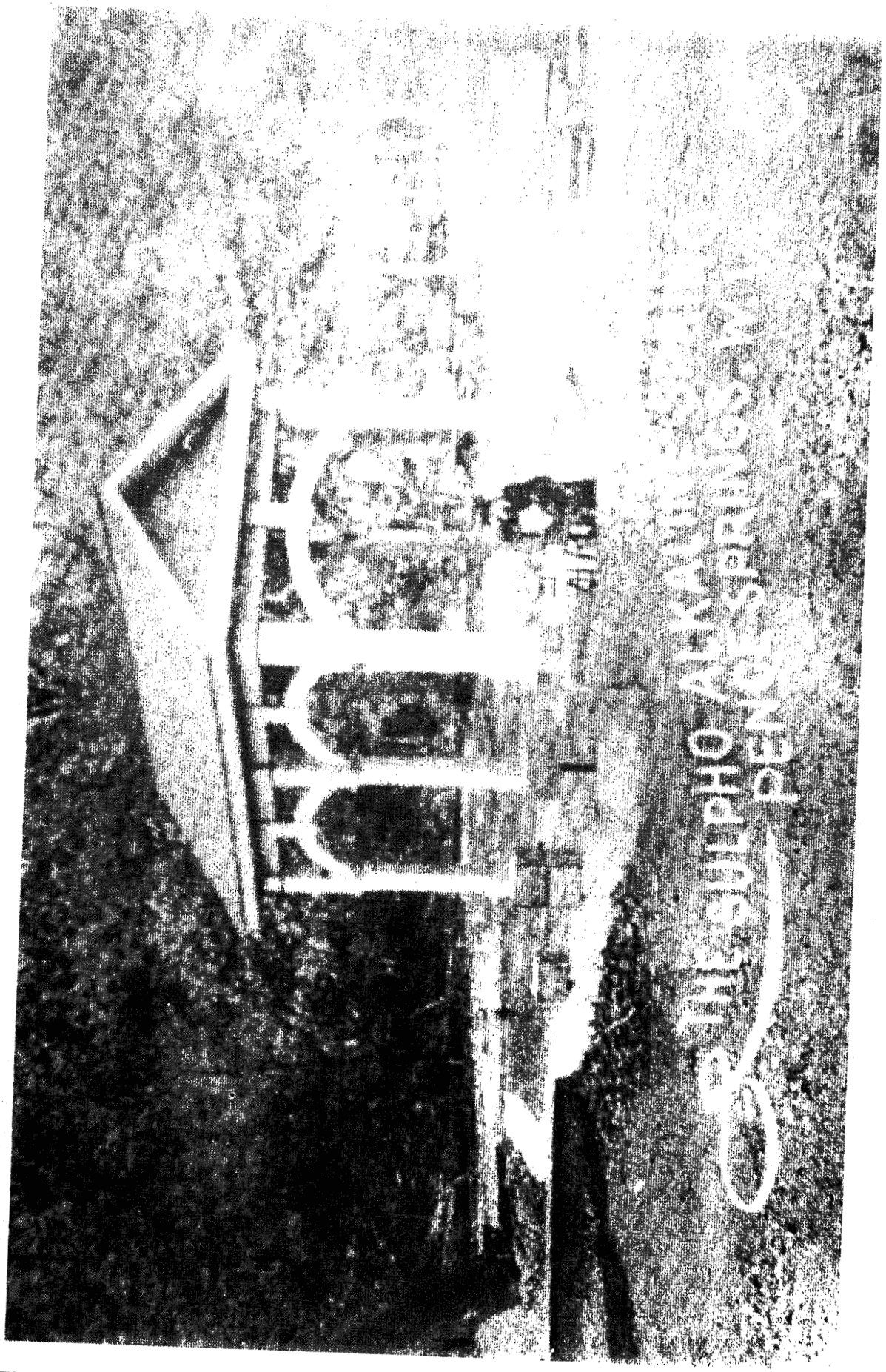
3. Photograph of Andrew Pence circa 1905. It was he who endowed his Southern genteel character upon the spring-hotel complexes.

4. The Pence Spring today. The pioneers referred to the spring as "The Buffalo Spring" due to the numerous buffalo that frequented the salt lick. It is this spring that became the foci of the two Pence Springs Hotels. In 1872 Andrew Pence purchased the spring property. Soon after the Chesapeake and Ohio Railroad passed by the spring on the opposite side of the Greenbrier River. In 1880 Andrew Pence received a deed to the property and in that year built a boarding house in which his family also resided. This structure subsequently burned in 1891. In 1882 the bottling and sale of Pence Spring water began. Dr. George L. Pence, son of Andrew Pence, in an interview in the November 29, 1952 edition of the Hinton Daily News stated, "...It [the present Pence Spring] was just a swamp on the hill up from the river when my father first saw the spring. Animals from all around would pass up the cool water of the Greenbrier River to go up the hill and drink from the sulphur spring. My father dug up a gum tree and had running mineral water..." According to Jacob Dick Pence, another son of Andrew Pence, "...The work consisted of an excavation being made and a wooden gum placed over the spring..." Circa 1892 a square wooden spigot replaced the gum tree as a spring tap. About this time Andrew Pence erected a frame spring house to cover the spring.

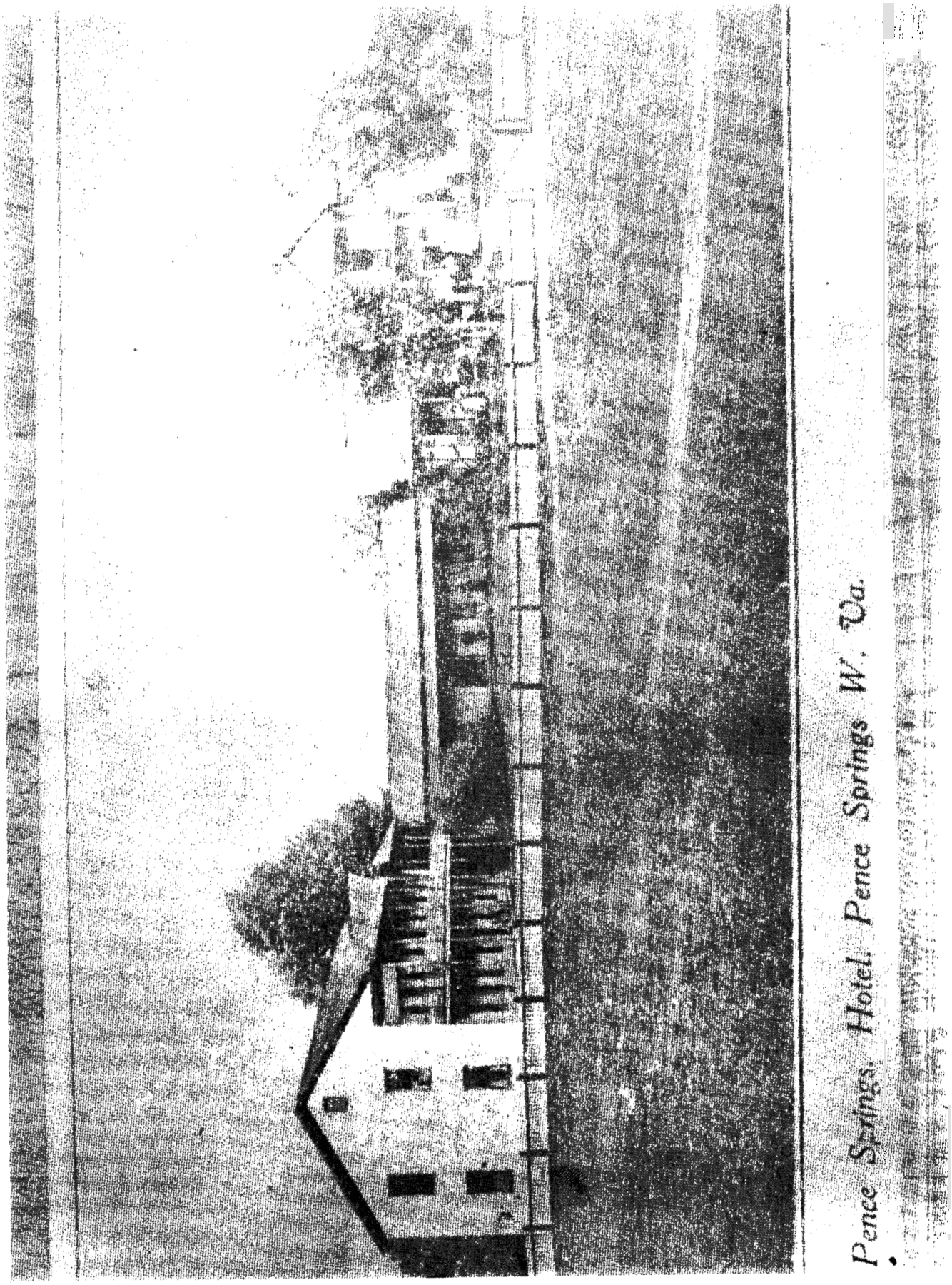
5. The Pence Spring August 11, 1905. In 1904 the spring water won the St. Louis Worlds Fair silver medal award for the high quality of the spring sulpho-alkaline water. In 1901-02 Andrew Pence employed eight to ten men to excavate the area that surrounded



Andrew P. Pence, 1909. Credit: Fred Long



The Sulpho Alkaline Spring, Pence Springs, West Virginia. From a postcard dated August 11, 1905. Used by permission of Ashby Rhodes.



Pence Spring Hotel, Pence Springs, West Virginia, circa 1905.
Used by permission of Ashby Rhodes. Credit: Fred Long.

the spring to obtain better control of the sulphur water flow. In a 1904 court case involving Andrew Pence he stated, "they worked for thirty to forty days excavating the earth around the spring until they came to where the water poured at ten gallons or more a minute from a crevice eight to ten inches long and from an inch to an inch and a half wide flowing in a north-westerly direction from a rock. The top of the rock when I first came to it was a mixture of slate and crystalized lime...and going down 10, 12 or 14 inches I could see nothing around the water, only the white crystals or quartz rock through which the water flowed. It came our through well defined walls of polished white crystal rock, as though it might have been running there for ages." Andrew Pence confined the spring water entirely with cement and tile. Pence at this time also replaced the old wooden, frame spring house with a new spring house that stands today though altered. The new spring house was neo-classical in design resembling a minature Grecian temple. The new spring house consisted of a triangular shaped roof supported by concrete columns. This spring was also referred to as "The Sulpho-Alkaline Spring". The spring house was trimmed in a gingerbread style.

6. The Pence Spring Grove circa 1904.

7. The Pence Spring circa 1910.

8. View of the first Pence Springs Hotel, looking east, circa 1900. This hotel was erected between 1894 and 1897.

9. The first Pence Springs Hotel circa 1900. Architecturally this hotel was constructed in a "L" configuration. The structure was a two and a half story, frame, grey colored building.

10. Shot featuring the main section of the first Pence Springs Hotel, 1903. The hotel was crowned with a two story, ten by twelve, frame observation tower that was erected atop the front roof.

11. A view of the first Pence Spring Hotel looking southeast circa 1905. By 1901 a combined ballroom-dining room was operating at the hotel along with a bowling alley on the adjacent grounds. This hotel boasted a fine 9 hole golf course. The Hatfields of feud-fame were frequent summer visitors at this hotel. On the morning of October 29, 1912 the quaint Victorian hotel burned.

12. Bowling Alley which today serves as a family dwelling. The bowling alley is the structure on the left of the slide taken February 1984. The Pence Spring house can be seen to the right of the slide.

13. Horse drawn carriage circa 1900, that transported hotel guests from the Stockyards (later changed to the Pence Springs Station) Train Station to and from the hotel.

14. The only remaining vestige of the first Pence Springs Hotel looking west.

15. This circular concrete structure is the only remaining vestige of the hotel proper. This structure is approximately 16 inches high by 12½ inches wide, and has a diameter of 11 feet and one inch.

16. Close up of a segment of the circular concrete structure.

17. View of the circular structure looking south. It was within this setting that the first Pence Springs Hotel once existed. As to what life was like at the hotel about the time of the turn of the 20th Century we can catch a glimpse in a letter published in the Greenbrier Independent on August 11, 1904. The letter is signed "J", and the flow of the letter seems to indicate that it is from a gentleman staying at the resort on his honeymoon: "The hotel is full, nearly all from West Virginia; quite a number from Kentucky, Georgia, South Carolina and Virginia. Quite a number of elegant and lovely ladies grace the lawns and parlor with their beauty and polished manners, and they contribute their skill and culture to the many plays and amusements engaged in during the day and early evenings....all innocent in form and effect. We have delightful instrumental music and vocal voices therewith. The old sentimental Southern songs make your writer's very soul abound and rebound with the realization that we are in Dixie Land."

18. View looking north of the grand building that was once the second Pence Springs Hotel. Today the building is once again empty, and is beginning to decay. Slide taken March 1984.

19. View looking north of the second Pence Springs Hotel under construction in 1918. The best of everything in the way of materials was used in the construction of this hotel. This hotel was the last of the grand southern spas to be built. Architecturally the hotel is in the Georgian or neo-classical style with a twist of Victorian. The central area is Georgian while the wings are Victorian.

20. View looking south of the rear of the second Pence Springs Hotel while under construction in 1918.

21. The Pence Spring Hotel after completion. This post card was produced circa 1925. This hotel spanned the era of the "Roaring 20's" and was a typical speakeasy for the affluent. Yet, the focal point and reason most people came to the spa was to partake of the mineral water, that is, the sulpho-alkaline water of the Pence Spring.

22. The Pence Spring house and bottling works looking south circa 1915.

23. Another view of the Pence Spring house and bottling works circa 1915.

24. This slide was taken February, 1984 at the Pence Spring concrete bridge that connects the spring house with the grove. The three bottles pictured once held water from the Pence Spring, and ginger ale manufactured at the bottling works. The bottle to the left was a water bottle. Its logo is "Pence Springs Water Company Pence Springs, W. Va." in raised relief. The middle bottle is a ginger ale bottle while the bottle to the right is another variety of water bottle. These bottles were bottled circa 1925.

25. An outing at the Pence Spring circa 1920.

26. Life at the Pence Spring circa 1920.

27. The Pence Spring circa 1920. Note that the black gentleman sitting on the bridge in the center of the photo is "Satch Kelly" who was the official spring dipper at the Pence Spring. His tenure at the spring spanned the entire existance of both Pence Springs Hotels.

28. The Sulphur Spring (the Pence Spring) circa 1920.

29. Scene at the Pence Spring in 1922. Note the glass mugs on the concrete spring box. From the look on the two gentlemen's faces captioned in the photo one cannot help but wonder as to what was in the mugs. To me they look crocked.

30. The Pence Spring house circa 1925. Note "Satch Kelly" dipping water at the Pence Spring. Also, note the water bottling operation at the right of the slide.

31. The Pence Springs complex May 12, 1928. Note that the spring house has been altered in that the two longest sides of the spring house have been enclosed.

32. Recent slide illustrating the close proximity of the Pence Spring to the second and still standing Pence Springs Hotel. Concrete steps once connected the two complexes and can bee seen in the slide.

33. A recent slide of the second Pence Spring Hotel building. This hotel was of brick construction. The following is from an advertisement on a Pence Springs Hotel Post Card, "a mountain resort in the beautiful Alleghaneys, is equipped with every modern convenience of the city hotel. Home garden, excellent cuisine, splendid service, famous mineral water. Orchestra, dancing, golf, tennis, swimming, fishing, horseback riding, motoring, marvelous scenery. Located on main line of C & O Railway and the Atlantic & Pacific Highway."

34. The Pence Springs Hotel building today looking north. This hotel was known quaintly as "the Country Home" and opened to the public in June 1918. It was a spacious 60 room hotel of brick construction. It was the talk of the region when completed. The atmosphere generated was Southern-genteel replete with Black employees mainly from the South. It is noteworthy that moonshine liquor along with other more tame alcoholic spirits freely flowed during the Era of the Prohibition at the Pence Spring-Hotel complex. The last record of the Pence Springs Hotel being open to the public was on September 3, 1929, when the last dance of the season was held at the famous though short lived resort. The dance was a final adieu to a grand lady if I may refer to the elegant hotel as such.

35. Slide of the veranda taken on the veranda looking south.

36. The Pence Springs Hotel circa 1930. The following excerpt is from an article written by L. T. Anderson under "Current Affairs" from the February 7, 1982 edition of the Sunday Gazette Mail: "The combined testimony of former patrons created an impression that the hotel was indifferent to time. The flapper and jazz age arrived and then was smothered in the grayness of the Great Depression, but the Pence Springs Hotel seems to have remained ricky-tick and ragtime to the end. When I first saw it, the end had come. Its doors were locked and its grounds shabby. The pin-stripped flannels and straw skimmers were gone from a croquet court now covered with weeds. Where there had been the soft talk of whist players there was nothing."

37. Close up of the front of the Pence Springs Hotel showing details of the facade. Note the large columns and massive grand character of the structure. Slide taken summer 1983.

38. Slide of the east wing of the hotel. Note the open porch on this wing. Also, note the second story porch on the front section of the hotel.

39. The east wing of the hotel. Note the concrete walkway that patrons once used to visit the Pence Spring. Slide taken summer 1983.

40. The east wing porch looking southwest up the porch toward the front. Note the pooled water on the floor. Slide taken summer 1983.

41. The west wing looking northwest. Note the enclosed solarium. Slide taken March, 1984.

42. The west wing looking northeast. Slide taken summer 1983. The one story addition was added during the late 1940's, during the prison era.

43. Rear of the Pence Springs Hotel building July 1983. Note the columned porte cochere, or rear entry. Note the bars on the windows a grim reminder that in 1947 the hotel was converted to a prison.

44. Close up of porte cochere.

45. Hotel manager's quarters, later the prison superintendents quarters. This structure was erected circa 1920.

46. Guest house and supervisory quarters, erected circa 1920.

47. The casino which fronts the west wing of the hotel, July 1983. This structure was erected circa 1920.

48. Motoring garage erected circa 1920. Automobile touring became popular during the life of the hotel.

49. The caddy house erected circa 1920. This structure complimented a fine 9 hole golf course. This building was the domain of the caddy master. Slide taken summer 1983.

50. One section of the 9 hole golf course which lies on a gentle sloping terrace located northeast of the hotel complex. Slide taken summer 1983.

51. Indian mound (46SU321). According to Mr. George Counts of Pence Springs, his father helped construct the golf course. He related that his father had told hime that Number 3 Tee was an Indian Mound prior to serving as a golf tee. Slide taken February 1984. Note the hotel building in the background.

52. The Pence Springs Hotel stables erected circa 1920. The stables have been altered. Slide taken summer 1983.

53. The guard house a reminder of the time when the Pence Springs Hotel was converted to the West Virginia State Prison For Women. The hotel served as a prison from 1947 to 1983.

54. The Pence home erected circa 1920. It was designed and constructed in the same style as the second Pence Springs Hotel. This home sits near where the first Pence Springs Hotel sit.

55. The entrance to the Pence Springs grounds. Slide taken summer 1983.

56. One of the many woodland trails that grace the area north and northeast of the hotel building. Slide taken summer 1983.

57. Slide taken summer 1983 of the hotel grounds.

58. Another 1983 summer slide of the hotel grounds. Many large old patriarchs stand guard over the hotel building and spring. Many of these trees were planted when the hotel and spring house were constructed.

59. One of many wild flowers that grace the grounds of the hotel-spring complex. Slide taken summer 1983.

60. Hotel grounds flora summer 1983.

61. The Pence Spring Grove 1983. Note the large old oak trees that dominate the grove today, and the Pence Spring Flea Market that is taking place beneath the canopy of the trees.

62. Close up of the Pence Springs Flea Market.

63. The Pence Spring house interior and tap February 1984.

64. Steps that once led from the Pence Spring to the second Pence Springs Hotel, looking west from the spring.

65. The old walkway covered partially today by foliage. Note the hotel building on the skyline. The following are impressions and thoughts concerning the Pence Spring. I first visited the spring in 1965 while employed in a summer program with the West Virginia Department of Highways. Upon nearing the spring house grounds, I was overcome by a feeling of enchantment that seemed to envelope the environs of the spring. The grove put me in a dream-like state of peaceful repose. Then suddenly, upon entering the spring house my sense of being spellbound was overpowered by the repugnance of the acrid hydrogen sulphide that entered my nostrils. The gas having dissipated from the spring sulphur water into the air around the spring. I wonder as to whether or not other people have similar reactions upon their first encounter with the spring. Throughout the years when I have visited the spring a certain timelessness, sense of order, and peacefulness of the place come to mind as impressions characteristic of the spring area. Even today, in 1984, the odor of the spring sulphur water startles me just as upon that first encounter. Nevertheless, the environs of the spring is truely an enchanted place.

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PAMPHLETS AND MAPS

Pence Springs Hotel: The Country Home. Hotel advertisement (brochure) circa 1920.

Pence Springs Water Company. Brochure advertising the spring. Circa 1925.

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Front view looking north towards the Pence Springs Hotel building. 1983. Credit: Fred Long.

MANUFACTURING IRON ALONG THE NEW RIVER IN VIRGINIA

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"Iron seemeth a simple metal, but in its nature are many Mysteries." ------Joseph Glanvill (1661)[1]

Iron was probably first produced by the Hittites about 1500 B.C. This metal cannot be separated from its ores by heating alone; extraction requires the presence of carbon. Perhaps the chance combination of charcoal with iron ore, probably in a campfire, led to the discovery of the process of purifying iron. Some prehistoric "scientist" observed the phenomenon and interpreted the facts correctly and the iron age began. The knowledge of iron was then carried from one civilization to another by the men with iron weapons who were conquering other peoples.[2] Some conjecture on the work of primitive iron makers and Early Egyptians using foot bellows have been illustrated by interested artists.[3]

Probably the first attempts to manufacture iron in America were made in Eastern Virginia at Falling Creek in 1622. An attack by Indians, which included the destruction of the furnace, eliminated the possible success of such an enterprise in Virginia for almost 100 years. The Saugus Ironworks founded in 1641 in Hammersmith, Massachusetts, is recognized as "the first successful furnace" in America.[4] Governor Alexander Spotwood is generally credited with the earliest successful manufacture of iron in Virginia by arranging for the immigration of Palatinate iron workers. However, others appear to have been interested in this industry. Large sums were being used to build "furnaces and other works" as early as 1727 and by 1732 there were three blast furnaces and one air furnace established in Virginia. Apparently there were no forges. These facts were recorded by Colonel William Byrd in his book A Progress to the Mines in 1732.[5] The Valley of Virginia had many forges and furnaces before the Revolutionary War and many others were built before the year 1800. The present Southwest Virginia Counties of Smyth, Washington, Carroll, and Wythe, all had some interest in the iron business about the same time.[6]

The New River-Cripple Creek region has a rich history in the production of iron in the late seventeen and early eithteen hundreds. This mineral region contains at least 300 square miles near the New River in what is now Pulaski and Wythe counties between Macks Creek, southwest of Pulaski on the east and the village of Speedwell on the west. The Wytheville-Pulaski line of the Norfolk and Western Railroad forms the northern boundary and the Iron Mountains the southern boundary. Through this region the New River flows generally northeastward from a gap in Iron Mountain south of the town of Ivanhoe for seventeen miles to Draper Station in present Pulaski County. Cripple Creek is the principle tributary which rises west of Speedwell and flows east-

ward eighteen miles to join the New River between the Lead Mines (Austinville) and Ivanhoe.

In this geographic region numerous sites along the creeks and river were ideal for washing ores and locating industeries. In fact, all the requirements for making iron were found in and around what is now the southern part of Wythe County, Virginia. Great forests were growing there and were much needed for the charcoal making. From innumerable outcrops limestone could be cut to supply iron furnace building materials and / or the continuous need for limestone flux ingredients. Adaquate water power was present in the form of Cripple Creek, Francis Mill Creek, and other branches of the New River drainage system. Especially important was the obvious abundance of hematite iron ore in the nearby hills. This is the story of how the settlers of the region produced iron for profit from the seventeen nineties (1790's) until about nineteen twenty (1920). It took men of vision and capital who were capable of aquiring the land with the forests, ores, limestone, and water power, and a human workforce with the skills necessary to produce iron.

The historical records show and the examined physical remains verify that primarily cold blast charcoal furnaces were used in those early days to produce iron along Cripple Creek. One must completely understand what is ment by the phrase "cold blast charcoal iron furnace" to appreciate the basics of how early New River iron was produced. The term furnace implies heat or hot and surely a source of heat energy was a must for the seperation of iron from the other mineral materials - called the "gangue" - with which iron always exists in combination in the iron ores. The fuel used to produce the heat energy was charcoal which was also necessary as a reducing agent in the process of purifying iron. It was an ideal furnace fuel, almost free of sulphur, and its ash consisted largely of lime and alkalies which supply part of the flux required in the process of smelting ore. Many early American Ironmasters continued to use charcoal as long as the required timber could be obtained in sufficient quantities.[7]

This is the interesting process of how charcoal was produced. It was called "coaling" and chemically it was the destructive distillation of wood. By heating wood strongly without access to air the combustible gases methanol, acetic acid, and other volatile products were driven off leaving only the charcoal.[8] It took about twelve specialized workers called "colliers" to keep one furnace going. A circular area called a "pit" or "hearth" thirty to fifty feet in diameter was prepared. Trees were felled, trimmed, cut into lengths, and bundled into cords by the "woodchoppers". The cut wood was thenbrought from the forest to the pit site on a hauling sled. The wood was stacked by the colliers in a conical shape standing the sticks on end. This was done around a central framework of sticks composing a chimney several inches in diameter and about six feet high. The completed cone was about twenty-five feet in diameter at the base. A layer of loose earth, damp leaves, or turf was spread over the entire pile. Chips, dry leaves or other inflammables were placed in the chimney, lighted at the top and the flue partly closed with turf. Holes were drilled in the sides to draw in a limited air supply. The smoldering pile was

tended continuously day and night by the collier who lived close by in a rudimentary log and sod hut. All traces of flames were carefully smothered. It took three to ten days to char an entire pile. Various woods were used in charcoal making but hickory was considered the best species.[9] After charring was completed the collier raked the charcoal into small piles to prevent fires by spontaneous combustion. The product, which consisted almost entirely of carbon, was usually not made until a short time before it was needed.[10] After cooling it was hauled to and stored in a stone-walled coalhouse located near the furnace.[11] The furnaces of Wythe County used on an average approximately 750 bushels of charcoal every twenty-four hours. That represents about nineteen cords of wood. One acre of twenty-five year old trees produced about twenty-five cords of wood. It seems that each furnace consumed almost one acre of forest every twenty-four hours.[12]

Careful examination of the standing remains of the early furnaces along Cripple Creek reveals most impressive structures and the results of masterful workmanship. They were all built close to the side of a small hill so a bridge could be built across to the stack. The ores and other raw materials called the "charge" were put into the furnace from the top. In size most were about twenty-five feet on each side of a square base but the stack heights varied from thirty-two feet to forty-seven feet.[13] Their basic shape is usually described as a "truncated pyramid." The earlier furnaces were entirely open at the top; later ones had a cylindrical erection of brickwork over the top to protect the workers from the heated gases and smoke rising from the furnace. Into the top of the stack or through a door in the tunnel head the raw materials were "charged." Workmen called "fillers" continuously crossed over the wooden bridge connecting the tunnel head with the bank bearing their baskets or wheel barrows loaded with materials to feed the hungry furnace.

The outside of the stack was usually built of large blocks of precisely cut limestone. The interior was lined with fire brick. Between this inwall and the outside limestone the space of several inches was filled with clay, coarse mortar, or rubble, to protect the outside limestone from the decomposing effects of the high temperatures within. Most of the stacks were reinforced, strengthened, and / or supported with strong iron girders, rods, or plates embeded in the walls. The widest part of the inner chamber of the stack - the bosh - measured eight to eleven feet but the nine foot diameter was the most common.[14] Below the bosh was the narrower crucible and below that the hearth or reservoir at the bottom of the furnace into which the molten metal flowed. The hearth was relatively small, only a few feet in diameter because of a necessity to concentrate the molten iron to prevent it from solidifying. The narrowing region below the bosh and above the crucible supported the major weight of the charge.[15]

The term "cold blast" comes from the fact that an "extra" supply of air at atmospheric temperature (unheated) was forced or blown into the fire chamber or crucible region of the furnace. This was done on one, two, or three sides of the furnace where there were arched recesses with a small aperture allowing the insertion ot the tuyeres (twee-yairs) a nozzle-like fixture and an

iron pipe connecting it to a blowing device.[16] Some furnaces used water driven bellows or blowing cylinders, or tubs to furnish the blast.[17] The energy to provide this cold blast came from Cripple Creek, or one of the other nearby creeks or runs. The creek was usually dammed at an appropriate location and the water diverted to the furnace area by means of a ditch and / or wooden troughs, perhaps made of hollowed out tree trunks. The water was used to rotate a water wheel, most frequently of the overshot design that could be driven with a relatively small amount of water flow. The water wheels were quite large probably about twenty-four feet in diameter. The size estimate comes from the comparing of old photographs and some conjecture on the meaning of old records. The blast for the earlier furnaces was presumably obtained by means of large double bellows made of wood and leather. They may have been from twenty to twenty-five feet long and several feet wide. Later came the blowing tubs, including cylinders, pistons, and connecting rods, all made mostly of wood. After many improvements the so-called double cylinders came into use. These consisted of two wooden cylinders set side by side that blew into a third container that helped to control and maintain a uniform air pressure. These overcame the unsteady and insufficient blasts of the old bellows.[18]

Some of the Wythe County furnaces used steam power to generate the cold blast.[19] This probably meant the use of a "boiler" to generate steam to drive some type of horizontal reciprocating engine with a flywheel which provided torque for gears connected to some form of blowing tubs.[20]

Geologically the Virginia deposits of brown hematite intervene between the Potsdam Sandstone and the base of calciferous limestone and are generally more or less disintergrated or decomposed into variegated clays.[21] The rich in iron "Cripple Creek ores" formed in ancient caverns and pot-holes of all sizes and shapes where iron bearing muds settled, filling them entirely. Afterwards, the iron concentrated into masses or pipes or gravels of iron ore (primarily brown hematite - Fe_2O_3). The ores occurred in clays in clefts and cavities in limestone deposits that were irregular but their extent was considered very great. The ore was derived from decomposition of iron pyrites as demonstrated by the fact nodules and masses of the mineral partly decomposed were frequently found.[22] There were two distinct classes of ore distinquishable by their origins. The first, "limestone ores" were lying in the Lower Silurian Limestone. The second, the so-called "mountain ores" were geologically connected to the Potsdam Sandstone. All of the ores showed as high a general character as any brown hematite ore mined in the country (54% metalic iron).[23] The quality was such it probably melted easily in the furnace and required a minimum amount of both flux and fuel.[24] Since the mountain ores were more inaccessible most of the early Cripple Creek / New River furnace iron came from the limestone ores. It was generally found in loose granular clay very free of flint and was easily washed out yielding a full one-half clean ore.[25] A typical mine site was described for the "Graham bank" of Cedar Run Furnace as being located one and one fourth miles S.E. of the furnace, three quarters of a mile W.N.W. from New River, consisting of a circular pit eighty feet in diameter and fifteen to eighteen feet

deep, with the bottom not gone through. No limestone had been observed at that point.[26] The approximate locations of some of the early mines are marked on the Geologic Survey Maps of the region. The actual field locations were found to be known by few local residence. Most mine sites are difficult to reach because of private property restrictions or are blocked and obscured by extensive overgrowth from the relentless processes of succession!

The ores were undoubtedly washed in nearby streams before they were transported to a furnace. Extraneous dirt was probably washed from the ore in at least some kind of sluice.[27] The precise methods and kinds of equipment that might have been used in the construction of some type of "buddle" is uncertain. One elderly gentleman living near a Wythe County furnace recalled visiting a cleaning area when he was about fourteen years old and remembered, "workmen picking balls of clay or mud from a trough and throwing them into a field." He could not recall for sure if there were any mechanical parts or belts or machinery involved. A local hunter pointed out an area where there had once been a dam and a shallow lake or pond he claimed had been used for washing iron ore. It was strategically located between an old mine site and a not too distant furnace.

The operation of an iron furnace - as a chemical process - was fairly simple, but its management involved continuous difficulties. The starting or the "blowing in" of the furnace was a rigorous process. The stack was first filled with charcoal and lighted at the top. After several days, when the fire had burned down and reached the tuyere opening, the furnace was refilled with charcoal. The fire then worked back to the top. The blast was then applied and ore and limestone (flux) put in from the tunnel head in gradually increasing quantities. After a few days, slag and iron ran into the hearth below. The proportions of ore and flux and charcoal were gradually increased until the furnace was working normally.[28] The furnace was continuously filled with alternate layers of charcoal, ore, limestone (flux) for probably nine months or whatever length of time it was making iron and was known as the "blast". The materials were normally not weighed before being "charged" but simply measured in buckets or baskets.[29]

The cold blast charcoal furnace itself served two major functions: It not only reduced the iron ore to iron but also removed the earthy gangue as slag. The charcoal was required for the first function and the limestone for the second. The products were <u>pig iron</u>, <u>slag</u>, <u>and flue gas</u> with probably seven major chemical reactions taking place. One primary process began as the charcoal burned in the blast and some of it formed carbon dioxide gas as heat energy was produced.

1) $C - O_2$ ---------- CO_2 - Heat

As carbon dioxide was formed just above the tuyeres (twee-yairs) and rose through the furnace it came in contact with more of the charcoal and was reduced to carbon monoxide gas (CO).

2) $CO_2 - C$ ---------- $2CO$

The carbon monoxide thus formed was actually the "mystery" agent that <u>reduced</u>, or removed the oxygen from, the iron oxide (ore) to

produce matalic iron.

3) Fe_2O - $3CO$ ---------- $2Fe$ - $3CO_2$

The white hot liquid flowed to the hearth at the bottom of the furnace as it was reduced; and periodically accumulated quantities were tapped off.

The second major process began in the middle of the furnace as the limestone was decomposed into calcium oxide. This probably occured because of the high temperature.

4) $CaCO_3$ ---------- CaO - CO_2

The calcium oxide then combined with the silica to form calcium silicate slag which liquified far more easily than the silica.

5) CaO - SiO_2 ---------- $CaSiO_3$

This glassy slag seperated from the iron and was also collected in a pool at the bottom of the furnace. Since it had a much lower density than the metal it floated on top of the melted iron. This was especially important because it helped prevent the reoxidation of the iron. The melted slag was also tapped off every few hours. The discarded slag was usually dumped into piles near the furnace by an unskilled workman called a "gutterman." Pieces of slag can still be found near the sites of the old furnaces. Not all the impurities in the iron found its way into the slag. Manganese, phosphorous, silicon, and sulfur were usually found present in small quantities in the reduced iron.[30]

Furthermore, air normally contains some moisture which reacts with the carbon (charcoal) to produce hydrogen and increase the carbon monoxide supply. This does absorb some heat energy in the process.

6) C - H_2O ---------- CO - H_2 minus heat

Experience has shown that when moisture is added and higher temperatures used to compensate for the heat absorbed by the reaction, smoother furnace operation and higher productivity result. The hydrogen, H_2 as well as the carbon monoxide produced by this reaction provides increased reducing power.

7) Fe_2O - $3H_2$ ---------- $2Fe$ - $3H_2O$ [31]

These latter reactions demonstrate how varying weather conditions as well as the changing physical condition and water content of the ores and / or flux being used could have a profound influence on the furnace operation.

The "Ironmaster" was the general manager of the furnace enterprise. He was usually the owner or part owner of the company. Many of the early ironmasters became outstanding civic and political leaders while not actively engaging in the iron industry.[32]

Ordinarily it was the responsibility of the "founders", with the aid of the "keepers" to produce quality iron despite all the varying factors. Since the furnace had to be operated night and day the workers labored in two twelve-hour shifts changing at six o'clock. Not many workers were needed to operate the furnace. Two founders, two keepers, two guttermen, two or three fillers, a potter, wheelwright, a blacksmith and a few laborers included all of them.[33]

The cold blast charcoal iron furnace was sometimes called a "fickle mistress" by those who were dependent upon her operation for economic well being.[34] For many, there was some unexplainable reason why ore, charcoal, and limestone produced a hardening metal of a thousand uses. This process was often considered . . . . . "The Mystery of Making Iron."[35]

Without modern laboratory methods and equipment there must have been a lot of guesswork and trial and error involved in operating the iron furnace. The skills of "burdening" the furnace - determining the proper proportions of the ore, flux and fuel for the charge - were learned with experience and a certain intuition and good judgement that was considered a "gift" that the cuccessful founders and ironmasters possessed.[36] The furnaces of Wythe County consumed on an average approximately 750 bushels of charcoal, 12 tons of ore, and unknown quantities of limestone (flux) to produce about five tons of iron every twenty-four hours.[37]

During a blast whenever reduced iron had accumulated sufficently in the hearth it was tapped off into molds to form pig iron, or delivered into large ladles and in turn was poured into small ladles and then into molds for castings. True pig iron was formed when molten iron was allowed to flow from the furnace into the casting bed in front of the hearth and the sand had been sculptured to allow the liquid to follow a main stream or feeder trench called a "sow," then into numerous side gutters called "pigs." These terms, still in use today, come from a comparison of the iron casting bed to a sow and her litter of suckling pigs. Before the iron became hard the pigs were separated from the sow and the latter broken into smaller pieces.[38]

The casting of hollow ware such as pots, pans, skillets, kettles, and stove parts was done by the "potter" using sand molds in the casting shed. A pattern of wood or iron made slightly larger than the finished casting was placed in a box called a "flask" and a sand mixture with a small amount of clay and moisture was packed tightly around the pattern.[39] Many flasks were made in two parts so the pattern could then be easily removed. A channel or "gate" had to be provided (carved in the sand) from the mold to the pour or "sprue" hole as well as an overflow vent called a "riser" before the mold halves were closed and secured. Molten iron was then poured into the sprue and it filled the cavities completely. When the iron cooled the sand was scraped away to remove the casting.[40] All unusable parts, such as the sprues, risers, and gates were cut off and the pieces sold at reduced rates as "gate metal" along with the pig iron.[41] Many decorated stove plates and other castings still remain bearing testimony to the artistic yearnings of these early artisans in iron.[42]

Considerable information presented here was obtained as a result of the extensive research done at Hopewell Village, Pennsylvania. Many of the slides which accompanied the original presentation of this paper at the 1984 New River Symposium were taken at Hopewell. They have many working examples of the equipment and facilities developed by the very early iron making industry. The materials used and many processes involved are well demonstrated, exhibited or explained. It is recomended that everyone who is interested in this topic write for complete information.[43] A visit to Hopewell is a most rewarding and free adventure into the past!!

FOOTNOTES

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4. Rutland, p. 10.

5. James M. Swank, History of the Manufacturing of Iron in All Ages (Philadelphia: 1892), pp. 258-60.

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7. Arthur C. Bining, Iron Manufacture in the Eighteenth Century (Harrisburg: Pennsylvania Historical and Musium Commission, 1979), p. 61.

8. Charles E. Dull, Clark Metcalfe, John E. Williams, Modern Chemistry (New York: Henry Holt and Company, 1958), p.210.

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12. Mary B. Kegley, "Charcoal Iron Furnaces of Wythe County, Virginia," Proceedings (Boone, North Carolina: New River Symposium, 1984), appendix.

13. Andrew Smith McCreath, The Mineral Wealth of Virginia (Harrisburg, Pa.: Lane S. Hart, 1884), 78.

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17. Bining, p. 68.

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20. Theodore Baumeister, "Steam Engine," Encyclopedia of Science and Technology (New York: McGraw-Hill Book Company, 1971).

21. McCreath, p. 10.

22. McCreath, p. 11.

23. McCreath, p. 74.

24. McCreath, p. 75.

25. McCreath, p. 76.

26. McCreath, p. 83.

27. Joseph E. Walker, Hopewell Village the Dynamics of a Nineteenth Century Iron Making Community (Philadelphia: University of Pennsylvania Press, 1966), p. 251.

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30. Dull et al., p. 596.

31. Thomas L. Joseph, "Iron Extraction from Ore," Encyclopedia of Science and Technology (New York: McGraw-Hill Book Company, 1971).

32. Bining, p. 120.

33. Bining, p. 69.

34. Walker, p. 139.

35. Rutland, p. 7.

36. Bining, p. 69.

37. Kegley, Appendix.

38. Bining, p. 68.

39. Harold V. Johnson, Manufacturing Processes Metals and Plastics (Peoria, Ill.: Charles C. Bennett Co. Inc., 1973), p. 91.

40. John L. Feirer, General Metals (New York: Webster Division, McGraw-Hill Book Company, 1959), p. 235.

41. Walker, p. 151.

42. Bining, p. 69.

43. Hopewell Village National Historic Site, U.S. Department of Interior, National Park Service, R.D. # 1, Box 345 Elverson, Pa. 19520.

