

New River Gorge National River

Historic Resource Study

NERI-02-038 HRS



August 2005

**Prepared by Michael E. Workman, Lee R. Maddex, and Dan J. Bonenberger
Institute for the History of Technology & Industrial Archaeology
West Virginia University
Edited by David Fuerst, NERI**

**Report submitted to New River Gorge National River
United States Department of Interior, National Park Service
Cooperative Agreement No. H0001010032**

LIST OF FIGURES AND TABLES

List of Figures

- Figure 1: Coal Fields of the United States
- Figure 2: Coal Fields of West Virginia
- Figure 3: Coke ovens at Beury
- Figure 4: House foundation and chimney next to former Beury mansion
- Figure 5: Coke ovens at Fire Creek
- Figure 6: Coke ovens ruins at mouth of Fire Creek
- Figure 7: Coke ovens at Sewell
- Figure 8: Coke oven ruins at Sewell
- Figure 9: Probable Powder House at Stonecliff
- Figure 10: Beechwood Coal and Coke tipple at Claremont
- Figure 11: Cemetery at Claremont
- Figure 12: Concrete silo and thickener at Royal Coal Company
- Figure 13: Ad for Ephraim Creek Coal & Coke Co.
- Figure 14: Concrete silos for sand storage at Dundee
- Figure 15: Former miner's houses at Thayer off State Route 25
- Figure 16: Little Rock Assembly Church at Thayer off State Route 25
- Figure 17: Former boarding house at Thayer off State Route 25
- Figure 18: Nurses at McKendree Hospital
- Figure 19: Stone walls at McKendree
- Figure 20: Panorama of Royal showing Power House at center
- Figure 21: Stone retaining wall at Royal
- Figure 22: Coke oven ruins at Red Ash
- Figure 23: Panorama of Caperton
- Figure 24: Three-story domestic structure at Caperton
- Figure 25: Kay Moor Bottom looking south with Nuttallburg conveyor at upper left
- Figure 26: Remains of Kay Moor Tipple
- Figure 27: Tipple at Nuttallburg
- Figure 28: Conveyor at Nuttallburg
- Figure 29: Railroad network of the United States, ca. 1890
- Figure 30: View of Quinnimont
- Figure 31: Joseph L. Beury Monument at Quinnimont
- Figure 32: View of Prince
- Figure 33: Prince Brothers Store at Prince
- Figure 34: CSX Railroad Depot at Prince
- Figure 35: View of Thurmond
- Figure 36: Downtown Thurmond looking south toward Thurmond Depot
- Figure 37: Stone ruins at Riverview
- Figure 38: Concrete Coaling Tower at Hinton
- Figure 39: CSX Depot at Hinton
- Figure 40: Steel plate girder bridge on Keeney's Creek

TABLE OF CONTENTS

Preface	2
Introduction	8
Revisions of Coal Industry Historical Context	12
Inventory and Evaluation of Cultural Resources Related to the Coal Industry	23
Revisions of Railroad Industry Historical Context	45
Inventory and Evaluation of Cultural Resources Related to Railroad Industry	52
Revisions of Lumbering Industry Historical Context	58
Inventory and Evaluation of Cultural Resources Related to Lumbering Industry ...	59
Revisions of Euro-American Settlement and Agriculture Historical Context	62
Inventory and Evaluation of Euro-American Settlement and Agriculture Sites	73
Revisions of Recreation and State Parks Historical Context	76
Inventory and Evaluation of Cultural Resources Related to Recreation/State Parks ..	79
Recommendations for Further Study and Inclusion in General Management Plan	83
Bibliography	85
Appendix 1: Reference Map of New River Gorge National River	

LIBRARY
New River Gorge National River
NEW RIVER GORGE NATIONAL RIVER
SOUTH DISTRICT 1 & VS LIBRARY
#1014

Nerf 206

LIST OF FIGURES AND TABLES (CONT)

- Figure 41: Lumber Mill at Hamlet
Figure 42: Aerial Photo of Hamlet showing railroad piers across New River
Figure 43: Lumber Mill foundation at Hamlet
Figure 44: Fire hydrant at Hamlet
Figure 45: Stone piers of railroad at Hamlet
Figure 46: Lumberman at Meadow Creek
Figure 47: Panorama of Babcock Coal & Coke lumbering operation at Landisburg
Figure 48: John Hughart company doctor's home off Route 41 near Landisburg
Figure 49: Fry-Jefferson map
Figure 50: Appalachian Frontiers, 1730-1839
Figure 51: Canals and Railroads Operated in 1850
Figure 52: Historic postcard of "New" Richmond (Sandstone)
Figure 53: Richmond farm across from Sandstone
Figure 54: Berry Cabin (ca. 1890) at Richmond Bottom
Figure 55: Keaton House (ca. 1890) at Richmond Bottom
Figure 56: Christina Vallandingham house (ca. 1890) at Richmond Bottom
Figure 57: Stone wall along River Road at Richmond Bottom
Figure 58: Richmond Hamilton Farmhouse (ca. 1902) at Richmond Bottom
Figure 59: Trump-Lilly Farmhouse
Figure 60: Bowyer's Ferry, historic drawing from Fayette County Court records
Figure 61: Putative location of Bowyer's Ferry, CSX Bridge crossing New River
Figure 62: Shelter at Babcock State Park
Figure 63: Steps to Shelter One at Grandview State Park
Figure 64: Camp Brookside Administrative Building
Figure 65: View of grounds, cabins, and water tower at Camp Brookside

List of Tables

Table 1: Tabular Summary of Management Information, Coal Related	
Cultural Resources	43
Table 2: Tabular Summary of Management Information, Railroad Related	
Cultural Resources	57
Table 3: Tabular Summary of Management Information, Lumber Related	
Cultural Resources	61
Table 4: Tabular Summary of Management Information, Settlement & Agriculture Related	
Cultural Resources	75
Table 5: Tabular Summary of Management Information, Recreation Related	
Cultural Resources	82

Executive Summary

This historic resource study (HRS) was prepared to supplement and update the historic resource study for the New River Gorge National River (NERI) developed in 1996 by Harlan Unrau. The overriding goals of this HRS are to a) assess and update NERI's historic contexts; 2) evaluate the significance of its historic resources; 3) produce a small scale cultural resources base map that clearly displays locations of NERI's significant cultural resources; and 4) provide historic preservation planning information in support of the park's General Management Plan.

A literature review and research were conducted to augment existing information in the 1996 report on the park's five historic contexts: 1) the coal industry; 2) railroad industry; 3) lumber industry; 4) Euro-American settlement/agriculture; and 5) recreation/state parks. Since it builds on rather than repeats its findings, it should be seen as a supplement to Unrau's report. It does not present information on archaeological resources pertaining to Native American occupation of the area before ca. 1790. It provides a framework for researching and evaluating cultural resources within the boundaries of the park, particularly those acquired by NERI since the publication of the 1996 study.

Field reconnaissance and research were the basis for an inventory and evaluation of the park's cultural resources, which correspond to the park's five contexts. Statements of significance and recommendations for management action are provided for each of the resources. In addition, each resource or historic site complex is provided with a rating from "1" to "3" (with "1" representing the highest level) based on its historical significance and integrity and whether it is intrinsically important to the mission of the park. A total of thirty-four (34) historic site complexes were described and rated: sixteen (16) relate to the coal industry context; seven (7) to the railroad industry context; two (2) to the lumber industry context; four (4) to the Euro-American and agricultural context; and four (4) to the recreation/state park context. Three (3) received the highest rating of "1" (Nuttallburg, Thurmond, and Babcock State Park), and seven (7) received the lowest rating of "3" or additional research required. The remaining twenty-four (24) historic site complexes are rated "2".

In addition, this HRS also provides recommendations for further study and for inclusion in NERI's general management plan. Recommended are 1) a study to identify, survey, and map historical archaeology sites throughout the park; 2) a focus on the preservation and interpretation of Nuttallburg and Kay Moor; 3) a study focusing on the social and labor history of early settlers and industrial workers; 4) a study of underground mining technology and the nature of work underground; 5) a study of the state-owned New River Gorge Bridge in connection with its recreational use and national significance; 6) development of a private recreation context; 7) adoption of an adaptive reuse plan for NERI's historic structures; 8) revival of the New River Symposium; and 9) formation of a "Friends of the Gorge" group.

Preface

Scope of Work

This historic resource study (HRS) has been prepared by the Institute for the History of Technology and Industrial Archaeology (IHTIA) at West Virginia University to update the historic resource study for the New River Gorge National River (NERI) developed in 1996 by Harlan Unrau. It has been prepared under the terms of a cooperative agreement (H0001010032) between the Department of Interior, the National Park Service's Historic American Buildings Survey/Historic American Engineering Record and the West Virginia University Research Corporation. The overriding goals of the study are to 1) assess and update NERI's historic contexts; 2) evaluate the significance of its historic resources; 3) produce a cultural resources base map that clearly displays the locations of NERI's significant cultural resources; and 4) provide historic preservation planning information to the park in support of its General Management Plan (GMP).

This HRS augments and synthesizes existing information in the 1996 report on the park's five historic contexts: 1) the coal industry; 2) railroad industry; 3) lumber industry; 4) Euro-American settlement/agriculture; and 5) recreation/state parks. Since it builds on rather than repeats its findings, it should be seen as a supplement to the earlier report. It does not present information on archaeological resources pertaining to Native American occupation of the area before ca. 1790. It provides a framework for researching and evaluating cultural resources within the boundaries of the park, particularly those acquired by NERI since the publication of the 1996 study. These resources, which, for the most part correspond to the park's five contexts, are evaluated in national, state and local contexts. Statements of significance are provided for each of the resources.

A number of considerations were paramount in developing the statements of significance. Are the resources significant on a local, state and/or national level? Do the resources have sufficient integrity to tell their story? Are the resource rare survivals of a particular property type? What element of the resources contribute to their significance? What elements are non-contributing?

Intrinsic Values

In addition to the appropriate context, these resources are evaluated in light of whether they are intrinsically important to the mission of the park. The park's mission was set out in its 1978 legislative mandate, 1982 General Management Plan, and 2002 agreement with the Advisory Council on Historic Preservation and West Virginia State Historic Preservation Office. In general, NPS is charged with conserving and interpreting outstanding natural, scenic, and historic values and objects in and around the New River Gorge. Intrinsically important cultural resources, then, are those which represent outstanding historic values as determined by the NPS and its consultants. With literally thousands of historic and historic archaeology sites and objects within the park's boundaries, this and other evaluative studies are required to determine which are genuinely outstanding and deserving of preservation and interpretation.

An important element of this study is the development of a map showing historic resources within the park. The map was developed from archival records, aerial photographs, and field reconnaissance. Its purpose is to show historical features within the park and help park planners with preservation planning. This map is presented full-size in a pocket attached to the back cover of the report.

It is anticipated that this HRS will provide a framework to support determinations of eligibility and National Register nominations that park planners submit to the West Virginia State Historic Preservation Office in the future. It also provides the background information for the park to update its General Management Plan and make informed decisions about the development of projects, planning, management, preservation, interpretation, and land acquisition.

Methodology

IHTIA began with a review and analysis of literary information focusing on the history and geography of the NERI region, focusing mainly on those works related to the five principal historic contexts: railroad industry, lumber industry, coal industry, Euro-American settlement/agriculture, and recreation/state parks. The primary focus was upon literature relating to the NERI region, but in order to place NERI resources in a larger context, works of national scope were also consulted. The most important sources of bibliographic references and historical information for the HRS were Unrau's 1996 historic resource study and Paul D. Marshall's "A Cultural Research Project: The New River Gorge National River," 1981. While outstanding in the breadth of their scholarship and exposition, these works require updating because of the expansion of NERI's boundary, the publication of new literature, and changes in the condition and integrity of cultural resources within the park. Additional books, manuscripts, periodicals, technical studies, dissertations, photographs, historic maps and other data were obtained from the West Virginia University Libraries, including the West Virginia and Regional History Collection, as well as NERI, which provided volumes and photographs from its library and databases pertaining to the National Register of Historic Places (NRHP), List of Classified Structures (LCS), Cultural Landscape Inventory (CLI), Cultural Landscape Assessment Information Management System (CLAIMS), and Ethnographic Resources Inventory (ERI). From these sources, relevant materials were collected and examined, and a annotated bibliography prepared.