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CHARCOAL IRON FURNACES OF WYTHE COUNTY, VIRGINIA

Mary B. Kegley, Wytheville, Virginia

INTRODUCTION

Although it is difficult to establish the exact date iron operations began in the New River mineral region, there is a document which indicates that iron-works were being considered on Chestnut Creek, a branch of New River, as early as 1779. Richardson Owenwas requesting assistance from the Virginia Assembly, claiming that a great quantity of ore "is and may be got convenient to a never failing stream, sufficient to manufacture iron in the most extensive manner... there being none [iron works]...yet erected or begun on the Western Waters." Although the Assembly approved an additional 5,000 acres of land for Owen, nothing else is known of him or the iron works.[1]

In present Wythe County, the furnace operation at Poplar Camp not far from the New River in the southeast part of the county, is said to be among the pioneer operations. Swank in his research on the iron industry relates that a stone from the furnace was dated 1778, but there has been no verification of this point and the date appears to be too early in view of Owens' petition.[2]

However, there are a few references to "iron ore banks" in the land record books. For example, in 1785, Daniel Carlin (Carland) was selecting land on Crooked Creek and in 1786 on Little Reed Island Creek. In the same year Andrew Kincannon was speculating on similar lands on Wallens Bottom, now Grayson County, and William Love was making choices on Cripple Creek in present Wythe County in 1787. All of these choices are on the New River watershed. On the Holston River further west, an iron works was established as early as 1786, and Joshua Jones and his associates were still choosing sites to include iron ore banks in 1797.[3]

William Love, mentioned above, was a blacksmith, and in 1792 he and his partner James Byrne agreed to build a bloomery at the south end of Love's mill dam on Cripple Creek, the exact location unknown. The bloomery operation was not part of a furnace operation, but a forge where blooms, that is large blocks of iron were hammered into shape with a heavy trip hammer. Furnaces produced hollow ware, sows and pigs.[4] This is the first documented iron business in what is now Wythe County, on the waters of New River. However, this presentation considers only the cold blast charcoal iron furnaces of the New River mineral region.

SPEEDWELL FURNACE

Speedwell furnace, located just west of the small town of Speedwell on the waters of Cripple Creek, was established some time prior to December 10,1799, the date a road to the Speedwell iron works is mentioned.[5] In November of that year, Jehu Stephens sold the right to use iron ore on his property to Francis Preston, and in 1801 a tract of 200 acres was conveyed to Preston. In 1804 a road order mentions Preston's iron works.[6]

A "Ballance Book" for the Speedwell iron furnace dated 1807 has survived showing amounts due Francis Preston from 148 citizens of North Carolina, Kentucky, Tennessee and several counties in Virginia. The accounts were signed by William Brownlow, apparently the bookkeeper for Preston.[7]

Preston sold seven tracts of land, including the Speedwell iron works and the right to use the ore on the Stephens' property to William King. However, the deed was not made until 1821 following King's death. In the meantime William Love and Jehu Stephens also conveyed land to King or his heirs.[8]

The firm of King, Trigg and Morgan has traditionally been associated with the Speedwell Furnace. Morgan was said to have been the foreman. The only land

record mentioning these names is a conveyance from Henry Stephens giving them the privilege to dig and haul ore from his land (no location given). A tombstone of iron, said to have been cast at the Speedwell furnace bears the inscription "Mary Trigg King Morgan, born October 13, 1807, died September 17, 1808." The marker now hangs on the wall of the old courthouse in Wytheville.[9]

The next owner of the furnace was Alexander Smyth, noted lawyer, statesman, and general in the War of 1812, whose home was located in Speedwell, not far from the furnace. When Smyth died the 560 acres of the Speedwell tract was inherited by his daughter Frances Piper (later McTeer) in the 1830's. Nothing appears to have been done with the property during the Smyth family ownership until 1872 when Frances sold the land to Robert Gilland Baker, an Englishman, who joined D.E. James, William C. Auman, and Robert Densham as partners in 1873 to manufacture pig iron with immediate plans to start up the furnace and build a mill dam.[10] The partners provided either cash, land, livestock, corn, hay, cord wood, lumber or merchandise or a combination of these. The company was known as the D.E. James Company, later the Speedwell Iron Company. The present furnace and store buildings probably date from this period. The furnace lands were purchased by Crockett Company in 1881 for $15,237.50. This company was composed of James S. Crockett, John W. Robinson and M.B. Tate.[11]

In 1880, under the James ownership, the furnace with a capacity of 1,400 tons was manufacturing pig iron in February and April of that year. The following year under the Crockett management, 600 tons of car-wheel pig iron was produced using 1,450 tons of ore and 88,700 bushels of charcoal. The furnace employed 50-60 men and used 2.4 tons of ore and 147.8 bushels of charcoal for each ton of iron produced. The finished product was marketed in Baltimore, Wilmington, Cincinnati and St. Louis. In 1882 the furnace made an average of 5 tons a day and ran from April until August when it "blew out" on account of damage done by high water of Cripple Creek. It went back into blast a month later and continued until February of the next year. There were 450 tons of iron on hand in 1883 and production was unlikely for the remainder of the year.[12]

Transportation improved in 1882 when plans were underway by the Norfolk and Western Railroad for construction of a spur line through the Cripple Creek Valley from the New River to Speedwell to service the entire iron industry of the area. Prior to this improvement, wagons transported the pig iron to the nearest railroad stations on the main line, either at Crockett, Wytheville or Max Meadows.[13]

The stack at the furnace measured 32 feet by 9 feet, and in 1887 the operation was owned by John Robinson of Graham's Forge. The company name changed to Wythe and Speedwell Mining and Manufacturing Company and the property was transferred to the Pulaski Development Company in 1890, the date of the last blast.[14] Later owners included the Carter Coal and Iron Company and the Virginia Iron Coal and Coke Company.[15] Pieces of iron and a variety of slag can still be found at the site.

CAVE HILL FURNACE

The Cave Hill furnace was located south of Speedwell and was constructed in 1881 by Robert Sayers. The stack which no longer stands measured 47 feet by 10 feet and was in blast the summer of 1882. A visit to the site revealed that it was several feet from Dry Run, a name also applied to the furnace. Limestone blocks and brick rubble are scattered over the area, and the red-stained road leads to the mine. After operating three or four weeks in 1882, the furnace "blew out" after making 80 tons of iron. It was back in production by September 1, manufacturing 5 tons a day.[16] Nothing else is known of its operation.

Francis Mill Creek, a branch of Cripple Creek was noted for its rich ore deposits nearby and consequently noted for its furnaces---Beverly,Noble and Wythe.

BEVERLY FURNACE

Beverly Furnace, built about 1880, had a capacity of 10 tons, and had a stack which measured 33 feet by 9 feet. The furnace stood on Francis Mill Creek near where the Beverly Mill now stands. In 1882 the furnace was owned by Crockett and Company and produced 950 tons of car-wheel pig iron. There were 60-80 men employed and the product was sold in Baltimore, Wilmington, Cincinnati and St. Louis.[17]

A report filed in 1882 revealed that the furnace was in blast on April 1 and production averaged 5 tons a day. In July, the furnace was out of blast for three weeks to replace a hearth, but production resumed until December 24, averaging 6 tons of iron daily during the nine months. At the end of the year 250 tons of iron were on hand.[18] In 1887 John Robinson was the owner, and in 1890 the furnace was sold with others, to the Pulaski Development Company. Later owners included the Carter Coal and Iron Company (1898) and the Virginia Iron Coal and Coke Company (1899)[19]

NOBLE FURNACE

The Noble Furnace, also called Iron Dale, Irondale, and Norma, stands south of the Town of Cripple Creek on Francis Mill Creek. The stack measures 33 feet by 11 feet and was built about 1880-1881 by the Wythe Iron Company.[20]

In 1880 agreements were drawn up whereby John W. Coe of New York and John S. and Henry Noble of New Jersey assigned their interests to the Wythe Iron Company. The furnace was erected on 10 acres of land known as the Nehemiah Fry tract. In 1881 a list of the personal property on the premises was given in order to secure debts. Everything for the manufacturing process was included. Consequently we have the engine house, the coal house, bridge house, stables, corn cribs, the 8 horsepower engine, the 60 horsepower steam engine, two cylinder boilers, a blowing machine, the buddle or ore washing apparatus, anvils, bellows, iron, steel, ore and coal barrows, wheel barrows, merchandise in the store, scales, hay, corn, straw, fodder,and a buggy with bridle and harness.[21]

In 1881 the first year of manufacture, the Wythe Iron Company had a contract to sell 200 tons out of the first production to the Lobdell Car-Wheel Company of Wilmington, Delaware at $31 per ton (2,240 pounds).[22] In that year the furnace produced 700 tons of car-wheel pig iron from 1,700 tons of ore and 108,000 bushels of charcoal. The furnace employed 60-70 men and used 2.4 tons of ore to produce one ton of iron. The product was sent to New York, St. Louis, Wilmington, and Cincinnati.[23]

Early in 1882 the business was sold to John F. Slaughter, George Dunn and James Walker and the furnace went into blast on July 25, with plans to run until the first of January; however, after running about two months and manufacturing 400 tons of iron, the furnace was shut down due to the scarcity of transportation and labor. It blew in again on December 1, with plans to run until March 1, 1883. Average production was 6-7 tons per day. In 1882 there were 300 tons of iron on hand.[24]

In 1883 Slaughter, Dunn and Company formed the Norma Iron and Mining Company and the ten acres where the furnace was located and the 15,000 acres of mountain land for ore and wood was transferred to the new company. They manufactured number two foundry pig iron with the brand "Norma Iron Company" using local red and brown hematite ores. This furnace was a closed top, cold blast furnace and operated by steam, but was not considered to be successful and after

operating several blasts was sold in 1885 to Crockett and Company.[25]

Traditionally the engines installed to produce sufficient air for the furnace were said to be too small to run the furnace to capacity. However, some local citizens report that the furnace was improperly charged by a furnace man who had a grudge against the owners. The furnace chilled and was clogged with the limestone-ore-charcoal charge.[26]

A tramway line was built along Francis Mill Creek to transport the iron to the main line of the rialroad. The engine house survives. In 1886 the furnace again changed hands becoming the property of the Iron Mountain Company. It was purchased the next year by the Clinch Valley Coal and Iron Company and finally by the Pulaski Iron Company.[27] During the latter period, the Pulaski Iron Company operated the boarding house, the mines and buddle, but shipped the washed lump ore to the furnace then operating in Pulaski. Dinkey engines and steam shovels were part of the mining scene. The mines were located about two miles from the Noble Furnace and can still be found if rough roads and wooded paths are followed. The Frye trestle, built about this time, improved transportation to Pulaski.[28]

WYTHE FURNACE

The third furnace on Francis Mill Creek formerly stood near the Noble Furnace and was named Wythe or Little Wythe Furnace. Earlier it had been known as the Stephens or Porter Furnace.[29]

The 168 acres (later narrowed to 6-7 acres) upon which the first furnace stood, was surveyed in 1790 and a grant issued to James Byrne and William Love in 1796. This was Byrne's only tract of land in Wythe County, although Love owned numerous tracts near the Speedwell Furnace. This fact apparently led Whitman to erroneously conclude that the bloomery (forge) operated by them in 1792 was located at Speedwell, when in fact it was at this location on Francis Mill Creek. The furnace operation appears to have developed about 1807 under the direction of Henry Stephens.[30]

Henry Stephens and Thompson Carter had an agreement with John Love to erect and build a furnace "with the necessary dam, water works and casting house." As soon as it was ready to blow, then William King was to find one-third of the flasks and patterns necessary for making hollow ware. Stephens and Carter agreed to sell their part at the rate of $25 per ton (2,268 pounds). In 1809 Love sold the furnace tract to the heirs of William King, and in 1814 Stephens' share was sold to King.[31]

The furnace was later owned by David Pierce and Alexander Pierce and from 1848 into the 1870's it was known as the Porter Furnace. In 1859 Lesley identified the furnace as Porters and stated it was built 30-40 years ago, and was abandoned and in ruins in the 1850's.[32]

The property was mortgaged in 1860 and sold nine years later for debts. Robert Sayers, Jr. became the purchaser for $950. In September 1872 a partnership was formed (Sayers and Oglesby) to manufacture iron, Robert contributing the three tracts of land including the Stephens [Porter] furnace tract.[33]

In 1873 the furnace was rebuilt with a stack measuring 25 feet by 8 feet. In was an open top, cold blast furnace. In 1880 the capacity reported was 3,000 tons annually. In the following year 850 tons of charcoal pig iron was made from 2,300 tons of ore using 60-70 men. The product was sold in Baltimore, Wilmington and St. Louis.[34]

In 1882 the furnace went into blast on June 20th and ran until November 20, making about 6 tons daily. The furnace used local red and brown hematite ores, producing car-wheel pig iron. Selling agents were R.C. Hoffman and Company in Baltimore.[35]

In 1886 the property was sold to James S. Crockett, N.P. Oglesby, John W. Robinson and M.B. Tate. The year before the Norma Iron Mining Company had sold them a tract of land near the Wythe Furnace with the right to "build, use, maintain and operate a railway or tramway along Francis Mill Creek over the lands of the Norma Company and below the Porter or Wythe Furnace."[36]

The date of the last blast at this furnace is unknown and it is no longer standing. However, a piece of bar iron survives with the brand "Wythe" on it. Local citizens state that other similar bars are at the bottom of the creek where the wagons had difficulty crossing. To lighten the load the bars were thrown in the creek.[37]

Rich ore deposits continued to be mined by the Virginia Iron Coal and Coke Company and the Pulaski Iron Company long after the furnace ceased to manufacture iron.[38]

RAVEN CLIFF FURNACE

The first forge and furnace at the present site of the Raven Cliff Furnace on Cripple Creek was probably established about 1810 by Joseph Bell and Andrew Kincannon. The property was mortgaged several times and sold for the debts of the various owners. From 1835 until 1857 the property was owned by James T. Gleaves who sold it to William Wilkinson. Part of the property was sold to Richard W. Sanders, John W. Green, J.P.M. Sanders, James N. and F.E. Kincannon and A.K. Fulton in 1861. In 1866 James, John and William Wilkinson and their wives transferred the 28 acres with the furnace and forge and five other tracts of land to Andrew K. Fulton and John W. Green.[39]

Capron states that the furnace at Raven Cliff was rebuilt in 1861 giving some credence to the idea that it was here that Green carried on one of his operations for the Confederacy. The two furnaces, Mt. Hope and Beauregard, whose locations have not been determined, were operated by Green during the Civil War and provided iron for the Confederacy. Several records pertaining to this operation were located at the Perkins Library at Duke University.[40]

In 1880 the Raven Cliff Furnace was owned by Crockett, Tate and Company and had a capacity of 3,000 tons. In 1881 the furnace produced 1,500 tons of car-wheel pig iron employing 80-90 men. The product was marketed in Baltimore St. Louis, Cincinnati and Wilmington.[41]

In 1882 Raven Cliff Furnace went into blast the first of May and averaged about 7 tons of iron per day and operated until December 20, "working finely all the time." In that year they had 600 tons of iron on hand and because of the low prices for iron, it was unlikely that they would operate in 1883.[42]

The furnace stack measures 29 feet by 9 feet, and in 1884 was owned by John W. Robinson. It was reported at that time that the first furnace was abandoned in 1829 although an attempt had been made to blow it in, in 1856. The furnace chilled and the project was set aside. The furnace used brown hematite ore from a bank four miles west of the furnace.[43]

In later years the Cripple Creek extension of the Norfolk and Western Railroad had a spur line into the site in order to transport the ore and the finished product. Today the road-bed leads to a picnic and camping area along the creek. Butresses from an abandoned bridge across Cripple Creek survive.

In 1886 the Wythe Speedwell Mining and Iron Manufacturing Company was organized and became owner of several furnaces in the county, including Raven Cliff, Speedwell, Wythe, Foster Falls and Beverly. In 1890 this company sold 44 tracts of land totalling more than 8,000 acres to the Pulaski Development Company together with all of the above mentioned furnaces. Subsequent owners were the Carter Coal and Iron Company and the Virginia Iron Coal and Coke Company.[44]

EAGLE FURNACE

Eagle Furnace, also known as Grey Eagle, is located on Cripple Creek about one mile below Raven Cliff Furnace and has a stack measuring 34 feet by 9 feet. Whitman states that it was built in 1863 by Stuart and Tuttle who operated it before selling to a Mrs. Preston who also was supposed to have operated the furnace. It was sold to David McConnell and included a forge as well as a furnace. Benjamin Gallup was said to have operated both. He was followed by David Huddle and the Crockett Company.[45] No court or other records have been found to support most of these statements.

However, in 1869 Samuel B. Williams transferred 111 1/2 acres to Thomas G. McConnell, D.G. Thomas, Jno. H. Stuart and David K. Tuttle operating as Stuart and Tuttle and Company. In 1872 McConnell obtained an additional tract of 777 1/2 acres from William and Augustus Cox. Both of these tracts formerly belonged to Elias Groseclose. In 1882 following a lawsuit involving Groseclose, Coxes, McConnell and others, the larger tract was transferred to David P. Graham and John W. Robinson. No disposition of the other tract has been found.[46]

In 1880 Crockett Sanders & Company were the reported owners of Eagle Furnace which was not in blast, although it had a reported capacity of 1,200 tons. In the same year Grey Eagle was reported to have been owned by B. Gallup who reported a capacity of 800 tons of iron. Eagle and Grey Eagle were apparently separate entities; the one report intended for the forge, while the other was for the furnace. In the same year Graham and Robinson were also the reported owners.[47]

In 1881 the furnace produced 600 tons of car-wheel pig iron from 1,450 tons of ore and 90,600 bushels of charcoal using 2.4 tons of ore and 151 bushels of charcoal per ton of iron produced. They employed 60-70 men and the product was sold in St. Louis and Baltimore.[48]

In 1882 the furnace went into blast on October 15 and plans were made to operate until the following March. The average production was about 5 tons daily. In 1884 Crockett Company owned four stacks in Wythe County: Beverly, Eagle, Raven Cliff and Speedwell. The furnace was said to have been abandoned in 1892, but Robinson writing about the furnaces of Wythe County states it was in operation in 1895 under the leadership of Graham and Robinson.[49]

In 1886 the furnace was owned by Speedwell Mining and Manufacturing Company and in 1890 was transferred to the Pulaski Development Company, followed by the Carter Coal and Iron Company and in 1899 to the Virginia Iron Coal and Coke Company.[50]

WALTON FURNACE

Walton Furnace located on Mine Mill Creek about two and one-half miles north of the New River was built on four acres of land about 1872 and measured 33 feet by 8 1/2 feet. Jerome Blair leased the land to Milton Howard and Dr. Richard Walton Sanders for ten years, giving permission to erect the furnace and other buildings necessary for the manufacture of iron, including the store house (now Blair's house), corn house and stables.[51]

In 1879 Blair leased the furnace to Lobdell Car Wheel Company of Wilmington, Delaware for a period of eight years to begin on February 27, 1882. Blair was to receive 50 cents a ton of metal made and was to be preferred for hauling and supplies.[52]

In 1880 Sanders and Howard sold 400 acres of land to Lobdell Car-Wheel Company with some mineral rights reserved and others granted to Lobdell.[53] The furnace was not included but had been leased by the Blairs earlier. In the same year, Lobdell purchased the Panic (White Rock) Furnace in Smyth County, as well as Brown Hill Furnace in Wythe County. In 1880 the furnace was not in production

but its capacity was reported to be 800 tons, the amount produced the following year using 2,000 tons of iron ore and 70-80 men. The product was sent to the Lobdell Company in Wilmington. In 1882 the furnace produced 5 tons of iron daily.[54] The last blast at the furnace was said to be about 1888. The furnace operated by steam and the iron ore was roasted on the site before being used in the furnace.[55]

Nine letters from the Lobdell Company to J.H. Wissler, Esq. apparently the agent at the furnace, have been preserved at the Eleutherian Mills Historical Library in Delaware. Other papers (70,000) of the Lobdell Company are located at the Historical Society of Pennsylvania in Philadelphia.[56]

From these letters written by George Lobdell, between 1886 and 1889, only an inkling of the concerns for the Walton Furnace operation can be determined. In 1886 there was a conclusion that 6,450 cords of wood ought to make 1,500 tons of iron." Also the founder's report showed that for the year the furnace was doing very well and he requested that the iron be sent as fast as possible in 100 ton lots.[57]

In March 1887 Spriggs was to put in a new hearth and to "get out rock for another one at once." Andy Porter was to make hearths for "coalings" and begin coaling as soon as possible.[58] In 1889 Lobdell bemoaned the fact that there was not more coal so that the furnace could run longer and he suggested ways to correct a shortage of water at the Porter buddle.[59]

BROWN HILL FURNACE

The Brown Hill Furnace is located on State Route 94 where it crosses Cripple Creek, about one-half mile south of Porter's Crossroads near Route 641. The furnace was built about 1870 on a 30 acre tract and measured 40 feet by 8 1/2 feet and had a capacity of eight tons. It was operated by steam.[60]

In 1872 C.M. Kitchens and his wife sold the land to the Brown Hill Iron Company. Members of the company included Abraham, William M., W.S. and James B. Painter, John Walters and Benjamin Rowe. The company was sometimes referred to as Abraham Painter and Company. [61]

In 1880 the Painters sold the furnace with buildings and machinery to the Lobdell Car Wheel Company but reserved the corn mill. Possession was to take place January 15, 1881 when the lease, then in effect, would expire. Abraham Painter also conveyed a buddle tract giving Lobdell the right to use water, erect buddles for washing ore and the right of ingress and egress to the property.[62]

The furnace was rebuilt by Lobdell in 1882 and went into blast on July 1 of that year making six tons of iron a day. Work continued for a few months and with 500-600 tons of iron on hand no preparation was being made for further production. Apparently the ore used was of a low grade and the one blast by Lobdell gave "rather disastrous results." [63]

POPLAR CAMP FURNACE

Although the date of the first furnace at Poplar Camp is given as 1778, there is no concrete evidence to suggest an industry was at this location until 1798. On October first of that year, Greenberry G. McKenzie and Caleb Bobbitt of Grayson County and Thomas Blair of Wythe County formed a partnership to"carry on an iron furnace " on the land purchased from William Ross in 1797. Blair was to manage the building of the furnace and the production of "good merchantable castings or hollow ware." He was to have as much land as necessary for "erecting dwelling houses, barns, stables, cole houses, and cole yards" for the use of the furnace. McKenzie and Bobbitt were to supply the provisions and one-third of the timber and ore for Blair who was to pay them $1,000.[64]

Interests of McKenzie and Bobbitt in the furnace tracts (590 acres) were sold in 1802 to Thomas and William Herbert and David Pierce. In 1808 the Herberts sold their interests to Pierce. Blair had maintained his one-third interest in the furnace.[65]

David Pierce, a tavernkeeper, and owner of a substantial interest in the lead mines on New River, was an entrepreneur of the first order. He operated grist and saw mills, an iron forge and furnace; owned four bark mills, five anvils, as well as blacksmith, tanner's and shoemakers' tools. The bar iron, castings, bellows, tools, flasks, patterns and castings belonging to the furnace are mentioned in the appraisal of his estate in 1833. There were more than 15,000 pounds of bar iron and more than 36,000 pounds of castings on hand at his death. Following his death 69,000 pounds of lead were sold for $5,000. The appraisal and sale of his estate covered 28 legal pages in the will book and the sale brought in more than $18,000, a substantial sum for the 1830's.[66]

A block of limestone with the inscription "D. Pierce 1810" was taken from the old furnace and was preserved by family members for many years.[67] The last blast at the furnace took place sometime between 1817 and 1827 and the furnace was in ruins prior to the Civil War and not mentioned again.[68]

BARREN SPRINGS

The furnace at Barren Springs was built by David Graham about 1853 and measured 7 feet across the bosh and was 40 feet high. In 26 weeks of 1855 and 1856 they made an average of 450 tons of iron. In 1859 the furnace was managed by Charles Lyons. The furnace stands on the south side of the New River near the community of Barren Springs near where the road (Route 100) crosses the New River and near the railroad line.[69]

In 1873 the furnace was rebuilt by David P. Graham and John W. Robinson and in 1880 was owned by J.W. McGavock and Company but was not in blast. McGavock inherited the property from his father-in-law David Graham. In 1882 the furnace began production on April 1 and averaged 6 tons a day. In May it stopped long enough to install a new hearth and resumed production until February 1, 1883. The daily production averaged 5 1/2 to 5 3/4 tons. In 1882, 450 tons of iron was on hand at the furnace. In that year the heirs of David Graham sold their inherited interest in the mineral rights for $15,000 to Charles B. Squire of New Jersey, and the McGavocks sold the land (1,583 acres) and the mineral rights for $35,700. The sale included the ferry, boats, and fixtures, although the family reserved the right to cross the river with wagons, teams and produce, free of charge. The school and the Methodist Church were excepted from the sale. In December 1882 the Passaic Zinc Company assumed the debt and became the purchasers.[70]

The Norfolk and Western Railroad extended their line to Barren Springs prior to 1886 and the Passaic Zinc Company provided 1 1/2 acres of land for the depot which was to be built within one year with buildings for passengers and freight. Two years later a siding for loading and shipping ores was to be provided on Periwinkle Branch.[71]

In 1899 the Passaic Zinc Company leased the Barren Springs property to the Virginia Iron Coal and Coke Company for 20 years with extensive provisions regarding royalties, care of the buildings, timber rights, washing and loading zinc, and arbitration if disagreements arose.[72]

FOSTER FALLS FURNACE

Foster Falls Furnace also known as Pierce, New River or Roaring Falls Furnace is situated on the south side of the New River not far from the present Interstate 77 and the shot tower, in the community of Foster Falls. The furnace was built by the Foster Falls Mining and Manufacturing Company in 1880-81 and was first operated by water power from the New River.[73] The furnace measured 25 feet by 8 feet, and had a capacity of 12 tons per day.

In 1881 the furnace was owned by the New River Iron Company and produced 950 tons of car-wheel pig iron from 2,450 tons of ore and 146,000 bushels of charcoal using 2.5 tons of ore and 140.9 bushels of charcoal to produce one ton of iron. The furnace employed 70-80 men and the product was sold in St. Louis, Baltimore, Cincinnati and Wilmington.[74]

In 1882 the furnace went into blast in January but halted in March and April to install a new hearth. It produced 6 3/4 tons of iron per day. It returned to blast on April 25, and stayed in production until December 25, when it blew out. At that time it had 1,000 tons of iron on hand. If the price continued to be low as predicted there were no plans to operate in 1883.[75]

In 1884 the furnace was owned by the Fosters Falls Iron and Manufacturing Company. The furnace was described as an open top, cold blast, charcoal furnace using local hematite ores. The product was car-wheel pig iron. The furnace had an annual capacity of 2,000 net tons and the iron was branded with the name "Pierce". The company president was J.W. Robinson.[76]

The furnace operated until 1890 when it was sold to the Pulaski Development Company and later to the Virginia Iron Coal and Coke Company in 1899. The latter company increased the capacity of the furnace by building a higher stack and eliminating the water power bellows. The blowing engine replacement was operated by steam from two boilers fired by gas from the furnace.[77]

The last blast at this furnace was made in 1914. The ore mined later was shipped to Pulaski for working. At this time Jim Bryant and Riley Lawson were foundry men.[78] The furnace still stands below the road near the Foster Falls train station.

GRAHAM'S FURNACE

The Graham family were involved in the manufacture of iron products in Wythe County for more than 75 years. It began with David Graham about 1826 when he purchased land in the vicinity of what is now known as Graham's Forge. The former owners, James and Andrew Crockett, had 1,200 acres on Reed Creek and Cedar Run where they operated an iron works as early as 1796. They received permission to build a dam across the creek and to build a forge in 1805.[79] The mill stands today near the site, and stones from the first furnace were used to build the basement.

Watson erroneously gives Graham credit for beginning Cedar Run Furnace about 1800, but that was the year he was born. When he was 26 he purchased 2,000 acres of land and began his iron empire, soon becoming the ironmaster of Wythe County.[80]

There were several stacks in the same vicinity. They were known as Parry Mount (Paramount) One and Two and Cedar Run.[81] Many of the account books of the furnace operation are filed at the University of Virginia where 130 ledgers and numerous loose papers are available for research. Parry Mount One was located 400 yards west of the second one and about three miles southeast of Graham's forge. The first furnace was apparently built by Crocketts, and was abandoned in 1832 and in ruins in 1859. Parry Mount Two on the road from the forge to Barren Springs was built in 1832 and supplied the forge. It was abandoned in 1852 and was in dilapidated condition in 1859.[82]

In the Graham records the Fair Play and Paint Furnaces are also mentioned in the mid-1850's but no location is given, and it is not clear whether these were just additional names for the same furnaces or not.[83]

The forge and rolling mills were built about 1800 and rebuilt in 1856 with four refinery fires, and one hammer worked by water. In 1856 it produced 161 tons of blooms and 23 tons of bar iron. The rolling mills and nail works were established in 1828 with three heating furnaces, four trains of rolls, five nail machines and one hammer.[84]

The production records for 1857 show the forgemen manufactured blooms and bar iron and from January 1 until April 10, produced 1,330 pounds of nails.[85]

Fleming K. Rich, a cabinet and coffin maker of Wytheville, purchased iron products regularly from Graham. From 1841 to 1846 he bought oven lids, spider lids, camp kettles, flat irons, andirons, pots, a back plate, a stove plate, and a kettle. To settle his account Rich provided hauling service to Wytheville, Hillsville, Newbern and Saltville.[86] Other iron products made at Graham's furnace and forge included iron water pipes, stoves, hobble weights, iron rails, giant kettles, minature lard lamps, small ovens and lids, andirons, pots and nails, as well as the pillars for the brick mansion house.[87]

In 1850 Graham's real estate was valued at $70,000. He owned 29 slaves. In 1860 his personal property was appraised at $55,800 and in 1863 he paid tax on 6,907 acres of land.[88]

During the Civil War, Graham's Furnace was one of the three in Wythe County providing iron for the Confederacy. Unfortunately cannon made with the Graham metal provied to be completely unreliable. Tredegar Ironworks informed Graham that several of the guns had misfired and the cannon burst.[89]

In 1835 Graham married Martha Peirce, daughter of David Peirce mentioned in connection with Poplar Camp Furnace. They built their brick house not far from Cedar Run Furnace, adding on to it in the 1850's. The ironmaster David, died in 1870, leaving his son David Peirce Graham, known as Major Graham, and his son-in-law John W. Robinson to continue the business.[90]

In the 1880's the reports indicated that there was an old and a new furnace owned by Graham and Robinson. The furnace was not in blast that year, although the capacity was reported to be 400 tons.[91]

In 1881, the Cedar Run Furnace with a stack 32 feet by 9 feet produced 1,250 tons of car-wheel iron from 3,021 tons of ore and 181,250 bushels of charcoal using 2.4 tons of ore and 164.1 bushels of charcoal for each ton of iron made. The furnace then employed 80-90 men. The product was sold in St. Louis, Louisville, Baltimore and Wilmington.[92]

In 1882 the furnace went into blast on April 20, 1882 averaging 5 tons a day. Although the plan was to operate until December or January they were forced to close down for four weeks in August because an in-wall fell in requiring a new hearth. The revised plan called for operation to continue until March 1, 1883 The average produced was 5 tons a day, and at the end of 1882 there were 200 tons on hand. They anticipated perhaps a short blast in 1884.[93]

The report made in 1884 stated that the Cedar Run Furnace had been built in 1832, was a cold blast furnace operated by water power. It is the only furnace we have a picture of with the water wheel in place. The ore was mined on furnace property and their specialty was car-wheel pig iron. R.C. Hoffman was selling agent for iron merchants of Baltimore. He represented 15 charcoal furnaces in Wythe County including Raven Cliff, Barren Springs, New River, Cedar Run, Eagle, Speedwell and Wythe. In 1885 he wrote to John Robinson stating it was inadvisable to run the furnace at Foster Falls or Speedwell because it was impossible to sell the iron as trade is "worse now than ever."[94]

Graham's furnace operated until about 1900. The forge operated until 1916 when it was washed away by a flood. The mill stands near the site and the store house operated by Robinson is located near by.[95]

The nine cold-blast charcoal furnaces in Wythe County which remain standing are evidence of an era of great industrial activity which existed for approximately 100 years in the New River-Cripple Creek mineral region. The furnaces of Pennsylvania were early competitors. Technology changed over the years and it was no longer feasible to produce iron from charcoal with the cold-blast system. Coal discoveries in Southwest Virginia, prompted its use in the production of iron, and modern hot-air furnaces appeared briefly in the New River Valley. The natural

resources---wood for charcoal and the iron ore supply---were becoming depleted and when the easily accessible, rich iron deposits on Lake Superior were discovered, production in the New River area dwindled to nothing. The furnaces are now only reminders of the industrial past.

APPENDIX

PRODUCTION OF NEW RIVER CHARCOAL IRON FURNACES

FURNACE NAME	TONS DAILY	TONS ANNUALLY	MEASUREMENTS (in feet)	BUILT	RE-BUILT	EMPLOYEES 1880's	TO PRODUCE ONE TON OF IRON TONS ORE	BUSHELS CHARCOAL
SPEEDWELL*	5	1,400	32 x 9	1790's	1870's	50-60	2.4	147.8
CAVE HILL	5		47 x 10	1881				
NOBLE, IRON DALE, NORMA *	7		32 x 9 or x 11	1881		60-70	2.4	154.3
WYTHE, STEPHENS, PORTER, LITTLE WYTHE	6	3,000	25 x 8 33 x 9	1807 or 1814	1873	60-70	2.7	145.8
BEVERLY	6		33 x 9	1880		60-80	2.47	149.5
RAVEN CLIFF*	7	3,000	29 x 9	1810	1876	80-90	2.4	151.7
EAGLE, GREY EAGLE *	4 3/4	800	24 x 9	1863	1881	60-70	2.4	151
BROWN HILL*	6	800	40 x 8 1/2	1870's	1882			
CEDAR RUN*	5		32 x 9	1832	1888	80-90	2.4	164.1
FOSTER FALLS*	6 3/4	2,000	35 x 8	1881		70-80	2.4	140.9
BARREN SPRINGS*	5 1/2	2,000	35 x 8 40 x 7	1853	1873			
WALTON*	5		33 x 8	1872		70-80	2.5	148.1
POPLAR CAMP				1798(?)	1810 (?)			
BEAUREGARD				1860's(?)				
MT. HOPE				1860's(?)				

* Still standing

Prepared by Mary B. Kegley from Whitman, Iron Industry, The Virginias, 1880-1884, and selected deeds and records

1983

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3. Montgomery County Entry Book B, pp. 208, 235, 272, 353, 303, 364; Wythe County Entry Book 1, p. 97.
4. Wythe County Deed Book 3, p. 206; J. A. Whitman, The Iron Industry of Wythe County, from 1792, pp. 7, 8.
5. Wythe County Orders, December 10, 1799.
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8. Preston-Campbell Papers, Reel 2, Vol. 4, p. 369, Library of Congress.
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11. Wythe County Deed Book 29, p. 106; 37, p. 185.
12. The Virginias, I, 30, 58; III, 52, 134; IV, 5.
13. Wythe County Deed Book 30, p. 22.
14. Andrew S. McCreath and E. V. d'Invilliers, The New River-Cripple Creek Mineral Region of Virginia, 1887, p.v.
15. Whitman, p. 9; Wythe County Deed Book 37, p. 188.
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17. Whitman, p. 22; McCreath, p. v; The Virginias, III, 52; Henry Robinson, "Iron From Its Incipiency," The News Review (August 23, 1895), no page.
18. The Virginias, III, 134; IV, 5.
19. McCreath, p. v; Whitman, p. 22.
20. Wythe County Deed Book 28, p. 314; 29, p. 225; The Virginias, III, 134.
21. Wythe County Deed Book 28, p. 321; 29, pp. 74, 225.
22. Wythe County Deed Book 29, p. 183.
23. The Virginias, III, 52.
24. The Virginias, III, 134; Wythe County Deed Book 29, p. 225.
25. Wythe County Deed Book 29, p. 225; 30, p. 277; The Virginias, V., 177; Wythe County Deed Book 32, p. 348.
26. Interview with several local citizens; Whitman, p. 22.
27. Wythe County Deed Books 33, p. 128; 50, p. 387.
28. Interview with Tom Vaughn, present owner of the furnace, 1983.

29. Wythe County Deed Book 18, p. 521.

30. Land Grant Book 33, pp. 495, 496; Whitman, p. 7; Wythe County Deed Books 6, pp. 270, 272; 20, p. 740.

31. Wythe County Deed Books 5, p. 268; 6, p. 270.

32. Wythe County Deed Books 6, p. 507; 17, p. 598; 18, pp. 193, 521; J. P. Lesley, Iron Manufacturing Guide to Furnaces, Forges and Rolling Mills, p. 74.

33. Wythe County Deed Books 22, p. 48; 23, p. 450; 25, p. 119.

34. The Virginias, V. 177; I, 30, 58; III, 52.

35. The Virginias, III, 134; IV, 5, V, 177.

36. Wythe County Deed Books 33, p. 148; 32, p. 348; 29, p. 577; 34, p. 533.

37. Interview with Helen and Dan Umberger, Cripple Creek, 1983.

38. Whitman, p. 17.

39. Whitman, pp. 12, 13; Wythe County Deed Books 22, p. 212; 23, p. 43.

40. John D. Capron, "Virginia Iron Furnaces of the Confederacy," Virginia Cavalcade XVII (Autumn 1967), p. 16; Sanders-Green Papers, Flowers Collection, Perkins Library, Duke University.

41. The Virginias, I, 30, 58; III, 52.

42. The Virginias, III, 134; IV, 5.

43. The Virginias, V, 177; McCreath, v; Lesley, p. 224.

44. Wythe County Deed Book 37, p. 188; Whitman, pp. 13-14.

45. Whitman, pp. 17-18.

46. Wythe County Deed Books 23, p. 402; 24, p. 291, 29, p. 329.

47. The Virginias, I, 30, 58.

48. The Virginias, III, 52.

49. The Virginias, III, 134; IV, 5; V, 176-177; Capron, p. 16; Robinson, p. 7.

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Norms of New River Gorge Boaters

about

Appropriate River Use Conditions

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INTRODUCTION

The New River Gorge National River, an approximately 50 mile segment of river between Hinton and Fayetteville, West Virginia, was established as a unit of the National Park System by an Act of Congress (Public Law 95-625) in 1978. The law called for conserving the outstanding natural, scenic, and historic values and objects in and around the New River Gorge, interpreting the resources for the visiting public, and preserving the free-flowing river for the benefit and enjoyment of present and future generations. The National Park Service thus has a dual and potentially contradictory management mandate for the New River Gorge. It must protect the river in its natural state, but it must also provide for recreational use and enjoyment. Since any use causes some change from natural conditions, the National Park Service must decide how much change is acceptable. In the final analysis, this decision is a judgment call which the agency must make on the basis of its legal and policy mandates, analyses of resource and experience impacts, and inputs from appropriate user publics.

The National Park Service typically uses a carrying-capacity-based decision-making strategy when deciding how much and what kind of use and impacts are acceptable, and this approach was mandated by Public Law 95-625 establishing the New River Gorge National River. The carrying capacity of an area for recreational use is the amount, type, and distribution of use that can occur without unacceptable change in the nature or quality of the resource or the recreational experience. Four types of recreational capacity are typically recognized: physical, ecological, facilities, and social. The physical capacity of the New River for recreational boating is the number of boats that could safely float the river at any one time. It would be determined largely by the size, depth, configuration, and flow patterns of the river. Ecological capacity refers to ecosystem parameters. For example, too much boater use might result in an unacceptable drop in water quality, destruction of vegetation at popular river bank attractions or lunch stops, or erosion at put-in or take-out points. Facilities capacity refers to structures or developments that control access to and use of the river. The number and quality of roads, size of parking lots, and size and number of put-in and take-out areas are examples of facility parameters. Social carrying capacity refers to the nature of the experiences that boaters receive from the river trip. Social capacity is exceeded when the amount or nature of interactions among visitors is such that the nature of the experience is changed in an unacceptable manner. In most analysis of social carrying capacity, the key variables are contacts and conflicts among recreationists.

Social carrying capacity is often considered the most limiting type in scenic, wild, and wilderness river settings. For example, facilities capacity can be easily altered through input of development dollars and additional management manpower. Neoprene rafts and people sitting in rafts appear to have little impact on ecosystems, especially on trips of one day or less. Physical capacity is generally very high. Thousands of rafts could likely be simultaneously placed on and float safely through the New River Gorge; but long before this number had been reached, the nature of the experience would have been changed.

STUDY OBJECTIVES

The study reported here, limited as it was to a "first cut" of the carrying-capacity issue, addressed social carrying capacity. Our study goal was to provide an assessment of the social carrying capacity of the New River Gorge National River for national park experiences. Specific task objectives included the following:

1) to describe and evaluate river user experience preferences and trip expectations;
2) to identify the existence and sources of conflicts among recreationists and to evaluate methods for reducing or eliminating them; and
3) to evaluate and recommend a strategy for identifying acceptable amounts and types of river use, and to suggest guidelines for managing use within capacity.