Following the literature review and concurrent with the preparation of the bibliography, the IHTIA team conducted four visits to NERI to undertake field reconnaissance of cultural resources. Assisted by NERI staff, particularly cultural resource specialist David Fuerst, who provided transportation and guidance to the park's cultural resources, the IHTIA team located, assessed, and photographed most of the park's known cultural resources. Time and the limited scope of the project did not permit a comprehensive cultural survey and mapping of the sites, however. Moreover, time did not permit the team to visit certain parts of the park.

Based on the literature review and field reconnaissance, IHTIA prepared a cultural resource base map tied to the park's five historical contexts. This map is based on a review of existing maps, particularly historic topographic maps prepared by the West Virginia Geological Survey and U.S. Geological Survey, and field reconnaissance. They depict zones or contiguous areas where activities related to

the contexts occurred historically, where cultural resources were located during the study, and where it is likely that resources will be found in the future.

The literature review was also the basis for the revision of the five historic contexts. Since the contexts were based on sound research and writing, it was not necessary to rewrite the narratives wholesale. Rather, short, supplementary narratives were developed to deal with aspects of the park's history not fully covered by the contexts or to add new insights and concepts from literature that was not utilized. Thus, the contextual information present herein supplements, rather than replaces, the 1996 study.

Perhaps the most important part of this study are the inventories and evaluations of cultural resources. The 1996 study did not address all potentially significant historic properties within the park, nor did it consider those in close proximity. Correlating each cultural resource with its appropriate historic context, these narratives contain site specific historical information dealing with the important people, places, and developments of the 1790 to 1950 period. Cultural resources are described, then evaluated on the basis of their historical significance and integrity on local, regional, and national levels.

The inventories and evaluations are based upon historical research and the cultural resource reconnaissance. Time and the scope of the project did not permit a more comprehensive cultural survey, which would entail the completion of survey forms, mapping, and additional field photography. Nor were any archeological excavations undertaken. Another limitation of the reconnaissance is that it was conducted largely during the summer, when thick vegetation limited visibility. An impenetrable jungle of kudzu and other vines confronted the field team at many sites. Undoubtedly, some cultural resources were missed, especially ruins, which are hard enough to spot under ordinary conditions.

Many of the cultural resources encountered were ruins—stone foundations, remnants of walls and piers, for example. As such, these are largely archaeological sites. And, since they post-date the arrival of Europeans in the New World and are supported by documentary records, they are historic archaeological sites. The historic archaeological sites are evaluated on the basis of National Register Criteria A, B, and C, but primarily on the basis of their adherence to Criterion D: “they have yielded, or may be likely to yield, information important in prehistory or history.”¹

Historical Communities

With a few exceptions, the historic archaeology sites are evaluated as complexes or localities, rather than individually. It is expected that a historic site complex has more potential to yield important historical information than a single, isolated site. In this framework, the unit of analysis is the community, places such as Caperton or Thayer or Hamlet where clusters of domestic and industrial sites related to mining, lumber milling, farming, railroading were found. The historic archaeological record, as well as historical accounts and oral histories, reveal significant differences between and

¹Jan Townsend et al., “National Register Bulletin 36: Guidelines for Evaluating and Registering Historical Archaeological Sites and Districts,” National Park Service, 1993, p. 16.

within these categories of communities. For example, the ruins at logging towns like Hamlet are less apparent owing to their ephemeral nature, whereas coal mining and especially railroad towns like Nuttallburg and Thurmond, respectively, are of longer duration, and hence have more potential for intact archaeological remains. Some communities, for example, have residential areas, company stores, cemeteries or public spaces, schools, churches, roads, etc., whereas others lack some or most of these features. In this regard, historic archaeology informs us about the functional differences between and within the different types of communities.

These New River communities, many of them now “ghost towns,” differed from the few independent, incorporated towns within the park boundaries. They were unincorporated places dominated by a single industry and often by a single company--“company towns.”² Like most company towns in the Central and Southern Appalachians, their heyday was in the period from 1880 to 1930, when thousands of miners and mill workers migrated to these centers of rural industry. With the Great Depression in the 1930s, changes in markets, and mechanization, they declined markedly during the ensuing two decades, many closing altogether in the 1950s.

Scholarly historical studies of Appalachian company towns have often portrayed them as bleak places to live and work, where workers and their families were at the mercy of the company, exploited and powerless. According to David Alan Corbin, company towns “functioned to limit the growth of social freedom and self determination,” and were “closed, artificial communities.” This interpretation raises the question of whether these settlements constituted true communities.³

Other scholars, particularly Crandall A. Shifflett, paint a much different picture. Relying to a large degree on oral histories, Shifflett focused on the social and cultural aspects of Appalachian company towns. Disputing the prevailing view as a stereotype, he asserted that “sports, drinking, religion, visiting, and other leisure activities formed a vital part of coal-town life,” and that volunteer associations were established to forge “bonds of worker solidarity and communal independence.” Citing also the physical clustering of dwellings around schools, churches, and stores, Shifflett concluded that these settlements were indeed communities, and that social and cultural life became a

²See Harlan D. Unrau, “New River Gorge: Special History Study/Historic Context Study,” United States Department of the Interior, National Park Service, 1996, pp. 19-23 for a discussion of the various aspects of company towns in southern West Virginia.

³David Alan Corbin, *Life, Work, and Rebellion in the Coal Fields: The Southern West Virginia Miners, 1880-1922* (Urbana: University of Illinois Press, 1981), pp. 61; 77. Also see Ronald L. Lewis, *Black Coal Miners in America: Race, Class and Community Conflict, 1780-1980* (Lexington: University Press of Kentucky, 1987) and Ronald D. Eller, *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930* (Knoxville: University of Tennessee Press, 1982) for similar perspectives.

source of “communal identity, mutual assistance and solidarity.”⁴

While neither accepting nor rejecting Shifflett’s conclusions, his interpretation does inform this study. Defining community as a social network of interacting individuals, as a place where frequent and routine personal interactions occur between individuals within the context of household, family, neighborhood, and work, it is clear that New River industrial settlements were true communities. As such, they were more than places where people simply lived and worked; religious, educational, recreational, and other communal activities were central as well.⁵

Thus, with certain exceptions, New River “ghost towns” containing a number of archaeological resources representing the full gamut of essential community functions were evaluated higher in terms of integrity than those missing certain functional elements. For example, a New River coal-mining community with archaeological remains of dwelling houses, a company store, a school, church and cemetery, recreational facilities, along with the full array of primary and secondary production facilities, including a mine opening, tippie or preparation plant, headhouse, incline or conveyor, shops, railroad sidings, and coke ovens (if historically present), possesses a high level of integrity.⁶ When coupled with the types of historical associations that confer national and/or regional significance, such a group of sites probably would rate highly in IHTIA’s evaluation system

Adoption of the community concept as an organizing principle also raises of the question of defining the geographical limits of specific communities. A community occupies a specific territory, but the peculiar geography of the New River gorge sometimes makes it difficult to define that territory simply by delineating the geographic boundaries of archaeological sites. Moreover, personal accounts and oral histories demonstrate that people who lived in these places sometimes had a broader concept, identifying themselves with adjacent communities. While the sphere of influence or economic reach of certain communities shifted over time with the changing fortunes of the coal, lumber, and railroad industries, it is clear that historically there were several extended communities. For example, Nuttallburg and South Nuttall, linked by a suspension bridge across the New River, were part of a single community; Browntown, a small settlement on the gorge rim, was also part of this greater Nuttallburg community. In this and other cases of linked settlements in the gorge, transportation systems played a key role in uniting people in a single community. Other cases of this type of linkage are noted in the inventory section of this report.

IHTIA has supplied brief statements of significance and a rating for each site or historic site complex

⁴Crandall A. Shifflett, *Coal Towns: Life, Work, and Culture in Company Towns of Southern Appalachia, 1880-1960* (Knoxville: University of Tennessee Press, 1991), pp. xvi; 3.

⁵This rather general definition of community is found in R.J. Johnson, et al. *The Dictionary of Human Geography* (Oxford: Blackwell, 2000), p. 101.

⁶Harlan D. Unrau, “New River Gorge,” pp. 40-41. Unrau’s “typology of known and expected property types” for the coal context is a list of the main elements of a coal-related site.

based on their historical significance and integrity. Since only the NPS or the West Virginia State Historic Preservation Office can make determinations on the eligibility of properties to the National Register, IHTIA has ascertained which sites are potentially eligible. In IHTIA's rating system, sites possessing the highest level of significance and integrity receive the highest score, a "1." These sites are nationally significant and intrinsically important to the mission of the park and potentially eligible for the National Register. Sites which are significant on the regional or level, and/or lack the highest level of integrity are given a "2". These sites may also be intrinsically important and qualify for listing on the National Register, depending on their scarcity, accessibility, and potential to convey a story related to the park's historic contexts. Those sites which are of lower significance and integrity are rated a "3." They are not intrinsically important to the park's mission; nor are they potentially eligible for the National Register.

It should be noted that this classification system is provisional in nature, and does not constitute a formal Section 110 evaluation. Rather it is an attempt to compare and contrast the general condition and potential of historic resources in the park. The findings are designed to establish a baseline for considering as many historic resources as possible, and to inform management decisions regarding preservation policies undertaken in conjunction with the West Virginia State Historic Preservation Office.

In order to provide input for the upcoming revision of NERI's General Management Plan, IHTIA has also included general and specific recommendations in regard to the park's cultural resources. These recommendations include determinations of which cultural resources are integrally important to the overall mission of the park, possible preservation strategies, and suggestions for further research and study.

INTRODUCTION

Regional and Chronological Framework

The local framework for this study is the New River Gorge National River (NERI), an approximately 70,000 acre park administered by the National Park Service. The park is comprised of a national river corridor that extends 53 miles from Hinton northward to the boundary of Hawks Nest State Park near Ansted, incorporating parts of Fayette, Raleigh, and Summers counties. NERI was established by the U.S. Congress in 1978 to conserve and interpret outstanding natural, scenic, and historical values and objects in around the New River Gorge.⁷

Southern West Virginia is the regional framework for the study. This region includes the eleven-county NPS Coal Heritage Area (Summers, Mercer, McDowell, Wyoming, Mingo, Logan, Boone, Raleigh, Fayette, Wayne, and Cabell counties), as well as the four adjacent counties of Nicholas, Kanawha, Lincoln, and Monroe. This region is defined by common characteristics of its constituent areas, especially the dominance of the extractive industries, particularly coal, but also by extensive inter-areal flows or activities among the various areas.⁸ The latter aspect of this definition justifies the inclusion of non-mining counties (Summers, and Cabell), and urban centers, such as Hinton, Charleston and Huntington. Historically, extensive flows of people, goods, ideas, and capital tied these areas to the central, coal-producing counties.⁹

A larger regional context for the study is Appalachia, an extensive region that extends along the east and west flanks of this mountain chain from northern Pennsylvania to Georgia. While historical geography has undergone a number of theoretical shifts in the last forty years, Appalachian Studies, which arose in the late-1960s and 1970s, continues to have a large influence on regional studies. Several concepts from this interdisciplinary field are pertinent to this study, particularly a development model that more or less applies to the Southern West Virginia region. According to the model, the mountainous areas of Appalachia, isolated from major transportation routes and trade, were sparsely settled and characterized by an agricultural, subsistence economy and a traditional culture until well after the Civil War. With the construction of railroads into the Appalachian hinterlands during the late-nineteenth century, the region was thrust into a new, industrial age. Rather than the indigenous people of the region, who served as wage earners and a compliant service class, the agents of this transformation were northern capitalists intent on exploiting the region's bountiful coal and timber resources. Lacking adequate numbers of laborers to serve the rapidly developing extractive industries, the region attracted thousands of migrants from other parts of the nation and

⁷Harlan Unrau, "New River Gorge," p. 1.

⁸Based on a definition of region from Harvey S. Perloff, Edgar S. Dunn, Jr., Eric E. Lampard and Richard F Muth, *Regions, Resources and Economic Growth* (Lincoln: University of Nebraska Press, 1960), p. 4.

⁹See Joseph DiBello, et al., "A Coal Heritage Study," (National Park Service, 1992), for more information on the southern West Virginia coal region.

from other nations during the 1880 to 1920 period. The fifty years of prosperity brought by this rapid development did not lead to diversification of the economy, however, because profits went outside the region. Then, as the extractive industries declined in the 1930s, the region experienced widespread poverty and out-migration because no alternative to the extractive industries had been developed.¹⁰

The Appalachian development model is a useful tool for understanding the history of the Southern West Virginia region, but its wholesale applicability to this region (and to particular areas within the region) is problematic. Recent scholarship has shown that pre-industrial Appalachian farmers were far more market-oriented than previously supposed, for example¹¹; and that indigenous peoples played a far more active role in industrial development than once thought, serving as a vanguard capitalist class in some areas.¹² Moreover, due to the overexpansion of the coal and lumber industries and resulting low prices, the surplus value from these enterprises accrued to consumers as low prices rather than to outside capitalists as profits.¹³

The chronological framework presented below addresses the history of the New River Gorge area in the context of broader developments in Southern West Virginia and in Appalachia. Broken down into periods, it is relevant to all five historic contexts.

Pre-industrial Period, 1798-1873

This long era of settlement and slow population growth was marked by the dominance of a self-sufficient farm economy, typical of Southern West Virginia and Appalachia. The relative isolation of the gorge and problems in navigating the New River made trade difficult and impeded the development of a market economy. It is unclear, however, how the construction of the James River and Kanawha Turnpike near the gorge affected agriculture. With this transportation artery nearby, farmers, especially those with choice lands along the New River, may have engaged in trade far more than previously thought. Moreover, historical accounts indicate that there was batteaux traffic on the New River originating from Hinton and other upriver shipping points. The rapids of the gorge presented an obstacle, however, preventing traffic from reaching points downstream of Batoff Mountain. According to W.E.Trout's *The New River Atlas*, batteaux were forced to land and unload

¹⁰Ronald D. Eller's *Miners, Millhands and Mountaineers* (Knoxville: University of Tennessee Press, 1982) is the outstanding exposition of the Appalachian development model.

¹¹See Paul Salstrom, *Appalachia's Path to Dependency: Rethinking a Region's Economic History, 1730-1940* (Lexington: University Press of Kentucky, 1994).

¹²See Eugene Conti, "The Cultural Role of Local Elites in the Kentucky Mountains: A Retrospective Analysis," in *Appalachian Journal* 7 (Autumn 1979): 51-68; and the author's "Political Culture and the Coal Economy in the Upper Monongahela Region: 1776-1933, Ph.D. diss., West Virginia University, 1995.

¹³Richard Simon, "The Development of Underdevelopment: the Coal Industry and Its Effect on the West Virginia Economy, 1880-1930," Ph.D. diss., University of Pittsburgh, 1978.

cargo at McCreery at the mouth of Piney Creek, from which point goods were “waggoned up Rt. 41 to points west.” Trout also presents some evidence that boaters used canals and mill races to get around shoals and rapids between Hinton and McCreery, and that Batoff Mountain may have originally been called Batteau Mountain.¹⁴

Industrialization, 1873-1902

The construction of the Chesapeake & Ohio Railroad through the gorge in 1873 led to its dramatic transformation. Although the Panic of 1873 retarded development, the coal and lumber industries grew rapidly after 1880, attracting thousands of immigrants. Small enterprises in many cases run by pioneer coal operators like Joseph Beury, who applied technologies developed in the anthracite region to his New River collieries, dominated the industry at first, but large companies became more common in the 1890s. New River collieries incorporated innovative technologies in their operations during this period, particularly those relating to lowering coal down the steep walls of the gorge and the electrification and mechanization of underground workings. The construction of branch and narrow-gauge logging railways, undertaken largely during the 1890s, expanded the industrial economy. The success of New River operators in capturing a larger share of the market in the late-1890s for their coal and coke and the defeat of the United Mine Workers 1902 organizing campaign mark the emergence of the New River coal field nationally. This prosperity also led to the establishment and growth of nearby urban centers such as Hinton, Beckley, Thurmond and Mount Hope, where banking, merchandising, warehousing, legal, and communication services were available.

Prosperity, 1902-1925

This is the heyday period of the New River coal and lumbering industries. As production increased, a new wave of immigrants arrived, chiefly from southern and eastern Europe. The prosperity of the extractive industries provided a base for the development of a service economy within the mining settlements, but more intense development occurred in the nearby service towns. The decline of the New River coke industry during the 1910s, a result of the displacement of the beehive oven by the by-product oven, and recessions during the 1920s heralded the decline of the ensuing period.

Decline, 1925-1960

The Great Depression came early and stayed late in Southern West Virginia. The already overexpanded coal industry became unprofitable and, in general, remained so throughout this period. With timber supplies depleted, the lumber industry faded. Despite unionization in 1933, miner's earnings continued to decline. A recovery during the World War II period only interrupted the downward slide as the coal industry continued to contract, especially in the 1950s when many miners lost their jobs due to increased mechanization. Hard times led to the out-migration which

¹⁴W.E. Trout III, *The New River Atlas* (Virginia Canals and Navigation Society, 2003), pp. 2, 78-84; also see Shirley C. Donnelly, “When Batteau Traffic Was Heavy Here,” *Post Herald*, Beckley, West Virginia, August 11, 1975, as well as Paul D. Marshall, “A Cultural Research Project: The New River Gorge National River, West Virginia,” (Charleston, W.Va., 1981) pp. 144-48 for information on early river traffic.

characterized this period.

Revision of Coal Industry Historic Context

A critical review of the coal industry context from Harlan Unrau's New River Gorge historic context study was conducted to ascertain what revisions and additions would be required in order to get a better understanding of coal-related cultural resources and the coal industry in general in the gorge. While the information presented in this 1996 document is sound, there are several areas where additional research and expansion of the narrative would enhance its overall value: 1) A more thorough discussion of the New River coal industry in relation to the national coal industry, describing its antecedents and its sequence in the development of coal fields in West Virginia and other states is required. Was mining in the New River an "early" or "late" development? How was its development conditioned by that in other parts of the nation and state? 2) Also needed is an analysis of coal mining technologies used in gorge collieries, noting in particular those of overriding significance and those tied to extant cultural resources. Was the New River Field a technological leader or laggard? What significant technologies of note were used or developed here? Which technologies were transferred from other coal fields? 3) A discussion of the structure and operation of specific collieries, along with 4) a narrative focusing on particular mining settlements, both of which should be keyed to existing cultural resources, would be helpful in understanding what remains on the ground today. 5) A discussion of the development of the labor movement in the gorge, particularly in the twentieth century, with information on key labor sites, would be valuable. While some scholarship on the nineteenth-century labor movement in the gorge exists, very little has been collected on United Mine Worker's organizing drives during the 1904 to 1933 period and labor sites in the gorge have been identified. 6) As recommended by Unrau, a narrative focusing on the social history of mining settlements in the gorge, including analysis of the ethnic composition of these communities and the lives of "average" individuals and families, is needed. 7) Finally, a discussion of underground mining technology and the nature of work underground would add a new dimension to our understanding of the gorge's coal industry.

The first topic in this agenda is treated in this section. Topics two, three and four are treated, to an extent, in the inventory of sites in a later section, though much work remains before a full technological history of the gorge's collieries can be written. The remaining topics, the labor, social, and underground history of mining in the gorge, require extensive archival research among primary documents, so they are outside the scope of this project. As such, these items are recommendations for further study.

The New River Coal Field in the National and State Context

According to Unrau's New River coal industry context: "The southern West Virginia coal fields were brought into production at a time when the established northern fields were already adequately supplying the national demand."¹⁵ This led to the stiff competition and overexpansion that

¹⁵Unrau, "New River Gorge," p. 9. This section and others in his coal industry context were based on a report, "Historical Context for the Coal Heritage Survey," written by the author and others at the Institute for the History of Technology and Industrial Archaeology.

characterized the coal industry in the twentieth century. An essential fact about the coal industry is implicit in Unrau's statement. Despite the common characterization of coal as "black diamonds" or "black gold" and the implication that it is scarce, in reality it is, and has been, one of our most plentiful natural resources. Coal is found and has been mined historically in thirty-five states. It is useful to understand the distribution of coal across the U.S. and how coal-mining areas are divided into districts, fields, regions, and provinces by the U.S. Geological Survey before looking at the developmental history of the industry.

Geography of the National Coal Industry

The coal mining territory in and around the New River Gorge has been variously described as the New River Field, the New River District and as part of the Southern West Virginia "Smokeless" Coal Field. In order to place the New River coal industry in its regional, state, and national context, an understanding of these geographical designations is essential.

The terms district, field, region, and province are often used loosely, and sometimes synonymously, but the U.S. Geological Survey has developed definitions of these coal-bearing areas. The term coal *district* is applied only to developed coal areas. The term has been widely used in the trade to describe an area in which mining has developed around a definite center, but, at times, the term has been used synonymously with coal field. A district is generally small, but no definite geographic limits exists for them. They are areas in which coal from a particular coal bed or group of similar beds from have been developed, and the coal is generally known in the trade by some distinguishing feature, such as a trade name or some physical characteristic. Districts are generally named for the leading town where mining first started, or which first achieved distinction in production a particular kind of coal (See Figure 1).

A coal *field* is a coal-bearing territory larger than a district. It is probably the most loosely used geographic term found in the literature. Its recognition is based more on man-made and natural geographic features, such as transportation networks, markets, and types of coal, than on trade practices. The U.S. Geological Survey applies the term to an area larger than a district, but still a compact area. Small areas or basins that are separated from another or from the main coal area are called fields, especially if their coal is of fairly uniform composition and value. Some of the best-known coal fields of this type are the Pocahontas field of Virginia and West Virginia, the New River field of West Virginia, the Georges Creek field of western Maryland, the Windber field of Pennsylvania. These fields have definite outlines, corresponding with the extent of the bed or beds of coal upon which the field was established or with the limits of a coal of a certain quality.

The West Virginia coal mining areas have been divided into ten or eleven coal fields: the Panhandle, Fairmont, Elkins, Upper Potomac or Elk Garden, Gauley-Greenbrier, Pocahontas, Williamson or Thacker-Kenova, Logan, Kanawha, New River and Winding Gulf fields. The New River and Winding Gulf fields are sometimes combined because of the similarity of the coal beds, but differences in markets and historical development make their separation into two different fields more

appropriate.¹⁶

Coal fields are often grouped into larger divisions called *regions*. These groupings are made to bring together coal fields that have certain features in common, such as the type of coal produced. For example, the Trinidad field of Colorado and the adjacent Raton coal field in New Mexico produce a similar type of coking coal, so they are referred to as a unit as the Raton Mesa coal region.