A Conceptual Approach to Carrying Capacity

The carrying capacity concept in general, and social carrying capacity in particular, is exceedingly complex. For the concept to be operational, boaters must share social norms about the appropriate experience(s) to be provided on the river, and appropriate levels of those experiences (Shelby and Heberlein, in press Shelby, 198). What is a quality recreation experience for one river user may not be for another. One boater may seek solitude, but another may seek companionship with a group of friends. The social carrying capacity of the river to provide these two experiences likely differs, and a value judgment must be made on what kind of experience or combinations of experiences are to be provided. Such a value judgment lies at the heart of all carrying capacity decisions, must be made by the resource manager, and is made easier when legislation or policy clearly states values to be gained from the resource or when there is a concensus among managers and user publics about appropriate experiences. The values to be gained from use of the resource should be stated in the management objectives for the area, and might be described in terms of the experiences to be provided. Public input can often help the manager make this value judgment.

The second value judgment which must be made when addressing social carrying capacity is to select an evaluative standard for the experience(s) to be provided. The evaluative standard determines the level of the impact parameter that is tolerable (the maximum) or most desirable (the optimum). For example, a river management objective may state that solitude is to be provided on the river, but an evaluative standard is needed to identify the appropriate number, type, and/or location of encounters to attain that experience. Again the manager must make this value judgment, but user opinions can help make the decision, particularly when a consensus exists among relevant user publics.

Finally, if the variable(s) that most influence solitude are identified, then managers must be able to manipulate those variables if they are to manage for this experience. For example, if number of contacts between boaters per trip is the key variable, then managers must be able to manipulate such parameters as number of boats launched per unit of time, time of launch, place of

launch, and/or travel patterns down the river.

Shelby and Heberlein (in press) have summarized this conceptual perspective by stating the following three conditions necessary for the establishment of social carrying capacity:

Rule 1: There must be agreement among relevant groups about the type of recreation experience to be provided.
Rule 2: There must be agreement among the relevant groups about the appropriate levels of the experience parameter.
Rule 3: There must be a known relationship between use level or other management parameter and the experience parameter.

If our study was to achieve its goal, then conditions on the New River must satisfy these three rules.

New River Boating Use

The land along the New River is virtually all in private ownership with no National Park Service public use facilities on the river. Boating access to the river is by numerous privately-owned sites, and egress from the river is by a few private sites. Even with these constraints, recreational use of the New River within the New River Gorge National River for float trip use has increased dramatically in recent years. The first commercial whitewater river outfitter was established on the New River in 1969. The number now exceeds 20. The National Park Service estimates that use of the lower 15-mile stretch of the river, a stretch that contains about 20 major rapids and some of the best whitewater in the East, exceeded 83,000 people in 1982 (NPS New River Gorge Use Study, 1982). One day use occasionally exceeded 1200 persons.

Recreational use of the river is also characterized by much diversity in type and time of use. About 92% of all boating use is commercial, the remaining 8% are private boaters in canoes, kayaks, and rafts. Virtually all river use occurs in the months of April through September, and about 72% of the boating use takes place in the Memorial Day to Labor Day summer season. Average weekend and holiday boating use in the lower 15-mile whitewater gorge is 1,015 persons per day; weekday use is 193 persons per day. Average weekend use upstream from the Gorge is 45 persons per day; weekday use averages 18 people. Almost all river trips are day use only. Finally, most trips are concentrated during the middle of the day, with most boats launching during mid-morning and leaving the river mid to late afternoon.

Data Collection Procedures

Sampling and Questionnaire

Our data collection season was the summer and fall of 1982, and spring of 1983. We wanted enough private and commercially boaters to permit further breakdown by such managerially relevant variables as season of year, weekend-weekday use, and location and size of the river trip. Our conceptual model

suggested that more consensus among norms about appropriate experiences, kinds and amounts of use, and management strategies might exist within these subgroups than across the entire sample. If this were the case, then river managers could potentially provide different experiences for distinct user groups at different times and places on the river. The river would thus have several different carrying capacities, each with different management scenarios. Given this, our sample size target was 300 private and 300 commercial boaters.

Within each month of the study season, sampling was stratified by commercial and private boaters, upriver and downriver (the lower-15 mile whitewater gorge), and weekends and weekdays. This gave eight sampling strata, and we had a total of 116 sampling days.

Within the commercial strata, one of the 19 commercial outfitters cooperating in the study was randomly selected for each sampling day. The research technician would then travel to the outfitter's base camp, contact boaters of high school age or above just prior to their trip, ask their cooperation in the study, and obtain trip expectation data. On private sampling days, the technician would travel to randomly selected access points and await the arrival of private boaters. Information collected at the pretrip contact among privates was identical to that of the commercial boaters. After the trip, all sample subjects were mailed a 10-page questionnaire, the study's primary data collection instrument. (For more details about the study's data collection procedures and a copy of the survey instruments, see Roggenbuck and Bange, 1983).

Response Rates

During the fieldseason, 942 boaters agreed to participate in the study; only 12 refused to do so. Of the 942, 916 gave useable addresses. Of these, 616 (341 commercials and 275 privates) returned a completed posttrip questionnaire, for a response rate of 67%. A nonresponse bias check indicated no more differences between respondents and nonrespondents than would be expected from chance alone, so data adjustments due to nonresponse were not deemed necessary.

Results

Preferred experiences

At the field contact, boaters were asked which of the following three trip experiences they expected: (1) a wilderness whitewater trip -- a trip through a scenic gorge with little evidence of man, many opportunities for solitude, and a chance for challenge and for you to battle the waves; (2) a scenic whitewater trip -- a trip through a scenic gorge with some evidence of man, fewer opportunities for solitude, and guidance when running wild rapids; or (3) a social recreation trip -- a trip on a scenic river with much evidence of man, exciting rapids, and seeing other people on the river makes the trip more fun. In the posttrip questionnaire, boaters were asked which experience they received and which they thought the river should offer. These three experience descriptions were identified in an effort to cover the range of potential experiences on a New River trip. Ideally, they would have been developed through informal interviews with experienced boaters. This was not

possible with the short planning horizon of the study, and instead river managers and outfitters were consulted. The three experience types appeared to be meaningful, feasible, and legal options on a National Park Service river. If these experiences were not being provided now, then through proper management they might be offered in the future.

Table 1 lists the commercial and private boaters' opinions about appropriate river experiences. Among the commercial boaters who responded, about 48% expected a wilderness whitewater trip; 40% a scenic whitewater trip, and 12% a social recreation trip. About 29% said they received a wilderness experience; 53% a scenic experience, and 18% a social recreation experience. About 42% said the river should provide a wilderness trip, 50% a scenic trip, and 8% a social trip. Among the private boaters who returned the questionnaire, 53% expected a wilderness trip; 30% a scenic trip, and 17% a social recreation trip. Only 27% said they received a wilderness experience, 50% a scenic trip, and 23% a social recreation trip. When asked what experience the river should provide, 39% of the private boaters said a wilderness trip, 52% a scenic trip, and 8% a social recreation trip.

Table 1

Breakdown of commercial and private boaters by type of river trip expected, received, and should be offered

	Type of Experience							
	Wilderness Whitewater		Scenic Whitewater		Social Recreation		Missing	
	N	%	N	%	N	%	N	%
Expected								
Commercial	162	48	133	39	39	11	7	2
Private	144	52	82	30	47	17	2	1
Received								
Commercial	93	27	174	51	59	17	15	4
Private	71	26	133	48	60	22	11	4
Should be offered								
Commercial	134	39	159	47	26	8	22	7
Private	102	37	135	49	22	8	16	6

These percentages suggest first of all that for some boaters, both among the commercials and the privates, the experience was not what they expected nor what they felt it should be. Too few boaters received wilderness experiences, and too many received social recreation experiences. This finding was supported by boater response to numbers of boats or people seen on the river trip. Almost 40% of the private boaters and 34% of the commercial boaters felt they saw too many people on their trip. More than 30% of the private boaters felt their percentage of time in sight of other river trips was unacceptable, and about 25% felt the large number of other boats seen, the average size of other trips seen, and the number of rapids waited at were unacceptable. Over 25% of the commercial users said the same about their percent of time in sight of other trips, and

over 20% felt the number of boats they saw on the river and the number of rapids they waited at were unacceptable.

Inter-group conflicts appear even greater at certain times and places on the river. About 45% of the weekend boaters said they saw too many people and that their percent of total time in sight of other groups was unacceptable. More than 50% felt they saw too many people on summer weekends in the 15-mile whitewater gorge, the river zone which receives the greatest use.

Does this mean that the New River Gorge is being used beyond its social carrying capacity? Not necessarily. It depends upon the experiences that the National Park Service decides to provide there. Rule 1 of the Shelby-Heberlein conceptual model of carrying capacity states that there must be agreement among relevant groups about the type of recreation experience to be provided. Table 1 indicates that there is some diversity of opinion among current boaters. About half believe the trip should be a scenic whitewater trip; a significant minority vote for wilderness, and a few favor the social recreation trip. This diversity of opinion makes the NPS's decision more difficult. The agency could decide to provide for the distribution of experiences sought among current boaters. For example, it may be possible to establish distinct temporal and/or spatial zones on the river, manage the river zones for the distribution of experiences sought, and assist the users in getting themselves to the right zone. Under this scenario, those seeking a wilderness experience may have to visit the river on spring weekdays; those seeking a scenic experience may have to take their trip on a summer weekday or launch their trip very early in the morning on a summer weekend. The social recreation trip would be offered on the midday, summer weekend trips in the lower gorge.

In another scenario, the National Park Service could take a regional perspective as called for by many carrying capacity theorists (e.g. Wagar 1974). Given this perspective, the National Park Service would work with other river management agencies and relevant publics in the region to make certain that scarce river experiences are retained and duplication of experiences is avoided. Under the strategy, management objectives for the New River Gorge might call for provision of experiences intermediate on the spectrum between highly social and highly solitary. The Greenbriar, Bluestone, or Gauley might provide for near wilderness experiences, and the Youghiogheny might offer social, high density experience. If this strategy were adopted, the resource agencies would need to inform user publics, and help them match experience preferences with experiences offered.

Trip conditions and preferred experiences

If managers are to provide the appropriate experience or mix of experiences on the New River, they must know the trip conditions that influence whether these experiences are gained. As Table 2 indicates, there was a significant tendency for more contacts with other boats, greater percentage of time in sight of other trips, and more rapids waited at to be associated with rating the trip as a social recreation experience. The fewer such contacts, the greater the likelihood that the trip was rated a wilderness experience. However, the highest

correlation was only .30 (for the percent of time in sight of boats from other trips). Other variables besides contact levels determine type of experience gained.

Table 2

Relationships between use variables and whether a wilderness, scenic, or social recreation trip was received

Use variable	Correlation Coefficient[1,2]
Number of boats from other trips seen on the river	.24
Percent of time in sight of boats from other trips	.30
Number of rapids waited at to let other trips pass through	.26

[1] Positive correlations indicate that an increase in the use variable is associated with an increase in the tendency for the experience received to be a social recreation trip.

[2] All correlation coefficients significant at $p<.01$.

As a check to see if we had identified the most important trip variables, we correlated other inter-group contact measures (boats seen floating past lunch stop, boats seen at take-out point, and size of other river trips seen), intra-group variables (number of people on boat, number of boats on the trip, and how will boaters in the trip get along), actions taken on the river to avoid contacts (speed up the trip, slow down the trip, pass preferred attractions and pass preferred lunch stops) and 20 potential river resource problems with type of river experience received. None of these correlations exceeded .20. Thus, while none of the three variables we emphasized in the study individually explained a great deal of variance in type of experience gained, they had stronger associations than other variables measured. Future research must focus on multivariate relationships, although this would make the task of decision-making and management more difficult.

Standardsfor relevant trip conditions

Rule 2 of the Shelby-Heberlein carrying capacity model suggests that relevant groups must agree on appropriate levels of important experience parameter(s). In our case we sought to find out whether boaters would agree on appropriate levels of the most important parameter identified: percent of total trip time in sight of other trips for wilderness, scenic, and social recreation experiences. We tried to determine whether boaters shared social norms about appropriate contact time.

Table 3 indicates that about 60% of the study boaters suggested an acceptable percentage of time in sight of other trips for a wilderness whitewater trip. This number dropped to about 50% for scenic whitewater trips, and to about 30% for social recreation trips. Another 20%, 20%, and 13%, respectively, said the percent of contact time did matter for a wilderness, scenic, and social recreation trip, but that they couldn't suggest an acceptable number. Finally

about 20%, 30%, and 60% said that percent of time in sight of other trips didn't matter for a wilderness, scenic, or social recreation trip.

These percentages suggest that most boaters do have norms about acceptable percent contact time for a wilderness experience, and managers might gain valuable input from them when making decisions. Most boaters also feel that percent contact time does influence a scenic trip, but only about half could help managers set appropriate standards. Few boaters have norms about acceptable contact levels for a social recreation trip. Most said the percent of contact time didn't matter or that they couldn't suggest an acceptable level.

Table 3

Breakdown of whether commercial and private boaters have norms about acceptable percentages of time in sight of boats from other trips for wilderness, scenic, or social recreation experiences

Type of river experience	Suggested an acceptable percentage		Didn't suggest an acceptable percentage			
			% of time in sight of other trips didn't matter		% of time in sight of other trips did matter, but couldn't suggest a number	
	N	%	N	%	N	%
Wilderness						
Commercial	197	59.2	56	16.8	80	24.0
Private	166	61.9	57	21.3	45	16.8
Scenic						
Commercial	155	47.3	92	28.0	81	24.7
Private	132	50.8	82	31.5	46	17.7
Social recreation						
Commercial	87	26.7	186	57.1	53	16.2
Private	86	33.5	148	57.6	23	8.9

Table 4 lists acceptable percentages of time in sight of boats from other trips for wilderness, scenic, and social recreation trips for those boaters who had norms about acceptable contact levels. There were no differences in the mean acceptable contact levels for a wilderness whitewater trip across four potential boater clientele groups (commercial or private trip, season of trip, time of week of trip, and river segment floated). The mean acceptable trip contact time for the four groups generally ranged from 17-20%. There was somewhat less consensus among the boaters on what would be acceptable contact times for a scenic trip. Most boater groups, however, suggested a mean of 30-40% of total trip time as an acceptable level. Among those with opinions about acceptable contact times for a social recreation trip, most boater groups had a mean acceptable level of 45-50% of total trip contact time.

Managers could adopt these mean normative scores (or the median scores reported in Table 4) as experience standards to be achieved on the river.

When they do so, however, managers should be aware that (1) other factors besides contact time influence type of trip experience gained, (2) for some boaters, contact time doesn't relate to type of experience gained, and (3) measures of the mean or median are simply central points around which preferences fell.

Table 4

Mean Acceptable percentages of time to be in sight of boats from other trips for wilderness, scenic, and social recreation experiences for boater clientele groups

Boater clientele groups	Wilderness		Scenic		Social	
	N	Mean	N	Mean	N	Mean
All boaters[1]	363	18.6	287	31.8	173	47.6
Trip type						
Commercial	197	17.5	155	29.0	87	46.0
Private	166	19.9	132	35.2	86	49.2
Season						
Spring	11	10.2	10	17.0	8	27.9
Summer	333	18.9	264	31.9	156	48.3
Fall	18	17.5	12	40.8	9	52.0
Time of week						
Weekend	220	19.8	172	35.2	105	50.8
Weekday	142	16.8	114	26.5	68	42.6
River Location						
Upriver	41	19.6	33	30.7	21	45.3
Gorge	273	18.5	218	31.7	130	48.6

[1]Median acceptable percentages for all boaters were as follows:
Wilderness = 10.0
Scenic = 25.0
Social = 50.0

Comparing conditions with standards

The next step in carrying-capacity-based management is to compare existing river conditions to standards. Managerially relevant subunits of the New River system might be defined by river segment, season of the year, and weekend-weekday. These three temporal and spatial variables give 12 potential management subunits. Table 5 lists current median percentages of trip time in sight of boats from other trips for river users in each of the subunits, and this permits a comparison of trip conditions with standards. The 15-mile gorge on summer weekends with its 80% contact time fails to meet acceptable standards for even a social recreation trip. Additional evidence suggesting that this management unit is below standard is that 53% of its boaters said they saw too many people while on their trip. The gorge on summer weekdays, on fall weekends, and the upper river (the river above the gorge) on summer weekends and weekdays either provides or comes very close to providing a scenic recreation experience. The other seven river subunits are apparently providing wilderness experiences -- though we must quality this statement somewhat because of small sample sizes.

The small sample sizes do, however, indicate that few boaters floated these river segments on sample days, and this would suggest that wilderness experiences were being provided.

Table 5

Current median percentages of trip time in sight of boats from other trips for boaters in 12 different subunits of the New River

Management Subunit	Median contact time	
	N	% of total trip time
Gorge summer weekend	246	80
Gorge summer weekday	149	25
Gorge fall weekend	5	27.5
Gorge fall weekday	8	1
Gorge spring weekend	6	7.5
Gorge spring weekday	14	2
Upriver summer weekend	52	27.5
Upriver summer weekday	20	15
Upriver fall weekend	0	--
Upriver fall weekday	0	--
Upriver spring weekend	2	.5
Upriver spring weekday	0	--

Corrective prescriptions for conditions below standards

If managers are to reduce contact levels in the gorge on summer weekends, there must be a relationship between some variable that managers can manipulate and the experience parameter (percent contact time with other river trips) of interest. This is Rule 3 of the Shelby-Heberlein model. In our case, there was a significant and strong correlation for Gorge boaters between percent of time in sight of other trips and number of boats launched that day ($r=.65$) and number of trips launched that day ($r=.60$). Thus, managers can alter percent contact time by altering number of boats or trips on the river.

The support for the tradeoffs by private and commercial gorge summer weekend boaters was similar, having the same rank order and very similar mean scores. Strongest support was for a departure time earlier in the morning or later in the afternoon. Only 6% of the Gorge summer weekend boaters said they would not do this; 46% said they probably would, and 48% said they definitely would. These boaters also supported taking a trip earlier or later in the river use season when the weather was less likely to be ideal. Twenty-eight percent said they wouldn't do this, but 45% said they probably would, and 27% said they definitely would. Strong support was also indicated for taking a trip during midweek rather than on a weekend. About 35% said they wouldn't do this, but 35% indicated they probably would, and 30% said they definitely would.

There was less support for a system of limited river use permits; 50% of the gorge summer weekend boaters would not support this management alternative; 30% and 20% probably or definitely would. Support was even lower for floating a river section (e.g. the river upstream from the gorge) that has fewer rapids and lower use. Eighty percent of the gorge summer weekend boaters said they wouldn't do this, 12% and 8% said they probably would or definitely would. Thus, from the boaters' perspective, shifting use through time in the gorge is a viable management action. Shifting use out of the gorge is not. Limiting river use has some support.

Conclusions

Our study suggests that some current boaters on the New River Gorge National River perceive overuse problems. These problems were not persuasive through time and space on the river, but were instead concentrated on the lower 15-mile whitewater gorge on summer weekends. There more than half the boaters said they saw too many people. Also, more people said the river should be a wilderness whitewater trip than received such an experience. Conversely, more boaters said they received a social recreation trip than felt such a trip was appropriate.

Judgment on whether this perceived overuse exceeds social carrying capacity cannot be made until the National Park Service specifies what experience or mix of experiences it seeks to provide on the river. Management objectives should specify appropriate experiences, and then should be stated in the proposed River Management Plan. Selecting experience objectives is typically a complex task, and will certainly be so for the New River. In addition to current boater preferences, the National Park Service must also consider legislative mandates, its long-standing policy and tradition, and other important clientele groups. And our research suggests that there is a diversity of opinion even among current users.

One possible solution is to call for a variety of experiences at different times and places on the river. Current river use and resource characteristics make this approach appear feasible. If so, the river could have a variety of social carrying capacities, and the primary management task would become one of matching experience preferences with experiences provided. Boaters appear willing to alter their behavior to achieve the experience they seek. For example, a large majority of summer weekend boaters in the gorge said they probably or definitely would alter their time of day of departure, switch to a weekday trip, or switch to lesser-use seasons in order to achieve their desired trip experience.

Finally, our research suggests two additional notes of caution for river managers. First, trip variables besides total trip contact time with other boats explain type of experience gained. While this variables was most important of the inter-group, intra-group, and perceived resource problem variables measured, its explanatory power was relatively low. Managers must remember that the river experience is multidimensional, and many other factors such as guide behavior and pre-trip expectations likely affect the type of experience gained. Second, for those boaters who said total trip contact time with other boats

impacted upon their experience, many did not feel qualified to suggest an appropriate contact level. While the numbers of such boaters may be higher than typical on the New River (because of the large number of first-time users), river managers should be careful not to force boaters to provide precise experience capacity numbers. Some boaters appeared to say that while contact levels with other trips was a salient issue, they were willing for the time being to acquiesce to those with more experience on what is appropriate.

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The Architecture of the New River Valley, North Carolina

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In the Spring of 1976 in response to a proposal by the Virginia Electric and Power Company to build a dam on the New River, the State of North Carolina dispatched teams of architectural historians and archaeologists to the New River Valley to assess the architectural and archaeological resources which would have been destroyed (or otherwise affected) by the proposed dam. Because of the long prehistoric Indian occupation in the valley the archaeological resources were expected to be impressive. The significance of the buildings there was less well known, but they too proved to be vital to our understanding of the region's history. Approximately 150 individual sites in Ashe and Alleghany counties--representing either individual houses or a farm complex--were recorded. Of that group five individual houses and their outbuildings, one church, a mineral springs resort, and the large Grassy Creek Historic District were nominated in 1976 to the National Register of Historic Places. Although the dam was not built the threat of its construction discouraged normal maintenance and repairs to occupied houses and farm outbuildings and led to the abandonment of many others. No other event in the valley's history has so disrupted its way of life.[1]

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The first extensive and recorded accounts of the New River Valley in North Carolina were made in December 1752 by the Moravian Bishop Augustus Gottlieb Spangenberg who was searching for a large tract of 100,000 acres on which to establish a Moravian colony. On December 14, 1752, having found his way out of the New River Valley and then encamped at the Lewis Fork of the Yadkin River, he wrote,

> "Here we are at last, after a difficult journey across the mountains. We were completely lost and whichever way we turned we were walled in. Not one of our company had ever been there before and path and trail were unknown--though how can one speak of path or trail where none existed? We crossed only dry mountains and dry valleys and when for several days we followed the river /New River/ in the hope that it would lead us out, we found ourselves only deeper in the wilderness, for the river ran now north, now south, now east, now west, in short to all points of the compass! Finally we decided to leave the river and take a course between east and south, crossing the mountains as best we could. One height rose behind the other and we travelled between hope and fear, distressed for our horses which had nothing to eat."[2]

Similar sentiments were expressed some seventy-five years later by Dr. Elisha Mitchell who visited Ashe County in 1827 and 1828 while on a geological and agricultural survey. Writing of his climb to the top of Negro Mountain, now Mt. Jefferson: "And a rugged ascent it was! Some of the plantations in view presented a noble appearance, but oh, what an ocean of mountains!"[3] Dr. Mitchell also commented on the particular qualities of the soil and the quantity of game, echoing the words of Thomas McGimsey who wrote to Thomas Henderson, the editor of the Raleigh Star, on 3 May 1811,

> Great part of Ashe County is mountainous and hilly, yet the soil is extremely rich, yielding an abundance of wheat, rye, oats, barley and buckwheat and other vegetables equal to any cold country on earth.
>
> This is a fine county for pasture and meadows, from which great numbers of cattle and sheep are raised, which bring much wealth to the farmer. The air is pure and the water is good, if not superior to any on earth. People live long in Ashe County.
>
> The face of the country is clothed with large and lofty timber of black walnut, sugar tree maple, buckeye, hickory, chestnut, and spruce pine. Clover, strawberries and blue grapes are natural to grow everywhere. Cranberries also in great plenty.
>
> As that country has always had plenty of game, the first settlers who lived there for the purpose of hunting, were much opposed by the Indians, in particular by the Shawnees and the Cherokees, until the end of the late war. Since they have made no incursions into these settlements.
>
> The main water courses are the New River, or head of the Great Kanawha, and its auxiliary branches flowing from the Blue Ridge, Iron and Stone Mountains.
>
> The country abounds with mines and minerals. There are at present five sites of good iron works within the County of Ashe. Great store of minerals has lately been found which is thought to contain great quantities of silver and gold.
>
> The people of Ashe County send to market cattle, sheep, butter, cheese, lard, beeswax, venison hams, deer-skins and ginseng to the amount of upwards of thirty thousand dollars yearly.
>
> People in this County improve more in Religion than in the study of arts and sciences but it is hoped that more pains will be taken to improve the youth in the one as well as the other.[4]

The same qualities and quantities of game and wildlife which had attracted hunters to the New River Valley in North Carolina in the first half of the 18th century and through the Revolutionary period also attracted permanent settlers beginning in the 1750s. However, the settlement did not take on the appearance of permanence until the eve of the Revolution by which time their numbers had substantially increased.[5] This influx of settlers into the New River Valley reflected both the gradual western expansion of settlement in North Carolina and the parallel movement south of younger brothers and sons of Virginia families. Settlers from Virginia came mostly from Montgomery County and successively Wythe County (1790) and Grayson County (1793) which stretches

across the northern borders of Ashe and Alleghany counties. Among these men was Captain John Cox (1739-1818) who acquired lands on Cranberry Creek after the Revolutionary War and moved here.[6] Others including members of the Sturgill family followed a similar pattern.[7] These familial and geographical relationships would be a predominant influence on the settlement of the New River Valley in North Carolina. The facility of transportation and communication with Virginia served to reinforce these interests as Ashe and Alleghany counties were removed from much real contact with the rest of North Carolina. This factor contributes to the area's uniqueness in the state and includes the New River Valley with those other North Carolina communities--most notably Warrenton--located along the Virginia-North Carolina border which being familially and economically tied to Virginia are culturally as much a part of Virginia as North Carolina. The results of this relationship are as tangible as they are intangible.

In 1799 Ashe County was established to include ". . . all that part of the County of Wilkes, lying west of the extreme height of the Appalachian Mountains, . . ." including all of what are now Ashe and Alleghany (1859) counties and part of Watauga County (1849). Ashe County was named for Samuel Ashe (1725-1813), a Revolutionary patriot and governor of North Carolina (1795-1798).[8] The development of a small iron industry followed on the formation of the county. At the beginning of the 19th century land grants were available to those who would agree to set up iron forges. Meredith Ballou (____-1847), among others, had visited Ashe County in the late 1790s and found rich iron ore deposits in the hills along the North Fork of the New River.[9] The mining industry's early profitability and need for workers encouraged settlement near the valley sites of the iron forges and along the banks of the nearby creeks and rivers. These early settlements grew naturally into farm complexes and as the iron industry flexed forward and later declined the farms grew in importance to the family which now came to depend exclusively on the farm for the family's existence.

That the iron industry played a vital part in the settlement of the New River Valley and Ashe County is without question. But the major and long term economic motive for settlement in the valley was agriculture. Dr. Mitchell had predicted as much in a diary entry during July 1828.[10] He reiterated those characteristics of the valley described by the Moravian leader Spangenberg--the richness of the soil, the abundance of water and timber, and the existence of sufficient mineral resources to complete the collective body of natural resources with which and from which man could create a sustaining life and society with his neighbors.

It is in the satisfaction of housing demands for this evolving agrarian community of families and its agricultural economy that the architectural character of the New River Valley has been formed and it is almost exclusively in these terms--in the growth and development of this agricultural economy--that an architectural analysis of the New River Valley should be interpreted. Settlement, evolving prosperity, and agrarian success are each exhibited in an architectural product and have marked the degree of building sophistication aimed for, achieved, and as importantly, maintained.

But while agriculture sustained life in the New River Valley, geography was also an influential factor in the evolution of its society, economy, and the correspondent architectural character of the valley. The cutting of the New River's course through the land has created a landscape of great complexity with

steep hills and narrow valleys--Mitchell's ocean of mountains. The rolling, richly covered topography with its sinuous bends of the river and its tributaries and the parallel curves of the hills created meadows among the hills and along the river bottoms--neatly tailored farmsites--on which the early settlers established and developed their farms. The hills enclosed and enframed them in an unique and vast isolation which encouraged the introversion of subsistence farming and an independent family life. The geography thus necessitated a close, specific, and complimenting relationship between the farm and its supporting fields and encouraged an intimate grouping of farm structures--houses, barns, granaries, smokehouses, corncribs, root cellars, springhouses, and later silos, poultry sheds, tobacco barns, and equipment sheds. There is no trace here of the formal 18th century plantation plan of the coastal plain but rather the strength of organic response--a quality achieved in the evolutionary course of agrarian development in the 19th and 20th centuries.

The major factor in the development of the social order here has been the tilling of a small self-contained family farm unit. While the state's economic history in the 18th and early 19th centuries has been written mainly in agricultural terms--excepting naval stores and up to the development of textile mills--it is also true in the New River Valley. In the Coastal Plain and, to a lesser extent, in the Piedmont there were markets available and methods of transportation for getting goods and produce to them. Transportation opportunities diminished as one moved inland from the coast and away from the Tidewater Virginia and South Carolina borders so that in the mountain area agricultural practices developed less along commercial farm lines, than as the means of sustaining the family unit. Thus the size of farms changed slowly and unnoticeably, mainly increasing and decreasing through the division of a family farm or the combination of farmlands as a result of marriage. This factor also encourages the relative evenness of the buildings here. Farms of similar size would and did support families and operations of an approximate size and scale. In consequence the houses and outbuildings themselves are similar in size, material, and design.

Another important consideration here is that this pattern of agrarian development saw only the most minor changes until the last decades of the 19th century. Interruption has been insignificant. The terrific economic and social disruption of the Civil War and more especially its aftermath which had such a major impact on the quality and character of life in the Coastal Plain was less severe here, another of the factors in making the architectural fabric of the valley so unique--a piece of even homespun.[11] The architectural character has developed independently and indigenously; pressures of style and social change have been at a minimum. There are, of course, variations in this context with buildings which break the mold or move ambitiously beyond it, but the homogeneity of the building remains intact and inviolate. The tie of the building to the soil is a principal factor in the aesthetic cohesiveness.

Another important factor for consideration here is the definite absence of the Georgian style, and the minimal presence of the Federal style which exerted considerable influence on the architectural character of much of the rest of the state. At the same time there is also little evidence of the Greek Revival style which so dominated antebellum building in North Carolina. The architecture of the New River Valley is, therefore, a history of building which occupies one place in the state and the oneness of response to repetitive demands--a remarkable sameness of type, form, shape, material, and ornament.

It is a repetition and sameness which is never boring but, because of its unpremeditated functionalism, it appears as natural in the landscape as the very trees and hills of the terrain. One of the most striking characteristics of buildings in the New River Valley is this containment of time in architectural practice, from the early 19th century to the valley's peaking at the turn of the century. This is a very short period from an exterior point of view but it seems after our survey, to be an appropriate length allowing for the expression of the full cycle of wood construction, from the most simple log cabin, through the hewn log house, the early frame house, to the airy elaborateness of the mechanical manipulation of wood in the final stage at the end of the 19th century.

The pioneers who settled in the New River Valley were familiar with the valley and its special character. That they chose the valley and remained here is an important acceptance of its particular character. The introversion of pioneer mountain life encouraged by the landscape was a deliberate extension of the strong individualism which defined their approach to life. The earliest building form was, as noted earlier, the log cabin built as shelters for Virginians and North Carolinians who organized hunting parties into the valley. These first structures were only meant to be temporary housing and consequently were quickly, and rudely, built. A similar practice was followed when settlers--and many of the above hunters numbered among them--came, or came back, to stay. The first requirement was to provide immediate shelter for the settler, his family, and any domesticated animals. The fact that none of these earliest buildings are known to remain owes as much to this matter of expediency as to a series of floods including those of 1916 and 1940 which washed many houses away. Most of the early homesteads had been established along the river and its tributaries on whose banks the early transportation routes were established. The double pen, or dog trot, form was ideal for this purpose. Two pens, or blocks, square or rectangular in shape, were built with a passage several yards wide between. The family could live on one side and the other could be used as a barn and granary to store foodstuffs for the family and animals. The animals could seek shelter in the passage. Alternatively, the second block itself became a stable with the passage between used for storage. This early architectural form sheltered all the activities and functions of the farm/homestead under one roof.

As necessity prevailed--with the growth of the family and the increased productivity of the farm--a new log house was built on whose construction more time and skill were expended. The old log cabin often became a granary or stable. It is this second generation of log construction which provides the first structures for our study. They are usually of half or full dovetail construction, built of hand-hewn logs and have either dry-laid or mortared stone exterior chimneys. In form they range from one story, story-and-a-half, to full two stories. As log construction was utilized during the entire 19th century it is not possible to date houses by a progression from the one-story to the two-story house for size and quality of construction depended on the resources of the builder at all times. In addition most of the log houses which survive appear to have been covered originally with weatherboards.

Pre-eminent among this second generation of log houses is one built in the mid-19th century by Samuel Cox (1811-1868) on a tract of land acquired from his father Joshua Cox in 1832.[12] His house, one of the best preserved of the valley's log houses, is representative of many built in the valley on or near



Samuel Cox House. Scottsville Vicinity. Ashe County.

the family homestead by second and third generation descendants of early settlers. It stands on a hilltop overlooking the site of the Cox homestead on the waters of Cranberry Creek and the South Fork of the New River. The house has dovetail construction and appears always to have been weatherboarded; bark remains on some of the logs and much of the clay daubing is still in place. A stone chimney--common in the valley--stands on the east gable end. While the shed porch appears to be original, the one-story frame ell was added in the early 20th century by the builder's son Franklin Cox (1853-1905). The interior of the first story has a two-room plan--as did many log houses--and is finished with flush sheathing. An enclosed stair provided access to the second story which was left as one large room.

Built about 1870, the William R. Neaves House is similar to the Cox House but has a shorter second story.[13] This reduced height two-story house is often called a one-and-three-quarter house and is a type which was frequently built in the valley. In or about 1895 a two-story frame addition was made to the log house on the gable end opposite the stone chimney; at this time a shed porch was carried fully across the five-bay front (west) elevation overlooking the North Fork of the New River which flowed in front of the house and separated it from the public road. Behind the house a stone root cellar, built into the hillside, has a gable roof with a weatherboarded gable front. The other outbuildings--all frame--are in a row to the south of the house on the same low plateau above the narrow bottoms.

Although the Cox and Neaves houses are late in the chronology of building in the New River Valley, their present appearance and relative degree of integrity make them useful and representative examples of the more permanent log houses.

The majority of New River Valley farmers were living in weatherboarded log houses or simple log cabins; however, there were several more affluent men who, with their families, lived in a higher state. There are four surviving brick houses in the New River Valley which were erected between ca. 1816 and 1865.[14] The oldest house in the group is a substantial, though plain, two-story three-bay brick house erected by Aquilla Greer, the progenitor of the Greer family who dominated the Grassy Creek community. Greer, a resident of Grayson County, Virginia acquired 400 acres on the waters of Grassy Creek on December 16, 1816 and built this house as the seat of his plantation.[15] Unfortunately the interior of the house was remodeled in this century.

The McMillan House, somewhat smaller in scale and probably dating from the 1830s or 1840s, survives nearly intact though deteriorated. It has a two-room plan on each floor with a transitional Federal-Greek Revival style finish including molded door and window surrounds, chair rails and baseboards, two-panel doors, and bold mantels. A unique feature of the house is the stair rising on the rear elevation which connects the first and second stories. The house is thought to have been built by Andrew McMillan who acquired a tract of 300 acres here on Nathans Creek in 1810.[16]

Nearly contemporary with the McMillan House is a two-story brick house built by John Baker (1783-1855), who came to Ashe County from Grayson County in the first decade of the 19th century and acquired lands on Grassy Creek. The Flemish bond brickwork of the front, east elevation is particularly noteworthy. After Baker's death the house passed through a number of hands before it was purchased



Aquilla Greer House. Grassy Creek. Ashe County.

by William Waddell (1835-1912) who, according to family tradition, is responsible for the remodeling, ca. 1870, which gave the house its present appearance.[17] The richly scrolled door and window surrounds and bracketed eaves are matched on the interior by an equally splendid and fascinating woodwork.

Two of the most prominent names in the county's 19th century history are associated with what is thought to be the earliest frame house recorded during our study. The oldest portion of the dwelling known as the Bowers-Cox House was built for George Bowers on a tract of some 400 acres on Silas Branch which he sold to Dr. Aras B. Cox in 1852.[18] The house is thought to have been built in the 1820s or 1830s. Bowers (____-1861), a successful farmer and businessman, represented Ashe County in the North Carolina Senate from 1812 to 1817, and sometime after 1828 built a large brick house in the county seat which served as both his residence and an inn. Dr. Cox, who was active in civic affairs and served as Clerk of Superior Court in 1849 and 1853, wrote an early history of the area, Footprints in the Sands of Time.

Another of the early frame houses is the William Weaver House which sits on lands stretching for just over a mile along the South Fork of the New River. The oldest portion of the house is the two-story three-bay main block built shortly after William Weaver purchased the property from Meredith Ballou in 1845.[19] In 1890, his son, Andrew (1843-1932) added a one-story ell containing a kitchen and pantry. About five years later he extended the ell to include a dining room and raised it to two stories in height. At the same time he added the richly decorated two-tier porch across the front elevation; it retains traces of its original blue, chartreuse, and white painting scheme. The farm owned by Fred Weaver, Andrew's son, retains farm outbuildings dating from the three generations of the Weaver family ownership. William Weaver (1787-1876) and his descendants, excepting his grandson Fred (1886-), are buried in a family cemetery on a hilltop to the southeast of the house.

The Weaver House and Farm is an important example of a New River Valley farmstead which has descended in a single family during three generations and occupied by them for nearly 140 years.

Another significant example of continued family ownership is the John M. Pierce House which began as a small log house, erected about 1871. Pierce built his one-story house on the edge of the lands his father Rufus Kincaid Pierce (____-1898) acquired in 1845 on the South Fork of the New River.[20] The first expansion of the log house was the addition of a one-story frame rear ell. But it was the dramatic remodeling of 1892 which extended the log house by two bays to the west, raised it to two stories in height, and included a handsome two-tier porch arrangement which brought the house to its turn-of-the-century appearance.

During the fourth quarter of the 19th century a transition from self-sufficient farming to cash crops began to be apparent. A study issued in 1913 by the U.S. Department of Agriculture and the North Carolina Department of Agriculture stated,

> "It was not until about 1880 that Ashe began to make any considerable progress along agricultural lines, a few good plows had been introduced as early as 1872, but these were exceptions. Before this time nearly all of the farm implements in the county were homemade, the iron being taken from mines in the country.

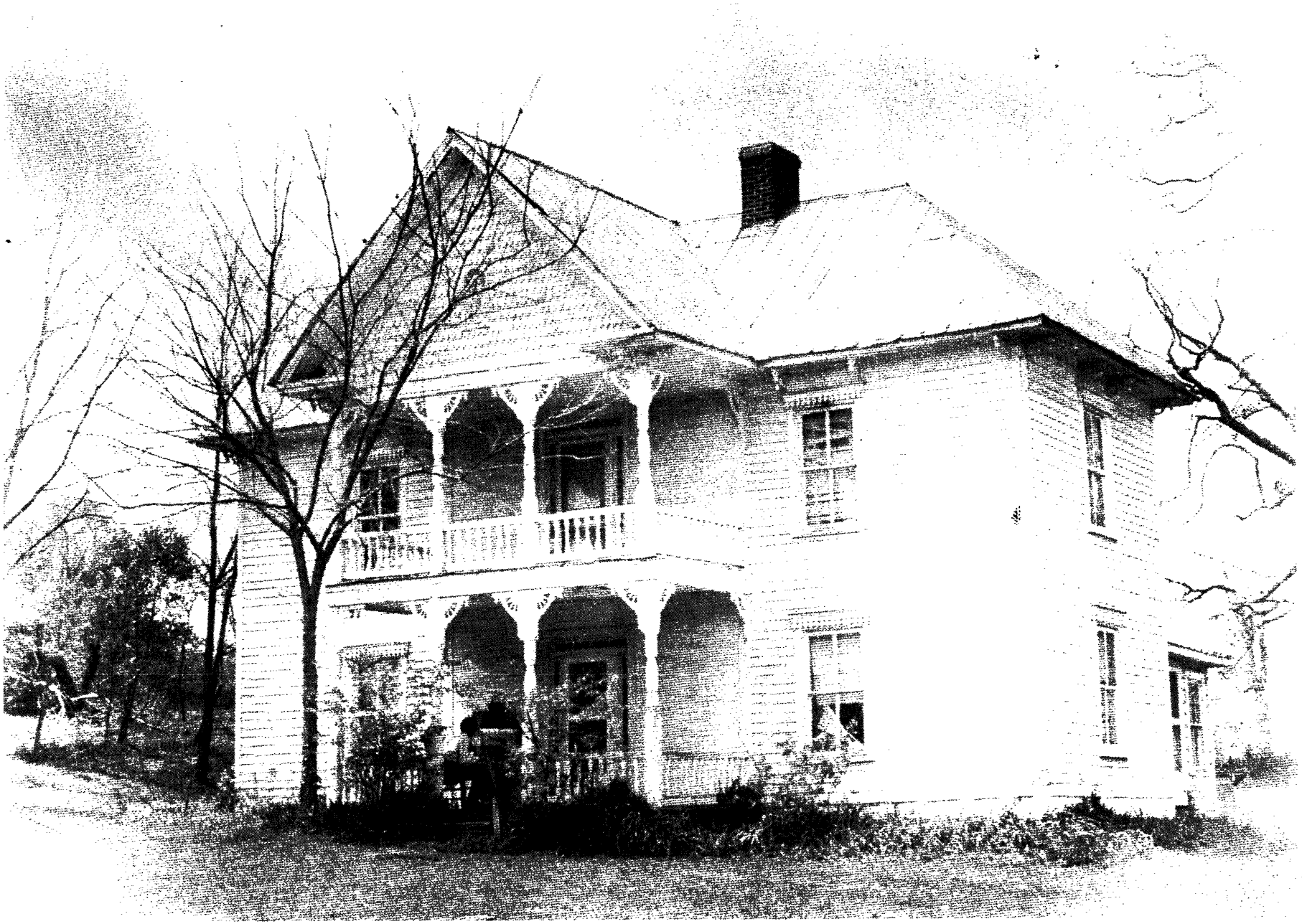
> The cutting and shocking of corn was practiced for the first time in 1882 and about the same time wheat growing over the entire county began. The first grain drills were introduced in 1884. Scarcely any commercial fertilizers were used prior to 1891."[21]

In tandem with the flow of produce out of the valley, money was now available to purchase sawn, turned and molded woodwork which was either locally produced by the nascent lumber industry or brought into the valley by the railroad. The farmer and house builder was no longer dependent on his own skills with woodworking tools for the ornament of his farmhouse but had at his disposal a catalogue of brackets, braces, turned posts, spindles and balusters, bargeboards, moldings, and other devices which became a part of the vocabulary of local building. Quite naturally the architectural woodwork and hardware available to the builder was similar to that available to other builders in the state. A belated Italianate influence together with that of the Stick Style and the Queen Anne is seen in frequent and combined harmony on the houses which were built or remodeled in this period.