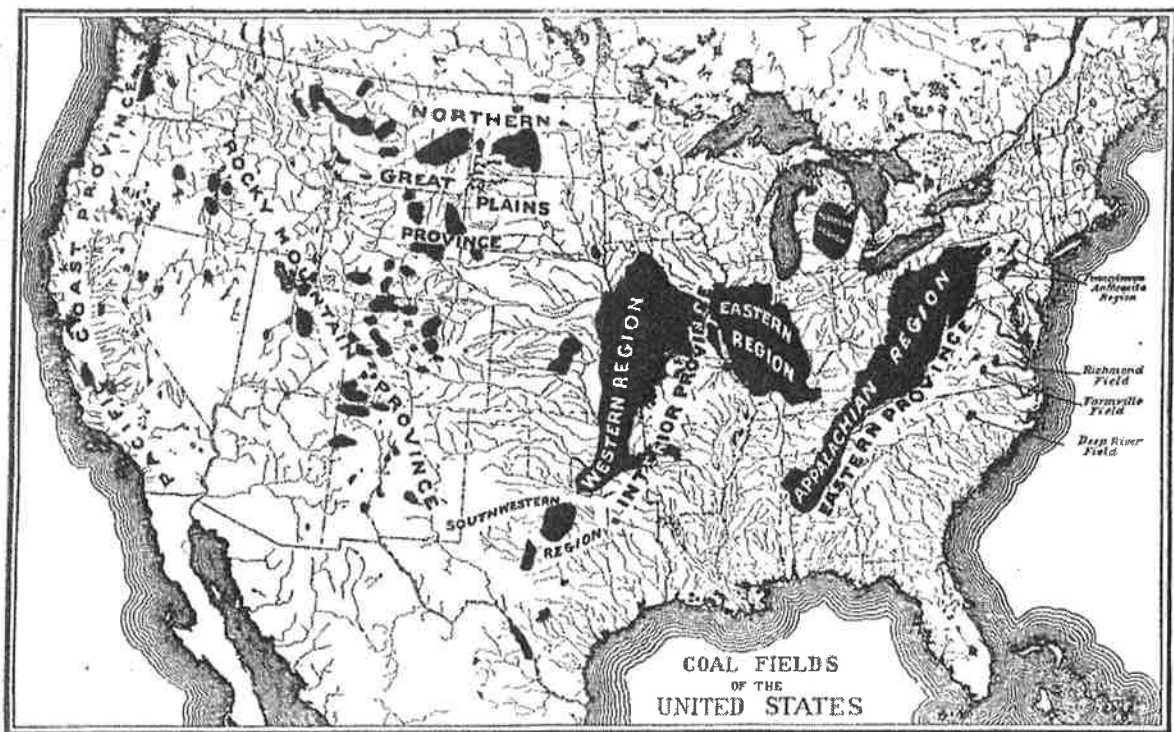
Likewise, other fields are often combined into regions: the anthracite region of northeastern Pennsylvania, and the western coal region in Iowa, Missouri, Kansas, Oklahoma, and Arkansas, and the Appalachian coal region of southwestern and central Pennsylvania, West Virginia, western Maryland, western Virginia, eastern Kentucky, western Tennessee, northern Alabama, and small areas in Georgia and North Carolina. The Appalachian region is the greatest storehouse of high-ranking coals (in terms of heating value or BTUs) in the United States. Coal from this region has provided the foundation for the development of the great iron and steel and manufacturing industries of the eastern states.

Regions are often grouped into larger coal areas known as *provinces*. These are the Eastern province, Interior province, Gulf province, Northern Great Plains province, Rock Mountain province, and Pacific Coast province. This grouping is made largely for the consideration of issues relating to geologic age, geologic structure, quality of coal, and transportation. In a province, there is a certain amount of unity in the physical features of the coal area. However, some provinces contain all ranks of coal, and the regions are grouped together because of their geographic positions, structural features, or age of the coal beds.

The Eastern coal province contains as much as nine-tenths of the original reserves of the high-ranking coal of the country. It is made up of the anthracite regions of Pennsylvania and Rhode Island, the Atlantic coast region of Virginia and North Carolina, and the Appalachian region, which includes all the bituminous and semibituminous coal of the Appalachian trough. Pennsylvania anthracite region is made up principally of four fields known as the Northern, Eastern Middle, Western Middle, and Southern. Mined commercially since the first decades of the nineteenth century, Pennsylvania anthracite was utilized first as domestic fuel, than after around 1840 also as blast furnace fuel and in general iron-working. It has accounted for over ninety-nine percent of all anthracite mined in the United States. Important in the early history of coal mining, the Atlantic coast region was nearly abandoned after the Civil War, when the railroads made Appalachian coals available to the east coast. The Richmond field was the site of the first development of bituminous coal in the nation, with mining initiated there after 1787.

The Interior province, second in commercial importance to the Eastern, includes all the bituminous coal fields near the Great Lakes, in the Mississippi Valley, and in Texas. It is made up of four distinct regions: the northern region (Michigan), the eastern region (Illinois, Indiana, and western Kentucky),

¹⁶Michael E. Workman, Paul Salstrom, and Philip W. Ross, *Northern West Virginia Coal Fields: Historic Context* (Morgantown, W. Va.: Institute for the History of Technology and Industrial Archaeology, 1994), Technical Report No. 10.



From 11th Annual Report, Dept. of Geology and Natural Resources, Indiana, 1882.

Figure 1: Coal Fields of the United States
Keystone Coal Catalog, 1930

the western region (Iowa, Missouri, Kansas, Oklahoma, and Arkansas), and the southwestern region (northern Texas). Generally, the coals of the Interior province are inferior to those of the Eastern province, but they have been extensively mined and marketed. With many coal beds close to the surface, much of the coal of this province has been extracted through surface mining. Historically, these coals have been used for domestic heating and for generating power in the many cities and towns of the Mississippi Valley and the Great Lakes. The presence of these extensive coal fields in proximity to the avenues of transportation--railroads, lakes, and canals--has been instrumental in the development of the great cities of Chicago, St. Louis, and Kansas City, and in making this region a part of the great northern manufacturing belt.

The Gulf province includes the mostly lignite coals found in Texas, Louisiana, Mississippi, southern Arkansas, Alabama, and western Tennessee. These coals have been exploited very little, however, in part because higher-ranking coals are available nearby and because the rock strata containing the coals are soft and friable, making mining difficult and expensive. As a result, commercial mining has occurred only at a few localities, mainly in Texas.

The Northern Great Plains province includes all the coal fields in the Great Plains east of the Front Range of the Rocky Mountains in the states of North Dakota and South Dakota, and in the eastern portions of Montana, Wyoming, Colorado, and New Mexico. Coals are generally of low quality in this province, chiefly lignite, but in northeastern Wyoming they are of a higher rank. Historically known as the Sheridan field and more recently the Powder River basin field, this area has seen the greatest development in the province. The rapid development of this field since the 1970s has made Wyoming one of the leading coal-producing state in the nation since the 1990s.

The Rocky Mountain province lies west of the Northern Great Plains province in the western portions of Montana, Wyoming, Colorado, New Mexico, and in Utah. It contains a greater variety of coals than any other in the United States, with coals ranging from lignite to anthracite. Historically, the coals of this province were exploited on a limited basis in a few areas of Colorado by the railroad and steel-making companies until the 1910s, when mining was expanded.

The Pacific Coast province of the west coast includes the states of Washington, California and Oregon. Coals in the latter two states are such low rank that little mining has been attempted. In Washington, some mining has occurred, especially on the east side of the Cascade Mountains in Kittitas County. This coal has been mined by railroad companies for use as locomotive fuel.¹⁷

Under the U.S. Geological Survey classification, the New River Gorge area is a district within the broader New River Field, which encompasses most of Fayette County and part of Raleigh County. The New River Field is a part of the so-called "Smokeless" Coal Region, which also includes the Pocahontas field in McDowell, Mercer, and Wyoming counties and a part of Virginia. In a broader context, the New River District is part of the Appalachian Region and the Eastern Province.

¹⁷Marius R. Campbell, "The Coal Fields of the United States," Professional Paper 100-A, United States Geological Survey (Washington: GPO, 1917), pp. 3-20.

Sequence of National Development Prior to 1873

In North America coal was known but rarely used by Native Americans. Eastern Indians carved small figurines and pendants of coal, and used crushed coal as a black pigment in body painting, but the only known utilitarian use was by the Hopi Indians in Arizona, who used lignite for tempering pottery about 1,000 A.D. The French explorer Joliet was the first European to record observations of coal in the present territory of the United States. In his account of the Mississippi River expedition of 1673-74, Joliet mentions "carbon de terre" in northern Illinois and depicts it on his map. During the next century, coal was discovered in the Atlantic coast and Appalachian regions: in the Pennsylvania anthracite region in 1698 by Gabriel Thomas; along the James River, above Richmond, in Virginia in 1701; along the North Fork of the Potomac River in Maryland and present-day Northern West Virginia in 1736, in what is now Southern West Virginia in 1742 by Peter Salley; in the western Pennsylvania bituminous region in 1753 by John Pattin; and around 1760 along the Narragansett Bay in Rhode Island.

These discoveries were made by explorers and travelers who had no intention of mining or even using the mineral fuel; most simply noted its existence as a potential resource or as a curiosity. It would be decades before mining and exploitation of coal began. There was little demand for coal for industrial purposes because the colonies were largely agricultural, and the few industries which existed had an abundance of wood within easy reach. The small market for domestic fuel in the seaboard cities was supplied by English imports, "sea cole" obtained from ship's ballast, or from Nova Scotia. Most American coal fields were situated too far in the remote interior to be of much use to the colonists.

The Richmond coal basin, located just fifteen to twenty miles west of that town and along the navigable James River, witnessed the only extensive mining activity in colonial America. Here, bituminous was mined as early as 1702 by French Huguenot settlers for local use. Commercial shipments of coal on the James River from the Midlothian and other mines of the Richmond field began in 1758. Averaging less than one hundred tons per year until the Revolutionary War years, this trade was relatively small, but it reached Philadelphia, New York, Boston, and even the West Indies ports. The Revolutionary War brought increased demand for coal, for it was needed as fuel by garrisons and for the manufacture of munitions. Since British imports were no longer available, American miners were called on to produce coal in greater quantities. In 1776 the first shipments of anthracite from northeastern Pennsylvania were made from the Wyoming Valley. The coal was floated in flatboats down the Susquehanna, then transported overland to the armory at Carlisle, Pennsylvania. When not occupied by British forces, the Richmond field supplied most of the emerging nation's wartime needs. And, with the dislocations in trade following the war, development continued here so that by 1800, mining established itself as a potentially lucrative business. By then, the nation's coal production came from Richmond and the Pittsburgh fields, with very small quantities from eastern Kentucky, Ohio, and western Maryland.

Pittsburgh and southwestern Pennsylvania emerged as the most productive coal field following the Revolution. Coal had been dug from Coal Hill, just opposite the confluence of the Monongahela and Allegheny rivers, in 1760 for the use of the garrison at Fort Pitt. The use of coal in glass making, brick works, smithing, and domestic use after the Revolution gave the growing town its sobriquet, the

"smoky city," by the turn of the century, and, along with a growing export trade on the Ohio River, spurred mining activity. As much as three-fourths of the nation's production originated here by 1800.¹⁸

Until the beginning of the canal era in the 1820s, coal was mainly for local use. When coal was found along streams, such as the James, Susquehanna, Monongahela, Ohio, Kentucky, and Kanawha rivers, it was mined and transported in small quantities to markets downstream, or along the Atlantic Coast. These early mines, particularly those in southwestern Pennsylvania, where coal outcropped along streams and hillsides, were very small, and owned and operated by local figures. Capital inputs were minimal. All that was required to open a mine was ownership or lease of a small plot of coal land, a horse or mule, a few carts, and a few laborers, who might be kinsmen. The state of technology was primitive. Geological information was unavailable beyond what could be found out by actually digging out the coal. American miners seemed to have simply went at it, learning as they dug without plan, method or system. The knowledge and skills of the few British miners who came to the country were utilized in some of the larger operations, and the surveying skills of the American frontier came into play in establishing bearings and levels, but American mining technology was comparable to that of pre-industrial Great Britain. All of the work, inside and out, was done by hand; the coal was mined and loaded by hand, hauled by horses, mules, oxen or even dogs in small wooden sleds or carts, and dumped by hand over makeshift tipples which shipped only mine-run coal. These mines were of small capacity: any shipping over two hundred tons per day was considered large.