It is the collective effect of these three factors--the need for new housing, a rising prosperity, and the availability of decorative millwork--operating throughout the valley from the 1880s through the 1910s which produced a cohesive and impressive collection of late-Victorian farmhouses. This group of buildings predominates in the landscape. During the decades around the turn of the century descendant generations of the valley's early families established new farms or erected new and larger farm seats. These builders included members of the Gambill, Greer, Blevins, Neave, Reeve, Sturgill, Phipps, and Waddell families among others. Although nearly all of the houses are now painted white this was not always so. Many of the houses remained unpainted for years while others had only painted facades. Mrs. Clyde Cox, the owner (in 1976) of the L. F. Young House remembers that when she came to the house as a young bride it was painted red with yellow and white trim, and that a trellis of pink roses carried across the front porch.[22]

The preference for the rectilinear blocks of earlier log houses survived here in either a T-plan or L-plan. The ends of the block were sometimes bayed. The houses are nearly all three bays wide on the front elevation, two stories in height, clad in weatherboards and have either interior or exterior gable end chimneys. Roofs are either hipped or gable, or a combination of the two. The interior generally follows a center-hall plan with equal size rooms on either side, usually a parlor and bedroom. The kitchen and a dining room are contained in a one or two-story rear ell.

Porches are of two major types. The first is a one-story porch which is carried across the full front elevation of the house sometimes wrapping the corner of the house and continuing along its side. Its shed or hipped roof is supported by turned posts with brackets and connected by spandrels and balustrades. On some houses this porch was two-tier and sometimes engaged under the house's gable roof. The second type is the more impressive two-story gable-fronted porch centered on the front elevation and protecting entrances on each story. The gable fronts most often feature imbricated patterns of diamond, rounded and other-shaped shingles which are framed by jigsaw-cut bargeboards on sometimes bracketed eaves. Spandrels of varying elaborateness often fill the peak of the gable. Behind the porch and set in a flushly sheathed bay, molded



William H. Billings House. Piney Creek Vicinity. Alleghany County.

surrounds enframe the doors with fixed sidelights and transoms decorated by jigsaw-cut ornament. Window surrounds are similarly molded; blinds were frequently a part of the scheme but most have been lost or removed. On the L-plan the back porches are ranged in the interior of the L and sometimes connect to a springhouse or well house. On the T plan porches may completely surround the ell with a well head, pantry or storage room breaking the encirclement.

The Burgess Cox Waddell House and the William H. Billings House are particularly representative of the architectural character of domestic building in the New River Valley at the turn of the century, and exhibit the range of building form and ornamental woodwork used at that time. Mr. Waddell (1864-1946) built his house in 1889 and inscribed the date on the lintel of the surround enframing the window in the porch's gable front.[23] The two-story three-bay frame house has a two-tier center bay porch on the front elevation, exterior gable end brick chimneys and a one-story ell and shed room on the rear elevation. The porch remains as built except for the first-story railing which is now lost. Behind the porch the entrances are set in flush sheathing and flanked by sidelights and transoms whose patterned sawnwork was seen frequently throughout the valley.

William H. Billings (1838-1935), the bottler of Billings' Bitters and one of the richest farmers in the valley, purchased a part of the extensive Parsons family farm and erected his house in 1898.[24] The form of the house is nearly identical to that of the Waddell House and consists of a two-story main block with a one-story ell. Mr. Billings' prosperity is indicated by the rich detailing of the porch, the brackets set under the eaves, and the diamond patterned molding on the window cornices. The Parsons family cemetery is located on the farm; Mr. Billings is interred there with the earlier owners of the farm.

At the turn of the century the Grassy Creek community was one of the leading agricultural communities in the New River Valley and with its rich collection of late-19th and early 20th-century buildings is a vivid reminder of the prosperity of the New River Valley in the decades around the turn of the century.[25] The Greer family were the most prominent landowners in the community having six farms on contiguous property; the development of this complex of family-related farms is inextricably bound to the history of the agricultural economy of the valley. Four generations of the Greer family, beginning with Aquilla Greer who settled there in the early 19th century, maintained farms along Grassy Creek. About 1885 his son John F. Greer built a large and richly ornamented house as the seat of a farm which he established in the mid-century. Though similar to the William H. Billings House its two-tier porch has a different and lace-like system of ornament; the brackets are used here in pairs. The two-story ell, set in the middle of the rear elevation is circled by a one-story porch also boasting a fine railing. His son W. C. Greer, who later owned the house, increased the farm's production, enlarged its complement of outbuildings, and raised his children there; his children--four of whom built houses in the creek valley--were the last of the family to build in the valley. About 1904 Mr. Greer's daughter, Mrs. John Jones and her husband built their house on a farm southeast of her father's. The lavish decoration of the earlier houses in the Grassy Creek community is retained only on the gable fronts with imbricated shingles and spandrels. The house, aside from its asymmetrical plan, has a formality which is new to the valley--an influence of the emerging



John F. Greer House. Grassy Creek. Ashe County.

Colonial Revival, seen more clearly on the Robert Livesay House, built ca. 1914 for another of Greer's daughters. The Grassy Creek Methodist Church also remains as built in 1904 and owes its elegance to the prosperity of Grassy Creek at that time. The church is of frame construction with shingles in the gable ends above the weatherboarding and on the middle sections of the corner bell tower/steeple. Flat lancet arched surrounds enframe the windows, doors, and louvered openings in the bell tower.

Inside, the ceiling follows the pitch of the roof and the interior is fully finished in tongue and groove boards which like the pews have an oak varnish. Complimented by red upholstery and enriched by the light through the finest stained glass windows in the valley, this interior and building superbly recalls Grassy Creek at its peak.

The churches in the New River Valley are the most impressive of the public or commercial buildings which survive although in size they were sometimes smaller than the large frame stores and mills located throughout the valley. Baptist Chapel Church, set on a hill overlooking Helton Creek, is one of the oldest church buildings in Ashe County and remains uniquely unchanged, as built in 1872. The congregation was organized in 1842.[26] The paired entrances on the gable front, protected by molded hoods reflect the double aisle plan of the interior.

The discovery of mineral waters in the New River Valley initiated the development of resorts which were acclaimed for their rejuvenating effects as well as being popular social centers. According to local tradition the bromine and arsenic springs near Crumpler were discovered in 1885 and, shortly thereafter, they were purchased by Captain H. V. Thompson who built a hotel in 1887 and a spring house. His resort was advertised as Thompson's Bromine and Arsenic Springs.[27] The waters were also bottled and carried by wagon for shipment by rail. After Thompson's ownership the resort was operated by a succession of people. A new spring house was erected about 1900 and still stands. A row of one-story frame cottages was erected about 1920 to provide overflow accommodations when the hotel was filled. After Thompson's ownership the hotel was operated by a succession of people until the hotel burned in 1962.

Often the family cemetery was an important part of the farm complex and in several instances the grave markers in a cemetery are all that survives above ground to suggest the earlier existence of a farm. Each of the farm complexes has an individual character and situation and is unique in the siting of the house and the disposition of the barn and the other farm outbuildings about the property. As these farm buildings were constructed or added onto as the crops increased or production diversified their study is itself an agricultural history of the New River Valley.

In architectural terms, the farm complex--the house and its outbuildings--was built according to a hierarchy of values. The farmhouse occupies the first level followed by the barn which is generally the largest building in the complex. The first floor, the stable level, of the barn is frequently of log construction set on a stone foundation with log or frame construction used for the second level and haylofts above. The barns were either single or double pen. The older and better barns are sheathed with weatherboards and covered by a gambrel or gabled roof. Eaves and gables were often decoratively ventilated. Board and batten sheds were added at either side for stabling or storage.

Granaries were also of log and later frame construction, covered by weatherboards or board and batten and set on a dry-laid stone foundation or on stacked stone piers. Large bins were built to store separately the several grains. As noted earlier, old log houses were sometimes given a second life on the farm as granaries. Corncribs are more varied in form. There could be a single crib covered by a shed roof or a double crib with a wagon passage between covered by a gabled roof. A third method was to include it in the corner of the granary. They are almost always of frame construction with ventilated sheathing.

Poultry houses and privys are of frame construction with board and batten or weatherboard sheathing and most have shed roofs. Smokehouses are also frame constructed with weatherboard or board and batten sheathing. The brick smokehouse is an exceptional building. There are three known to survive in the valley; two of them--one at the W. C. Greer farm, and a second at the L. F. Young farm--are in the Grassy Creek community. Wood sheds, as well as hay and equipment sheds were generally simple structures and clad in board and batten or plain vertical sheathing. An exception is the splendidly unique octagonal board and batten wood shed at the Robert Livesay House, Grassy Creek.

Springhouses and root cellars were, when possible, built into the hillside and of stone construction--either dry-laid or mortared. They could also be freestanding and frequently the springhouse is attached directly to the farmhouse, at the end of the kitchen ell. The interior walls of both springhouse and root cellar were almost always stuccoed, and later cemented. The springhouse usually had a cooling trough for milk crocks or cans. The root cellars also had wood bins for potatoes, apples, pears, onions, turnips, and cabbages and shelves for canned goods.

As noted throughout this essay the geographic configuration of the New River Valley had a strong and binding influence on the organization of both farm and family life. The hills and river wrapped and, to a considerable degree, isolated the settler and farmer in the alternating states of a vast expansive openness or intimacy. The physical containment reinforced the self-sufficiency of the life on the farm on both the emotional and economic levels. The processes of birth, life, and death were all effected within the confines of the family farm. On a significant number of farms small family cemeteries survive containing several generations of a particular family and their married kin. Thus the entire history of the farm and its owners and workers was contained on its grounds and read in its fields, buildings, and cemetery. These cemeteries, generally located on the highest point of ground on the farm, are enclosed by fences of stone, metal or wood; plantings of box bushes, crepe myrtle, cedars, and sometimes lilac are interspersed among the granite, marble, and fieldstone markers.

Not only have the buildings long served the purposes for which they were built but to a remarkable degree the farms are owned by descendants of those who homesteaded them. This continued ownership is one of the most important factors in the maintenance of cultural values in the area. The fact that one is farming land which has been owned by one's family for three or four generations and on which these generations are buried has instilled a love of place which is seen in the architecture and its position in the landscape. This relationship of man, architecture and landscape has preserved a way of life in the valley and the architecture which shelters it.

Footnotes

[1]See also: Thomas J. Schoenbaum, The New River Controversy (Winston-Salem: John F. Blair, Publisher, 1979).

[2]Arthur L. Fletcher, Ashe County: A History (Jefferson: Ashe County Research Association, Inc., 1963), p. 9, hereinafter cited as Fletcher, Ashe County.

[3]Fletcher, Ashe County, p. 88.

[4]Fletcher, Ashe County, pp. 14-15.

[5]Fletcher, Ashe County, pp. 10-21.

[6]Joe Mobley and Davyd Foard Hood, "National Register Nomination for the Samuel Cox House," Scottville vicinity, Ashe County. Hereinafter cited as Mobley and Hood, Samuel Cox House Nomination. Entered in the National Register of Historic Places November 7, 1976.

[7]Jerry L. Cross, "A Research Report on the Sturgill and McMillan Occupations," unpublished report on deposit in the Research Branch, Division of Archives and History, Raleigh, May 18, 1981.

[8]Fletcher, Ashe County, p. 34.

[9]Fletcher, Ashe County, p. 222.

[10]Fletcher, Ashe County, p. 15.

[11]Fletcher, Ashe County, pp. 137-141.

[12]Mobley and Hood, Samuel Cox House Nomination.

[13]William R. Neaves House File, Ashe County, Survey and Planning Branch, Division of Archives and History, Raleigh.

[14]See also: Monroe Barker House File, Ashe County, Survey and Planning Branch, Division of Archives and History, Raleigh.

[15]Ashe County Deed Books, Office of the Register of Deeds, Ashe County Courthouse, Jefferson, Deed Book F: p. 39, hereinafter cited as Ashe Deed Books. See also: Davyd Foard Hood, John B. Flowers, III, and Benjamin Alford, "National Register Nomination for the Grassy Creek Historic District," Grassy Creek, Ashe County. Hereinafter cited as Hood, Flowers, and Alford, Grassy Creek Historic District Nomination. Entered in the National Register of Historic Places December 12, 1976.

[16]Ashe Deed Book R: p. 106. See also: Armfield McMillan House File, Nathans Creek vicinity, Ashe County, Survey and Planning Branch, Division of Archives and History, Raleigh.

[17]Jerry L. Cross and Davyd Foard Hood, "National Register Nomination for the William Waddell House," Sussex vicinity, Ashe County. Entered in the National Register of Historic Places November 7, 1976.

[18]Ashe Deed Book R: p. 12. See also: Davyd Foard Hood, Michael T. Southern, and Joe A. Mobley, "National Register Nomination for the Bower(s)-Cox House," Nathans Creek vicinity, Ashe County. Entered in the National Register of Historic Places November 7, 1976.

[19]Jerry L. Cross and Davyd Foard Hood, "National Register Nomination for the William Weaver House," Peden vicinity, Alleghany County. Entered in the National Register of Historic Places November 7, 1976.

[20]Joe A. Mobley and Davyd Foard Hood, "National Register Nomination for the John M. Pierce House," Crumpler vicinity, Ashe County. Entered in the National Register of Historic Places November 7, 1976.

[21]Fletcher, Ashe County, pp. 68-69.

[22]L. F. Young House File, Ashe County, Survey and Planning Branch, Division of Archives and History, Raleigh.

[23]Burgess Cox Waddell House File, Alleghany County, Survey and Planning Branch, Division of Archives and History, Raleigh.

[24]William H. Billings House File, Alleghany County, Survey and Planning Branch, Division of Archives and History, Raleigh.

[25]Hood, Flowers, and Alford, Grassy Creek Historic District Nomination.

[26]Davyd Foard Hood and Jerry L. Cross, "National Register Nomination for Baptist Chapel Church and Cemetery," Helton vicinity, Ashe County. Entered in the National Register of Historic Places November 13, 1976.

[27]Linda Robertson, Davyd Foard Hood, and Charles Greer Suttlemyre, Jr. "National Register Nomination for Thompson's Bromine and Arsenic Springs," Crumpler vicinity, Ashe County. Entered in the National Register of Historic Places October 22, 1976.

TOWARD A HISTORIC PRESERVATION STRATEGY FOR THE GRASSY CREEK (N.C.) NATIONAL REGISTER HISTORIC DISTRICT

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Let me begin by painting a rather frightening picture of one threat to the cultural landscape of Grassy Creek, North Carolina: imagine a tailgate flea market in a shopping center parking lot somewhere in southern Florida. Imagine a booth in this flea market with a table with a sign on it that reads, "Ashe Co. Land--Lots for Sale." Apparently they know down there where this bit of heaven is because the sign doesn't even say North Carolina--just "Ashe Co."

The scene has been reported to me as fact. And it has the ring of truth to it. About 17,000 tax listing forms were mailed from the Ashe County Tax Supervisor's office this past January. Of these, about 1,400--more than 8 per cent--were sent to Florida. In all about 4,000 Ashe County property tax forms--almost a quarter of the total--were mailed out of state. Follow these forms through the postal service and they would take you to 46 states and 5 foreign countries.

As an indication of the direction of the trend, Ashe County Register of Deeds Shirley Wallace reports that approximately 60 per cent of Ashe County land sold last year went to out-of-state residents, whereas ten years ago the figure was half that.

Ten years ago the residents of Grassy Creek and other sections of the New River Valley were facing another threat, the proposed inundation of their homes and farms by 42,000 acres of lakes backed up behind two power generating dams to be built near Galax, Virginia, and owned and operated by the Appalachian Power Company. The project had actually first been proposed back in the early sixties but was not granted a federal license until the mid-seventies. Lawsuits pressed by environmental groups and by North Carolina Attorney General Rufus Edmisten delayed the project long enough for Congress to designate 26.5 miles of the river in North Carolina as part of the federal Wild and Scenic River system thereby blocking the project, but the campaign was really won at the local level where it had been fought for 13 years. As Hamilton Horton, who headed the National Committee for the New River, put it, "Three little mountain counties whipped the AFL-CIO, the Federal Power Commission, and the worlds largest power company."

The threat posed to New River residents by a flea market booth selling Ashe County land in Florida in 1984 is not so clear as dams and rising water, but the alarms seem to be going off in some people's minds just the same. Citing a concern that Ashe County will soon be experiencing "extreme growth" and fearing the consequences of "haphazard" development, the Ashe County Chamber of Commerce recently established a Land-Use Planning Committee "to begin a study on what kind of growth Ashe Countians would like to see here in coming years."

"The problem has been addressed off and on for 10 years and maybe longer," reported Chamber President Jim Barlow. "It's time to think seriously about it. In my opinion this is probably the most beautiful place in the eastern United States

and it could be ruined by uncontrolled growth." Early in January of this year the Ashe County Board of Commissioners gave their blessing to the Chamber study.

During a recent interview, Chamber Director Rex Daugherty shed some light on the failure of a previous attempt to sell land-use planning in Ashe County. "We tried it back in 1976," he said, "but that time it was presented by young, educated outsiders. At the public meetings they would get asked, 'Where you from?' 'Horse Creek.' 'No, where were you born?' 'Michigan.' 'Sit down!' They knew what they were talking about, but they didn't talk with our accent. We're not going to make the same mistake this time around." Although it's much too early to predict how the current land-use proposal will be received around the county, Daugherty senses a shift in opinion among the oldtimers that just might win it support: apparently they truly are beginning to consider the pace and magnitude of change brought on by outsiders as a serious tresspass upon their cultural territory.

All this--tailgate booths, Floridian invasions, wild-and-scenic-dam-stopping rivers, enlightened chambers of commerce, and coming-around oldtimers--I offer as a context for considering the issue of a preservation strategy for the Grassy Creek community in Ashe County, North Carolina.

Back in 1976 when the proposal to dam the New was still alive, a team of architectural historians from the North Carolina Division of Archives and History was sent to survey the area slated for inundation. Their mission was to identify and assess the historic architecture of the valley--to help make the case against flooding if the resources proved of sufficient value, or at least to record for posterity what was there before the flood.

What they found was a nineteenth-century agricultural landscape as intact as any in this agricultural state of ours, complete with vigorously embellished classic farmhouses and extensive collections of supporting farm outbuildings. What resulted was a National Register nomination for the valley of the New's Grassy Creek tributary in the form of a rural historic district, as well as individual nominations for several other buildings scattered throughout the study area.

As far as I am aware, the historical designations played little or no role in the Congressional deliberations which saved the river from the power company; nonetheless, I know for a fact that the staff of Archives and History was delighted to have the opportunity to explore the New River Valley and that they consider what they found there to be of major significance as cultural resources of western North Carolina and the state.

The Grassy Creek Historic District was officially entered in the National Register of Historic Places on December 12, 1976. Davyd Hood wrote the nomination. Were Davyd to drive through Grassy Creek this afternoon, he would find that little has changed in the eight years since he did his first research there. On the one hand this is good: the rampant subdivision of New River property ahead of the Florida invasion has mostly been a southern Ashe County phenomenon. On the other hand, however, this is not so good, even in relation to a preservation agenda: the National Register nomination has meant little or nothing to Grassy Creek. Buildings that were empty and deteriorating in 1976 are still empty and

deteriorating today, which means they won't be around much longer unless something is done with them soon.

This is where I enter the story. As the preservation specialist for the state in western North Carolina, it is up to me to try to get a preservation program going in Ashe County if it is not happening on its own. This is a project I have taken on during the last several months, and what follows is more a progress report and prospectus for those efforts than the delivery of a finished preservation strategy. It is a report on a process that has begun and, hopefully, will continue.

Davyd has given you an excellent perspective on the architecture and landscape of Grassy Creek. Now, what are the factors working for and against historic preservation in the community? First of all there is relative stability of land ownership, and the same relationship to the land which produced the cultural landscape recognized as significant in the National Register nomination still exists to some degree. That is to say, Grassy Creek's history is continuous, with no precipitous breaks in this century as have been experienced almost everywhere else. The names on the tax roles are pretty much the same as one hundred years ago. This is the kind of cultural environment where what we call "historic preservation activity" approaches the ideal of "a way of life"--a predisposition to take care of the land and the buildings previous generations have placed on it.

In the case of Grassy Creek no doubt the pride the natives feel in their community has been reinforced by all the attention it has received from outsiders, largely due to the historical designation. Davyd published an essay on Grassy Creek in a book on North Carolina architecture in 1978. I know this book found its way into at least one Grassy Creek home. And as recently as last May the Jefferson Times in West Jefferson ran a two-page feature on the historic district. All of this would seem to bode well for historic preservation in Grassy Creek.

I do not know enough about the farming economy of Ashe County to say with any certainty what direction farming is taking in Grassy Creek, but I would guess that it is something of a swing issue. On the one hand, as the writer for the Jefferson Times put it last May, "Grassy Creek is a practicing agricultural economy," and it is this continuity with its agricultural past that makes Grassy Creek the living page of history that it is. On the other hand, I would guess the problems confronting the small farmer all over America today--rising costs of energy, feeds, fertilizer, labor, and equipment--are present in Grassy Creek making some farms marginally profitable, forcing farm families to consider "public" work, discouraging the next generation from taking the reins, and tempting even the most land-loyal farmer to sell out or subdivide. I had one Grassy Creek farmer tell me it is practically impossible to hire out heavy handwork, like fence building, these days. He pointed enviously at the scroll-work on his childhood home and said neither did he know of any carpenters who could do that any more, or even repair it properly, for that matter.

In Ashe County today the biggest threat to the survival of the traditional agricultural landscape is this increasingly marginal nature of farming coupled with the burgeoning demand for land for second home development. And I might as well interject right here that we preservationists have no program for saving the

family farm, although we certainly wish we did. In this respect, when it comes to rural preservation programs, we can only treat some of the symptoms and not the disease itself.

In Grassy Creek there has been very little abandonment of the historic housing stock. This is an obvious problem over much of the state where changed housing standards have led folks out of nineteenth-century frame farmhouses and into brick ranchers in droves. Overall it appears the older buildings are still considered desirable dwellings in the historic district.

Unfortunately there is one key exception. A Greer family farmhouse that is critically important to the district due to its location and visibility, its architectural flair, its history, and its splendid collection of outbuildings has been vacant now for about ten years. Its owner lives in the community--fittingly enough, in Grassy Creek's only brick rancher.

I see the task of bringing a historic preservation program to Ashe County and Grassy Creek as basically twofold: 1) to try to bring to bear the preservation tools and programs that already exist at the state and national level; and 2) to help organize local preservation interest into an effective preservation constituency or lobby. Organizing a local preservation constituency is by far the more important step. When it comes to promoting preservation in the community, the closer to home the source of the message, the less artificial it is and the more likely it is to be heard. Remember the fate of Ashe County land-use planning back in 1976 when it was being promoted by "outsiders."

In an effort to sample local opinion and take the very first steps toward getting organized, a meeting was called at the home of Mr. and Mrs. Dewey Cox in Grassy Creek on February 17 of this year. Ten people came out to that meeting--several members of the Grassy Creek Methodist Church and some folks from the Ashe County Library. Most of those present either own land in Grassy Creek or have family ties there or are members of the larger Grassy Creek community although they don't live within the historic district. Several who attended are active in the Ashe County Historical Society. Irene Cox (Mrs. Dewey Cox) has to get credit for organizing the meeting. From my vantage, I would have to call the meeting a key event in introducing historic preservation to Grassy Creek and so I would like to describe it in some detail.

After I made some general remarks about the existing federal and state preservation programs and what is possible at the local level, discussion focused on two questions: 1) how best to organize a local preservation group; and 2) how to save the vacant and deteriorating Greer family farmhouse mentioned above. Clarice Weaver, an Ashe County public librarian, suggested that the by-laws of the Ashe County Historical Society would lend themselves to setting up a historic preservation committee and offered to pursue the possibility with that group. After considerable discussion about the options for the Greer farmhouse, we decided to approach the owner about either giving the house to the community for use as a community center or offering it for sale to someone interested in restoring the place. Appropriately enough, the meeting concluded with a tour of Dewey Cox's mother's house, another key Grassy Creek farmhouse constructed in stages beginning in 1849 and now vacant but protected by Mr. Cox.

I have one overriding observation on the discussions that day: several times the possibility of turning outside the community for help came up--as I

presented a general picture of preservation options, as we pondered the fate of the Greer house, and in talking with the Coxes about Dewey's mother's place--and each time an uneasiness was expressed over doing so. As Jack Young put it, "Of course we are reluctant to consider selling outside of the community of families that have been here all along." These sentiments are natural and, relative to preservation values, laudable.

Two months have now passed since that first meeting and I would like to briefly report on our progress since then. First of all, I understand that a proposal has been made, or will be made shortly, to the historical society about setting up a historic preservation committee. Irene Cox, who lives in Grassy Creek and organized the February meeting, will chair the committee. I will be giving a program to the historical society at their May or June meeting, and it is my hope that they will become the local sponsoring organization of a comprehensive county survey of historic buildings. This would be the same kind of study that was done in the New River Valley in 1976 but this time over the whole county. Such a study is the foundation piece for any local preservation program. Recently I discussed with the director of the Ashe County Chamber of Commerce the possibility of such a study being accomplished under the auspices of the chamber's land-use planning committee. Feeling that the committee already had a full agenda, he recommended that it be a historical society project and that the historical society coordinate its findings through the study with the investigations of the land-use planning committee. This all sounds like a very workable approach to me.

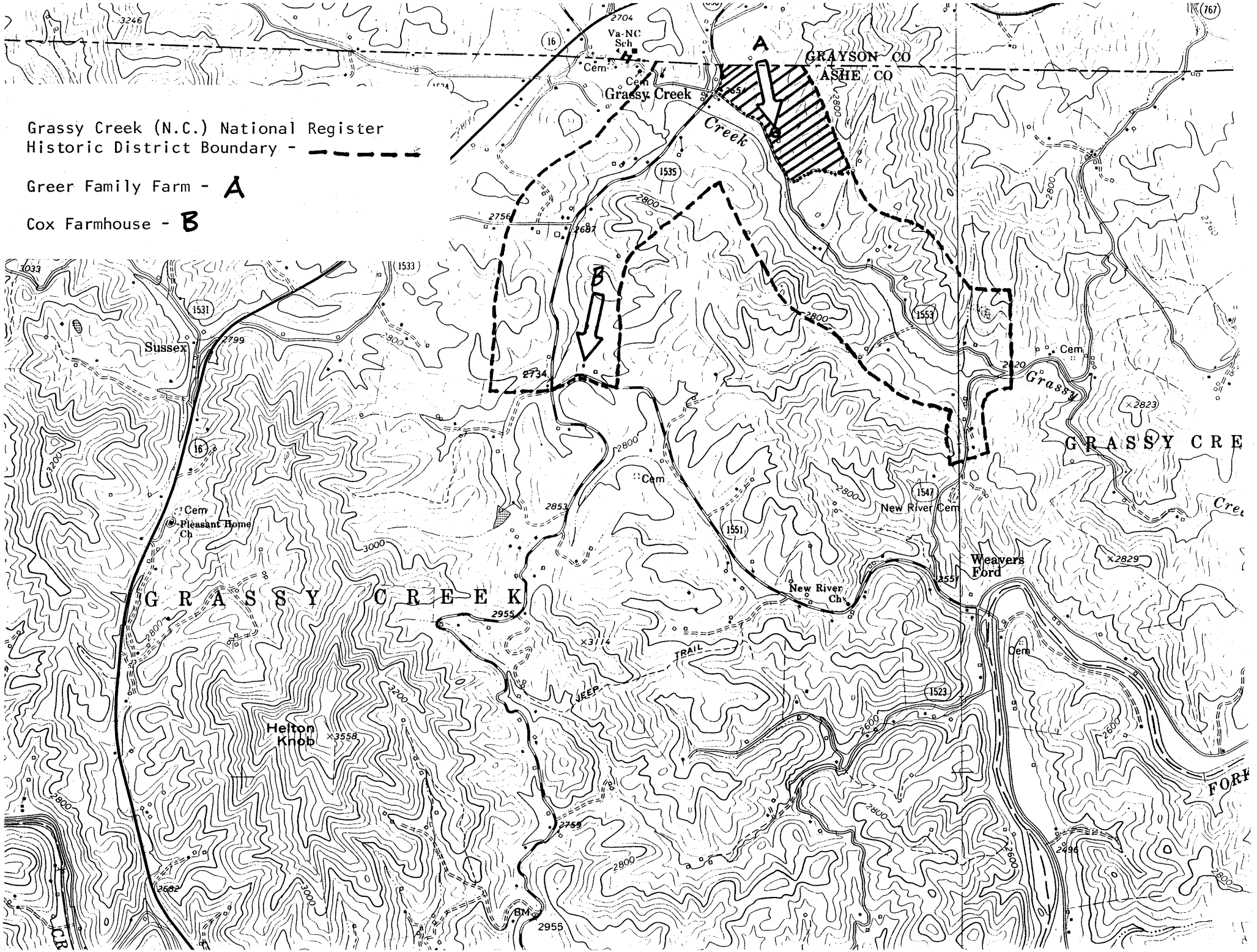
I have recently talked as well with the owner of the Greer farmhouse, and he has said that he is willing to sell the house to someone for restoration if about 100 acres of farm goes with it. I brought up the notion of his giving the house to the community but he didn't seem very interested in the idea. My next step will be to bring a representative of the Historic Preservation Foundation of North Carolina, which operates a state-wide revolving fund for saving endangered buildings, to Grassy Creek to see if that group can buy an option on the Greer property. The foundation would then market the property nationwide and sell it with restrictive covenants requiring the farmhouse's restoration. It might even still be possible to get the house into the hands of the community if the new buyer wants only the land and could use the deduction on donating the house.

I think one message I want to get across to the folks in Ashe County at this point is that the Florida people are not the only ones who would like to buy a piece of the ranch. I would suggest that there is an important segment of the market which is interested in the traditional character of Ashe County property and could well be utilized as an ally in the attempt to preserve the existing quality of the landscape. By no means am I advocating selling out across the board to these more sensitive buyers--and I'll be the first to admit that the more local solution to the preservation problem is the least artificial and most satisfying route--but at the same time we must be aware that this market is there as well and that in some circumstances it could be the best alternative to a local fix.

A case in point: a fellow from High Point recently visited my office in Asheville. He and his wife have purchased an Ashe County farm and he was eager

to get the farmhouse listed on the National Register. They intended to restore the house and use it as a second home. He was extremely excited about owning his piece of heaven and doing everything he could to protect it. Although this is not the survival of the family farm--and let's push for national and state policy to insure that--it's also not the tailgate flea market selling unrestricted lots.

The success of preservation in Grassy Creek is going to depend on a continued commitment to the land on the part of the families whose forebearers made the landscape what it is. I suggest they will fare best if they are able to blend their conservative loyalty to the place with a canny openness to new alliances and, perhaps as well, compromises to the traditional private property owner rights and prerogatives. Controls that have long appeared as intrusions on the property owner's sacred territory may in today's light be reconsidered as protection from outside assaults on the landed heritage.


Grassy Creek (N.C.) National Register
Historic District Boundary -
Greer Family Farm - A
Cox Farmhouse - B
A
B
GRAYSON CO
ASHE CO
Va-NC Sch
Cem
Grassy Creek
Creek
Sussex
Pleasant Home Ch
Cem
New River Cem
New River Ch
Weavers Ford
GRASSY CREEK
GRASSY CRE
Helton Knob
TRAIL
JEEP
BM
2955
1531
1533
1535
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16
767

History of the Management Plan For the South Fork of the New River in N.C.

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The New River is an ancient stream rich in its natural history as well as a wealth of cultural and human history. It has also been a stream subject to man's study, use, development, and exploitation since its early discovery and settlement. The management plan for the New River State and National Scenic River evolved as a result of a long history of fervent, emotional battles between proponents of each of the several characteristics common to the river. The legislation creating both river designations and the staff which subsequently developed the management plan attempted to protect those features unique to the river as well as to provide for little disturbance of the existing lifestyle in the New River valley.

Along the banks of the same river that today sports profuse blooms of spring and summer wildflowers and offers a resting area for migrations of waterfowl, Indians once settled or passed through on hunting expeditions leaving projectile points, pottery shards, and stone tools to be unearthed, examined and wondered over by farm workers and archaeologists. A way of life developed in the area based on a respect for nature.

With the local economy linked closely to those natural resources, the river and its tributaries offered the residents rich, fertile, bottomlands in which to tend their crops. It offered the power to grind their grain and operate their mills. It offered them a place to relax and fish. Also, it offered the healing and restorative powers of nearby mineral-rich springs and the spas which sprang up around them.

In 1962 the actual history of the management plan for the New River Scenic River began. Appalachian Power Company applied with the Federal Power Commission to conduct a feasibility study for a non-federal hydroelectric power project on the New River in Va. and North Carolina. That application was granted and the study was completed in February of 1965. Immediately APCO applied for a license to build a two-dam hydroelectric and pumped-storage facility named the Blue Ridge Project. The project offered to generate power for periods of high demand at the project's upper reservoir. During periods of low demand, power from elsewhere in the APCO system would be used to pump the water back up from the lower reservoir. The proposal met with relatively light protest primarily from the landowners who were to be directly affected.

During that project's pre-licensing review, the U.S. Department of Interior requested that the plan include enough storage capacity to provide flushing water during periods of low flow to dilute the pollution dumped into the Kanawha River by industries downstream. As a result of this recommendation and hearings held on the project, APCO submitted a revised

proposal called the Modified Blue Ridge Project with an upper reservoir of 26,000 acres and a lower reservoir of 12,390 acres. The upper dam would have been 300 ft. high and 1,700 ft. long, the lower, 236 ft. high and 2,000 ft. long. This nearly doubled the size of the original project. At least 2,700 inhabitants of the New River valley would have been displaced with the loss or replacement of 893 dwellings, 12 cemeteries and 5 post offices. An estimated $13.5 million annually would have been lost in crop and livestock sales. Power generated for peak load would have gone to large urban areas of the East and Middle West during the estimated 50 year life expectancy of the plant. For every 3 units of electricity generated, 4 would be used to pump water back into the upper reservoir.

Needless to say opposition to the modified plan was widespread as local people and outside supporters protested the injustice of having to sacrifice their homes and lifestyles to provide peak load power at a net negative energy cost to people outside the area and to flush away pollutants dumped by other "outsiders" into a river some 250 miles away.

The opposition began among a group of local people united as the Upper New River Valley Association. It grew and attracted other organizations such as the Issac Walton League, Conservation Council of Virginia, and the West Virginia Highlands Conservancy. Meanwhile hearing after hearing before the Federal Power Commission led to decisions in favor of licensing the project. Modifications were made in the plan to reduce the amount of drawdown during low flow periods, cutting the size of the mudflats to be left during power generation and eventual elimination of "pollution dilution" storage. These changes reduced the size of the lower reservoir, but the relative size of the project remained the same.

Again the group of opponents to the project grew. It became a national organization and an alternate strategy for fighting the project outside the courts was devised. That strategy was based on seeking inclusion of the New River into the National Wild and Scenic Rivers system under the federal Wild and Scenic Rivers Act of 1968.

There were two ways this could be accomplished. Congress could enact legislation to fund a study of the river by the Department of Interior to see if it qualified, then Congress could vote to include it in the system. In the second method, the governor of the State could apply to the Secretary of the Department of Interior to include a river segment within the state as a federal river if that river segment had been designated a state scenic river and the state had adopted a management plan under which a state agency would manage the river at no cost to the federal government. After receiving that application, the Secretary must by statute carry out a study to see if the river meets the criteria for designation into the federal system. If so, then Interior can legally establish the scenic river <u>without</u> any action by Congress. The federal designation was sought on both of these fronts.

Bills were introduced in Congress in late 1973 and early 1974 for a New River study. The bill passed in the Senate, but not in the House. As a result of their failure, the Governor then submitted his application in December 1974 to the Secretary of the Department of Interior based on the fact that

In 1977 North Carolina had established a state Natural and Scenic River System and had designated a 4.5 mile segment of the main stem of the New River as a State Scenic River in March 1974. A management plan had been developed for that segment and another state study was begun in late 1974 to include the entire South fork of the New within the state designation. In that original management planning process the 4.5 miles of river were tested according to the criteria mandatory for N.C. Natural and Scenic rivers. Those criteria relate to water quality, water flow, river segment length, environmental quality, boundaries, and public accessibility. In this system "natural" rivers are "those free-flowing rivers and adjacent lands existing in a natural condition and generally inaccessible except by trail." "Scenic" rivers are "largely free of impoundments with adjacent lands largely primitive and largely undeveloped but accessible in places by roads."

After public hearings were held in early 1975, the section of the South Fork proposed for inclusion was reduced to 22 miles and in May the N.C. General Assembly placed 26.5 miles of river under state management as a state scenic river. The requested study of the New River by the U.S. Department of Interior was completed in 1976 and federal designation was approved by the Secretary of the Department of Interior in April 1976. Congressional legislation was also enacted to include the river in the Federal Wild and Scenic Rivers system and included a provision to prevent construction of any power project that would innundate the segment designated as a National Scenic River. That congressional bill was signed into law on September 11, 1976 by President Gerald Ford and the 26.5 mile river segment became both a National and State Scenic river.

In September 1976 following the inclusion of the river into the federal system a set of objectives for field operations was developed for maintaining the conditions for both the federal and state systems. Those objectives provided for a land and water based patrol of conditions on the scenic river and its boundaries. It provided for cooperative enforcement of regulations governing water quality standards, sedimentation control, hunting and fishing, and flood-plain development by many agencies within the N.C. Department of Natural Resources and Community Development.

The management plan for the 26.5 miles of the New River became finalized and formalized into the master plan for the South Fork New River in 1977. The river segment is to be managed by North Carolina as a National Scenic River at no expense to the federal government, and as a State Scenic River under the directives of the state Natural and Scenic River Act of 1971. The bill including the river into the state system set limits on land acquisition, provided for continued agricultural use of lands adjacent to the river, and set criteria to be monitored to keep both the state and federal designations.

Boundary limits were set as the visual horizon from the river, but no less than 20 feet wide nor more than 320 acres/miles of river. Water quality was to be maintained at class - C (suitable for fish and wildlife propogation, boating, wading, but not bathing or drinking) with river flow such that the minimum continuous flow would be enough to maintain the natural ecology of the stream. Public accessibility allowed for roads parallelling the river and even crossing the river.