At the dawn of the canal age in 1820, the nation's coal mines produced an estimated 333,665 short tons--about the same annual production as a single, medium-sized surface mining operation today. Pennsylvania and Virginia remained the largest producers; some production occurred in Ohio, Kentucky, Maryland, Missouri, Illinois and Indiana. With 225,600 short tons, Pennsylvania's bituminous mines, mainly in the Pittsburgh field, produced about two-thirds of the nation's output.

In addition to the Richmond field, Virginia boosted extensive coal reserves in its western section. Part of the extensive and rich Appalachian region, the western coal fields were developed to a limited extent before the Civil War. Four separate coal fields saw activity: in the Monongahela basin in Harrison, Marion, Monongahela and Taylor counties (Fairmont field), particularly after the construction of the Baltimore and Ohio Railroad in 1852; along the Ohio River in Ohio and Brooke counties (Panhandle field), where coal supported industrial development in Wheeling; along the Upper Potomac River in Mineral Counties (Upper Potomac field), where a scattering of mines shipped small quantities down the Potomac; and in Kanawha County along the Great Kanawha and Coal rivers (Kanawha field), where coal was used extensively as a fuel in evaporating salt brine in the production of red salt. As development was contingent upon local demand and/or the availability of river transportation, no mining occurred in the rugged, relatively uninhabited southern and central parts of western Virginia.

Virginia's Richmond basin mines were beset with a host of economic, geological, and technical

¹⁸Ibid., Table 20: "United States Coal Production," pp. 426-434.

problems which brought about the decline of the industry in the 1850s. Along with the inefficiency of slave labor, the lack of economical transportation was the cause of financial difficulties. A large percentage of the coal mined from the Richmond basin was transported on batteaux down the James River or on the James River Canal, which was built in a somewhat desultory manner by the Board of Public Works beginning in 1817. This section was part of a grand scheme of river improvements and canals, the James River and Kanawha Canal, which was envisioned by George Washington to link Virginia's Atlantic Coast to the Ohio River through the Kanawha. A survey of the Jackson, Greenbrier and New rivers, including the section that runs through the park, was made in 1812 by John Marshall, who served as Chief Justice of the U.S. Supreme Court. Marshall reported that the steamboats could be successfully run on the New River, but admitted that the cost of improving the river for navigation would be great.¹⁹ For this and other reasons, the canal was never built across the mountains, but the James River was made navigable as far west as Lynchburg. Despite its decline, the Richmond field continued to produce coal until the first decades of the twentieth century. During the Civil War, the Midlothian and Clover Hill collieries played a very important role in the Confederate war effort, supplying coal to the Tredegar Iron Works at Richmond, the most important ordnance plant in the South.²⁰

In contrast to the troubled and incomplete transportation system of Virginia, by the 1830s an efficient canal system had been completed in the anthracite region. This system provided cheap transport of anthracite to Philadelphia and New York, permitting it to compete favorably in the market with Richmond bituminous.²¹

Pennsylvania was the greatest coal producing state in the nation throughout the nineteenth century. Until 1902 Pennsylvania produced annually more than half of the coal mined in the United States, but the development of the Central Appalachian fields, particularly West Virginia and Eastern Kentucky, in the first two decades of the twentieth century, reduced its dominance. In 1927, the Commonwealth was surpassed by West Virginia as the nation's leading coal-producing state.

Pennsylvania's coal industry breaks down naturally into two great divisions, anthracite and bituminous. The anthracite coal region is situated in the northeastern counties of Pennsylvania, separated by the highest of the Allegheny mountains from the much larger bituminous coal fields of western and central part of the state. This bituminous region embraces the northeastern end of the great Appalachian region. Pennsylvania's portion of this coal region is an area of about 12,200 square miles spreading from the Ohio, West Virginia, and Maryland borders. The boundary of this area is

¹⁹Otis Rice, "History of the New Gorge Area," Typescript, Montgomery, West Virginia Institute of Technology, [1986], p. 2 (copy in historical files, NERI).

²⁰Howard Eavenson, *The First Century and a Quarter of American Coal Industry* (Pittsburgh: Privately printed, 1942), p. 129.

²¹Ronald L. Lewis, *Coal, Iron and Slaves: Industrial Slavery in Maryland and Virginia, 1715-1865* (Westport, Connecticut, 1979), p. 201.

somewhat irregular, with many small, outlying fields along the northeastern margins. One important outlier, the Broad Top field in Bedford and Huntingdon, is well-detached from the main body of the coal-bearing area.²²

The Pennsylvania bituminous region has been variously divided into smaller fields, with groupings based on transportation lines, use of the coal (coking, gas, steam), and geography. A simple geographic break-down yields four principal fields:

(1) Main Bituminous Field [Pittsburgh Field]: Allegheny, Armstrong, Beaver, Blair, Butler, Cambria, Cameron, Center, Clairon, Clearfield, Clinton, Elk, Fayette, Greene, Indiana, Jefferson, Lawrence, McKean, Mercer, Somerset, Venango, Washington and Westmoreland Counties; (2) Broad Top Field: Bedford, Fulton, and Huntingdon Counties; (3) North-Central Fields (five small fields): Bradford, Lycoming, and Tioga Counties; (4) Georges Creek Field: Somerset County.

While the Pittsburgh or Main bituminous field was well developed by 1800, mining got underway in the Broad Top field by 1810; by 1856 in the North-Central fields; and by 1870 in Somerset County.²³

Pennsylvania's anthracite coal fields are particularly relevant to early mining in the New River Gorge, because one of the latter's pioneer operators, Joseph Beury, migrated from Schuylkill County, the heart of the anthracite region, to the New River area and opened some of the earliest mines here. It is clear that Beury brought with him technologies developed in the anthracite region and put them in place at his New River mines. In addition, there is some evidence that miners from the anthracite region migrated to the New River area during the 1873 to 1902 period.²⁴

The anthracite region is located mainly in Lackawanna, Luzerne, Carbon, Schuylkill and Northumberland counties, but the coal also extend into Wayne, Susquehanna, Wyoming, Sullivan, Columbia, Dauphin and Lebanon counties. The anthracite region embraces a territory of about 3,300 square miles, but only a small part of this region, 484 square miles, is underlain by workable coal beds. Over ninety-nine percent of the anthracite production of the United States has come from this small area, with the remainder produced in Rhode Island, Arkansas, Colorado, Virginia and New

²²*Keystone Coal Catalog, 1930*, (Pittsburgh: Keystone Consolidated Publishing Company, 1930), p. 418.

²³Adam T. Shuraick, The Coal Industry (Boston: Little, Brown and Company, 1924), p. 15.

²⁴Lois C. McLean, "Labor History in the New River Coalfield," *Proceedings, New River Symposium*, 1982, p. 176.

Mexico.²⁵

The first use of anthracite probably was made by the Gore brothers, who settled at Wilkes-Barre in 1769. Significant shipments of anthracite began in 1820, so this year has traditionally been given as the beginning of the industry.²⁶ By 1831 production hit the 500,000 small ton mark, surpassing the production of Pennsylvania's bituminous fields and making the anthracite region the most productive in the nation. Anthracite was used as fuel in iron-making by the late-1830s. By 1840 seven anthracite-fueled blast furnaces were in operation in Pennsylvania; by the 1850s anthracite produced more iron in the United States than charcoal. Anthracite remained the principal fuel for iron-making in the United States until 1875, when coke made from bituminous coal surpassed it as the dominant fuel.²⁷ Anthracite production reached its peak during World War I, and declined rapidly afterward.

Maryland is not typically considered an important coal-producing state, but the state had one of the most productive coal fields in America during the period from 1842 to around 1920. The first discovery of coal in the Appalachian region was made in 1736 along the Potomac River in Western Maryland. Exploitation of the George's Creek field had to await transportation improvements, however. While some coal was shipped on the Chesapeake & Ohio Canal beginning in 1828, large shipments began in 1842, after the Baltimore & Ohio Railroad reached Cumberland, Maryland.²⁸

Coal mining began in Ohio in 1804 along the Ohio River in the vicinity of Wheeling, Virginia. Much of mining done before the Civil War took place along the Ohio and Mahoning Rivers, but a considerable tonnage also came from mines farther west. The completion of Ohio's canal system by 1850 made this coal accessible, and it was shipped via canal to Lake Erie for transshipment to the Erie Canal and other ports, and to Cincinnati for use on steamboats. Ohio coal was also used extensively in the state's iron furnaces and salt works. The large scale development of Ohio's coal resources came after the development of a rail network during the 1850s and 1860s.²⁹

As in Ohio, the coal industry developed early in other mid-western states in response to local demands by iron furnaces, salt works, locomotives and steam engines for fuel. Most of Indiana's early mines, which were developed before 1840, were strippings along the outcrop of the coal seam.

²⁵*Keystone Coal Catalog*, 1930, p. 386.

²⁶Hudson Coal Company, *The Story of Anthracite* (Scranton, Pa: International Textbook Press, 1932), pp. 56-58; Edgar A. Haine, *Anthracite Coal* (Chicago: Adams Press, 1987), pp. 13-14.

²⁷*Ibid.*, pp. 25-28.

²⁸Eavenson, *American Coal Industry*, pp. 227-238.

²⁹*Ibid.*, pp. 264-274.

By the 1870s much of Indiana's coal was used as fuel to make iron. A peculiar type of bituminous known as "block" coal (formed from alternative layers of organic matter so that it burns without fusing) was used raw in the iron furnaces.³⁰ Coal was first mined in Illinois in 1809 in Jackson County, even before it became a state in 1818. Small amounts were mined and shipped on the state's navigable rivers and canals before the Civil War, but large scale development of the industry came during the 1850s and 1860s following the completion of the state's rail system.³¹ Michigan, which was never an important coal-producing state, saw its first mining in the 1830s. Several mines were opened during the 1860s and 1870s, but mining had ceased by the turn of the twentieth century.

The South, which lagged behind the North in its industrial development before the Civil War, had three states which began coal production before 1873. In Alabama mining was centered in the Birmingham district, but production was quite small until after the Civil War when the emerging iron industry led to a boom in mining. In Kentucky, coal was first mined along the Ohio and Cumberland rivers during the late-1820s and early-1830s from the coal fields in the western part of the state. The rich bituminous fields in the eastern part of the state did not come into production until the last decades of the nineteenth century. The first substantial production of coal from Tennessee came in 1855, after the Nashville & Chattanooga Railroad was opened. Mines near Chattanooga supplied the Confederacy through much of the Civil War and supplied blast furnace fuel for the Roane Iron Works at Rockwood, Tennessee afterward.³²

Even states west of the Mississippi River, not typically considered as coal producers, placed coal on the market before 1873. Shipments of coal were made by 1860 in Arkansas. By 1870 coal was mined from three counties in Kansas and coke was being made and sold. Coal development in Oklahoma and Iowa began in the 1870s.³³

In western Virginia, development of the coal industry began along the navigable rivers. Coal was mined and shipped from the Wheeling area (Upper Panhandle field) during the first decade of the nineteenth century. The Kanawha field witnessed the first large scale development of the state's coal resources in connection with the extensive salt industry, which was centered in Malden, just east of Charleston. Coal was first used in 1817 to evaporate salt brine to make Kanawha "red salt," and assumed greater importance through each ensuing decade until the salt industry declined during the 1850s and 1860s. Coal was also mined in the Kanawha field in Mason County, and in Boone County, where it was shipped on the Coal River following a series of navigation improvements made by the Coal River Navigation Company in the 1850s. Coal was mined in Monongalia, Marion, and Harrison counties (Fairmont field) by the 1810s, at first serving the local needs of blacksmiths and other

³⁰Ibid, pp. 275-285.