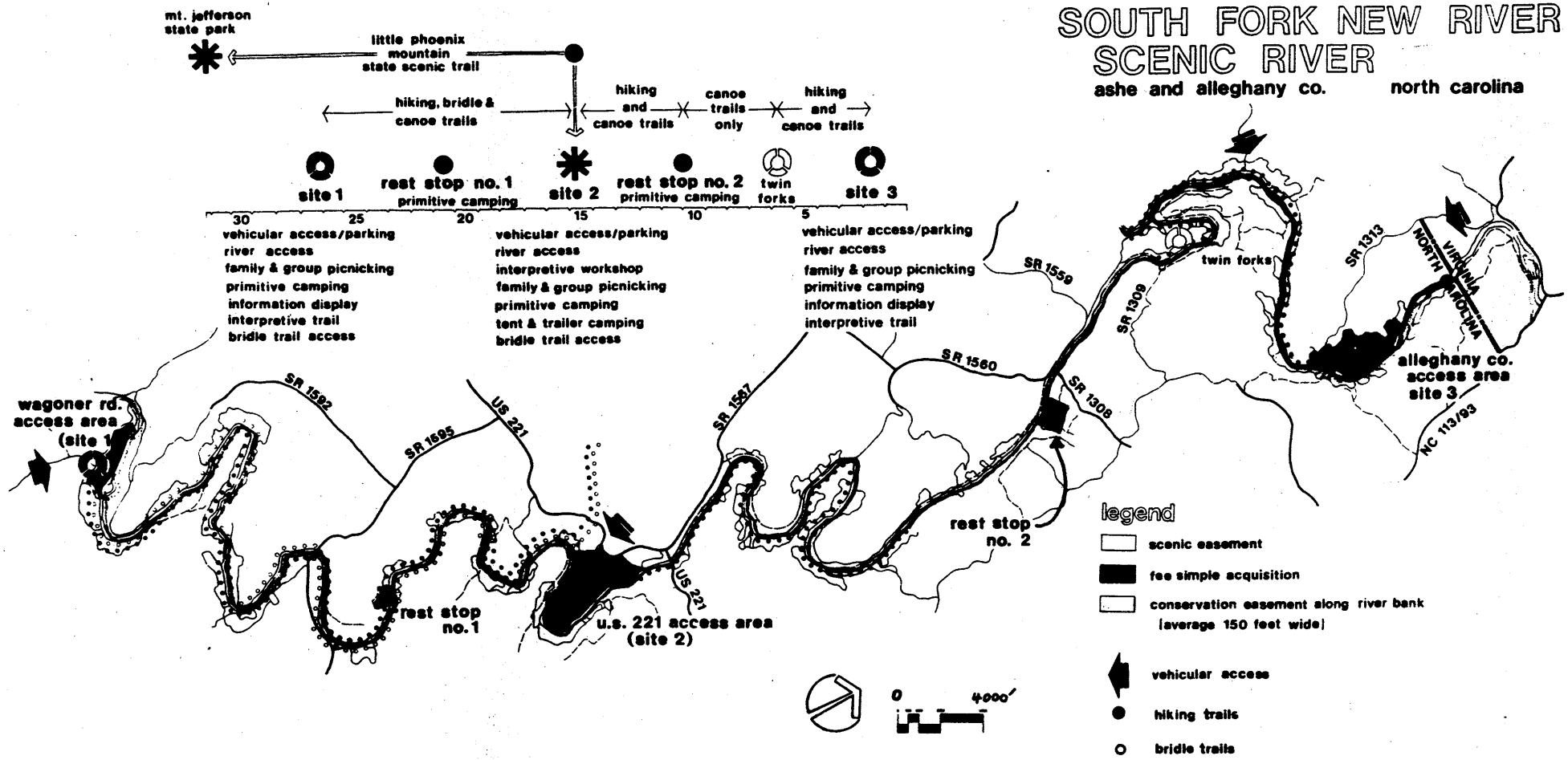
More specifically, the master plan calls for 5 state-owned public access sites to be devloped along the 26.5 miles of river interconnected with a strip of scenic and conservation easements. Of the 5 access sites, 3 will provide "drive-in," "hike-in," or "boat-in" access with a range of day use and overnight activities offered. The remaining 2 access sites will be rest stops for boaters, horseback riders, or hikers with no vehicular access provided but picnicking and primitive camping available. Incorporated in the plan is a privately owned and operated campground, Twin Rivers Campground, at the confluence of the North and South forks of the New. Included in this paper are the plans for the state-owned sites.

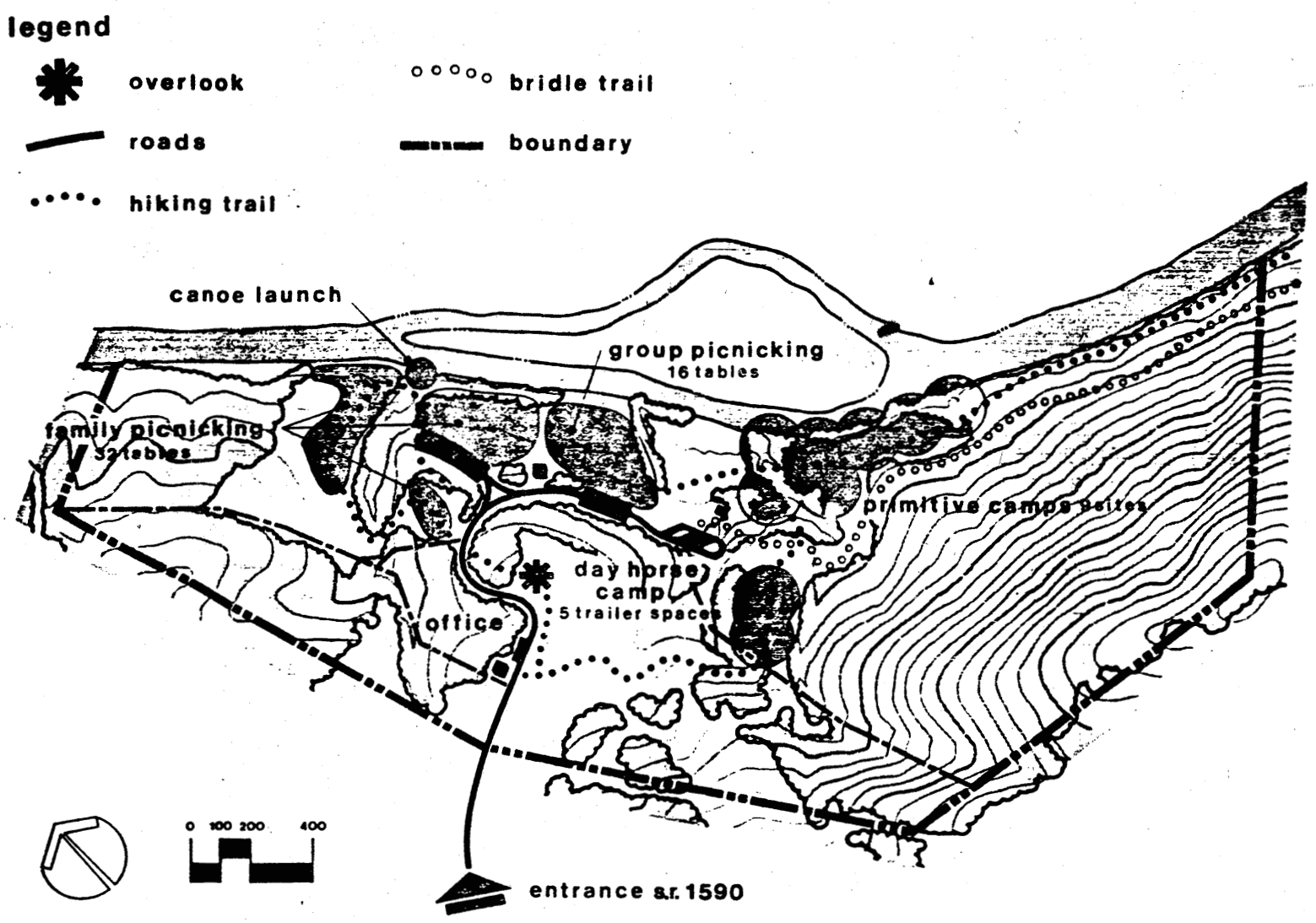
In all, up to 550 acres were identified for acquisition as public access sites with up to 1,500 acres of easement needed to protect water quality and the scenic integrity of the managed section. Land acquisition began in 1976 with the fee simple donation of an 8.81 acre tract by one of the members of the National New River Committee. More gifts of easements followed in the same year from other supportive committee members. Land acquisition by the State of N.C. began in late 1979 and early 1980 with the purchase of the Wagoner Road Access, the Alleghany County Access, Rest Stop # 2, and a portion of the U.S. 221 Access. Since then another conservation easement has been obtained near the 2nd rest stop. Easement gifts currently total 4.5 miles of river front within 33 acres of land.

Two of the major access sites have been developed for interim use pending appropriations for further development. The Wagoner Rd. Access was formally dedicated and opened in May 1980 offering picnicking, boater access and egress, primitive canoe-in camping, water and pit toilets and an access road. In 1982 interim facilities were completed for primitive boat-in camping at the Alleghany County Access with water, grills, and pit toilets provided. Access to that site is currently limited to boater access. The N.C. Division of Parks and Recreation is currently developing a five-year plan for the entire Division which will identify funding and development priorities for these and the remainder of the access sites.

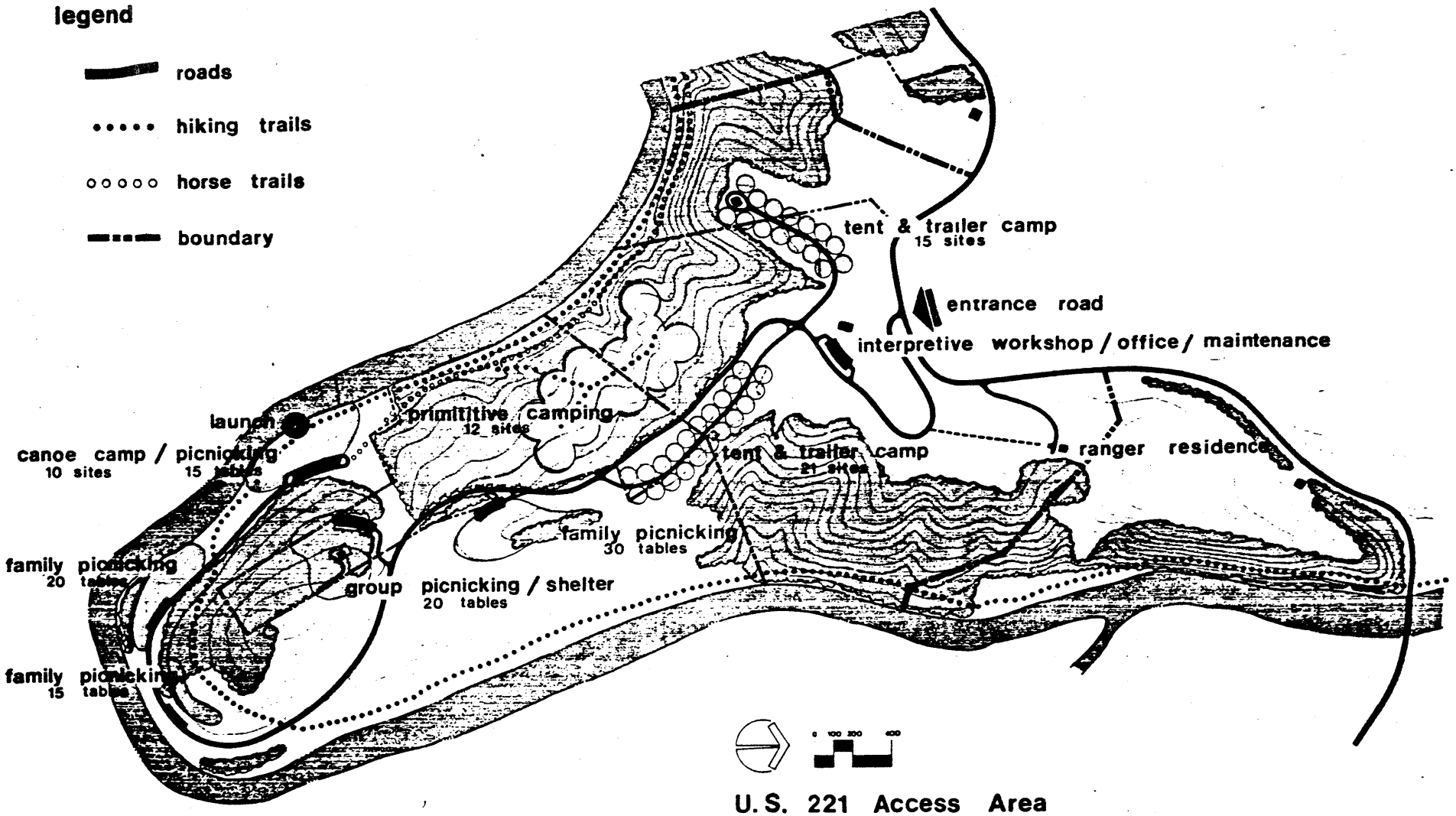
Staffing is currently provided through a permanent park superintendent, permanent ranger, and 3 seasonal employees. The staff operates both Mt. Jefferson and the New River State Parks. Final staffing proposed the establishment of another permanent ranger and additional seasonal support staff.

Through the efforts of a coalition of residents of the New River Valley and their friends and supporters nationwide, the unique character of the river and the way of life that developed alongside it have been preserved and protected for generations. The battle cry "New River - Like It Is" is a truth today. The State's management plan attempts to preserve its character and tradition while providing compatible recreational use and guided understanding of the resource. As the New River State Park is developed generations of people now and in years to come will have the opportunity to share the river's natural and cultural history and come to understand why the fight to save the New was such an emotionally and tenaciously fought issue.


SOUTH FORK NEW RIVER
SCENIC RIVER
ashe and alleghany co. north carolina
mt. jefferson state park
little phoenix mountain state scenic trail
hiking, bridle & canoe trails
hiking and canoe trails
canoe trails only
hiking and canoe trails
site 1
rest stop no. 1
primitive camping
site 2
rest stop no. 2
primitive camping
twin forks
site 3
30
25
20
15
10
5
vehicular access/parking
river access
family & group picnicking
primitive camping
information display
interpretive trail
bridle trail access
vehicular access/parking
river access
interpretive workshop
family & group picnicking
primitive camping
tent & trailer camping
bridle trail access
vehicular access/parking
river access
family & group picnicking
primitive camping
information display
interpretive trail
SR 1559
SR 1309
twin forks
SR 1313
NORTH CAROLINA
VIRGINIA
SR 1560
SR 1308
alleghany co. access area site 3
NC 113/93
SR 1592
SR 1595
US 221
SR 1567
wagoner rd. access area (site 1)
rest stop no. 1
u.s. 221 access area (site 2)
US 221
rest stop no. 2
0
4000'
legend
scenic easement
fee simple acquisition
conservation easement along river bank (average 150 feet wide)
vehicular access
hiking trails
bridle trails



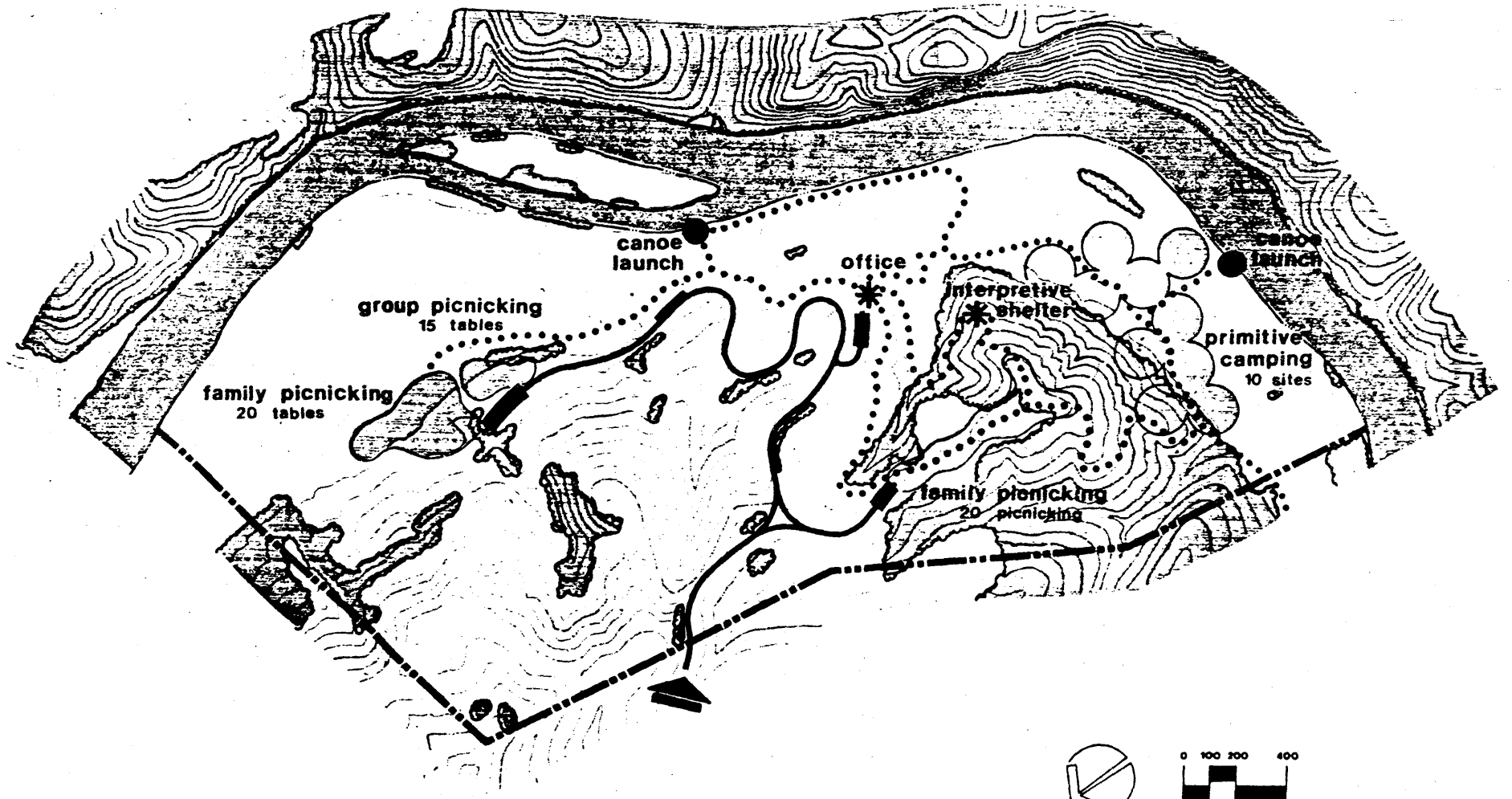
Wagoner Road Access Area



U. S. 221 Access Area

legend

- overlooks
- roads
- hiking trails
- boundary



Alleghany Co. Access Area

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HISTORIC SITES IN CRUMPS BOTTOM, BLUESTONE RESERVATION

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INTRODUCTION

The investigation of historic sites in the Bluestone Reservation is in its infancy. While published references have been researched, there is still a great deal of archival material left unexplored. U. S. Army Corps of Engineers aerial photography, Real Estate records and topographic mapping have been used along with traditional source materials to prepare this preliminary history of some of the historic sites in the Crumps Bottom area. This information will be used to locate and evaluate historic sites for the National Register of Historic Places and to develop pertinent research topics for future investigations in the fields of history and historic archeology.

The Crumps Bottom area consists of approximately six miles of flood plain on the left descending bank of the New River between river miles 9.1 and 14.5 upriver from Bluestone Dam, Summers County, West Virginia (Figure 1). The Bottom had been sporadically occupied by Indians from 10,500 B.C. (Maslowski 1982:186) and was the site of the earliest European settlement in the Bluestone Reservation (U. S. Army Corps of Engineers 1983). Crumps Bottom lay at the intersection of several important Indian trails, and an important ford was located between the Bottom and the Mouth of Indian Creek (Solecki 1949:344).

COLONIAL AND REVOLUTIONARY WAR PERIOD

The first documented settlement in the area was by Andrew Culbertson in 1753 or 1754. Andrew Culbertson settled at the mouth of Joshua Run in an area to become known as Culbertson's Bottom , Reid's Bottom and then Crump's Bottom (Miller 1908:171). He left the land for fear of Indians, selling it to Samuel Culbertson who moved there in 1755. Samuel Culbertson also left because of hostile Indians (Wythe's Chancery Reports 1794:43). Little is known about the earliest settlers on Culbertson's Bottom, but at the outbreak of Dunmore's War in 1774, Colonel William Preston in his 22 July 1774 letter ordered James Robertson "to construct a small Stockade Fort for the Protection of the Inhabitants and the Reception of a Company" (Thwaites & Kellogg 1905:95).

Drafting men to construct and man the fort was a problem. Major Robertson wrote from Fort Dunmore, a local blockhouse on the New River, on 26 July 1774 "I have met at this Place Six or Seven men that Left Culbertson's and has Perswaded them all Back but one (William Atkins)." In the same letter he says "Onless you Send Some men down the Case will be Bad So that I must stay with not more than Six men unless I kill part and tye the Other I Expect we will have a war amongst our Selves without that of the Indians" (Thwaites & Kellogg 1905:99). On 28 July 1774, Major Robertson wrote from Fort Byrd, which is the name given to the fort at Culbertson's, "we will have our Fort Gentelly finished the week. We have 25 private at this Place. I have Ten at Old Billey Wood's" (Thwaites & Kellogg 1905:100).

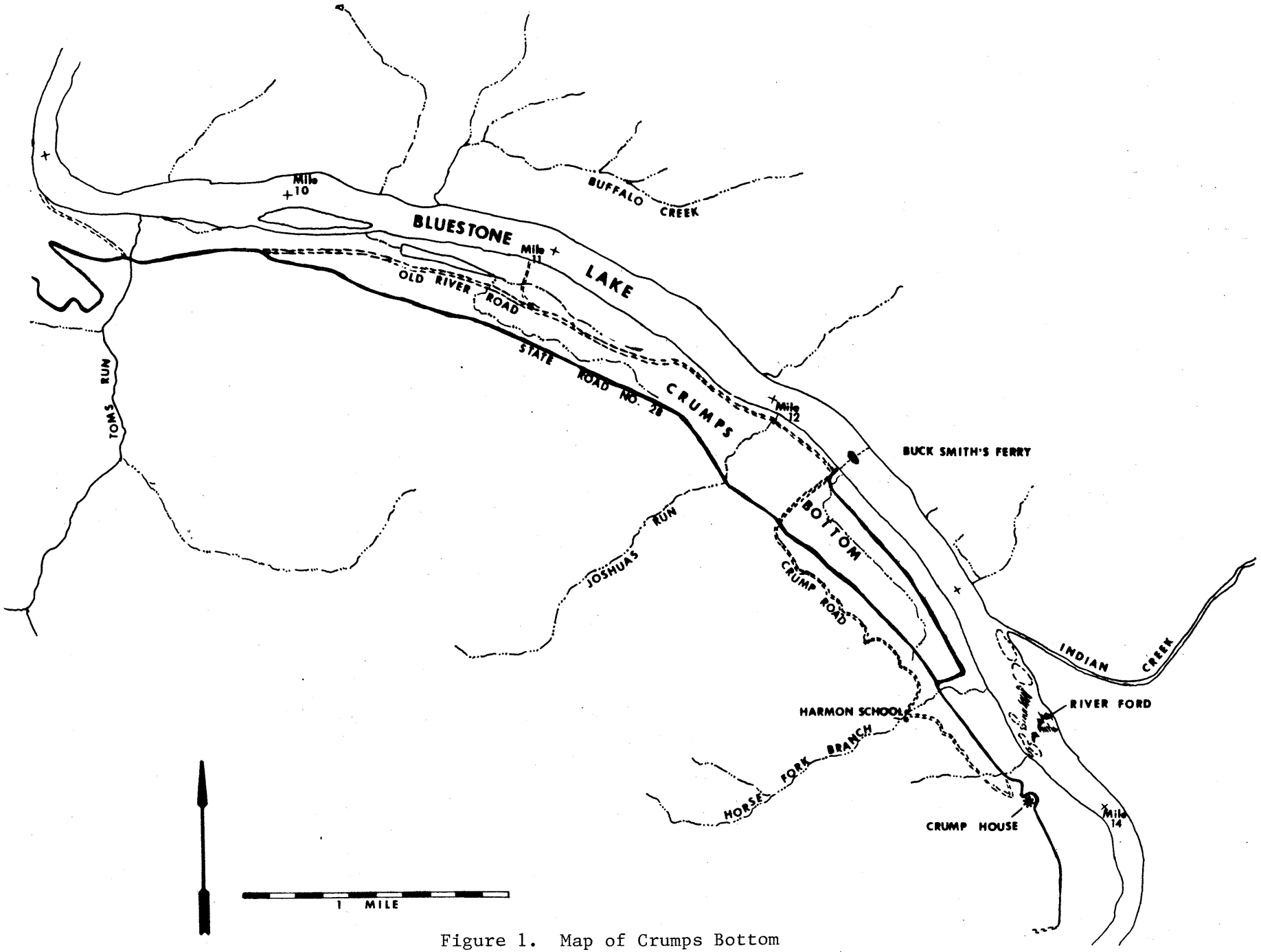


Figure 1. Map of Crumps Bottom

On 1 August 1774 he wrote "we have finished our fort and I think not a dispiseable one. I have been about Raiseing a House for to hold Provisions and Amunition but I am Afraid the Place wont be Over Stocked with Either" (Thwaites & Kellogg 1905:105). In the same letter Robertson indicated he now had 33 men. The fort at Culbertson's was constructed in approximately 10 days and must have been relatively small for a stockaded fort.

Robertson's men were concerned with scouting the Indian trails because Indian raiding parties were frequently in the area. On 11 August 1774, Robertson wrote "There has been three or four Indians Visiting the Waste Plantations Above us on the River they Burnt a House About five miles above the fort Last Sunday. They Left a War Club at one of the wasted Plantations well made and mark'd with two Letters IG" (Thwaites & Kellogg 1905:138-139). The war club was probably an Iron tomahawk and the letters may have represented the maker's mark.

In the same letter Robertson offered a reward "I have Offered ₤ 5 for the first Indians hand that will be brought in to the fort by any of the Company."

The primary Indian trail used by the Shawnee and other Ohio Indians in their raids on the New River settlements was the Paint Creek Trail (Olafson 1958:5). Paint Creek Trail crossed the Bluestone River at its mouth, traveled through the Glades and down Paint Creek, crossed over to the Coal River and followed the Coal River to its mouth on the Kanawha at St. Albans. Robertson's scouts patrolled this trail even before the construction of Culbertson's Fort. This caused the Indians to use the Big Sandy Trail. On 11 August 1774, Major Robertson wrote "I keep the Scouts out as far as the Glades they Cannot See any Signs of the Indians that Road I suppose these Indians came up Sandy River and In by the Head of Blue Stone" (Thwaites & Kellogg 1905:139).

In September 1774 Major Robertson and Michael Woods were busy recruiting men for the expedition to Point Pleasant. On 15 September Major Robertson wrote "Capt. Woods and his Party is Joynd me Which makes our number of the Whole 55" (Thwaites & Kellogg 1905:199-200). Recruiting and maintaining a company was still a problem, as Capt. Michael Woods adds to Robertson's letter "Sir-I Draughted Philip Cavanough John farley Richard Blankingship John [H]umphres francis farley & george pack who all refused; and I understand there is some of them going over to you to try and get off But Major Robertson and I has consulted and we desire that you may not Countenance any of them."

In October 1774 Captain Joseph Martin took command of Culbertson's Fort (Thwaites & Kellogg 1905:247-248) and a month later the detachment of scouts was disbanded. However, the Fort must have been maintained because in 1777 Captain John Lucas was in command of the Fort which was by then referred to as Fort Field (Johnston 1906:62).

Because the Culbertsons had left the land and the land appeared deserted, other people began to assert claims on the Culbertson land. In 1775, Thomas Farley acquired the settlement rights of Butcher and Gatliff for 355 acres at Tom's Run on the lower end of Crump's Bottom. The land was actually settled in 1772 (Wythe's Chancery Reports 1794:43).

In 1775, Thomas Farley built a blockhouse or settler's fort (Johnston 1906:14) at the mouth of Tom's Run approximately 5 miles below Culbertson's. Later in the year, Farley assigned his claim for the land to James Burnsides

and a long period of litigation involving Andrew Reid, Samuel Culbertson, Thomas Walker and James Burnsides over the right of ownership followed.

It was finally decided that 400 acres of land be surveyed and laid down for the Culbertsons, that Burnside's claim should also be surveyed and laid down and that Burnsides would convey to Reid, as representative of the Culbertsons, whatever portion of the 400 acre patent lay within his surveyed claim. Both parties appealed this decree (Wythe's Chancery Reports 1794).

James Caldwell, in his Revolutionary War Pension Declaration, stated that Farley's (Farlow's) Fort on Culbertson's Bottom was burned by the Indians in the spring of 1778 (Dorman 1968:47). Caldwell stated that during this time he had served under the command of Captain Archibald Woods and they had spent fifteen days pursuing the hostile Indians who burned the fort.

The remains of Culbertson's Fort and Farley's Fort have not been located. Solecki (1949:342) assigned archeological site number 46SU23 to an area 400 feet from the mouth of Joshua's Run which he thought may have been the location of Culbertson's Fort. European artifacts were found in the area but no test excavations were ever undertaken.

Solecki assigned site number 46SU19 to an area of Crump's Bottom opposite the mouth of Buffalo Creek, one mile east of Warford, which he thought may have been the location of Farley's Fort. Again European artifacts were collected but no test excavations were undertaken.

If these Forts and other early cabin sites could be located, they would undoubtedly qualify for the National Register of Historic Places. They would also provide valuable information on the early European settlements in the area.

EARLY SETTLEMENT PERIOD (1795-1848)

Peace was established with the warring Indian tribes west of the Ohio River in 1795 after the Battle of Fallen Timbers. This assured the peaceful settlement of the Ohio and Big Sandy Valleys and increased the influx of settlers throughout the New River Valley. Culbertson's Bottom was probably occupied by several families engaging in subsistence farming with a heavy reliance on hunting and fishing to provide sources of protein. Surplus produce was first sold or bartered locally, but, gradually, farms grew large enough to ship grain and livestock to eastern markets.

AGRICULTURAL AND COMMERCIAL PERIOD (1848-1948)

By 1848 the Giles, Fayette and Kanawha Turnpike was completed through the New River Valley. The turnpike proceeded from Peterstown, Virginia, crossed the Bluestone River near its mouth and traveled up the Little Bluestone River to Jumping Branch and then to Beckley (Richardson 1949:215). This provided ready access to eastern markets for local goods and produce.

In the early 1800's, part of Culbertson's Bottom was owned by T. S. Campbell. His estate consisted of 800 acres which included 550 acres of flat bottomland and 200 acres of virgin timber. Campbell raised 200 head of hogs and 100 head of cattle a year. Each year the stock was driven overland to markets in Philadelphia, Baltimore and Richmond (Donnelly 1960).



Figure 2. Front view of Crump Mansion. Photograph provided by Hallie Harman and Fred Long.

L. P. Campbell, the son of T. S. Campbell, indicated that in his boyhood, which would be the 1850's, game was plentiful in the area. The New River was full of fish and there were plenty of deer, raccoon, squirrel, wild turkey, wild ducks and other water fowl to feed the family. At this time there were "millions of pigeons" and flocks of wild geese passed over the bottom each year. During this period, the bottom was too rich for raising wheat. The wheat would grow up in a hurry and then fall over, making it difficult to harvest (Donnelly 1960).

In 1855, Major William Crump, a native of Franklin County, Virginia, moved, with his family and several slaves, to what is now Crump's Bottom. Major Crump, a Primitive Baptist, had married a Miss Gillie Law in 1816. His son, William G. Crump, was born a short time later. Crump, an entrepreneur and an extremely rich man described as "a gentleman by birth and a nobleman by nature", (Miller 1908:171) proceeded to build the only brick house in the area that was later, in 1871, to become the Pipestem District of Summers County. The only other house of reknown in the Pipestem District at that time was a

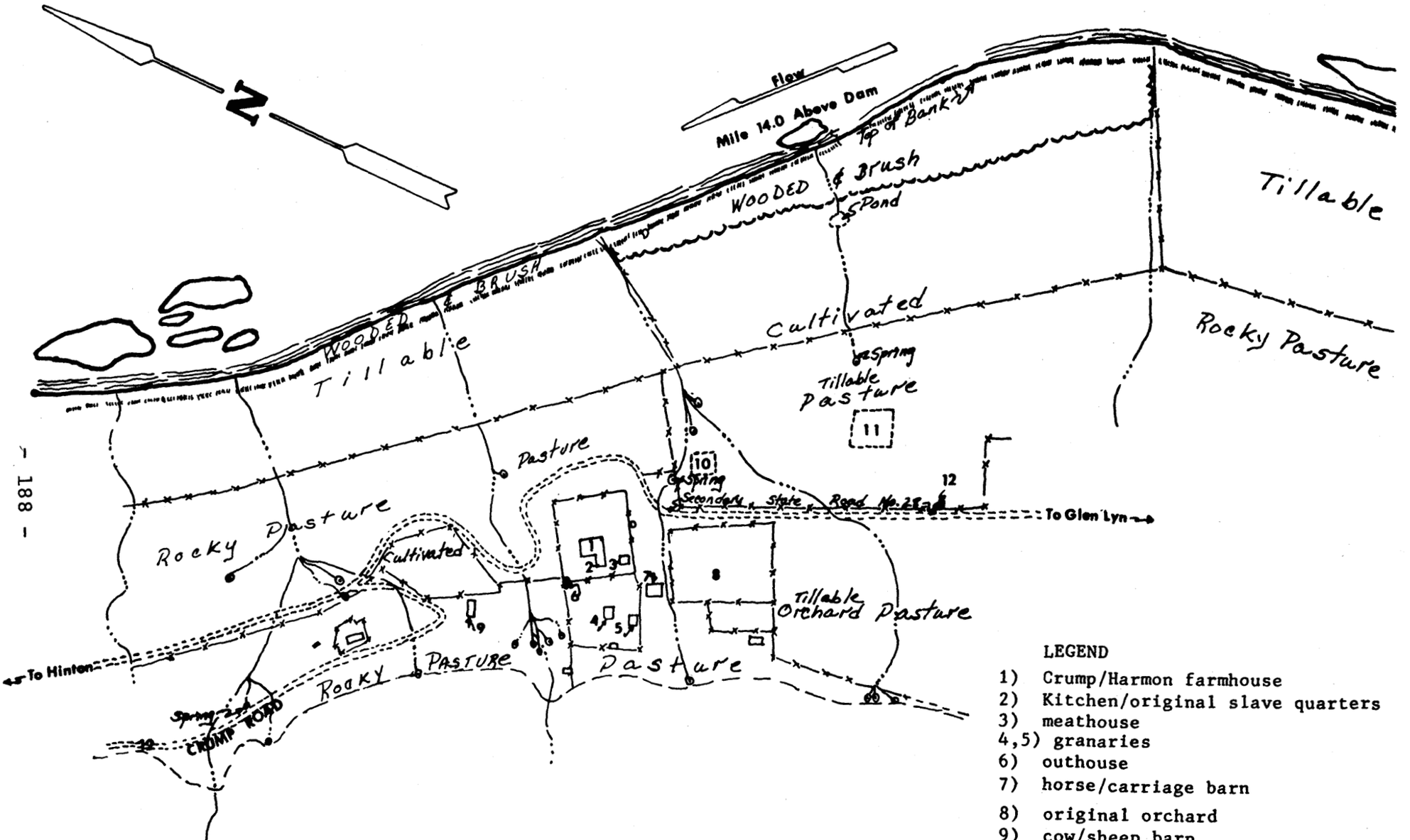


Figure 3. U. S. Army Corps of Engineers Real Estate Map of Crump/Harman farm.

two-story, frame house belonging to Anderson Shumate, on the property of the Mercer Salt Works on Lick Creek (Miller 1908:58).

The Crump estate was one of the grand estates in what is now southern West Virginia. Crump property extended along the New River and covered approximately 1,744 acres (Browning 1953:12).

The Crump Mansion (Figure 2), quite a site in a region where a man's wealth and standing were measured by whether his home was built of round logs or the more pretentious hewn logs, was built above the flood plain of the New River, overlooking the river and a good portion of the fertile bottomlands (Figure 3).

Of Major Crump's many business interests in the area of Summers County, one was the ownership of a buhrstone mill, known later as the mill of Mr. Levi McNelly, on the Bluestone River (Miller 1908:74). The Crump family also had an interest in the Mercer Salt Works on Lick Creek. Upon Major Crump's death at age 83 in January of 1877, the Crump estate passed to the hands of his son, William G. Crump (Summers County Records:Deaths 1871-1906).

Both Major Crump and his wife, Gillie, who died after him, were purported to be buried in glass coffins (Wilbur Farley, personal communication 1984). This has never been proven; however, a common practice was to have a pane of glass set in the coffin lids over the face of the deceased. Although many coffins of this type were homemade, more elaborate coffins with larger panes of glass could be purchased. When the graves in the family cemetery were exhumed in 1948 because of the construction of the Bluestone Dam project, two unmarked graves, which contained remnants of glass, were found lying end to end (Bluestone Reservoir Cemetery Removal Field Notes CR-2). These are presumed to be the graves of Major Crump and his wife.

Upon the death of William G. Crump, Major Crump's son, on May 22, 1890, (Summers County Records:Deaths 1871-1906), the estate passed to William Crump's daughters and their husbands. Ella Crump married Colonel John G. Crockett in November 1872 and Mary Crump married Colonel W. C. Crockett on December 1, 1875 (Summers County Records:Marriages 1871-1899). W. C. Crockett was a preacher in the Methodist Church South and Colonel John Crockett, a Confederate officer, represented Summers County for two terms in the West Virginia Legislature (Miller 1908:171).

Around the year 1900, J. T. Shumate purchased the lower portion of Crump's Bottom from W. C. Crockett (Miller 1908:459). In 1902, G. W. Harman bought the upper part of the Crump estate, including the Crump mansion, from John Crockett (Miller 1908:709).

G. W. Harman, his family and heirs, lived in the Crump Mansion until it was purchased by the Corps of Engineers in 1939. After this, the house began to decay. After standing empty for a number of years, the house was razed because it had been extensively vandalized. The brick house was so sturdy that dynamite had to be used to bring it down. Many bricks from the house were used to improve the nearby road. The four poplar pillars were reportedly used in the construction of a house in Beckley and the shutters were used on a house in Hinton.

Major Crump built his mansion on a terrace point above the flood plain on the upper end of Crump's Bottom (Figure 3). The house itself was built of brick made on the site by slaves. The house had 22 rooms, a full basement with a dirt floor where apples, potatoes and canned goods were kept by the Harmans and a plastered attic on the fourth floor. The timber in the house was mostly walnut and cherry and the four 40-foot porch columns were solid poplar (Browning 1953). The kitchen was at the back of the house, separated from the main structure by a breezeway. The remains of the foundation stone and some of the hand made brick can still be identified and plotted. Some "store-bought" brick, once used to build a new flue in the kitchen, is helpful in delineating the position of that structure. According to reports (Hallie Harman, personal communication 1984), there was a basement under the kitchen which served originally as slave quarters. A flagstone path led from the porch down towards the road and the four main rooms on the first and second floors each had a fireplace (Browning 1953).

Immediately upriver and to the rear of the mansion stood a wooden structure, possibly the original slave quarters, which was later used as a meathouse (Hallie Harman, personal communication 1984). The two original granaries stood directly behind the house. They consisted of a double corn crib with a wheat storage bin on top. They and the other outbuildings were constructed of wood (Figure 3). The outhouse was off the back porch of the house as can be noted from the diagram.

A wooden horse barn in which the riding horses and presumably the carriages were kept stood in a pasture upriver of the house. Next to this was the original Crump orchard. In this original orchard grew many different types of fruits, including grapes, berries, apples, plums, peaches and quince (Wilbur Farley, personal communication 1984). Next to it stood an apple orchard planted in the early 1900's.

Downriver of the house was a spring which fed a small, intermittent stream. Beyond this, in a pasture, was a wooden barn in which the sheep and cattle were kept (Hallie Harman, personal communication 1984).

To the river side of what was Secondary State Road 28, in front of the mansion, is a spring. A springhouse, which left a depression still visible today, once stood nearby. The house was without water or electricity and water was carried up from this spring or from one in back of the house. The family cemetery was in an area of tillable pasture nearby. The rest of the bottomland on the Crump estate was either cultivated field, pasture or timber (Figure 3).

To the left of the estate, toward Hinton, are the remnants of an old road, known locally as the Crump Road. Major Crump established this road in order to gain a better view of his fertile bottomland upon entering and leaving his estate (Wilbur Farley, personal communication 1984). This road climbed up the hillside slightly downriver of the mansion and ran toward Hinton, past what was later the Harman school on Horse Ford Creek, and then dropped suddenly down to the river (Figure 1). The Crump Road traveled down to what was later known as Buck Smith's Ferry. Buck Smith was a white man who ran a ferry across New River around 1920. Buck Smith himself lived on the opposite side of the river. Near the ferry, the Crump road joined the old River Road, which ran through the center of the bottom; the River Road then continued down to Hinton.

The old Crump Road is also known locally as "Billy Crump's Corduroy Road." To corduroy a road is to build a road, or sections of it, by placing logs side by side transversely to the road bed. The Crump Road was corduroyed in its low-lying areas, which were subject to erosion or which had a tendency to hold water. For example, the road was corduroyed where it crossed Horse Ford Creek, near the Harman school. Although apparently none of the corduroy remains extant, it is part of the living memory of many local people (Wilbur Farley, personal communication 1984) and a study of the topography of the area can give a good indication of the placement of the original corduroy.