³¹Ibid., pp. 286-292.

³²Ibid., pp. 293-324.

³³Ibid, pp. 330-343.

industry. Until the 1840s, some limited tonnage was shipped down the Monongahela and Ohio rivers to markets in Ohio. Large-scale production in the Fairmont field followed the completion of the Baltimore & Ohio Railroad through northern Virginia in 1852. Mining in Mineral County (the Upper Potomac field) began in the 1840s, but did not assume large proportions until the 1880s. The first development in the Elkins field, which includes the central counties of Randolph, Braxton, Lewis, Upshur, and Gilmer counties, began in 1874, but little coal was mined until the construction of the Coal & Coke Railroad in 1905³⁴ (See Figure 2).

While the opening of the New River field lagged considerably behind most major coal fields in the state and nation, it was the first to be developed in southern West Virginia. Lacking a strong local demand and adequate transportation, the southern West Virginia fields came into production late. After New River's opening in 1873 following the completion of the Chesapeake and Ohio Railroad, the Pocahontas field was developed in 1881 with the construction of the Norfolk & Western Railroad. After this railroad reached Mingo County in 1894, the Williamson (also Thacker-Kenova) field was opened. Other state coal fields were opened in the twentieth century. The highly-productive Logan field (consisting solely of Logan County) was opened in 1904 following the construction of a C&O branch line. The Winding Gulf field, largely in Raleigh County, got its start in 1907 following the construction of the Virginian Railroad. The Greenbrier-Gauley field, which includes Nicholas, Webster, and Greenbrier counties was the last major coal field to be opened; it came into production in 1906.³⁵

³⁴Workman, et al., *Northern West Virginia Coal Fields*, *passim*.

³⁵Phil Conley, *History of the West Virginia Coal Industry* (Charleston: Education Foundation, 1960).

Inventory and Evaluation of Cultural Resources Related to the Coal Industry

The following section contains site-specific information and evaluations of selected mining-related sites within NERI boundaries. For the most part, each site includes more than one cultural resource. These sites were chosen for study because cultural resources were known to exist there. While Unrau's 1996 report listed some of the sites and provided a point of reference, it did not consider the following: Nuttallburg, Claremont, Alaska, Ephraim-Dundee, Royal, Rush Run, Red Ash-Red Ash Island, Caperton, and Michigan. Information about and guidance to these sites was provided by NERI personnel, particularly cultural resource specialist David Fuerst, who accompanied IHTIA staff during much of the field work.

Beury

Historical background: Beury was established in 1881 by Joseph L. Beury, who is considered the pioneer coal operator in the New River field. After shipping the first New River coal on the C&O Railroad from his Quinnimont mine in 1873, Beury established the Fire Creek Coal and Coke Company and opened a mine near Fire Creek. Later he opened the Echo Mine at Beury, as well as other mines in the New River area, and established his home here. This mine was first operated by William Beury, Cooper & Company, then later by the Echo Coal and Coke Company. The surface plant included 50 coke ovens³⁶ (see Figure 3). In 1897 a state mine inspector noted that the mine was a "first class condition" as far as ventilation and drainage, and that it featured a "splendid" system of endless rope haulage. The coal was lowered on monitor cars on an inclined plane to the C&O Railroad. The coal was purchased by the C&O for use in its locomotives.³⁷ The Echo Mine was the site of an explosion in 1909 which took 6 lives. The town of Beury had a population of 500 in both 1900 and 1910; 495 in 1919. The Echo mine was later operated by the Echo Smokeless Coal Company. The Beury post office operated from 1888 to 1925.³⁸ Miners here were prominent in the early labor movement: a Knights of Labor National Trade Assembly local was established at Beury around 1890, with a resident, N. Miller, appointed as organizer for the New River district. Later, this assembly was reorganized as UMWA Local No. 988.³⁹

The 1916 West Virginia Geological Survey map depicts a mine and conveyor system approximately

³⁶J.T. Peters and H.B. Carden, *History of Fayette County West Virginia* (Charleston, W.Va.: Jarrett Printing Company, 1926) pp. 258-59; John Cavalier, *Panorama of Fayette County* (Parsons, W.Va.: McClain Printing Company, 1985) pp. 110-112; Marshall "Cultural Research Project," Vol. II, pp. 198; 208; 287; Unrau, "New River Gorge," p. 26; Rice, "History of the New Gorge Area," n.p.

³⁷*Annual Report*, West Virginia Inspector of Mines, 1897, "Echo Mine," p. 33.

³⁸Cavalier, *Panorama*, op.cit.

³⁹McLean, "Labor History in the New River Coalfield," p. 180.

0.5 mile east of Beury, but it is unclear if this is the Echo Mine.⁴⁰ No mines are depicted at Beury itself. This mine is also shown on the USGS 1929 Beckley 15 minute map. According to the maps, there were more structures at Beury in 1916 than 1929, suggesting that the settlement was in decline.⁴¹ No structures are depicted on the 1988 USGS Thurmond quad; strip-mining activity along the contours may have obliterated any vestiges of the historic mine.⁴²

Cultural Resources: Cultural resources observed at Beury include a set of stone piers, possibly for a coal conveying system, stone/masonry ruins of a church, including a standing masonry arch, two large domestic structures, with steps and chimney, remains of the nineteenth-century twin mansions purportedly belonging to Joseph Beury and his brother (see Figure 4), remains of the Beury Company Store, and another large structure, which may be the ruins of the Fayette County Bottling Plant reported by Unrau in 1996.

Statement of Significance: One of the earliest mines and settlements in the gorge, Beury is associated with Joseph L. Beury, the most important pioneer coal operator in the New River Field. It was also prominent in the early labor movement, and site of the 1909 mine disaster. From this perspective, the site is significant on a local and regional level. With numerous ruins and no standing structures, Beury is a domestic and industrial, historical archaeology site. As observed, the site does not include many property types typically associated with a mining settlement.⁴³ Lacking integrity, the site is not potentially eligible for the National Register. However, a rating of "2" is justified by its significance in the early mining history of the gorge and the possibility of locating remnants of missing property types in future archaeological investigations.

Recommendations: . Further archival research and archaeological investigations will be required to discern the full extent of the site. Although it does not appear to be threatened, the site should thoroughly surveyed and mapped. If feasible, the ruins should be stabilized.

Fire Creek

Historical Background: Fire Creek was established in 1876 by Joseph Beury, who opened the first mine in the Fire Creek seam here after opening the Quinnimont mine. Fire Creek also had some of the

⁴⁰West Virginia Geological Survey, "Map of Raleigh County and Western Part of Summers County showing Topography," 1916. Published in conjunction with the volume with the same title, this map also includes portions of Fayette County.

⁴¹United States Department of the Interior, Geological Survey, "Beckley, W.Va.," 15-minute quad. Surveyed in 1911, this map was revised in 1929.

⁴²United States Department of the Interior, Geological Survey, "Thurmond, W.Va.," 7.5 - minute quad. Surveyed in 1969, this map was revised in 1988.

⁴³See Unrau, "New River Gorge," pp. 40-41, for a listing and typology of mining-related property types.

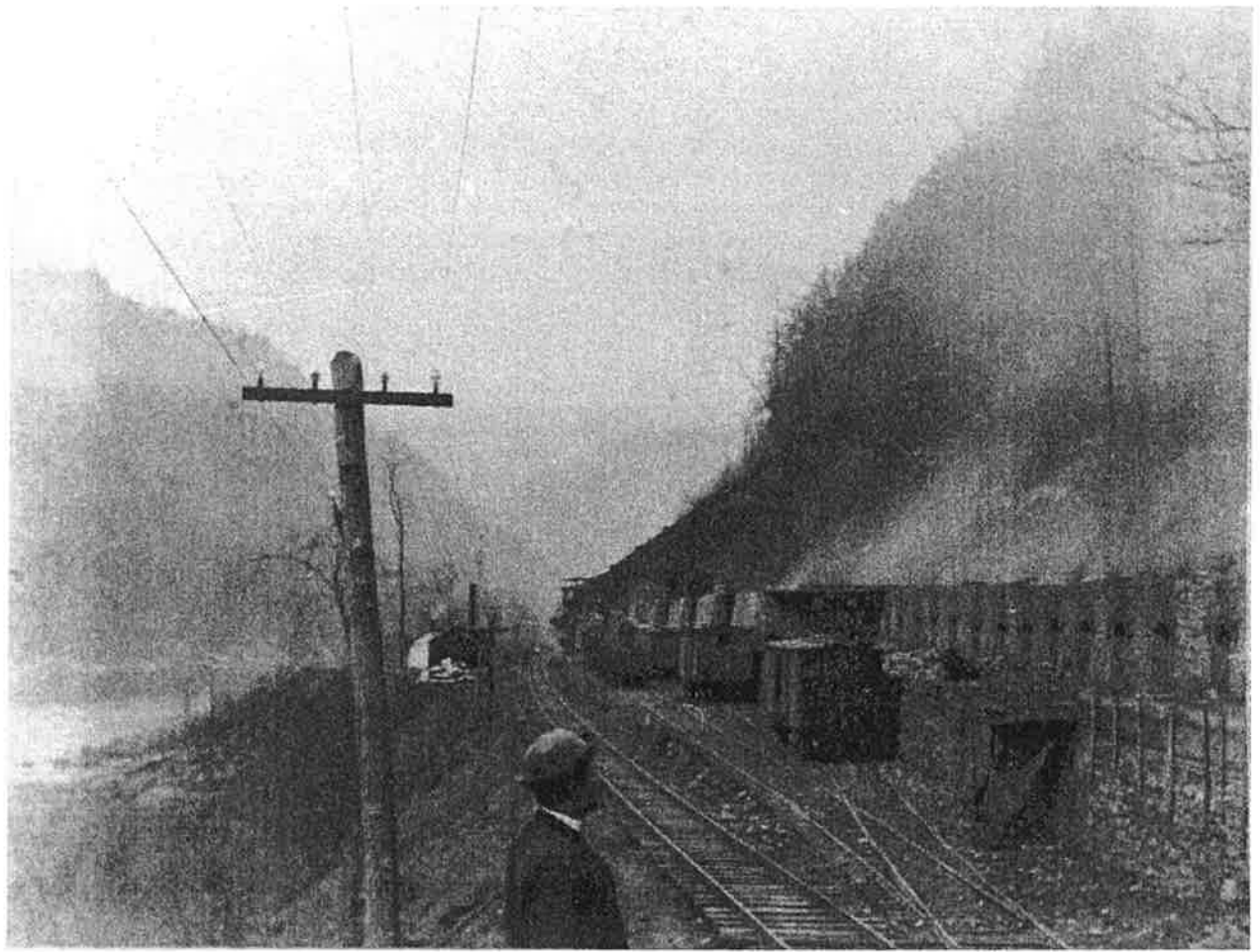


Figure 3: Coke ovens at Beury
NERI Historical Collection

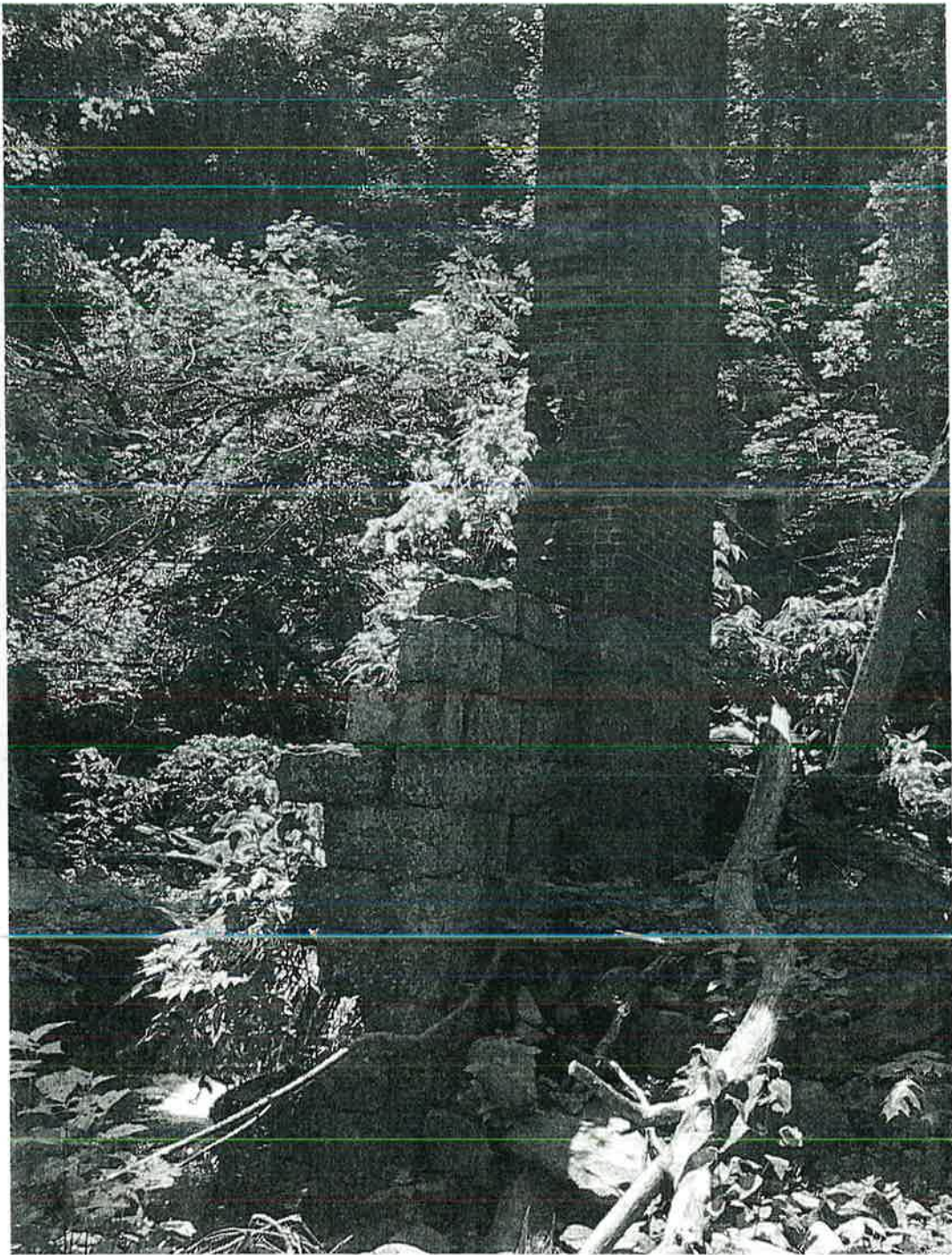


Figure 4: House foundation and chimney next to former Beury mansion
IHTIA, 2003

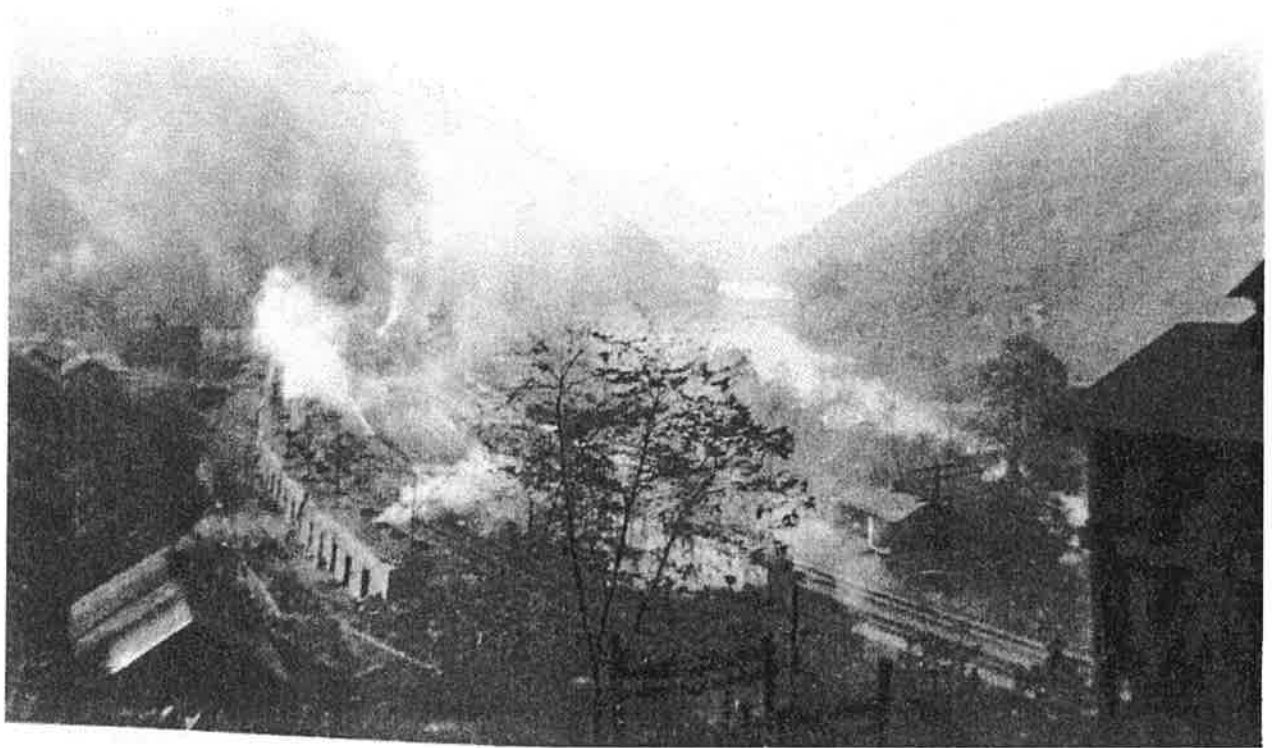


Figure 5: Coke ovens at Fire Creek
NERI Historical Collection



Figure 6: Coke oven ruins at mouth of Fire Creek
IHTIA, 2003

earliest coke ovens (70 originally and 96 by 1899) in the gorge.⁴⁴ According to the 1884 mine inspector's report, coal was conveyed from the mine in mine cars on a tramway 4,500 feet long to the head of an inclined plane where it was transferred to a bin from which it was drawn into the monitor and lowered on the inclined plane 1,280 feet long to the reservoir at the C&O Railroad.⁴⁵ The colliery was operated by the Fire Creek Coal and Coke Company for many years. Fire Creek was important in the early labor movement in the New River field. A local of the Knights of Labor was formed here in 1879. During the first strike in the gorge in 1879-1880, Fire Creek miners were the only ones in the gorge to join strikers in the Kanawha field. They commandeered a C&O train in order to induce miners at Hawks Nest to join the strike, but to no avail. Fire Creek miners also played a leadership role during the 1894 UMWA-sponsored strike.⁴⁶ In 1919, this settlement had a population of 260. The post office here operated from 1877 until 1947.⁴⁷

Both the 1916 WVGS and 1929 USGS maps depict a mine located about 1.5 miles above the settlement along Fire Creek. A railway or inclined plane links the mine to the C&O Railroad. About 25 structures are depicted on both the 1916 and 1929 maps. One is obviously a coal tipple, while several others may be coke ovens. No structures are shown on the 1988 USGS quad, and, despite some strip-mining nearby, the site of the historic mine opening appears undisturbed.

Cultural Resources: Twelve to fifteen stone/masonry coke ovens were observed at Fire Creek (see Figure 5). From their construction and position, these appear to be the original ovens. Also, a stone pier was found along Fire Creek, (see Figure 6) possibly a part of the railway or incline that linked the mine to the C&O Railroad. The very thick vegetation in this area limited field work

Statement of Significance: Fire Creek mine and settlement are associated with Joseph Beury; the mine was one of the earliest to ship coal on the C&O Railroad; and, the coke ovens here were some of the earliest in the gorge. These associations make it significant on a local and regional level. Since only the coke ovens were located, the site lacks integrity and is not potentially eligible for the National Register. However, its historical associations and the potential of locating ruins of other property types merits a rating of "2".

Recommendations: Additional archaeological investigations should be conducted, and the site should be thoroughly surveyed and mapped.

⁴⁴*Annual Report*, West Virginia Department of Mines, 1899, p. 153.

⁴⁵*Annual Report*, West Virginia Department of Mines, 1884, pp. 32-33.

⁴⁶McLean, "Labor History," pp. 178-81.

⁴⁷Cavalier, *Panorama*, p. 10.

Sewell

Historical background: Sewell was established in 1873 by the Longdale Coal and Iron Company at Bowyer's Ferry, the crossing of the New River on the Old State Road that dates to 1790. Longdale purchased coal lands to produce coke for its Lucy-Selina iron furnace in Allegheny County, Virginia. Longdale opened the Sewell seam here, and built 50 beehive coke ovens (see Figure 7). The company shipped the first coke from New River in April, 1874.⁴⁸ By 1883 Longdale had 196 coke ovens at Sewell, and 212 by 1898.⁴⁹ To provide coal for the ovens, Longdale acquired other coal lands nearby, and built the narrow-gauge Manns Creek Railroad through rugged Mann's Creek canyon to reach the Sewell seam at Clifftop in 1886. A mine inspector reported in 1884 that the mine utilized natural ventilation and featured a "very long" inclined plane running from the mine to the bin at the coke ovens.⁵⁰ On May 23, 1894, during the United Mine Workers of America-led strike, a New River district convention was held at Sewell with representative delegates from 26 mines.⁵¹ Longdale closed its coke and coal operations in 1902, and after leasing its properties for several years, sold them to the Babcock Coal and Coke Company in 1914. Sewell had a population of 410 in 1919. Babcock continued to operate the coke ovens, coal mines, and timbering operations until 1934. Sewell prospered as a railroad and commercial center, at one time boasting four or five large stores, four saloons and other businesses. Coke was made at Sewell until 1956, when the plant was shut down. The post office at Sewell, opened in 1835, shut down in 1956.⁵²

The 1929 USGS Beckley 15-minute map shows numerous structures at Sewell, including coke ovens stretching for nearly a mile along a railyard and the C&O mainline. The 1988 USGS Thurmond quad shows no structures here. Cultural resources noted by Unrau in 1996 were ruins of the superintendent's house, engine house ruins, coke yard office ruins, coke oven ruins, and white church ruins.

Cultural Resources: Coke oven ruins (see Figure 8) were observed at Sewell, along with remains of a water tower, which was probably used to quench coke, and the remains of a larry car, which was used to load the ovens. Several other ruins were observed nearby, possibly those listed by Unrau in

⁴⁸Marshall, "Cultural Research Project," pp. 290-92; Unrau, "New River Gorge," p. 35; Lee R. Maddex, "Furnaces in Blast on the Chesapeake and Ohio Railroad: A Study of the Early Virginias Iron Industry," *Canal History and Proceedings*, (XV, 1996): 33-48; also see Ron Lane and Ted Schnepf, *Sewall [sic]: A New River Community*, (N.P., Eastern National Parks and Monument Association, 1985).

⁴⁹*Annual Report*, West Virginia Department of Mines, 1883; 1898.

⁵⁰*Ibid.*, 1884, p. 32.

⁵¹McLean, "Labor History," p.181.

⁵²Cavalier, *Panorama*, pp. 401-04; Melody Bragg, *Window to the Past* (Glen Jean, W.Va.: Gem Publications, 1990), p. 97.