Slightly upriver of the Crump Mansion, along the old state road, one can see the remains of a set of cattle scales on which cattle were weighed before the drive to market.

Although little remains of the house on Crump's Bottom, the farm complex or the community of people supporting it, there is much of historic archeological interest. Fence lines on the estate are still extant, and through real estate records, early maps, aerial photography and local informants one can relocate structures and piece together the lifestyles of past generations.

The Crump/Harman Mansion and outbuildings have been assigned archeological site number 46SU328. The site, along with all other archeological sites in Bluestone Reservoir, are protected by Federal law and are being preserved for future archeological research.

ACKNOWLEDGEMENTS

The authors wish to thank Wilbur Farley, Hallie Lee Harman, Dora Toney, Steven Trails and Fred Long for providing their time and information for this report. Ranger David Eskridge and Resource Manager Wayne Rigor of Bluestone Reservoir provided transportation to historic and archeological sites on numerous occasions. Lisa Hatten assisted with the typing, editing and compilation of this report.

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ECONOMIC DEVELOPMENT OF VIRGINIA'S NEW RIVER VALLEY: FOCUS 1984

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1884 was a good year for Southwestern Virginia, as developers saw it. As for all the Southern Appalachians, profitable development was in the works especially for the mineral resources. Local entrepreneurs without much apprehension had, particularly during the preceding five years, enticed well-heeled outsiders into the act. Advertisement of the coal reserves of the New River Valley went back eleven years, when the New York-owned C & O railroad completed its trunk line via Hawk's Nest overlooking the river in West Virginia downstream.[1] A heady realization that an iron industry using local ores of Western Virginia might someday rival Pennsylvania's had alerted outsiders even earlier, in 1867. A Philadelphia group, primarily Quakers, bought iron land southeast of the New in Pulaski County, Virginia, to erect a charcoal furnace with what were then modern proportions and technology.[2] The zinc ore in 1884 was being used, as it had been for four years, in a smelting operation organized by a Massachusetts firm in 1879. The ore was mined at Falling Cliff southeast of the river and near Barren Spring(s) in Wythe County, and smelted at the Bertha works in Martin's Station (now Pulaski), on the railroad in the neighboring county.[3] The railroad at the time of organization in 1877 had been the British-owned A, M & O; in 1884 it was the Philadelphia-owned Norfolk & Western.[4] Access to many markets via the railroad was the key to development.

Virginians who had been using the iron, and local coal, for decades perhaps were most surprised at what seemed like global interest in Virginia's ore reserves. Pre-Civil War furnaces, which dotted the landscape, were being built up. In Giles County, a furnace east of Newport reached the peak of its business selling pigs in 1872, just before the depression of the 1870s.[5] The Philadelphia Quakers who bought land in 1867 abandoned a Laurel Creek furnace and built a new Mack's Creek Furnace for their organization, called the Radford Iron Company though in Pulaski County, about a mile from the river (and opposite the old settlement of Draper on the other side).[6] In Wythe County the New River and its tributaries were the sites of numerous old furnaces. Among the best known were Graham's forge, on Reed Island Creek, and the Speedwell furnace, many miles up Cripple Creek.[7] As a Wytheville mining engineer, C. R. Boyd, wrote in 1881, the region was "making a wide and favorable reputation for the almost fabulous quantity of its iron ores and the extent of its fine coal fields, to say nothing of the ores of zinc, lead, and other minerals."[8]

There was, as near Mack's Creek Furnace, a bit of the admired red hematite ore, but most of what the mining engineers found was called limonite, or brown ore, embedded in clay; in ante bellum days the ore had been roasted to separate the iron. The 1880s method of preparing it for the furnace was to "wash" it.[9] With the American iron and steel industry burgeoning in the generally prosperous 1880s, agents of speculators and investors were delighted to find brown ore on the northern slope of Draper Mountain; up

Little Reed Island Creek on the southeast side of the New (not to be confused with Reed Creek); at Foster Falls practically on the river; and at Painters, farther up and northwest of the river beyond Austinville. Austinville was of course the old lead-processing center, and adjacent to a zinc belt coexisting with lead in Pulaski and Wythe Counties.[10]

Coal used for the zinc works in Pulaski City came from Cloyd's Mountain in northern Pulaski County. It would also be used in the new iron furnace built at Central, to be renamed Radford. The Belle Hampton mines there belonged to the Hoge family. A future governor of Virginia, James Hoge Tyler, five years after 1884 would become the chief developer of the eastern half of Radford, where the N & W yards spread out on the flood plain near a sharp bend of the New. Not coincidentally, in 1889 he would also become Lieutenant-Governor.[11] The concentrated coal resources that attracted investors who wanted to use it in the East centered on the Flat Top Mountain section of West Virginia, west of the New downstream. Some knowledge of these riches was shared in England and Northern cities when in 1872 local entrepreneurs planned a new railroad spur from Central Depot downriver to Giles County, then paralleling the Virginia-West Virginia border to what after 1881 became Pocahontas, Virginia. By 1882 a group of Philadelphians had secured control of the proposed spur and it became the New River Division of the N & W.[12]

This spur, and the promise of other access to the mineral riches, caused excitement in the period 1880-1885, and in later cycles. The transportation barrier to commercial possibilities was being met; "after the Civil War the U.S. Government dredged and blasted a boat channel from Max [sic] Creek to Radford and some iron was sent down the river to Radford on flat boats [and on to Lynchburg and Richmond] , but the expense of getting the boats back up the river was so great that this venture was soon abandoned."[13] Fifty years after 1884 a local man named Kersey remembered that "The iron I hauled I loaded at the [Mack's Creek] furnace in my wagon and hauled it across the ferry to Dublin [on the railroad] and unloaded."[14] The Radford Iron Company which owned the furnace experimented with mule-drawn cars on a tram road, and after they leased the furnace in 1880, vainly encouraged the N & W to build its second spur, headed for the Wythe County iron-lands across the mountainous terrain from Radford in a southwesterly direction directly to the Radford Iron Company's furnace.[15] With this prospect fading, the President of the company in 1884 joined with both local and other outside entrepreneurs to buy iron lands closer to the river, and west of it, and also at Peak Knob, overlooking Pulaski City.[16]

This move was made in 1884 because a Pulaski County man had persuaded the N & W, two years before, that the easiest route to the upper New would be on relatively level land from east of Pulaski City south to the river on its western bank, crossing the river to reach Allisonia, the mouth of Reed Island Creek, Foster Falls, and Austinville. The complete plan for the Cripple Creek spur, completed in four years, would extend the road, crossing once again to the west bank to a modern furnace at Ivanhoe (at Painters), then up Cripple Creek to reach both the Speedwell furnace and new developments south of the creek on the slope of Iron Mountain.[17] The N & W, like the mineral developers, knew of plans to extend a railway from Danville west to

the New River--never fulfilled--and another to extend a North Carolina railroad from Mt. Airy to Ivanhoe; that would materialize.[18] Rail access to the Midwest market was also anticipated.

In 1884 the primary existing market for the pigs of the new furnaces was the East. In that year eleven furnaces in Virginia shipped over 70,000 tons of pigs, via rail and ships. New furnaces, some using charcoal, some coke by a new technology, operated at Little Reed Island Creek, Radford, Ivanhoe, and north of the James River west of the Blue Ridge.[19] With northern Alabama behind western Virginia in developing its iron resources, and considerably behind in shipping to the East, Virginia iron threatened the "McConnellsville" competition in Pennsylvania in a year of ups and downs in the market. Apparently an attempt was made in the summer of 1884 to keep the price up with a national pooling arrangement; with its break-down, Virginia iron was really threatening to dominate the market by the end of the year. The London Economist saw fit to editorialize:

> The Eastern (anthracite) pig ironmakers have been surprised to learn of the sum total of Southern (coke and charcoal) iron which has come East in 1884. In consequence, the Lehigh furnaces...have reduced prices... One of the Lehigh men said to me that he and the Lehigh and Schuylkill men do not intend to permit the South to sell 100,000 tons of pig iron in the East in 1885...[20]

Virginia iron, however, much of it from Wythe County, continued to sell well into the late 1880s, so much so that speculation in limonite lands and sites for industrial towns, notably in the Holston Valley and at Radford, reached its peak in the three years before the 1890s depression. At the same time the Cranberry furnace 20 miles west of Boone had its greatest promise.[21] The same period brought a British company into development of Middlesborough, Kentucky, and the breakthrough in processing of the red hematite ores in the vicinity of Birmingham, Alabama.[22] Interest and excitement about Virginia's iron ores peaked about 1901, when the state was fourth in production.[23] A local entrepreneur who learned the method of the "big boys," George L. Carter, of Carroll County, was a principal organizer of the Virginia Iron, Coal & Coke Company just before the turn of the century, and a huge holding company building a new rail outlet and the industrial city of Kingsport before World War I.[24]

But a genie, or a god, would have known, even in 1884, that the expectations for Virginia's iron and zinc were exaggerated. Virginia's brown ore, its scattered locations, its remoteness in terms of railroad access, its management by relatively small operations--these did not "fit" the emerging iron and steel industry, in the age of Andrew Carnegie, Henry Clay Frick, and the U.S. Steel giant organized in 1901. What later would be seen as modest-sized furnaces, lined with tile, in the 1880s came to use coke, the coke produced by a Belgian technology brought first to the Hawk's Nest area and then to the Flat Top and other coal regions.[25] The speculative era of the 1880s in Virginia resulted in new furnaces which "blew in," and in a few months would "blow out" because of the mineral "impurities" associated with the iron treated. Virginia iron had high percentages of phosphorous, manganese, and sulphur. Of course, given the

right technology, and enough money, these, too, had commercial possibilities. In Augusta County, north of the James River, in the 1880s, where the manganese was itself relatively concentrated, outside investors developed the country's largest manganese plant.[26] An "acid plant" processing sulphuric acid flourished at Pulaski City until the Great Depression.[27]

In the 1880s though, idle months, and the expense of relining with tile were blights on the expectations. In Western Virginia, the most damaging of the "blow outs" occurred in 1884 for the Victoria Furnace, then considered a monster. Owned by the Iron and Steel Association of Virginia, Limited, a British corporation which also developed the Mr. Carbon Coke Company at Hawk's Nest, the Victoria performed beautifully during many months of 1883, then went out of blast in April, 1884. The market was slow during the months of expensive relining.[28] Within the next three years the Alabama industry flourished, using the less difficult red hematite ore, and Victoria's backers retreated to the coal operation in West Virginia.[29]

Despite being ahead of Alabama during the mid-1880s, Virginia had gotten a late start in benefiting from British investment money because of an embargo until 1880 watched over by that country's Council of Foreign Bondholders. Whereas the Alabama government worked out an advantageous arrangement for the bondholders, in effect giving them a railroad and mineral lands, Virginia's Readjusters in the late 1870s threatened the bond-funding formula which had pleased the British.[30] In anticipation of the political defeat of the Readjusters the British interest in Victoria ensued in 1882.[30]

In a sense, the boom in coal prices and the stability of coal-selling for the coal railroads worked to blight the iron industry in Western Virginia. Increasingly the coal of the Flat Top, and other West Virginia regions, as well as from the Cumberlands, could be sold to heat homes and fire factories.[31] From 1887 until the First World War, the N & W, the C & O, the L & N which came into Southwestern Virginia, and later the Clinchfield and Virginian railroads had managements desirous of this coal trade.[32] (The coal resources of Giles, Montgomery, Pulaski, and Wythe Counties, Virginia were not extensive enough to attract much attention. The advent of the Virginian railway did revive some interest in Montgomery's anthracite before 1914.)[33]

The iron industry in Western Virginia nevertheless held up remarkably well in the first decade of this century. The scattered nature of the ores, and Daniel Imboden's failure to interest the Pittsburgh steel barons in the area, probably were critical factors. After 1910 Virginia's iron industry took a plunge. As an example, the owners of the Mack's Creek furnace after 1903 gave up on significant use of the iron and zinc ores, and decided to sell off the timber and, later, gain a few dollars for their stockholders by leasing a route for an electric power line.[34]

The level of promise had changed drastically in the twenty-five years since 1884. In that Gilded Age year, the railroad had built a handsome Maple Shade Inn in downtown Pulaski City, to house the numbers of examiners of the possibilities of the "Industrial Region."[35] "Southwest Virginia... [was] attracting the attention of British capitalists."[36] At Staunton

mining engineer Jedediah Hitchcock's publication, The Virginias, stirred up global awareness of the iron resources of the New River Valley in Virginia.[37] In Wytheville, mining engineer C. R. Boyd was still sanguine about commercial benefits for both local and outside investors.[38] It is not, at this distance, possible to know how the natives responded to the exclamations of promise. They had participated, truly, in "development," cutting trees for the charcoal furnaces, driving wagons with pig irons to the railroad stations, and shoveling the grading of mountainsides for a growing network of railroad mainlines and spurs. In 1885, the level of disinterest of some of the natives was observed with some pique, by an outsider writing for the Baltimore Manufacturers' Record. This publication was a major booster of social progress for the South through accommodation to the wishes of the men with money, and their agents. He wrote:

> Speaking of mountain people, it is a mystery to the outside world how some of them live. All through the mountainous sections of Virginia and the Carolinas there are people living in the most primitive fashion, knowing nothing of the outside world. As a class they are thoroughly honest, and are hospital [sic] to any who may visit their mountain homes... Here in contentment and apparent happiness they live, caring not for the rise or fall of stocks, nor for the things that command the attention of the [developing] world...[39]

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THE HOUSE BY THE WILDERNESS ROAD

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Prior to 1966 very little group interest had been shown in the Radford area in the preservation of buildings and artifacts that remained of over 200 years of history. Various groups and agencies interested in the preservation of our local heritage were in existence, such as the Smithfield Plantation organization in Blacksburg, and these groups were obtaining homes, farms, and artifacts in order to protect, preserve, and display said items for the general public. It was only a matter of time until the citizens of Radford developed a similar interest.

Efforts in the Radford area were spearheaded by William E. Gilbert, a retired Radford College professor. Mr. Gilbert worked for five years visiting historical societies in other areas in order to make recommendations for the formation of a similar agency in Radford.

His notes of June 8, 1965, called for a preliminary meeting of a few citizens with the wisdom to reach some conclusions regarding the organization of regional citizens to publicize and perpetuate the local history. Thus was born a new historical society and plans were launched to obtain a charter and create a formal organization.

On October 18, 1966, a group of 21 interested individuals applied to the Commonwealth of Virginia for a corporate charter to create an organization to be named the New River Historical Society (hereafter referred to as Society). According to the charter its purposes were to be as follows:

A. To bring together persons and organizations interested in history and especially history as it relates to Radford and the New River region of Virginia;

B. To discover and collect any and all material relating to the said New River Valley of Virginia and any area related thereto;

C. To provide for the housing, storing, preservation, display, and accessibility of said material to students and the general public;

D. To disseminate historical information by publication and other means of communication directly by the corporation or in association with others, including the marking of historical objects, buildings, sites, and trails.[1]

Since that time the growth of the New River Historical Society has been gradual and currently over 350 members are enrolled. One reason for the growth was the interest stimulated in the idea of an outdoor drama. In 1970, the Society established The Long Way Home, currently Virginia's only historical outdoor drama. This play gave its premiere performance that year at the Ingles homestead on the New River. Many persons became a part of the New

River Historical Society as they supported the outdoor drama, which was based on the story of Mary Draper Ingles and her return to Draper's Meadow after a period of Indian captivity following her capture in July, 1755. The Long Way Home presented its 500th performance in the summer of 1983 and will begin its 14th year this June.

The need for a museum became apparent as the Society began to accumulate records, furniture, tools, and many other historical items. One such acquisition was a hand-carved Honduras mahogany poster bed and large chest of drawers donated November 15, 1971, by Mrs. Helen Trigg. Storage for the growing collection was becoming a problem.

It was obvious that a broad base would be needed to undertake such a project. In 1977, after several reorganizations, the Society adopted its present structure. As a part of the fourth planning district of the New River Valley, chapters were created in Giles County, Floyd County, Montgomery County, Pulaski County, and the city of Radford. A board structure was adopted that represented the entire area.[2]

The board in 1978 approved the appointment of a "Museum Search Committee" to explore the future needs of the Society and formulate and recommend plans to carry them out. A committee of seven members was appointed in the spring of 1978. This group held its first meeting in Pearisburg, Virginia. After much discussion the committee voted to recommend to the Society that a regional museum be established somewhere in the Radford/Dublin/Pulaski area.

At the same meeting the committee also explored the idea of local museums. The decision was made to recommend local or mini-museums in each chapter area. Both proposals were accepted by the Board of Directors of the Society. At the present time museums are being established in Christiansburg, Giles County, Radford, and plans are formulating for one in Floyd County.

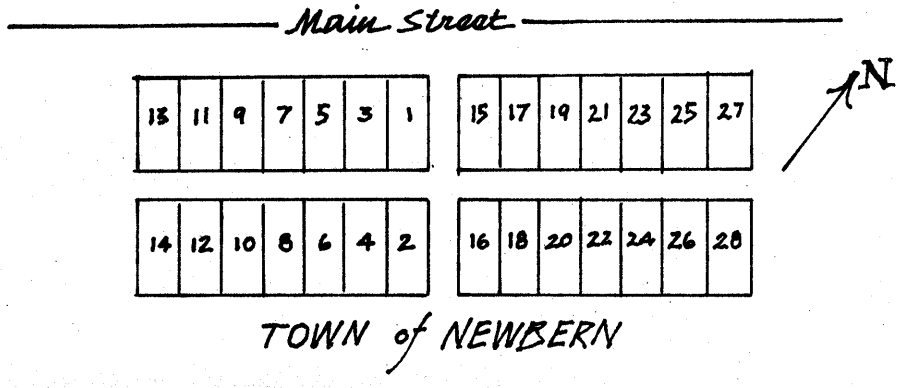
The Museum Committee considered several possible locations for a regional museum before the opportunity arose to purchase property in Newbern, Virginia. The 12-room Henry Hance House (later K.B. Alexander property) located in the State and National Historic District of Newbern, Pulaski County, was offered to the Society. The property at the time was owned by Levin J. Smith of Independence, Virginia, who had given up plans to restore it as a private residence.

On the recommendation of the Museum Committee the Society's Board of Directors met on the property and after careful inspection and consideration, it was their unanimous decision to purchase the property.[3] One reason the Board looked with favor on the property was its location. Newbern had been listed in the register of National Historic places in 1977 and the house fronted on the highway (State Route 611) that was originally called the Great Road or Wilderness Road about six miles from historic Ingles Ferry on the New River.

Newbern was a planned town created in the year 1810 by a local settler named Adam Hance. Hance had started in early life acquiring property in the area and by 1810 possessed a plantation over 1,000 acres. This property was

about halfway between Christiansburg and Evansham (Now Wytheville). The rough "Great Road," either muddy or dusty, crossed at Ingles Ferry on the New River and swung northwesterly through the Hance Plantation. As Conway H. Smith pointed out in his History of Pulaski County, "A town halfway between the two points (a distance of about 60 miles) would surely attract taverns and other business establishments, and town lots would bring good prices."[4] Adam Hance conceived the idea of establishing a new town but in order to do this the main road from the valley area called Round Glade had to be moved to the ridge about 180 feet higher on his property. By 1810 it was apparent that Adam Hance had been successful in his plans because county authorities moved the road to cross the ridge above the Round Glade. On March 3, 1810, Adam met with a group of local residents and together they signed a document by which a town was established. Rules and regulations for building and other considerations were agreed upon. Those signing the document were Henry Weiser (sic), Jr., George Whitfield, John Myers, William Eyre or Eyrs, and John R. Johns. The town was to be called Newbern. Some think this name was chosen because of the settlers in the area who had come from Switzerland.

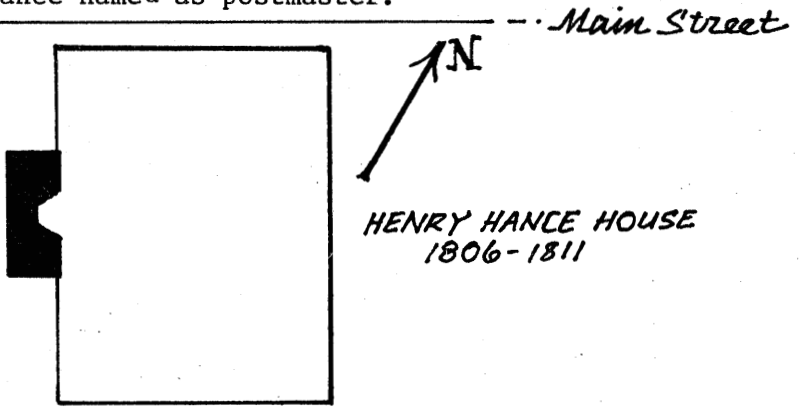
The town was to consist of 29 lots which were laid out and surveyed the same month the agreement was signed. Twenty-eight of the lots measuring 99 feet by 214 feet with the even-numbered lots facing the Great Road on the South side were bisected by a street named Cross Street. The 29th lot, to be used for a tannery, was located several hundred feet to the North.[5]



In the agreement it was specified that each house should be constructed of logs with the minimum size to be at least 16 feet square. The height of the building was to be one-and one-half stories and chimneys were to be of brick or limestone. Each window was required to have 12 panes and all roofs were to be shingled. Stones and lumber would be provided for the first four purchasers of lots with these materials to be used in building the houses. The offer was to be good for two years from the date of the agreement.[6]

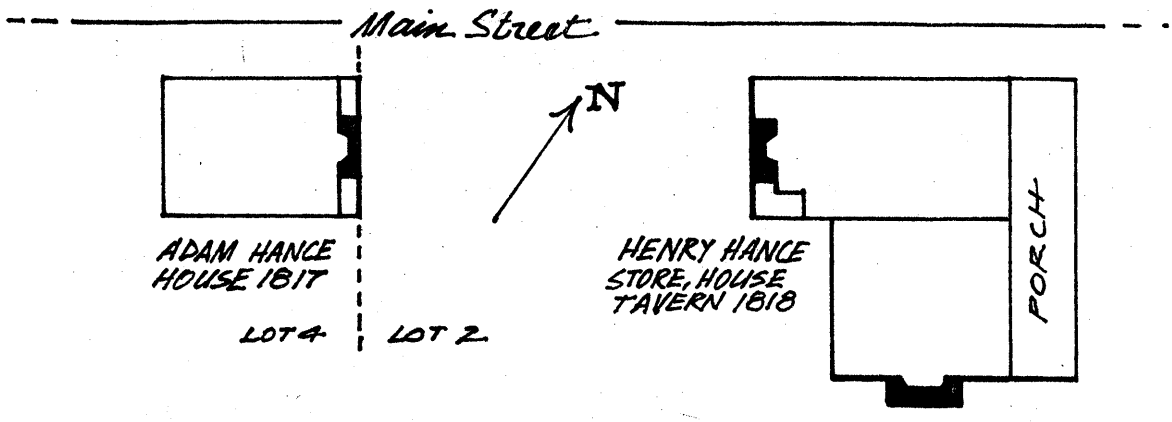
Water was not present, thus some means of obtaining water had to be provided. The agreement stated that town residents could obtain water from several springs close by. If they wanted to pipe the water Adam Hance would provide stones and lumber free for the period of five years from the date the agreement was signed.[7]

Soon after the agreement to establish Newbern was signed, Adam Hance arranged to have the town recognized by the Virginia General Assembly. In January of 1811 the act to establish the town was passed. The enabling act specified thirty acres of Adam's land would constitute the town.[8] The trustees were empowered to make rules concerning the building of houses and settle disputes regarding lot boundaries and make bylaws for the government of the town. The act specified that after residents had built a house 12 feet square or more with brick or stone chimneys they would be entitled to privileges that freeholders of other towns enjoyed. When the town was laid out the area's first realtor would be in business selling lots. By 1817 17 lots were sold and lot number two, the one we are primarily interested in, was sold early. On this lot Henry Hance had constructed the first building in the town. It is believed that this construction took place between the years 1806 and 1812 with the traditional construction date set at 1806. The house was in use in 1812 because a post office was established that year on 8 April 1812 with Henry Hance named as postmaster.[9]



The house which Henry Hance built was log, 18 feet by 18 feet. A hearth and chimney of limestone was built on the west wall of the structure. The house was two stories high and access to the upper area was probably gained by use of a ladder. The exterior was covered with weatherboards which painted barn red as shown by the surviving exterior in the attic of the present museum building. The interior was panelled and originally painted white with other woodwork such as window frames, chair rails, and doors painted colonial gray.

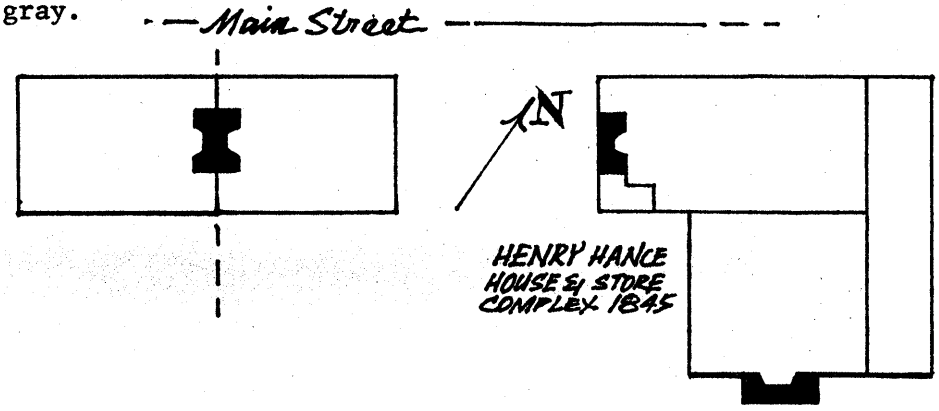
In 1816 Henry Hance obtained a merchant's license from Montgomery County Court and began enlarging the house to make more room for a store. During the building addition the original chimney was moved to a wall farther west. An additional room 22 1/2 by 18 feet was built on the south of the old house and had a hearth and chimney of limestone and brick on its southeast wall. The new room did not have a connecting door into the old part of the Hance house. A porch eight feet wide and 40 1/2 feet long was added to the east end of the house. An additional 21 feet was added west of the old house to make Hance's house 26 1/2 feet long parallel to the main street. The new addition, now connected to the original room, was divided by the present arched opening and was used as Hance's tavern in 1819.



The barn on the property was built about March of 1818. Henry Hance credited Solomon Davis for the work done on the barn in his ledger in March of 1818.[10]

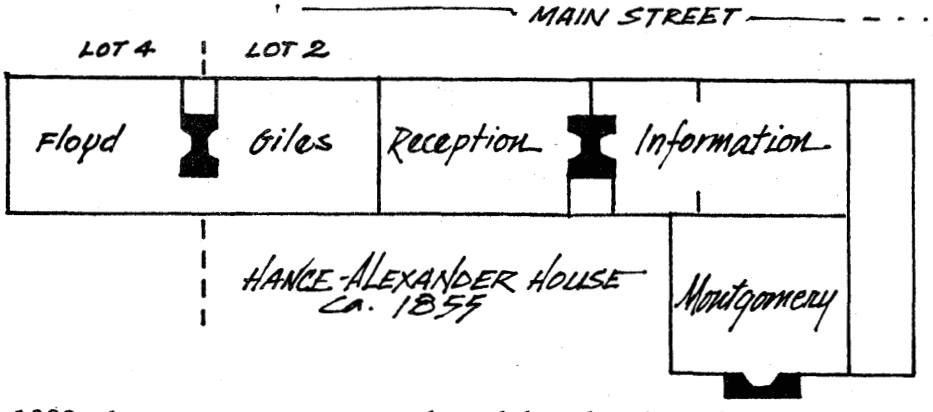
In 1817 Adam Hance moved into a new home 24 1/2 by 18 feet on lot number four of the original Newbern plot. The walls of this house were originally painted white and the woodwork a light purple or violet. A wooden mantel of simple classical form was placed in the room. Later this house would be used for court meetings until the Newbern courthouse was completed in 1842.

In 1843 Henry Hance began construction on the Adam Hance house to add additional rooms. These rooms were to be 25 1/2 by 18 feet. A staircase was built in the northeast end of the room and the second story was raised to make the entire house two stories high. The woodwork in the new addition was painted gray.



Sometime after 1846 the room now used as a reception room by the museum was constructed by Henry Hance and Jabin B. Alexander. This room, which had a mantel from another structure, had its chimney placed against the chimney of Henry Hance's old tavern. The new structure was not connected to either Adam Hance's house or Henry Hance's house. A staircase was built in the southwest corner giving access to the room above. This 21 1/2 by 18 foot log addition could have been an apartment for Jabin Alexander. With this construction the Hance-Alexander house assumed its present configuration with the exception of the kitchen wing. Eventually doorways were cut between the rooms but the date is not known.

The style of the different parts of the house is similar even though built in different periods. Window openings are small being 28 inches wide. All windows have panels eight by ten inches with 15 panes in each window. All woodwork is similar and most mantels are of Greek revival style. The only fancy decoration is a rope motif on the exterior cornice of the Adam Hance end of the house. Outbuildings present in 1852 and still standing are a log house, a log crib, and the barn. The log cabin is a story and one-half building with a limestone and brick chimney on the north side. The chimney, eight feet and ten inches wide, is all that remains of the kitchen and its loft used for the slaves.[11]



In April 1980, the property was purchased by the New River Historical Society. It is the Society's plan to develop the property into a museum complex representative of the New River Valley culture. On May, 4, 1980, an open house was held which was attended by over 500 people. By the fall of 1980 over 2000 people had visited the museum. This large turnout was interpreted as a show of support from the many surrounding counties in southwest Virginia.

The house, as purchased, is a two-story clapboard building with the original chimneys of brick and native stone. The interior has hardwood floors, solid panel doors with wrought iron hinges, plastered walls, two bathrooms, and windows with 15 panes. Standing back of the main house is the chimney to the original log kitchen, a large barn, smokehouse, and three smaller buildings. The front entrance faces what was once the "Wilderness Road."

With the purchase the Museum Committee of the Society adopted the following statement of purpose for its brochure:

> To provide a regional museum to preserve the cultural heritage of the area; to discover and collect any and all materials relating to the history of the said New River Valley; to provide for the housing, storing, preservation, display and accessibility of said materials to students and the general public.[12]

By vote of the membership the name adopted for the museum was the Wilderness Road Regional Museum.

The museum now houses many items for exhibit and is affording educational opportunities for school children throughout the Valley. During each calendar year several educational activities are held for youth and adults: Founder's Day in March, Appalachian Heritage Day in May, Civil War Reenactment in June, and Fall Festival of Arts and Crafts in October. Genealogical material and research assistance are also provided at the museum.

The Hance House is unique in that it is the only regional institution of its kind functioning between Roanoke and Abingdon, intending to preserve the Appalachian culture for all citizens of the New River Valley.

Since its purchase, reconstruction and renovation have been continuous. Permanent exhibits and programs are taking place and gifts and donations continue to aid the completion of the project. The house by the side of the Wilderness Road has become the Wilderness Road Regional Museum. In the near future the Society hopes to see a marker on Interstate 81 reading: "Wilderness Road Regional Museum, next left/right." Then all travelers who desire to learn something of the Appalachian culture can exit to the house by the side of the road where the story of our past is being told.

FOOTNOTES

[1]New River Historical Society By-Laws, Adopted April 1977.

[2]Minutes, Museum Committee, New River Historical Society, January 18, 1979.

[3]Minutes, New River Historical Society, Board of Directors, August 19, 1979.

[4]Conway Howard Smith, The Land That Is Pulaski County (Edmonds Printing Company, 1981), p. 180.

[5]William Buchanan, "A Chronology of the Hance-Alexander Family and the Hance Alexander House, 1768-1866," R.U. unpublished thesis, May 1983, p. 19. (Hereafter referred to as Buchanan.)

[6]Mary B. Kegley, Early Adventures On the Western Waters, Vol. II, (Green Publishers, Inc., Orange, Va.), 1982, pp. 285-288.

[7]Kegley, pp. 285-288.

[8]Buchanan, p. 21.

[9]Buchanan, p. 22.

[10]Buchanan, pp. 104-106.

[11]Buchanan, pp. 80-91.

[12]Minutes, Museum Committee, New River Historical Society.

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2. Buchanan, William, "A Chronology of the Hance-Alexander Family of Pulaski County, Virginia, and the Hance Alexander House 1768-1866." May 1983. Radford University unpublished masters thesis.

3. Kegley, Mary B. Early Adventurers On the Western Waters, Vol. II, Green Publishers, Inc., Orange, Va., 1982.

4. Minutes of the Museum Committee, New River Historical Society.

5. Stanley, Alecia. Newbern, Past and Present, Radford Review XIV, July 1960.

6. Smith, Conway Howard. The Land That Is Pulaski County, Edmonds Printing Company, Pulaski, Va., 1981.

THE NEW RIVER VALLEY (N.C.) IN SETTLEMENT DAYS

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The Broyhill Center for Continuing Education here on the campus of Appalachian State University is situated on a headwaters tributary of the South Fork of the New River, which flows from a spring on the grounds of the Green Park Hotel in Blowing Rock and only a stone's throw from the Continental Divide. We are in Watauga County, the birthplace of rivers. No river flows through Watauga County, but four flow out of it.

The old Buffalo Trail, tramped out over the centuries by the migration to the Piedmont of thousands of buffalo, entered North Carolina near Trade, Tennessee, and crossed the valley of the South Fork of the New River a few miles east of Boone. This trail, still discernible in undisturbed woodlands, was followed by Indians for many generations before the white man arrived. Prior to settlement of the region beginning in the 1780's, hunters, herdsmen, and explorers followed the Buffalo Trail from the Yadkin River Valley through Deep Gap and into the mountains and beyond. The Daniel Boone Trail follows roughly the Buffalo Trail. Early land grants tended to cluster along this trail, and surveys were made to either side of it. Most of the settlers there came up from the Yadkin Valley and beyond, among them many of German origin. Among families living along the trail prior to 1800 were Blackburns, Bryans, Greenes, Jacksons, Lookabills, Millers, Norrises, Proffitts, Ragans, Tugmans, and Woodrings. Some of the progenitors of these families were among the charter members of the Three Forks Baptist Church, organized in 1790 and located on the South Fork of New River about three miles east of Boone.

One of the first explorers in the Upper New River Valley was Bishop Spangenburg, who, along with a band of Moravians, came searching in the fall of 1752 for 100,000 acres on which to settle. While camping in early December near the present town of Blowing Rock they almost froze. Moving down the South Fork and past the site of Boone into what is now Ashe County, they found the mountains too rugged and the weather too severe to suit them and finally settled in and around old Salem, now Winston-Salem, North Carolina.

By 1760 Benjamin Howard, who lived in the Yadkin Valley, had begun herding cattle during the summer months in the region in and around what is now Boone. He built a crude cabin on what is today the campus of Appalachian State University. The spot, now covered by Rivers Street, was marked in 1912 by an 18-foot-high stone-and-concrete monument, a replica of which stands at the foot of the hill below Justice Hall and a hundred yards or so east of the site of the original marker.

It was the Howard cabin that Daniel Boone used while on hunting trips

to the region and while exploring in Tennessee, Virginia, and Kentucky. At the time, Boone, whose family had settled in the Yadkin Valley in 1751, was living in what was to become Wilkes County.

There is little evidence extant of permanent settlements in the Upper New River Valley prior to the 1770's, although Andrew Baker might have been living there as early as 1763. David Helton, William Walling, and William McLean came down from Virginia on a hunting expedition to the North Fork of the New River in what is now Ashe County in 1770. A year later they returned and built cabins on Helton Creek,a few miles northeast of here, but at that time they could not legally claim land there. However, Enoch Osborne had moved up from Rowan County, N.C., to the Mouth of Wilson, Virginia, over the line from Ashe County by 1765. One of Enoch's sons, Soloman, was killed by Indians while on a hunting trip into what is now Watauga County in 1772. Captain Enoch Osborne kept the fort at the Mouth of Wilson during the War.

By 1778 a few families were living in the region. Benjamin Howard, a Tory, returned to what is now Boone, and hid out for a time in a shallow cliff on the knob that bears his name. He took the oath of allegiance in 1778 but afterwards returned to the Yadkin Valley to live. In 1778 Martin Gambill brought his young wife and some slaves to the Bend of the New River in Ashe County where he established a home. Prior to 1778 it had not been possible to obtain a North Carolina title to lands west of the Blue Ridge.

Many hunters had built shelters in the region. Some of the hunters had no doubt made land surveys which they entered later. Some of the "shelters" referred to in entries for land by 1780 were those of progenitors of such well known families as Baker, Collins, Fee, Gambill, Howell, Mahon, Robinson, and Sizemore. Families actually living on land prior to 1780 at the time entries for grants were made included Baker, Johnston, Yates, Pennington, Howell, Ellison, King, Little.

Many of the pioneers in the North Fork were members of Captain Enoch Osborne's militia during the Revolution, and some of them were with the Overmountain Men at the Battle of King's Mountain, but only one episode connected with the American Revolution occurred in the Upper New River Valley. Captain William Riddle, a Tory, and some of his men captured Colonel Ben Cleveland, who had come up to inspect his land at Old Fields, and were holding him as a prisoner in the Wolf Den on Riddle's Knob a few miles northeast of Boone. This occurred in April, 1781. Robert Cleveland, having been told about the capture of his brother, gathered 20 or 30 patriots, stole through the wilderness at night, surprised Captain Riddle at sunrise, and rescued Colonel Cleveland. Later, Colonel Cleveland captured Riddle and some of his men and hanged them on the Tory Oak at Wilkesboro.

By 1790 as many as 200 land grants had been issued, but there were

probably not more than 80 households in the Upper New River Valley at that time. During the following decade many North Fork families migrated to the Powell Valley in Lee County, Virginia, among them Boggses, Creeches, Flanerys, Huffs, Osbornes, Penningtons, Sheppards, Stidhams, Sturgills, and Wellses. A generation later these families "swarmed" again, this time into eastern Kentucky. I grew up at Blaine in Lawrence County, Kentucky, but among my ancestors were Boggses and Wellses who were living on the North Fork in 1790. Their neighbors at Blaine included Creeches, Gambills, Holbrooks, Lyons, Millers, Osborns, Penningtons, Sparkses, Stidhams, Sturgills, and Weavers. The Upper New River Valley, like the Yadkin Valley, was a nursery basket for the Westward Movement.

Early settlers in the region established schools and churches. General Lenoir is credited with having founded a Baptist church in Ashe County in the early 1770's. There were Methodists in the county by 1783, before Bishop Asbury visited the region, beginning in 1789. The Three Forks Baptist Church near Boone, of which Daniel Boone's brother was a sometime member, was founded in 1790. By 1840 there was a Lutheran congregation near the Buffalo Trail in Watauga County.

Martin Gambill built a log school on his farm at Chestnut Hill about 1790 for his children and those of his neighbors. In the summer of 1784 there were four schools in what is now Ashe County. By 1790 there were ten. Schools in those days were kept only during the warm summer months.

Soil in the valley is fertile. The rugged terrain and the remoteness of the region, identified later as the "Lost Provinces," made it difficult to transport bulky produce to markets off the mountains. Roads were impassible. By the 1930's only two paved roads traversed the region. People lived simply but comfortably as subsistence farmers, supplementing their income by growing a few cattle to sell to drovers, hunting, and gathering herbs, chestnuts, and bark which they transported by wagon to markets in Piedmont towns.

Until the coming of sawmills near the end of the 19th century, homes in the Valley continued to be constructed of logs, the oblong cabin with a chimney on the outside of one end of it the basic architectural unit. The quality of life did not change much during that century. Dr. Elisha Mitchell, who made a geological survey of Ashe County in 1828, described the region as "an ocean of mountains." Most of the homes in the North Fork were log huts. Fields were fertile. Herds of cattle, some driven over from Washington County, Virginia, grazed in hillside pastures. Roads followed streams. Mitchell reported that he forded the stream 32 times while riding his horse a distance of 10 miles north of Helton. While in the neighborhood he attended a Methodist meeting, where he heard "a reasonable amount of female screaming and vociferation." He visited Captain Ballou's forge, and inspected Perkins' ore bank. He heard an account of an old man in the area who "determined the locality of ores by the mineral rod."

The 1818 census reported a population of 3,694 people in Ashe County, which then included Watauga, much of Avery, and Alleghany. By 1830 there were 492 slaves in the county and by 1860 only 533.

The Civil War brought divisions among the people and left poverty that retarded economic development. Many families had left the region by the 1880's, migrating this time to the West and the Far West.

In 1884 Charles Dudley Warner, best remembered as the co-author, along with Mark Twain, of the Guilded Age (1873), the title of which gave the name to the decade of the 1870's, traveled through the Upper New River Valley of Ashe County and Watauga County, North Carolina. His account of his journey was included in On Horseback, A Tour in Virginia, North Carolina, and Tennessee, which appeared first in the Atlantic Monthly and then in book form in 1889.

After spending a night in a home near Trade, Tennessee, Warner and his party rode into Ashe County. Interested in the dialect of the natives of the region, he was disappointed when he found no local peculiarity of speech except for an occasional use of "hit" for "it." On the North Carolina-Tennessee line the travelers visited a tavern and distillery, where they were amused by a pretty, talkative young woman who explained that she was staying there for a while in order to avoid being called as a witness in the trial of one of her admirers who had killed another. She punctuated her account by spitting tobacco juice into a fireplace "with accuracy of aim and with a nonchalance that was not assumed." At Worth's in Ashe County they found a well-to-do mountain farmer whose two daughters had been to finishing school, wore stylish clothes, and could play the two pianos that were in the house.

For dinner they stopped at Tatem's on the New River. Tatem had very little corn for the horses. His home, consisting of two log cabins backed up to a huge chimney and a lean-to behind, was crude. The rough dinner was seasoned with too much grease to suit the taste of the travelers, but it was rendered even more distasteful by the presence of a bed in the dining room and a tubercular daughter with a "graveyard cough." In Mr. Tatem's "parlour," which had two beds in it, the hearth was decorated with two gleaming white gravestones. Mr. Tatem was not illiterate. He subscribed to the Blue Ridge Baptist, but told his guests he was planning to discontinue his subscription. His guests thought he overcharged for their dinners.

The people of Watauga County the travelers found fond of lawsuits. On court days they assembled in large numbers in the shabby little village of Boone, which boasted that its elevation made it the highest county seat east of the Mississippi River. The tavern in Boone was rickety and poorly kept. A profusion of flies swarmed everywhere, but an ingenious foot-operated fly-shoo hung over the table in the dining room and creaked miserably as meals were being served. No alcoholic drinks were available in Watauga County. As they rode away from the tavern the next morning, the travelers noticed that

the porch "resembled a carpenter's shop; it was literally covered with the whittlings of the row of natives who had spent the evening there in the sedative occupation of whittling."

As is evident in Warner's report, stereotypes of Appalachians were being created. But the region was coming out of its poverty. By the end of the century, though life in the region was much as it had been from the beginning, new homes, large country houses with many chimneys, wide porches, and gingerbread decorations, were being built, many of them around the original log cabins of the pioneers. Mostly, the same families lived in the region, many of them on the same tracts of land for which the progenitors had received grants before 1800. The "Lost Provinces" were preparing to join North Carolina, but they did not succeed in doing so completely until after World War II.

The Ecology of Black Flies in the New River and its Major Tributaries in Southern West Virginia

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Introduction

Adult black flies are adept fliers that measure about 2-3 mm long. Females must feed on blood for their eggs to develop. Different species are known to feed on a variety of birds and mammals, sometimes including man. The females locate their preferred hosts by odors, visual stimuli, and carbon dioxide exhaled by the host. Even when the females do not feed on a particular host, they are sometimes attracted and swarm in annoying numbers around the host's head. The immature stages, called larvae, develop only in flowing water. They attach to firm substrates such as rocks or vegetation, by spinning silk on the substrate and then holding the silk with small hooks on the posterior of their bodies. The larvae feed on very fine particles of organic matter (0.01 to 0.1 mm) that they filter from the water as current passes through fan-like structures on their heads. After the larvae have finished growing, they pass through a resting stage (pupa) in a silk cocoon, and then they transform into adults which rise to the surface and fly away. For more detailed information on the biology of black flies, readers are referred to recent reviews by Colbo and Wotton (1981), Cupp (1981), Peterson (1981), and Wenk (1981).

During the past several years, considerable controversy has developed in southern West Virginia over black flies (Diptera: Simuliidae). Some citizens have complained vociferously about the "gnats" (adult black flies) that are present during the warm months of the year. Complaints include biting and general nuisance that prevent outdoor recreation such as picnics, golf, or tennis. Amrine (1982) reported that the problem was being caused by a single species, Simulium jenningsi, and he speculated that all of the pestiferous organisms were coming from a 7 mile section of the New River below Bluestone Dam. In response to complaints of some citizens, the State of West Virginia was asked to permit the application of bacterial pesticide, Bacillus thuringiensis israelensis (BTI), to the New River in order to kill the black fly larvae before they emerged from the water. However, other citizens of the area have expressed opposite opinions. Some persons do not consider black flies to be a serious nuisance, and they strongly object to the application of a pesticide into the New River. They fear that eliminating black flies from the river could have an adverse effect on the food web, and this might harm the very productive sport fishery found below Bluestone Dam.

In order to obtain the information necessary to respond to this controversy, the West Virginia Department of Natural Resources has contracted VPI&SU to conduct several studies on the ecology of black flies in southern West Virginia. If an attempt is made to manage the populations of black flies, it will be necessary to have a comprehensive ecological data base in order to choose the best method(s), to assure effective implementation of

the method(s), and to monitor the success of the program. Conversely, it has been well documented in these symposia that the New River is a valuable natural resource, and there are commercial, recreational, aesthetic, and cultural reasons for its protection. The objectives of the research that we have been conducting are: (1) to analyze the species composition, distribution, and abundance of adult black flies; (2) to determine the breeding areas of the larvae; (3) to describe the life cycles of the important species; and (4) to determine the function of black flies in the New River ecosystem. The information that is presented in this paper is a summary of two reports on completed research (Kondratieff and Voshell 1983, Voshell 1983a) and a description of a study that is still in progress (Voshell 1983b).

Methods

Adults

Our studies have been conducted throughout a 25 mile radius of Hinton. Adult black flies were sampled at 25 sites that were all approximately 10 miles apart (Fig. 1). These sites included several locations where black flies had been frequently reported to be a problem: Pipestem State Park, Grandview State Park, and Glade Springs Resort. A 26th site was established within the City of Beckley. Two quantitative methods were used to estimate populations of adult black flies. One method was to collect organisms in a large funnel-shaped net mounted on top of a van (Barnard 1979). This vehicle-mounted trap was driven at a constant speed over a known distance, thereby providing replicate quantitative samples (number of black flies per $1000m^3$ of air). The second method for collecting adult black flies was a trap with a fan that blew them down into a jar (Snoddy and Hays 1966, Fallis et al. 1967). Carbon dioxide was released from the trap to attract the black flies. The sampling method was made quantitative by releasing carbon dioxide at a constant rate and operating the trap for a known length of time (number of black flies captured per 10 minutes). We also made qualitative collections of the black flies that swarmed about us, by sweeping an insect net over our heads.

Immature Stages

Previously published information on the suspected pest, Simulium jenningsi, indicated that this species prefers streams greater than 25 ft. wide (Underhill 1944, Snoddy and Noblett 1976, Stone and Snoddy 1969). Therefore, we sampled for the immature stages primarily in the New, Greenbrier, and Bluestone Rivers. There were 5 sites on the New River from Glen Lyn, VA to McCreery, WV, 3 sites on the Greenbrier River from Ronceverte to Willow Wood, and 1 site on the Bluestone River in the gorge at Pipestem (Fig. 2). In addition, many smaller streams, particularly those around Beckley, Pipestem, and Glade Springs, were also examined. Each site was first searched by qualitative means to determine if black flies were present. At those sites where black flies were present, quantitative bottom samples were taken with either a Surber Sampler or a Portable Invertebrate Box Sampler. Both devices are quantitative because they estimate the density of organisms per unit area of stream bottom (number of immature black flies per m^2).

Life Cycles

Analyzing the life cycle of an aquatic insect involves determining the length of time that is required to pass from the egg to adult stages and the number of times that a species repeats this cycle (generations) in a year. Life cycles are analyzed by collecting immature stages at specified time intervals and then measuring the specimens with a microscope to determine their growth from one date to the next. We compared the life cycles of the black flies at 3 sites: New River below Bluestone Dam, Indian Creek, and Glade Creek. We collected immature stages with a fine mesh net (0.1 mm) at these sites every 2 weeks from April to October 1982.

Feeding Habits of Invertebrate Predators

In order to obtain preliminary information on the importance of black fly larvae in the food web of the New River, we studied the feeding habits of some aquatic insects that are known to be predaceous. These predators included: the hellgrammite, Corydalus cornutus, 2 net-spinning caddisflies, Hydropsyche hoffmani and Hydropsyche hageni, and a damselfly, Hetaerina americana. We collected these species at 3 sites on the New River (Bluestone Dam, Longbottom, Sandstone Falls) and then examined their gut contents by cutting them open under a microscope. We analyzed the importance of black flies in the food web by determining the relative abundance (volume) of black flies in the diet of the predators.

Results and Discussion

Adults

A total of 6 species of black flies were collected by all means of adult sampling. In the quantitative samples, 99% of the organisms were Simulium jenningsi. The qualitative samples of black flies swarming about us were not enumerated, but it appeared that most of those organisms were also S. jenningsi. The only exceptions occurred early and late in the period of adult emergence (April to October), when some of the swarms attracted to the investigators were composed primarily of S. vittatum.

While we were collecting samples we recorded some observations on the blood-feeding habits of the females. The investigators found biting by S. jenningsi to be exceptionally rare in relation to the numbers of black flies that would swarm about us at a given time. We often found ourselves surrounded by annoying swarms that were estimated to contain several thousand black flies, but we would be bitten only once or twice at most. Usually the investigators received no bites from black flies. Almost all of the black flies that were caught feeding on humans and horses were S. jenningsi. Early in the season (April 13, 1982) some Prosimulium spp. were caught feeding in the ears of a horse, and later in the season (June 10, 1982) one S. decorum was caught feeding on my arm. Coffman (1982) also reported S. decorum feeding on horses.

The data from the vehicle-mounted trap and carbon dioxide trap were analyzed by several standard statistical procedures (Voshell 1983a). There was a trend for the highest densities of adult black flies to occur along a NW

- SE axis that approximately parallels the course of the New River (Fig. 1). It is interesting to note that two of the sites with consistently higher catches were located at Glade Springs Resort (Site 12) and Pipestem State Park (Site 17). Both of these places have been major sources of complaints about black flies. Detailed statistical analyses that compared the number of adult black flies with various parameters such as temperature, time, humidity, distance from Hinton, and wind, failed to explain the distribution patterns. The inability of the statistical analyses to explain the distribution of the adults probably indicates that dispersal is controlled by a complex interaction of many factors. The environs at Pipestem State Park and Glade Springs Resort have several features in common. Both are located on plateaus at the edge of steep-sided valleys through which New River tributaries flow (Bluestone River and Glade Creek, respectively), and both are developments where there are large open fields surrounded by woods. It is likely that the adults migrate along the streams (Wenk 1981), and the developed areas (particularly golf courses) provide ideal microenvironments for seeking hosts during the day and resting in trees at night (Wolfe and Peterson 1960).

Another observation that merits attention is that the second highest catch among the vehicle-mounted trap samples during one period was at Mountain Lake, VA (Site 25). The Mountain Lake site is over 25 miles from Hinton, yet it is only 5.5 miles from the closest stretch of the New River which lies in Virginia above Bluestone Lake. These results would seem to indicate that S. jenningsi might occur in the New River throughout the study area. However, the geographical extent of larval breeding can be determined conclusively by examining the results of the quantitative sampling in the streams and rivers.

Larval Breeding Sites

A total of 8 species were identified from samples of the immature stages. However, I will restrict my comments to S. jenningsi in order to keep this paper within a reasonable length. We examined 31 sites for the presence of immature black flies; S. jenningsi larvae were found at 12 sites (Fig. 2). The densities of the larvae at these 12 sites were analyzed by standard statistical procedures (Voshell 1983a) to determine the relative importance of different streams as breeding areas for S. jenningsi. Howard Creek and Wolf Creek had significantly lower densities of larvae than the other sites. The highest densities occurred in the New River just below Blueston Dam (NEW2) and 6 miles downstream at Longbottom (NEW3), however, statistical tests indicated that there were no significant differences among most of the sites on the New River, Greenbrier River, Bluestone River, and Indian Creek. To a statistician, this means that the same densities of larvae could be encountered in all of these streams. This information is very important for planning a program to manage the populations of black flies. High numbers of S. jenningsi larvae occur in many places in southern West Virginia, and most of these sites cannot be ignored, because there are no economic or nuisance thresholds to indicate what density of larvae can be expected to cause problems in the adult stage. The presence of S. jenningsi larvae at many sites also means that there is great potential for recolonization throughout southern West Virginia because the adults are known to disperse widely. Therefore, the larval breeding sites that produce significant numbers of adult S. jenningsi total

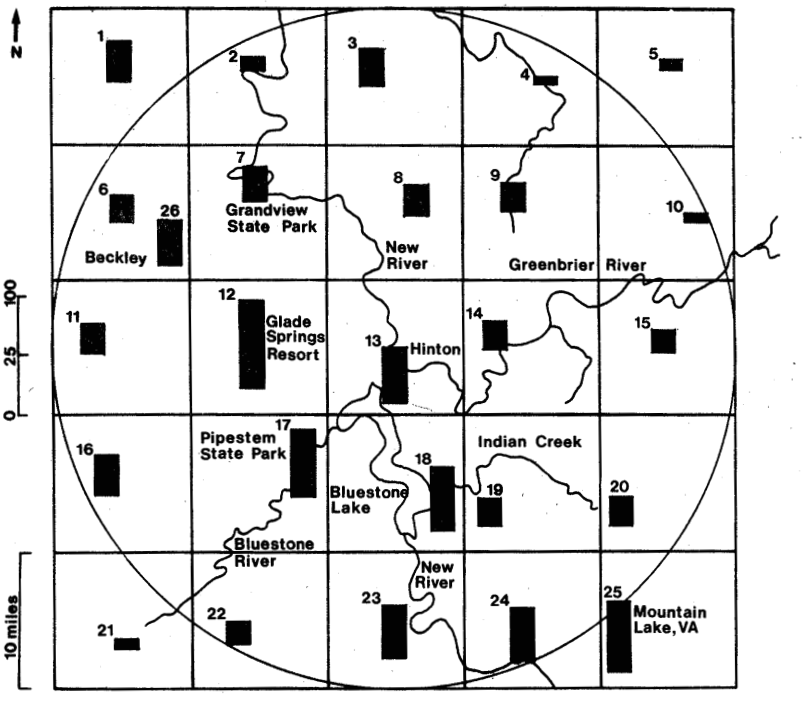


Fig. 1. Average catches (n=4) of adult black flies in the vehicle-mounted trap (number/1000m³) according to study sites during June 16-July 1, 1982. All data were transformed by $\sqrt{x}$.

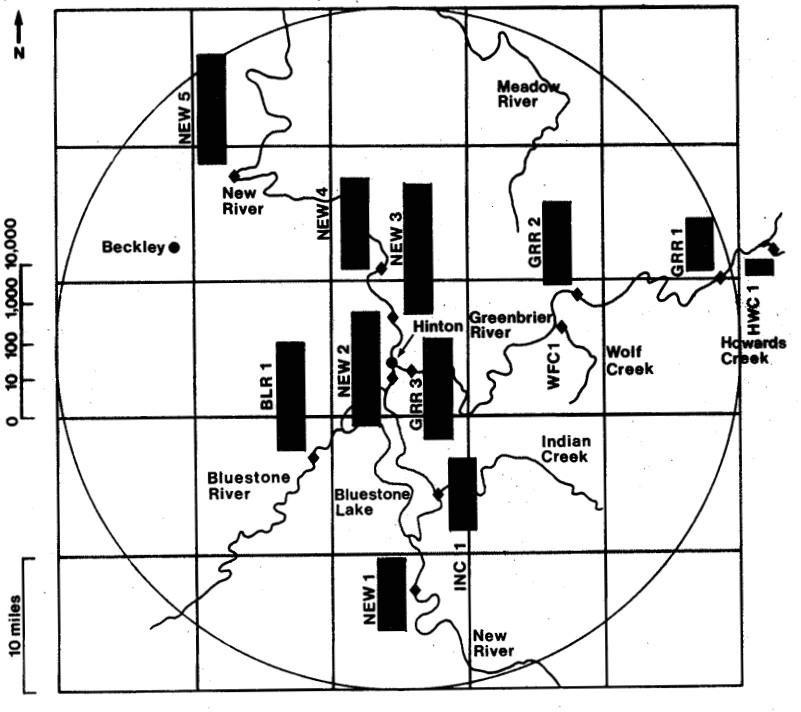


Fig. 2. Average densities (n=3-5) of S. jenningsi larvae (number/m²) according to study sites during Sept. 7-15, 1982. All data were transformed by log10 (x + 1).

approximately 130 miles of 4 different streams. This information is in sharp contrast to the speculation by Amrine (1982), who thought that S. jenningsi only occurred in significant numbers for a distance of 7 miles in the New River below Bluestone Dam. The differences in interpretation are probably the result of the qualitative methods used by Amrine (1982) and the quantitative methods used in this study.

Life Cycles

The life cycle of S. jenningsi was analyzed in the New River just below Bluestone Dam and in Indian Creek. S. jenningsi apparently overwinters as eggs which hatch in March. In the New River, the first generation emerged as adults during the last half of April. Four more generations followed, with the fifth generation emerging as adults around the first of October. All larvae completed their development and disappeared from the New River by late October. In Indian Creek, there was no indication of a generation completing its development prior to the middle of May. S. jenningsi only completed three generations in Indian Creek and disappeared from the stream by mid-September. The differences in the life cycle of the same species in two streams were probably due to different temperature regimes and available food in the streams (Anderson and Cummins 1979, Colbo and Porter 1979, 1981, Merritt et al. 1982). It is likely that there is a slightly different developmental pattern in each stream where S. jenningsi occurs. If an attempt is made to reduce the populations of S. jenningsi larvae throughout southern West Virginia, the application of the pesticide will probably have to be timed differently in each stream.

Role of Black Flies in New River Ecosystem

The environmental conditions and ecological relationships below a surface-release dam on a large, warm-water river (such as Bluestone Dam on New River) are very different from most free-flowing surface waters. A review of the downstream effects of impoundments can be found in a book edited by Ward and Stanford (1979). An impoundment with a surface-release dam introduces large quantities of living plankton and bacteria-rich detritus into the receiving stream. In response to this abundant supply of high quality food, there are very high densities of filter-feeding insects in the tailwaters below a dam. Filter feeders employ a variety of methods to "strain" or "sieve" seston (small particles of organic matter suspended in the water). Readers should see a recent review by Wallace and Merrit (1980) for further information on filter feeding. In the New River just below Bluestone Dam, we found filter-feeding caddisflies and black flies to be very abundant (7,000/m^2 and 9,200/m^2, respectively). Another characteristic of ecosystems below surface-release dams is that there are relatively few species of insects because the temperature of the water is more consistent and warmer than an unregulated river. Many aquatic insect species require a fluctuating temperature cycle and cannot reproduce in tailwaters. In the New River, several species of caddisflies, black flies, and mayflies, and an assemblage of midge species accounted for over 87% of the densities of all organisms.

The species of aquatic insects that are suited to the environmental conditions below a surface-release dam often achieve very high levels of production because of the rich food supply. Production can be explained as

the weight that organisms gain during a specified time interval. Fish also achieve high levels of production in tailwaters because of the bountiful supply of insects for them to eat, and the New River below Bluestone Dam is well known for its productive sport fishery. Therefore, tailwaters are very productive systems, but they are relatively simple systems. The high levels of production of the organisms are entirely dependent upon the high energy input from the upstream reservoir. The situation below dams is somewhat analogous to managed agricultural ecosystems, which depend on high inputs of energy to maximize the production of crops grown in monocultures. When simple systems are disturbed, the results are usually more pronounced than in complex systems which have more ways to compensate.

Black fly larvae may serve a significant function in flowing-water ecosystems by consuming seston and transferring the energy from the seston to the production of other organisms. In tailwaters, black flies could be especially significant because they are so abundant. In the past decade, aquatic ecologists have begun to integrate their knowledge of the feeding habits and physiology of aquatic insects into conceptual models of energy flow through flowing-water ecosystems (Cummins 1974), however, many details of energy transfers are still being resolved. With this caveat in mind, let us examine two ways that black fly larvae could function to transfer energy in the New River ecosystem. The most obvious way is that they can be consumed by invertebrate predators and fish (Fig. 3). Hence, the energy that black fly larvae assimilate from the seston would be transferred to higher trophic levels. In our preliminary studies (Kondratieff and Voshell 1983), we found that black flies comprised about 20% of the diet of insect predators at Bluestone Dam and 10% farther downstream at Longbottom and Sandstone Falls. These values indicate that black flies are not the single most abundant item in the diets of insect predators, but they are consumed in quantities that must be considered important, particularly in the area just below Bluestone Dam. Black flies may be especially important in the diets of hellgrammites, which consume black flies directly and also consume caddisflies that feed upon black flies. Hellgrammites are found in greatest numbers just below Bluestone Dam, and it is there that fishermen and commercial bait dealers go to collect them. The decrease in consumption of black flies downstream is consistent with the trend for decreasing densities of black flies downstream. Black flies exhibit their highest densities immediately below dams where the rich food is released and then progressively decrease in numbers downstream as the quality of the food diminishes.

Another way that black fly larvae could transfer energy in flowing-water ecosystems is by producing feces which are consumed by other organisms (Fig. 3). Black flies only assimilate about 2% of the seston that they consume, and the remaining 98% is passed out of their bodies as feces. Black fly feces consist of particles which are larger than the seston particles that they originally consumed, therefore, black flies make food available to detritus-feeding organisms that do not have access to very fine particles suspended in the water. By combining information on ingestion and assimilation (Wotton 1978), area of habitat (Amrine 1982), and densities and life cycles (Voshell 1983a), I have calculated that black flies in the New River from Bluestone Dam to Sandstone Falls may produce 26 tons of feces per day for a total of 3,900 tons per year. This information certainly suggests that black fly larvae may be an integral component of the very productive New River ecosystem.

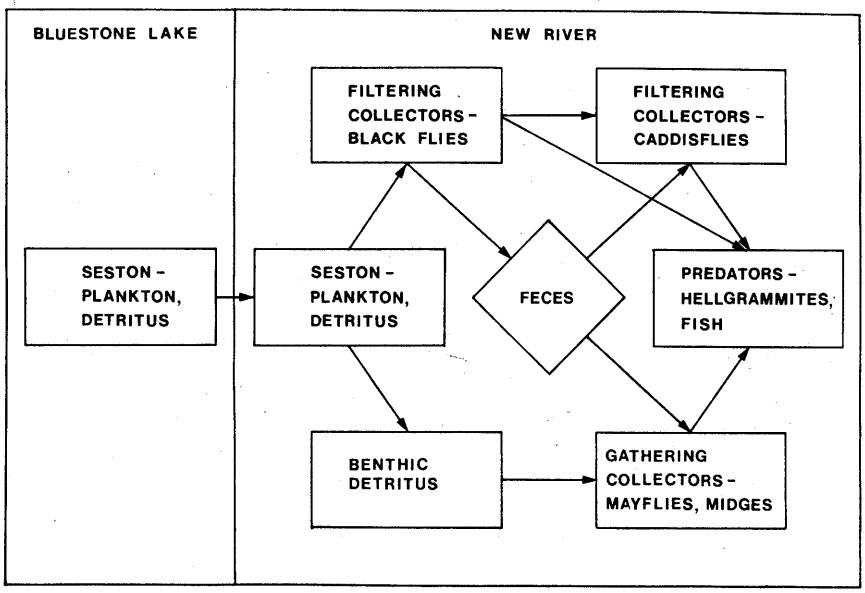


Fig. 3. Conceptual model of energy flow from seston in Bluestone Lake to organisms in New River below dam. Developed from Cummins (1974) and Cummins and Klug (1979).

In spite of this broad base of information that has been developed over the past several years, there are still several questions that need numerical answers to clear up the speculation. Some of the key points that require quantification are: (1) the production rate of black flies and other dominant aquatic insects; (2) the amount of insect predator production that is dependent on the function of black flies as prey; and (3) the amount of insect detritivore production that is dependent on the function of black fly feces for food. We currently have studies in progress that are designed to resolve each of these matters (Voshell 1983b). We are collecting monthly samples from the New River to quantify the production rates and trophic basis for the production of 2 species of black flies, 1 species of caddisfly, 2 species of mayflies, 1 type of midge, and the hellgrammite. The results will be the weights of these species that are produced in a year. By examining the gut contents of the predators, we will be able to determine how much of their weight is produced from eating black flies. The most challenging problem is to quantify the transfer of energy by means of black fly feces. Black fly feces are quickly dispersed in flowing water and cannot be recognized from other detritus. We are conducting laboratory studies in stream microcosms that will provide indirect information on this subject. By measuring the growth of selected detritus feeders in microcosms that only differ in the presence or absence of black flies, we will be able to determine the amount of production that is attributed to the consumption of black fly feces. The results of these studies will be available late in 1984.

Summary

Simulium jenningsi is abundant throughout southern West Virginia because it breeds in many locations, has slightly different life cycles in these locations, and disperses widely. Before any attempts are made to manage the populations of S. jenningsi in the New River, the function of black flies in the unique ecosystem below Bluestone Dam should be thoroughly understood.

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FISHERY MANAGEMENT ACTIVITIES ON THE NEW RIVER DRAINAGE IN NORTH CAROLINA

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Introduction

Comprising an area of 769 square miles (1999 sq km), the New River drainage in North Carolina (Figure1) encompases 98% of Alleghany County-225 sq mi (585 sq km), 99% of Ashe County-423 sq mi (1100 sq km) and 38% of Watauga County-121 sq mi (312 sq km) (Richardson and Carnes 1964). Located in the northwestern mountain region of North Carolina, the New River Basin is bounded on the west by the Watauga River Basin and the State of Tennessee; on the east by the Yadkin River Basin; and on the south by the Catawba River Basin. Snake Mountain on the Watauga County-Johnson County, Tennessee line is the highest peak in the drainage, reaching an elevation of 5,518 feet (1681 m) while the lowest point of 2320 feet (707 m) is located in Alleghany County where the New River enters Virginia for the last time. Part of the Southern Blue Ridge Mountain Range of the Appalachian System, the drainage in Alleghany, Ashe and Watauga Counties is characterized by many peaks, ridges, valleys, and mountain ranges. Watauga County has the distinction of containing the headwater springs which are the beginning of the New River system which flows north through North Carolina, Virginia, and West Virginia before joining the Ohio River.

Predominantly rural in character, the Basin is drained principally by three large tributaries; South Fork New River, North Fork New River, and Little River. There is only one municipality, Boone, within the Basin which has a population greater than 10,000. Approximately 75% of the total land area is in farms, while approximately 45% has a forest cover.

The fishery resource of the New River drainage in Alleghany, Ashe, and Watauga Counties comes under the jurisdiction of the North Carolina Wildlife Resources Commission, Division of Inland Fisheries. A total of 45 warm, cool and cold water fish species have been identified in the drainage (Bonner 1983, Mickey 1980, Menhinick 1975) (Table 1). Nine fish on the State's rare and/or endangered list, and five fish listed as endangered or threatened by the Endangered Species Act of 1973 are known to exist in the drainage (DNRCD 1973) (Table 1).

Because of the wide diversity of cool and cold water streams and rivers in the drainage area, the North Carolina Wildlife Resources Commission has targeted fish management activities in the drainage to trout, smallmouth bass, and muskellunge. Management activities for each individual species are discussed separately.

Trout Management Program

Three species of trout (brook, rainbow, and brown) are present in the drainage waters today and constitute the major portion of the game fishery of the drainage.

The brook trout (Salvelinus fontinalis) or speckled trout as it is called locally, is the only trout native to North Carolina. It was once widely distributed throughout the drainage, but because of changing land use patterns which have greatly reduced its habitat and competition with brown and rainbow trout, its range has been greatly reduced. Today, wild brook trout populations are found in fishable numbers only in those streams that are either remote or have heavy rhododendron cover that limits fishing (Bonner 1980). The typical wild brook trout caught today would be 8 inches or less in length, with one 12 inches or longer a rarity.

The rainbow trout (Salmo gairdneri), native to the western slopes of the Sierra Nevada range in the western United States, was introduced into North Carolina in the early 1880's. Since then it has been stocked in most trout streams in the State and has become well established in several drainage streams. The rainbow trout does best in clear, cool, cascading type streams, but can hold its own in waters too warm or silt-laden for brook trout. The typical wild rainbow trout taken from the New River drainage waters would be 10 inches or less in length, but fish up to 15 inches long are not uncommon.

The brown trout (Salmo trutta), native to northern Europe, was first stocked into North Carolina waters shortly after 1905, and is still expanding its range in the drainage today. The brown trout seems to prefer the larger, slower flowing streams containing an abundance of minnows; however, it does do well in some of the smaller, swifter tributary streams. Typically, wild brown trout taken from the New River drainage waters would be 12 inches or less in length, but fish up to 24 inches long or longer are not uncommon. The brown trout has become the backbone of the wild trout fishery in the drainage because many of the larger streams provide the type of habitat preferred by the species.

Of the more than 500 miles of streams in the New River drainage capable of supporting trout, better than one-half are designated as Public Mountain Trout Waters. These waters are managed by the North Carolina Wildlife Resources Commission and are identified by signs posted along the stream bank. Many Public Mountain Trout Waters in the drainage are located on privately owned land where, through informal agreements, public fishing is allowed by landowners in return for having the stream managed by the Wildlife Resources Commission. These privately owned waters are subject to being posted against trespass by individual landowners at any time, usually in anger over the thoughtless act of some angler. A listing of Designated Public Mountain Trout Waters on private lands is made annually and is available from the North Carolina Wildlife Resources Commission, Division of Inland Fisheries, Archdale Building, Raleigh, North Carolina, 27611.

License requirements for trout fishing in drainage waters include the annual State Fishing and Special Trout Fishing Licenses or a Sportsman License or Comprehensive Short-Term Fishing License. The trout fishing season runs from the first Saturday in April to February 28 or 29 of the following year.

In order to better manage the Designated Public Mountain Trout Waters in the State, the Fish Division's mountain region biologists undertook a systematic trout stream survey from 1978-1982. The objectives of this survey were to determine stream capability to produce wild trout; to develop a classification system based on a streams ability to produce wild trout; to determine trout regulations to protect the resource and enhance the quality of angling; and to recommend management practices such as fish stockings, habitat improvements, and/or stream protection for mitigation purposes (Bonner 1983).

Due to the geology of the Appalachian Mountains in North Carolina (mostly granite-gensis type) surface waters are low in nutrients which translates into low standing crops of fishes. The highest number of fish found during the trout stream survey in the New River drainage was 6,212 fish/acre in Little Pine Creek in Alleghany County while the highest standing crop was 62.42 pounds/acre in Nathans Creek in Ashe County. The highest number of wild trout found in the drainage was 644 trout/acre in Pine Swamp Creek in Ashe County while the highest standing crop for wild trout was 32.29 pounds/acre in Pell Branch in Alleghany County.

Water chemistry was relatively uniform over the entire drainage. Average summer stream temperature for Alleghany and Ashe Counties was 68.5 F while, because of higher elevations, average summer temperature for streams in Watauga County was 65.6 F. The pH in streams surveyed ranged from 7.0 to 8.0. Hardness and alkalinity were low throughout the drainage. Hardness ranged from 17 ppm to 34 ppm with a mean of 23 ppm. Alkalinity ranged from 9 ppm to 26 ppm with a mean of 20 ppm.

Because of low nutrient levels found in the watershed, the trout streams of the drainage are classified as poor producers of benthic organisms (aquatic insects, etc.). Numbers of benthic organisms ranged from a low of 15 organisms/ft^2 to a high of 160 organisms/ft^2 with a mean of 54.4 organisms/ft^2.

The low numbers of benthic organisms found in the streams of the New River watershed in North Carolina can be attributed to two major items. First, and most important, is the lack of limestone formations in this drainage. Low alkalinities such as found in the drainage streams do not offer favorable conditions to produce large numbers of benthic organisms. Secondly, poor mining and land use practices have created excessive siltation on numerous trout streams thereby reducing the benthic community density and diversity and trout habitat.

The trout streams in the New River drainage are classified into four categories based upon several parameters of which trout standing crops and competing fish species are key factors (Bonner 1983). Classification of trout streams in the New River drainage are as follows:

Class A. High quality wild trout streams capable of sustaining a fishery through natural reproduction alone with no stocking necessary. Supports a standing crop of more than 10 pounds wild trout/acre and usually contains four or less competing non-trout species. Overall habitat rating good to excellent.

Class B. Intermediate quality wild trout streams incapable of sustaining a fishery through natural reproduction alone; supplemental stockings necessary. Supports a standing crop of 2-10 pounds wild trout/acre and usually contains five or more competing non-trout species. Overall habitat rating fair to good.

Class C. Low quality streams that can support trout on a year round basis, but in which few or no wild trout are found; stocking necessary to provide a fishery. Supports a standing crop of 0-2 pounds wild trout/acre and usually contains five or more competing non-trout species. Overall habitat rating poor to fair.

Class D. Streams better managed for warm or cool water species rather than trout. High summer temperatures limit year round survival of trout.

In the New River drainage, 53 streams totaling 259 miles (414.4 km) are managed by the North Carolina Wildlife Resources Commission, and are open to public fishing. Nine streams total 32.5 miles are Class A streams, 15 streams totaling 61.5 miles are Class B streams, 28 streams totaling 160 miles are Class C streams, and 1 stream totaling 5 miles came under the Class D category (Table 2).

With 81% of the trout streams and 85.5% of the total stream miles falling under the B and C classifications, an annual catchable trout stocking program is an important component of the trout management program. Approximately 81,000 brook, rainbow, and brown trout greater than eight inches are stocked annually in the drainage from March through August. In addition to the catchable stocking program, many of the Class B streams receive annual fingerling trout stockings to help maintain trout populations. The catchable and fingerling trout stockings program maintains a trout fishery in the drainage which would otherwise be nonexistent because of the poor habitat which exists in the Class C streams. These streams comprise 62% of the total stream mileage managed by the North Carolina Wildlife Resources Commission in the drainage.

Forty-eight of the trout streams in the drainage are managed under the general trout stream regulations consisting of a daily creel limit of seven trout with no minimum size limit or bait restrictions. General trout streams are stocked with catchable and fingerling trout.

Three streams are managed under the native trout stream regulations for wild stream-bred trout. Native trout streams have a minimum size limit of seven inches, and a daily creel limit of four fish, only one of which may exceed ten inches in length. Native trout streams are limited to artifical lures having one single hook. As a result of the trout stream survey, more streams in the drainage may come under the native trout stream regulation.

The New River drainage was once blessed with many Class A and B trout streams. However, with the continuing influence of man on the region, the trout fishery has declined and may continue to decline. The more significant factors influencing the trout fishery are sedimentation from gravel roads, poor agricultural and forestry practices, new developments, use of streams as local dumps, increased stream water temperatures (thermal pollution) resulting from channelization projects, and the removal of streamside vegetation for agriculture and developments.

Smallmouth Bass Management

From 1977 to 1980 a survey was conducted on the drainage streams to identify smallmouth bass waters (Mickey 1980). Results of the survey showed smallmouth bass preferred the larger, clear, cool streams with gravel and rock bottoms, good current flows with numerous quiet pools over 3.5 feet in depth, and deep riffles.

Smallmouth bass are found in fishable numbers in the North and South Forks of the New River in Ashe and Watauga Counties and in the New River, and Little River in Alleghany County. The smallmouth bass populations in these major rivers make the drainage one of the more popular smallmouth bass fisheries in North Carolina.

Management of the smallmouth bass population in the drainage is limited to fingerling smallmouth bass stockings, and to a restrictive creel and size limit regulation. As a result of the smallmouth bass survey, only one stream was selected for a fingerling smallmouth bass stocking program. Little River in Alleghany County provided good habitat, but contained few smallmouth bass. The low smallmouth bass standing crop was the result of a major fish kill which occured in the early 1970's when Sparta Mill Dam broke and choked the lower

Little River with a heavy silt load. To help return the smallmouth bass population to fishable numbers, a 3 year fingerling stocking program was carried out from 1980 to 1982 during which 42,313 1½ to 4 inch fingerlings were stocked into the river. The program appears successful as measured by the number of fishermen reporting catches of small smallmouth bass from the river.

Smallmouth bass populations of other drainage streams maintain their numbers through natural reproduction. However, spring floods and high turbidities during the nesting season can greatly reduce the chances of a successful smallmouth bass spawn (Mickey 1980). It is the policy of the North Carolina Wildlife Resources Commission to supplement the natural smallmouth bass population through fingerling stockings only when the rivers have been ravaged by heavy spring floods for two consecutive years.

Fishing regulations are used as a management tool to maintain a high quality smallmouth bass fishery in the drainage. The daily creel limit is 8 fish of which no more than 2 bass less than 12 inches in length may be retained. The typical smallmouth bass of the drainage would be 10 to 14 inches in length, but bass up to 20 inches and 4 pounds are not uncommon. The fishing season for smallmouth bass is open year round.

Smallmouth bass populations in the drainage should remain healthy since land-use practices which control siltation have improved over the past ten years, except in the Boone area of Watauga County. The removal of gravel mining operations from stream channels and stricter erosion control laws for road construction and development enforced by the North Carolina Department of Natural Resources and Community Development, Land Quality Section, have been a major factor in slowing the loss of fishery habitat. However, a constant watch is needed by all concerned to ensure that excessive siltation does not affect the smallmouth bass streams again if this valuable fishery resource is to endure for future generations of fishermen.

Muskellunge Management

The northern muskellunge (Esox masquinongy), a ferocious game fish that reaches weights of 70 pounds, is generally associated with the waters of the northern United States and Canada. However, these fish are also native to North Carolina mountain rivers that flow to the Mississippi. Siltation and water pollution eliminated most Tar Heel musky populations early in the century. Water pollution control laws passed in the 1960's and 1970's helped clean up these rivers and the North Carolina Wildlife Resources Commission began stocking musky in selected waters in 1970. However, it was not until 1978 that the first musky were stocked into the lower South Fork New River and New River in Alleghany and Ashe Counties. From 1978 through 1982 approximately 4,542 three to ten inch musky fingerlings were stocked in the lower South Fork (2,519) and New Rivers (2,023). At this time the musky fishery in the rivers is maintained through a fingerling stocking program.

North Carolina Wildlife Resources Commission Fisheries Biologists are currently learning more about musky populations in the drainage through two programs - an alternate year stocking program and a "Husky Musky Club". An alternate year stocking program for musky in the drainage was established in 1982 with the South Fork and New Rivers scheduled for musky fingerling stockings on even years through the 1980's. This program was established so that in years when no fingerling stockings are made fishery surveys can be conducted to detect natural musky reproduction. If natural reproduction is found in odd years in sufficient numbers to maintain musky populations, then the even year

stocking program can be discontinued. Also, by stocking on even years, any adult musky captured can be aged through scale analysis to determine if they came from a year in which no stocking occured.

A Husky Musky Club was formed to recognize outstanding musky catches by anglers and to provide fisheries biologist with information on musky growth and harvest rates. Membership in the Husky Musky Club is open to anyone who catches a legal sized musky (30 inches or longer) and reports his catch to the North Carolina Wildlife Resources Commission. There are two categories of membership in the club.

Regular membership is open to anyone who, in one year, catches and reports 4 legal-sized musky or a fish over 36 inches in length or weighing 15 pounds or more. An honorable-mention membership certificate is awarded to anglers who report a legal-sized musky, but did not catch enough fish to qualify for regular membership.

Husky Musky Club applications are available from Wildlife Cooperator agents in the vicinity of musky waters. Anglers need only fill in the required information; date the musky was caught, where caught (body of water), lure or bait, anglers name, address and telephone number, total length and weight of the fish, and a fish scale sample to become a Husky Musky Club member.

Since the formation of the Husky Musky Club in the mid 1970's and the beginning of the musky stocking program in the drainage in 1978 twelve legal size musky have been reported from the drainage by fishermen with the largest musky being 43½ inches and 10 pounds 8 ounces (Personal communication, W. Jones 1984). However, this reported catch does not represent the total catch as many musky are caught and never reported. The musky program has been very popular with area fishermen and interest in the musky fishery increases each year as more "monster" musky are reported through the Husky Musky Club, and through the efforts of the North Carolina Wildlife Resources Commission to publicize information on this fishery.

Conclusion

With the diverse fishery habitat and fish management programs which exist in the New River drainage in North Carolina, the area offers the angler a wide variety of fishing opportunities from trout to smallmouth bass to musky. North Carolina Wildlife Resources Commission trout management programs constitute the major fishery of the drainage, and give the angler a variety of trout to fish for; be it for wild stream-bred trout found in the remote, less accessable Class A native trout streams or for stocked trout in the more accessable Class B and C trout streams.

Smallmouth bass populations maintain themselves through natural reproduction, in most instances, in the major rivers of the drainage. With the lower South Fork New River classified as a National Scenic River, float fishing for smallmouth bass has become very popular not only locally, but region wide.

Until natural reproduction is documented in sufficient numbers, the musky management program will be maintained by an even year stocking program. Musky fishing, though relatively new to the drainage in North Carolina, is continuing to gain in popularity as reports of musky caught from the river spread throughout the angling public.

Fishing in the drainage is a major economic and recreational resource for the drainage as every dollar spent by the North Carolina Wildlife Resources Commission in fish management programs generates $50 back to the local economy (Mickey and Wingate 1980, Jones 1982). Fish management programs carried out by the North Carolina Wildlife Resources Commission strive to keep, and maintain

a quality fishery in the drainage. However, as more stream habitat is lost to increased sediment loads, and increased stream water temperatures caused by development, the fishery resource of the drainage may continue to decline despite the efforts of the North Carolina Wildlife Resources Commission unless man realizes that a balance needs to be achieved between "progress" and the valuable fishery resource of the drainage.

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Figure 1

Geographic area of the New River drainage in North Carolina

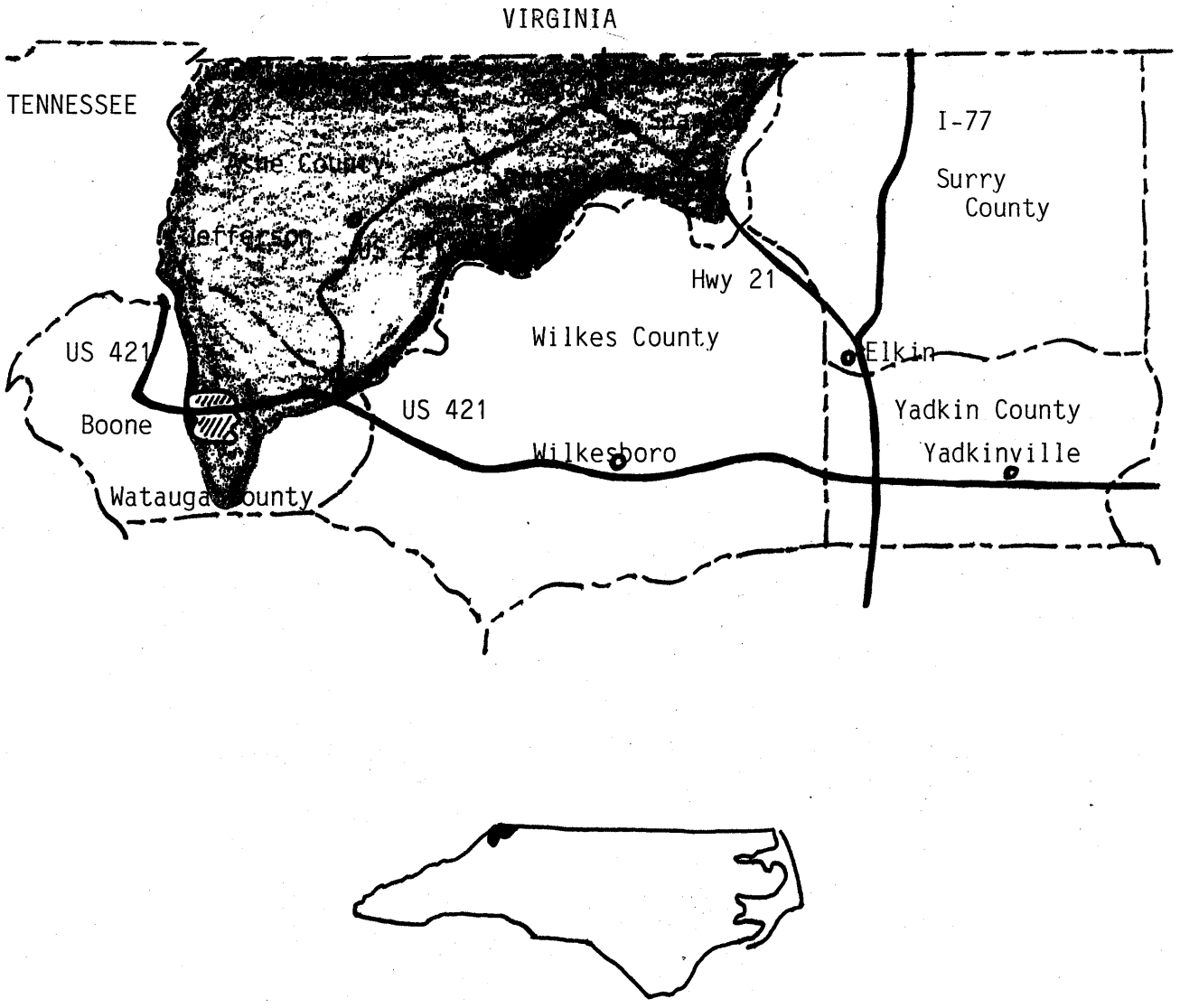


Table 1

Fish Species of the New River Drainage, North Carolina

Common Name	Scientific Name
Brook trout	Salvelinus fontinalis
Rainbow trout	Salmo gairdneri
Brown trout	Salmo trutta
Muskellunge	Esox masquinongy
Carp	Cyprinus carpio
Golden shiner	Notemigonus crysoleucas
Stoneroller	Campostoma anomalum
Mountain redbelly dace	Phoxinus oreas
Rosyside dace	Clinostomas funduloides
Tonguetied minnow*	Exoglossum laurae
Bluehead chub	Nocomis leptocephalus
Bigmouth chub**	Nocomis platyrhynchus
Warpaint shiner	Notropis cocogenis
Spotfin shiner	Notropis spilopterus
Saffron shiner	Notropis rubricroceas
Tennessee shiner	Notropis leuciodus
New River shiner**	Notropis scabriceps
Popeye shiner	Notropis ariommus
Redlip shiner	Notropis chiliticus
Mimic shiner	Notropis volucellus
White shiner	Notropis albeolus
Rosyface shiner	Notropis rubellus
Silver shiner	Notropis photogenis
Kanawha minnow**	Phenacobius teretulus
Bluntnose minnow*	Pimephales notatus
Blacknose dace	Rhinichthys atratulus
Longnose dace	Rhinichthys cataractae
Creek chub	Semotilus atromaculatus
White sucker	Catostomus commersoni
Northern Hog sucker	Hypentelium nigricans
Flathead catfish*	Pylodictis olivaris
Rock bass	Ambloplites rupestris
Redbreast sunfish	Lepomis auritus
Bluegill	Lepomis macrochirus
Largemouth bass	Micropterus salmoides
Smallmouth bass	Micropterus dolomieui
Fantail darter	Etheostoma flabellare
Greenside darter	Etheostoma blennioides
Kanawha darter **	Etheostoma kanawhae
Finescale saddled darter***	Etheostoma osburni
Tessellated darter	Etheostoma olmstedi
Logperch	Percina caprodes
Sharpnose darter*	Percina oxyrhyncha
Blackside darter*	Percina maculata
Mottled sculpin	Cottus bairdi

*State endangered or rare list, 1973. **State and Federal endangered or threatened list, 1973. ***Federal endangered or threatened list, 1973.

Table 2

Trout Stream Classifications in the New River Drainage, North Carolina

County	Number of streams	Total miles	Miles of stream for each class A	B	C	D
Alleghany	20	89.0	4.0(3)*	9.0(3)	71.0(13)	5.0(1)
Ashe	27	137.7	24.5(5)	33.5(8)	79.7(14)	-
Watauga	6	32.3	4.0(1)	19.0(4)	9.3 (1)	-
Totals	53	259.0	32.5(9)	61.5(15)	160(28)	5.0(1)

* (#) denotes number of streams in each class

PLANNING OF THE EARLY TOWNS IN THE NEW RIVER VALLEY, VIRGINIA

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An interest of mine is the provision for and the development of public open spaces in towns and cities. These spaces may include parks, school sites, courthouse grounds, cemeteries, public monuments and institutional sites. A particular interest is the village green or village common so characteristic of the early New England towns. The Common in Boston is a well known example of an early public open space that remains today. Commons and greens exist today in dozens of New England towns and cities. Wherever large numbers of New Englanders settled; across Ohio, into Illinois and up into Wisconsin, common areas can be found today.

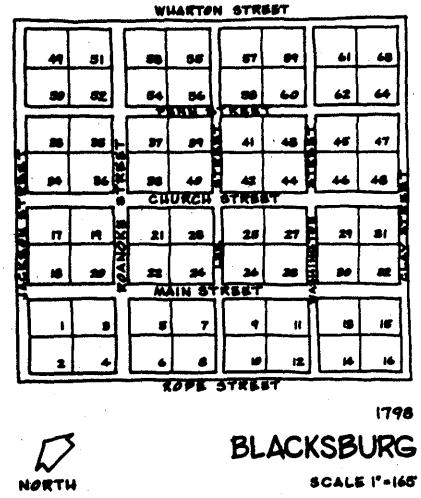
Common land was limited almost entirely to England and Wales. Scotland, Ireland and the northern European countries did not have the practice of common land. English common law recognized dozens of "rights in common." Among these rights were the "common of pasture" (right to grazing livestock), "common of estovers" (right to cut wood for building and fuel for the cutter's own use, but not for sale), "common in the soil" (right to take sand and stone for the diggers own use) and the "common of piscary" (right to fish in a freshwater pond).[1]

Many of these rights were transported to and incorporated into the New England town structure in the early seventeenth century. As settlers began moving into southwestern Virginia, towns were established in the New River Valley to meet the needs of the growing population. With this brief background, several towns in the New River Valley were researched to determine if common land had become a part of these early towns. In a word, the answer to this research is, "no". A majority of the early settlers in western and southwestern Virginia immigrated from Scotland, Ireland and Germany. Common land had not been a part of their culture therefore, such land was not provided in the early towns in western Virginia and in the New River Valley.

Upon discovering common land was not provided, my attention turned to investigating other forms of public open spaces. The results of this research proved to be more fruitful. Public open space was provided in several towns in a number of ways; school sites, parks and courthouse grounds. Also, where it was possible to do so, the relationships between the topography and the town plan was studied. The towns researched were Blacksburg, Christiansburg, Fries, Mount Airy, Newbern, New River, Pulaski, Radford, Triggsville, and Wytheville.

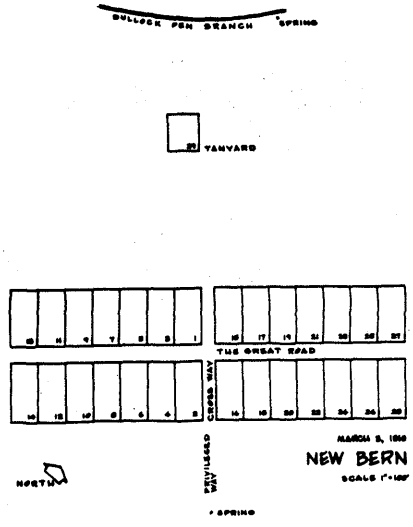
BLACKSBURG - 1798

Blacksburg dates from 1798 when William Black and his wife Jane gave 38/ 3/4 acres + 20 poles for the town. In his petition to the state legislature, Black stated he had "a piece of ground, in a healthy climate, a fertile neighborhood, with excellent springs thereon, agreeably and well situated for a small town..."[2] On August 4, 1798 the land was deeded to the trustees of the town. The town consisted of 16 blocks with each block containing four almost one half acre lots (eight by nine poles). Lot 40 was assigned to the Methodists who immediately built a small log church. There is no evidence of any of the lots being left open. The land slopes gently to the southwest and is quite suited to the gridiron street pattern. This pattern and street names remain today except Rope Street is now Draper Road.



NEWBERN - 1810

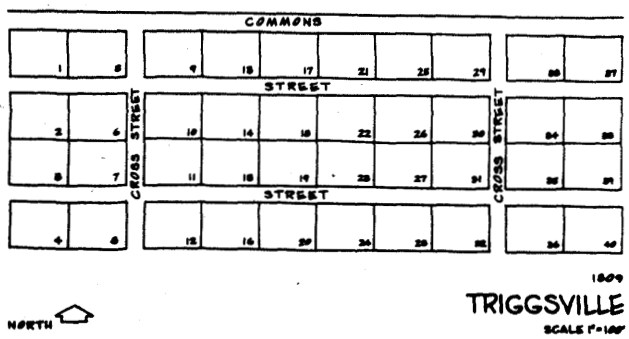
Newbern,[3] the first seat of Pulaski County government, dates from March 3, 1810 when 29 lots were laid off "for the purpose of erecting a town to be called and known by the name of Newbern."[4] Each lot contained .48 acres (6 by 13 poles). The town had one street, the Great Road, running along the top of a ridge and one cross street. Near one end of the cross street was a spring which supplied the residents with water. The area between the end of the street and the spring was called the previledged way thus suggesting a common area reserved for the Newbern residents. With the tanyard located so the prevailing summer breezes would carry the odor away from town, suggests Adam Hance (the founder) was concerned about the comfort of the inhabitants.



This street layout fits the topography very well.

TRIGGSVILLE - 1809

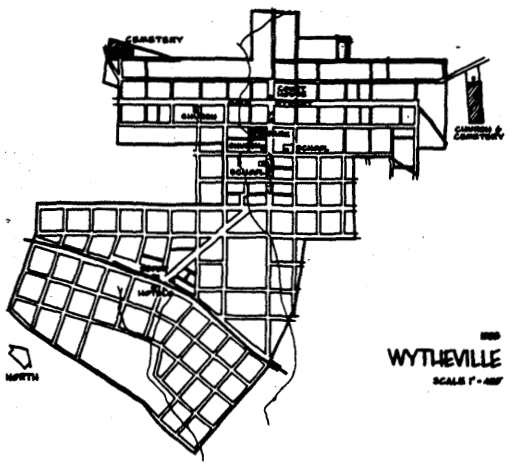
Triggsville was similar in plan to Newbern although slightly bigger. Established December 6, 1809 for the purpose of domestic manufacturing, Triggsville, having to compete with Newbern, never flourished and developed. Triggsville contained 40 lots each .50 acre (8 x 10 poles), two streets, two cross streets and a 57' wide common. The community spring was located on the common. Triggsville is the only New River Valley town researched to use the word "common." Located on nearly flat river bottom land, the topography was ideally suited to the street pattern.



The three plans just discussed were typical of the town layouts in the New River Valley of the period. Street pattern and lot sizes were nearly identical and each worked with the topography. Public space was not provided. Mount Airy, a town in Wythe County that never developed, had a public square but no mention was made of its intended use. The next several plans represent towns of a later time period; 1880's, when several different types of open spaces were identified.

WYTHEVILLE - 1883

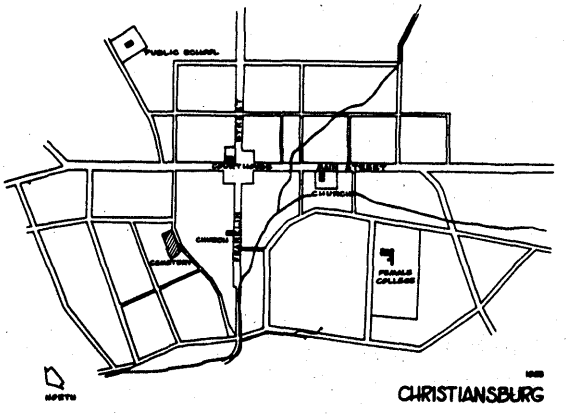
An 1839 map of Wytheville shows a plan similar to Triggsville, but very much larger. The first open space noted for Wytheville, a 1 3/4 acre graveyard, appears on this plan. By 1877, the town had more than doubled in area. The town map for that year showed a stream running through town, the Catholic church, the 1839 graveyard and, although not within the town limits, "The South West Virginia Agricultural Society's Fair Grounds."[5] Six years later the town map showed the county courthouse, two schools, three churches, two cemeteries and a park containing a spring and a chalybeate fountain. This is the first notation of a park to be



found in any of the New River Valley towns researched. Wytheville was fortunate to have a public open space near the center of town; one block from the courthouse. Today, a church occupies much of the former park site. Most of the stream has been culverted, however, in a few areas it is still flowing free. By this time the railroad had arrived in Wytheville. Its influence can be seen in the way the street pattern has been changed to reflect the depot and the railroad tracks.

CHRISTIANSBURG - 1883

Known originally as Hans Meadow, the seat of Montgomery County became Christiansburg in 1792. A map of the town from the early 1800's shows the courthouse in the central square, streams and springs, the old academy with trees on the site. This is the only early town plan found that shows trees on a specific site.

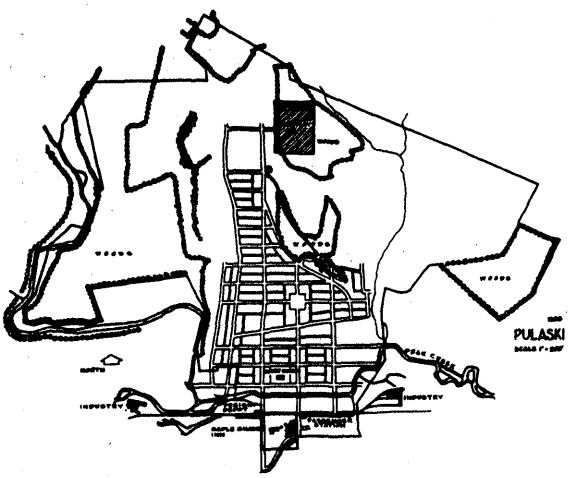


By 1883 the town plan included the courthouse on a corner of the square, two churches, a cemetery, a public school and the female college. It is interesting to compare the size of the sites in Christiansburg with those in Wytheville of the same year. The larger sites suggests a recognization for future growth and/or a desire to provide a setting for the building. The most recent courthouse, opened in 1980, still occupies this site although is set farther back from the square. A public open space has been provided where the previous courthouse stood. Small public spaces have been developed in each of the remaining three quadrants, however, each space is cut off by streets and parking thereby making them undesirable to use. Monuments to local heros, wars and historical events are located in these

spaces but overgrown shrubbery makes viewing them difficult.

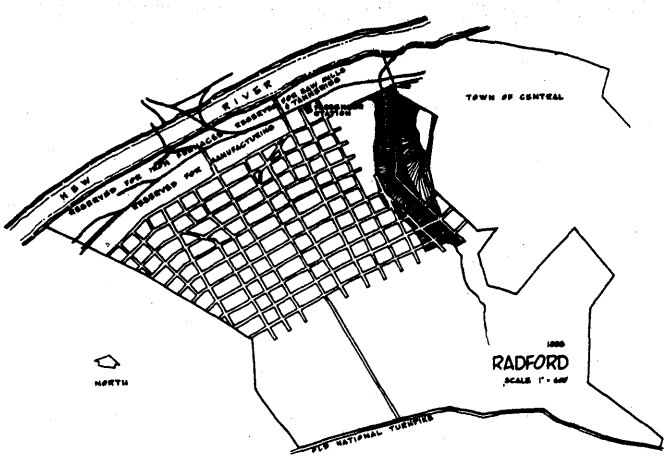
PULASKI - 1888

The map of Pulaski in 1888 showed several large woodlots wrapping around the developed part of the town. These woodlots appear where the topography was too steep and difficult to develop at that time. Two streets run north, their location dictated by the hills on either side. A large cemetery occupies one of the hills. The only identified public open space is the courthouse site. Land owned by the Norfolk and Western railroad along Peak Creek provided private open space. In 1884 the railroad built the Maple Shade Inn for travelers passing through Pulaski and for visitors from the deep South and eastern Virginia to vacation in the mountains. The inn stood on a huge lawn shaded by stately maples. Here the guests enjoyed such outdoor activities as tennis, croquet, horseback riding and carriage rides. Whether the townspeople had access to the recreation opportunities at the Inn is unclear. In 1963 the Inn was razed for a shopping center and other parcels of railroad land were given to the town of Pulaski for a park. Here the railroad had more of an impact on the economic life of the town than on the physical form of the town.



RADFORD - 1888

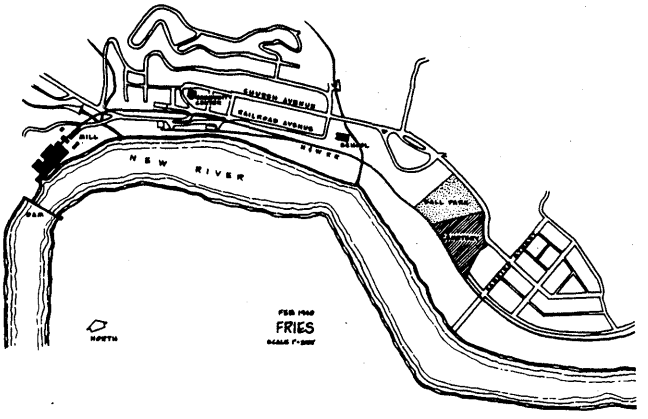
In 1888 a new town named Radford was planned to be built across a deep ravine from the town of Central. There is no evidence that any public open space had been provided. All the land along the New River was allocated to industry and manufacturing. On the original map the ravine was delineated in a manner usually reserved for park



land, however, this land was not designated for this purpose. Today the land is a Radford park as is much of the land along the New River. The land in the residential area is steep and hilly, however, the street pattern does not reflect the topography. The street pattern is a flat land solution. Central is now a part of the city and is often referred to as east Radford.

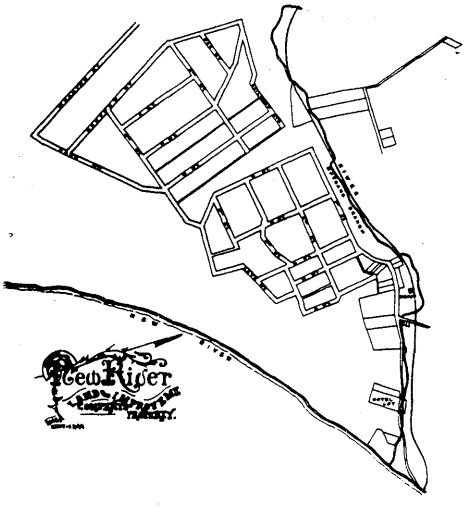
FRIES - 1940

In April 1901 construction began on a 39' high dam across the New River for the purpose of generating power for a proposed cotton mill. With the construction of the mill, Fries, a cotton mill town on the New River, was built to house the workers. Small houses were built row upon row on narrow lots on the hillside above the river and the mill. An elementary school was constructed at the same time as the houses. Early in the history of the town a community center as built which soon became the hub of the social and recreational life of the town. The railroad depot also served as a social magnet. A long time resident stated that in 1903 "...everyone went to the depot to watch the trains come in."[6] The 1940 map shows a cemetery and a ball field. At present the town is developing a walk along the river in the vicinity of the park and the cemetery. The early town was developed on the flatter land along the New River. As the need for housing grew, development climbed higher up the hills causing the street pattern to become more irregular.



NEW RIVER - Not dated

Of all the towns researched, New River has to be the most unusual. Probably planned around the 1890's, New River has the ap-



pearance of "just happening." The choatic street pattern has no relationship to topography, there is no indication of any public buildings, no industry or sense of organization. It is not too difficult to see why New River never developed.

The nine towns discussed represent a time period of a little over one hundred years. Over that time the street pattern did not change; it remained the gridiron regardless of topography. Most of the towns, even in the later years, were rather small. As a result most people lived close to open space, the country, therefore, there probably was no need for public open space. The park movement in the United States really did not begin until 1858, the date of Central Park in New York City. It would have taken many years before the effect of the park movement to be felt in southwest Virginia. The late 19th century was a time of great industrial growth and with it came the all-work-no-play ethic. In small, rural, mountain towns, public open spaces were not considered esential. It would be many more years before these spaces would be considered a desirable addition to life and found their way into the New River towns.

FOOTNOTES

1. Ronald Lee Fleming, On Common Ground (Harvard: The Harvard Common Press, 1982), p. 8.

2. Michael, Rudolph D., A Brief History of the Blacksburg Area (1953), p. 3.

3. Map constructed from the original plot drawn by Mary B. Kegley.

4. Mary B. Kegley, "Newbern," Journal of the Roanoke Historical Society, Vol. 7, No. 1 (Summer 1970), p. 15.

5. Map of the Town of Wytheville, Virginia. Wythe County Courthouse. Plat Book 1, Map 2.

6. Avery Bond and Martha Nichols, A History of the Town of Fries, Virginia (Collinsville Printing Co. Inc., 1976), p. 33.

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Special Collections, Newman Library; Virginia Polytechnic Institute and State University. Blacksburg, Virginia.

Map 123 - Grays New Map of Christiansburg - 1880

Map 212 - Pulaski - June 9, 1884

Map 263 - Radford, Virginia - not dated; subsequent research uncovered 1888 as the date.

Map 273 - New River Land and Improvement Co., not dated.

Radford Land and Improvement Co.: Title Abstracts, Deeds, etc. July 19, 1888 - July 15, 1898.

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THE RIDE OF MARTIN GAMBILL

David Andrew Sturgill

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Sparta, NC

In 1775 a Boston silversmith named Paul Revere made a night ride of about ten miles to warn other patriots that the British were coming and, with the aid of a poet named Longfellow, he also rode into the pages of history. In 1780, Martin Gambill, a pioneer settler of the upper New River valley, made a ride of over one hundred miles for the same purpose but there was no Longfellow around to immortalize him in poetry. What is known of the ride of Martin Gambill is buried in the military archives in Washington DC, in old Court records and in the memories of his many descendants.

The ancestors of Martin Gambill were among the last of the Scotch-Irish who moved from Ireland to England after the "linen war" of 1700-1704 and shortly thereafter migrated to America where most of them first settled in Pennsylvania. In the period from 1730 through 1750 many of these people were moving southward and settling along the headwaters of the James river in the central Counties of Virginia, among them was Henry Gambill, the father of Martin. Martin was born near Culpepper Virginia in the year of 1750.

In 1768 Martin Gambill, at the age of eighteen, was already incensed at the arrogant and arbitrary actions of the British governing officials and tax collectors. When he learned that a group in North Carolina, who called themselves "Regulators," were offering armed resistance to British laws he decided to join them. Riding his horse to North Carolina in 1768 he enlisted with the Regulators in Rowan County and participated in several skirmishes against the Tory militia of Governor Tyron. In 1771 a group of poorly equipped Regulators were badly defeated at Alamance in Orange County and many of the survivors, including Martin Gambill, were forced to flee to the western mountains.

In 1768 all of western North Carolina was Rowan County, Surry County was formed from Rowan in 1771, Wilkes County was formed from Surry and Rowan in 1776 and Ashe County was formed from Wilkes in 1799. Records of Martin Gambill have been found in all of these Counties but this does not mean that he was moving from one place to another. It is now believed that after the battle of Alamance he continued his western journey across the crest of the Blue Ridge into present Ashe County which was to become his home.

In Ashe County(then Wilkes) he enlisted in the militia in the Company of Capt. William Nall. Records show that he served in this Company as Sgt., Ensign, and as 1st Lieutenant. Later he also served as Captain. In 1777 he married Nancy Nall, daughter of William, and they made their home on the south fork of New River in the Chestnut Hill community of Ashe County. Both lived the remainder of their lives and are buried on this original homestead.

There were very few settlers along the north and south forks of New River before 1770 and none of them had any legal claim to the land which they occupied. Between 1770 and 1775 many more people,

mostly from Virginia, began to move into the area and one of the first things they did was to organize militia units. One of these units was under the command of Andrew Baker with James Shepherd serving as Lieutenant. Another was organized by Capt. William Hardin. These groups soon united with others for the common purpose of defence and the maintenance of law and order. They called themselves the "Watauga Compact." As the State line had not yet been established most of them did not know whether they were in North Carolina or Virginia, some as far south as the present town of Boone thought that they were still in Virginia.

In 1775 Chief Oconostota of the Cherokee tribe decided to move his people out of the area despite the objections of some of them. To accomplish this move he sold all of the land between the Kentucky and the Cumberland rivers to a group of settlers led by Richard Henderson. Two days later, in a similar deal, he sold all of the land between the Holston and the New River to the Watauga Compact who were represented by Charles Robertson. The British refused to recognise the legality of these transactions and sent agents among the Cherokees to incite them to attack the settlers. The Indians did make sporatic attacks against individual settlers or lone hunters and some were killed. Martin Gambill participated in several forays against the Indians and led some of these himself until they were finally driven out of the area.

A few miles further down the river, below the forks of the river, settlers had started moving in between 1765 and 1770. They had also formed loosely organized militia units and John Cox had built a fort on New River at Peach Bottom. In 1774, when open rebellion had become a distinct possibility, these units were reorganized. The first Company of record was formed with John Cox as Captain and his brother David as Lieutenant. Enoch Osborne served as Ensign. In 1776, after war had become a fact, the militia was expanded. Cox's Company was divided to form a new Company in which Enoch Osborne served as Captain, Ezekiel Young as Lieutenant and William Wyatt as Ensign or second Lieutenant. In 1778 Cox's Company was again divided to form another Company commanded by Capt. John Henderson and Lieut. John Bryson. In 1779 an entirely new Company was formed under the command of Capt. Flower Swift. Before this time Capt. Enoch Osborne had also constructed a fort between the mouth of Bridle creek and Saddle creek in Grayson County.

By 1778 there were well established militia units in present Wilkes County under command of Col. Ben Cleveland and William Lenoir, in Surry County under command of Major Joseph Winston, in Watauga County under command of Col. John Sevier and across the mountain in Tennessee under the command of Col. Shelby. As there were only rough trails across the crest of the Blue Ridge into Wilkes County and not much better between the forks of New River and upper Watauga County, the militia units along New River had placed themselves under the command of Col.William Campbell of Seven Mile Ford and his brother Arthur Campbell of Marion Virginia.

During the period from 1770 through 1780 there were also a number of British sympathisers living in the mountains who secretly organized their own "Tory" militia and served as spies for the British. Martin Gambill participated in one skirmish against these Tories at the "old fields" in Ashe County. This was the only pitched battle fought in Ashe County during the revolutionary war.

In 1778 Col. Charles Lynch beat off a Tory attack on the lead mines at Austinville Virginia. In 1779 Col. Willian Campbell and the New River militia broke up a large assembly of Tories at present Baywood Va. As the lead mines were the only local source of lead for the militia they were critical to their defence so in 1780 the Tory militia launched another attack on the mines with a larger force. Capt. John Cox was in command of the forces defending the mines but, being short of manpower, he sent his sixteen year old son James to seek aid from Col. Ben Cleveland. James Cox was captured by the Tories on his return journey. Col. Cleveland quickly mustered his forces and overtook the Tories at the top of the mountain at a place called the "glades". The Tories were soundly defeated, James Cox was released and some Tories were hung.

By the summer of 1780 the American revolution was beginning to look like a lost cause. The militia in the mountains of North Carolina and Virginia were being kept busy defending themselves against Tory and Indian attacks, George Washington had been unable to defeat Gen. Clinton in New York, Gen. Howe had been driven from Savannah, Gen. Lincoln had been soundly defeated at Charleston, Maj. McDowell had been defeated at Camden and had fled with the remainder of his troops and their families to Watauga County. In all of the south no organized and effective Continental troops remained.

General Cornwallis, whom Gen.Clinton had left in command after taking Charleston,had moved his army to near Charlotte and was preparing for a northward sweep in which he expected to crush all the remaining opposition and soon be in position to attack George Washington from the rear while Gen. Clinton assaulted him from the front. Had this plan succ eeded Washington and many other patriots would have been hung as traitors and the picture of Benedict Arnold would probably be on our currency.

The only thing which kept Cornwallis from moving northward immediately was the knowlege that rebels still remained in the mountains who had not been subdued and he did not know the strength or spirit of these people. Being a cautious commander, he did not want to leave this unknown force behind him or to have them on his flank during a northward march. To solve this problem he assigned one of his most capable officers, Major Patrick Ferguson, to the task of eliminating this threat before he moved north.

Major Ferguson was a courageous and brilliant tactician but he was also arrogant and over confident, this proved to be his undoing. As the first step in his campaign he sent two messengers into the mountains, one a freed prisoner, with orders that all opposition to the British forces cease immediately and that two hundred men be enlisted in the Loyalist militia and gather at a designated place. The order also stated that if this was not done he would come into the mountains, lay waste to their homes and farms and hang all their leaders. Tradition says that the Tory messenger was permitted to return, coated with tar and feathers, and told to tell Mr. Ferguson that others would have something to say about who was hung.

After Ferguson's ultimatum was received, men from McDowells army, then refugees in Watauga County, volunteered to act as spies and to keep track of the movements of Ferguson's army. As a means of quickly sending a warning northward, should Ferguson start into the mountains, large piles of brush were placed on all the higher mountain peaks to be lit as signal fires.

Upon learning of Ferguson's arrogant demands, Col. Isaac Shelby of Tenn. called a meeting of the militia commanders to be held at the home of Col. John Sevier, between Boone and Deep Gap, on Sept. 18th, 1780. Martin Gambill attended this meeting as a represenative of the New River militia units. While the meeting was still under way the message came flashing across the mountains that Ferguson's army was on the move in their direction. A decision was quickly made to intercept him before he could reach the mountains. Sycamore Shoals was selected as the meeting place for the militia units and Sept. 25th, one week away, was set as the date.

As the signal fires only extended to Watauga County it was necessary to send messengers to alert Col. Campbell and the individual Company Commanders. Martin Gambill volunteered to carry the message to Col. Campbell and to dispatch other messengers to the Captains of the local units along the way. He left the home of Col. John Sevier late in the afternoon of Sept. 18th, 1780.

The exact route taken by Martin Gambill on his long ride is not known but as most of the roads and trails existing at that time followed streams his route can be guessed at with a good probability of being correct. Rather than follow the convolutions of the south fork of New River he probably followed the old Indian and trading trail which ran close to the present route of US 221 to where this trail crossed the south fork. From there he would have turned down the river to go by his home and then continued down the river to cross at the mouth of Prathers creek (then Praters creek) Following prathers creek to the foot of Bakers Ridge he would have crossed over a low spur of the ridge to the head of Potato creek and then followed this creek to New River. He crossed the New River just below the mouth of Potato Creek at daylight on the morning of Sept. 19th at the home of Capt. Enoch Osborne. Capt. Osborne had just harnessed his horses to start plowing. As Gambill emerged from the river his horse fell dead from over exertion and the shock of the cold water. Capt. Cox sent him to the house to get some breakfast while he switched his saddle to one of the plow horses. He would then have continued up the north side of New River to the mouth of Fox creek and followed this stream to the present town of Troutdale Virginia. Crossing the mountain through Comers Gap he continued on down the "hog trough", now the Hurricane road, to a branch of the Holston river. At the "red bridge",now Thomas Bridge, Osborne's horse fell dead. He secured another mount, it is not known from whom, and continued to the middle fork of the Holston river which he followed to the home of Col. William Campbell,at the present site of the village of Seven Mile Ford, arriving there just after dark. Col. Arthur Campbell was at that time guarding the lead mines. In a little more than twenty four hours Martin Gambill had ridden over a hundred miles with no sleep and little food, crossing rough rivers and rugged mountains and alerting the militia along the way.

Col. Campbell and his group of about 400 men arrived at Sycamore Shoals on the evening of Sept. 24th to find Sevier and Shelby and their men already encamped and distributing what meager supplies they had. On the morning of Sept. 26th this united force of about 1000 men, some mounted and some on foot, began their difficult trek across the high mountains to join the troops of Col. Ben Cleveland and Maj. Joseph Winston at Quaker Meadows, near the present town of Morganton NC. The next morning, October 1st, 1780, they began their

southward march which was to end at King's Mountain on the afternoon of Oct. 7th. It is not known for certain how many of these mountain men marched to King's Mountain. Different accounts have listed the number as anywhere between 1200 and 1600. It is known that 900 men were selected for the final attack while the remainder were held in reserve. At Quaker Meadows Col. Campbell had been elected as over all commander when Gen. Gates failed to respond to their request to send them a commander.

Many Tories along the route of their march had kept Ferguson informed of the movement of the rebels. When Ferguson learned the size of the force which would be confronting him he began a hasty retreat back toward Charlotte and the protection of Cornwallis. When he saw that he could not complete this retreat in time he selected King's Mountain as a place which he was sure that he could defend. The exact composition of Ferguson's army is also unclear. An early history of North Carolina states that he had 1125 men under his command consisting of 150 Scottish Highlanders equipped with breech loading rifles, 400 seasoned Loyalist militia and the remainder were local Tory militia.

Ferguson applied typical Prussian military tactics to this battle as this had worked very well for him before. His men were ordered to fire volleys on command and to make bayonet charges in ranks. Col. Campbell gave his men different orders. Having no gunpowder to spare they were told to fight as individuals, to hide behind trees and rocks, to fire only when they had a target to aim at, to retreat before bayonet attacks until they could reload and to avoid hand to hand combat if possible. Ferguson did not know how to fight this kind of battle, in less than two hours he and 500 of his men were killed and many more wounded, the survivors soon surrendered. The patriots had losses of 28 killed and 62 wounded. Among the wounded was Martin Gambill who took a musket ball through his left elbow.

The battle of King's Mountain is now history but until very recent times the importance of this battle to the successful conclusion of the revolutionary war has been largely overlooked by most historians. After the loss of Fergusons army,Cornwallis was forced to await reinforcements before he could start his northward campaign. Gen. Greene, noting the success of the tactics applied at King's Mtn., began a war of harassment with the aid of such able men as Williams, Marion and Morgan. These men struck in quick raids, destroyed as many supplies as possible and then retreated, they led Cornwallis on wild chases through swamps and forests and ambushed his troops along the way. Cornwallis tried repeatedly to engage them in a big battle and later he complained bitterly thet they would not "stand and fight like gentlemen". In the one battle when the patriots did engage him in force at Guilford Courthouse he was soundly beaten. Once again Cornwallis was forced to seek reinforcements and turned toward the coast where he hoped to accomplish this. He was eventually forced to take refuge on an island in the James River near Yorktown.

When George Washington learned of Cornwallis's predicament he made a forced march from New York to Yorktown and there he forced the surrender of Cornwallis, thus ending the war with victory for the rebels. General Clinton, the British commander, later wrote of the battle of King's Mountain that it was "the first link in a chain of evils that followed each other in regular succession until they at last ended in the total loss of America."

A United States Senator recently stated on network television that he had never heard of a democratic government being established by the point of a bayonet, this Senator should read a little American history.

We may never know but it could well be that the ride of Martin Gambill changed the course of American history, in any event it had far more effect on the outcome of the revolutionary war than did the ride of Paul Revere. Had Col. Campbell and the New River militiamen not gotten the message in time to gather for the battle of King's Mountain it could well have ended with victory for Ferguson and made it possible for Cornwallis to succeed in his plans for the defeat of George Washington.

It has long been tradition among many of the families still living along the waters of New River that their ancestors participated in the battle of King's Mountain and few have doubted that this was true. However, few records have been found to support these traditions. It now appears that this lack of records can be explained. Little attempt was made to determine who did participate in this battle until after the Veterans Pension Act was passed in 1832 and by this time many of these veterans and their officers had died. As this act was extended to widows and dependant children many of them also filed claims most of which were rejected due to lack of records. The first claim of Nancy Gambill, widow of Martin, filed in 1834 was also rejected but after many sworn statements were filed by others she was finally granted a pension in 1851.

In 1836 the US Congress passed another act which made additional Federal lands available to war veterans which also included the veterans of the war of 1812. Claims filed under this act are also a rich source of information about the men of the New River valley.

In her pension claim Nancy Gambill stated that Martin crossed over the Blue Ridge into present Wilkes County and took command of Larkin Cleveland'd Company as Captain and that he took these troops to King's Mountain under the command of Col. Benjamin Cleveland. In an application filed from Morgan County Ky. by James Sturgill, a former Pvt. in the company of Capt. Enoch Osborne, in 1834, he stated that he was also under the command of Cleveland. Similar statements were also made by other claimnants. It now appears likely that Col. Campbell, knowing that the New River men would not have time to get to Sycamore Shoals, sent orders back by Martin Gambill that they were to take the much shorter route across the Blue Ridge and join with Col. Cleveland. Thus these men did not appear on Clevelands records because the only records available in 1832 were his original muster rolls. They did not appear on Campbell's records because he did make a record of the men he led to King's Mtn. and the New River men did not go with him. Several of these pensions were later made and land grants honored after many sworn statements were made by others in behalf of the claimnants, such was the case if Nancy Gambill who was granted land after she had passed the age of ninety.

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The statements made in this document came from many different sources including:

(1) Personal interviews with many of the older residents of the upper New River valley during the 1930's and 1940's. Many of these people then past the age of 90

(2) Court records of Montgomery and Grayson Counties of Virginia and Ashe, Wilkes, Surry and Rowan Counties of North Carolina.

(3) Deed and will records of above named Counties.

(4) Pension claims filed in the Military Archives in Washington DC including the claim of Nancy Gambill and James Sturgill

(5) Archives of North Carolina at Raleigh NC, veterans land claims filed under the Congressional land act of 1836.

(6) North Carolina veterans land grants made in Tennessee and filed at Rogersville in Hawkins County Tenn.

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NEW RIVER SYMPOSIUM

The New River Symposium is held annually each spring rotating from the three states of West Virginia, Virginia and North Carolina. The 1985 Symposium is scheduled for April 11-13 at Pipestem State Resort Park, Pipestem, West Virginia. In 1986 the Symposium will return to Virginia.

Those interested in presenting papers at future conferences should contact the sponsors. The Symposium is a multi-disciplinary conference for lay and academic people interested in the historical, cultural, recreational and scientific importance of the New River.

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