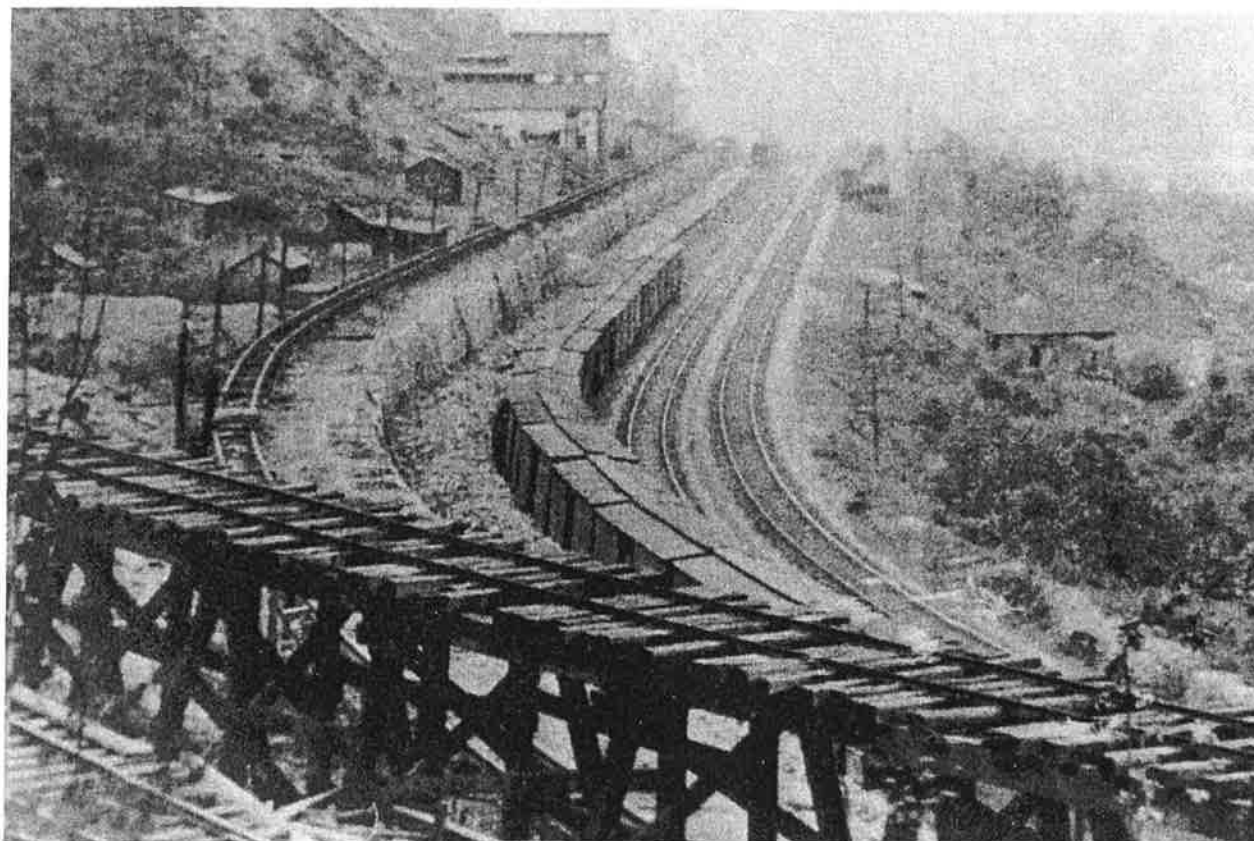


Figure 7: Coke ovens at Sewell
NERI Historical Collection

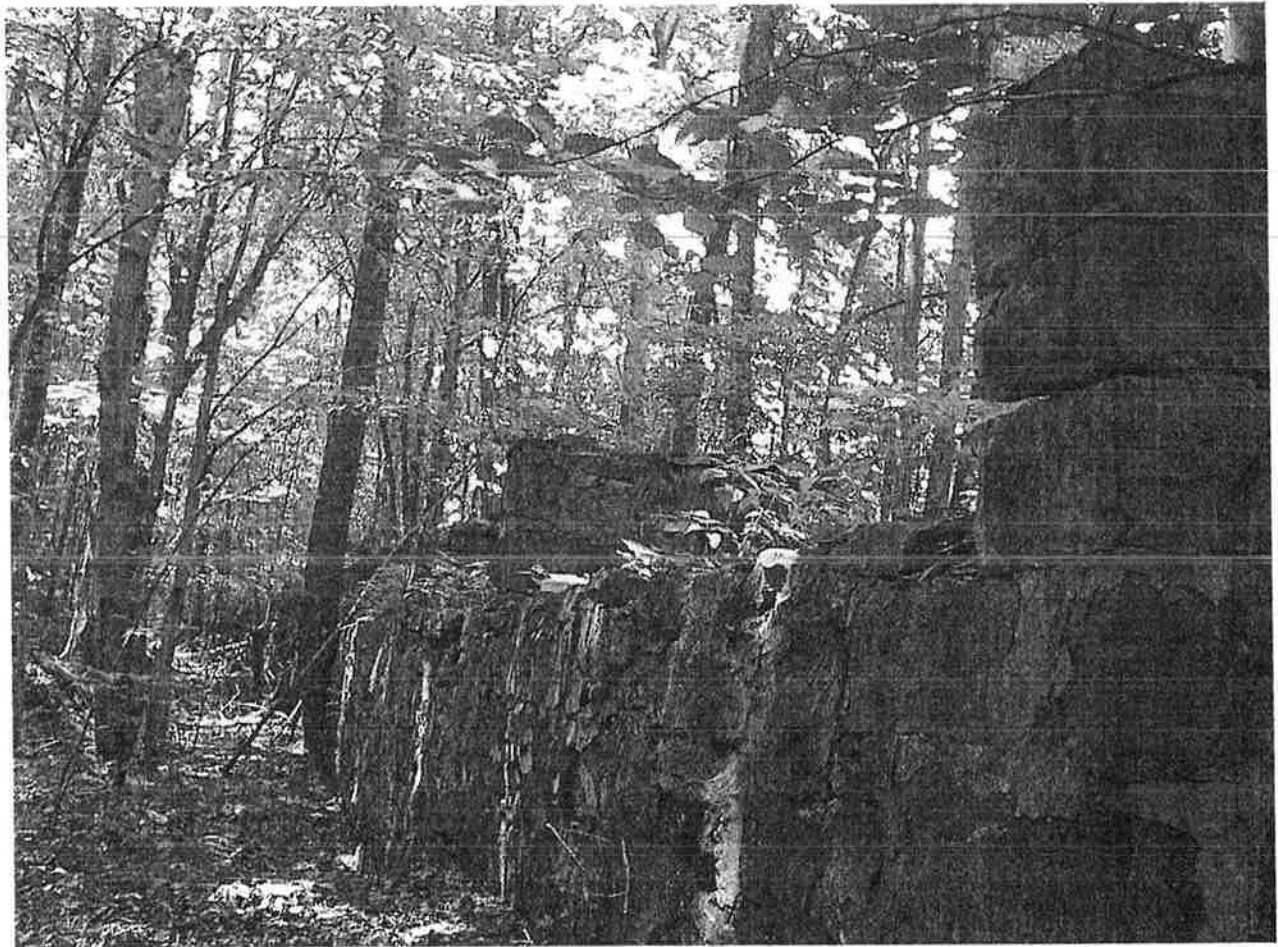


Figure 8: Coke ovens ruins at Sewell
IHTIA, 2003

1996.

Statement of Significance: The site of the first--and last--coke-making operation in the gorge, Sewell was also one of the gorge's first settlements, an early commercial center, and terminus of the Manns Creek Railroad. Miners there were also important in the early union movement. Thus, the site has great local and regional significance. However, presently, the site is not potentially eligible for the National Register because it lacks elements of many property types typically associated with a mining settlement of this era. It rates a "2".

Recommendation: Additional archaeological investigations should be conducted to ascertain whether other property types are present. It also should be mapped to provide a permanent record of its current status. Lane and Schnepf's *Sewall* [sic]: *A New River Community* provides a solid historical record of the mining settlement and includes a map depicting the layout of the town.

Stonecliff

Historical Background: Stonecliff was established in 1881 by Bramwell and Jenkins, who formed the Stone Cliff Collieries Company and opened a mine here.⁵³ In 1883 the Fayette Coal and Coke Company opened two mines here—one in the Fire Creek and the other in the Sewell seam. The coal was lowered from both mines by means of a tramway and monitor cars running on an inclined plane. The coal was converted to coke in 60 coke ovens.⁵⁴ By 1903 the operation was in the hands of the Beury Coal and Coke Company.⁵⁵ Coal mining continued here through the 1920s by the Stone Cliff Collieries Company and in the 1940s by the Pugh Coal Company.⁵⁶ The mining settlement at Stonecliff, like many others in the gorge, was linear in form, with two rows of houses separated by the C&O Railroad main line. In 1919 the settlement had a population of 150. The post office operated from 1880 to 1948.⁵⁷

Both the 1916 WVGS and 1929 USGS maps depict about twenty structures at Stonecliff, with a mine in the Fire Creek seam situated about 1 mile east, linked to the C&O by a railway. The 1929 map also depicts the 1928 Pony-Through truss highway bridge. No structures are portrayed in the 1988 map. In 1996 Unrau listed the Stonecliff powder house as the only cultural resource there.

⁵³Peters and Carden, *History of Fayette County*, p. 260; Marshall, "Cultural Research Project," p. 273.

⁵⁴*Annual Report*, West Virginia Department of Mines, 1883.

⁵⁵Rice, "History of the New River Gorge Area," p. 12 citing E.V. d'Invilliers, *New River and Kanawha Coal Field*, 1903.

⁵⁶Peters and Carden, *History of Fayette County*, p. 286; Rice, "History of the New River Gorge Area," p. 16.

⁵⁷Cavalier, *Panorama*, p. 12.

Cultural Resources: A large number of stone/masonry ruins were found at Stonecliff, including two sets of coke ovens, a concrete turntable, foundations for a monitor or rail line, foundations for a company store, including steel safe, and piers of several different heights and configurations. In addition, the powder house identified by Unrau still stands, a stone building with concrete roof (see Figure 9)..

Statement of Significance: Stonecliff was one of the earliest mines and mining settlements in the gorge, so it is significant on a local and regional level. With the number and diversity of cultural resources found here, including both industrial and domestic structures, Stonecliff is an historical archaeology with some integrity, but it lacks many property types so is not potentially eligible for the National Register. It rates a “2”.

Recommendations: Additional historical research should be completed to document the various coal and coking operations here, as well as the development of the community. In addition, archaeological investigations should be conducted to locate unobserved remains; the site as it exists should also be mapped.

Claremont

Historical Background: Established in 1887 by the Beechwood Coal and Coke Company, Claremont was first known as Beechwood. This company continued to mine coal here through 1923, when it had two mines in the Fire Creek seam (see Figure 10). It also had at least 20 coke ovens here.⁵⁸ Mining continued here through the 1940s with mines operated by the South Side Company and the Rucker Coal Company.⁵⁹ The town of Claremont had a population of 593 in both 1910 and 1919. The post office operated from 1887 to 1942.⁶⁰

The 1916 WVGS 15 minute map shows approximately 25 structures at Claremont, nearly all of which are situated along a short side track leading to the mine tipple. A mine is depicted about 0.5 mile east of the main settlement, linked to the side track by a railway or inclined plane. Another mine and short rail line or inclined plane is depicted about 0.5 mile northeast of the settlement toward Stonecliff, along with 4 structures on a terrace beside the C&O main line. The 1929 map shows fewer structures at Claremont, and does not depict the mine northeast of the settlement, suggesting some decline during the intervening years. It does, however, show the 4 structures on the nearby terrace. The 1988 USGS quad depicts no structures at Claremont, but a conveyor and tank are shown about 0.2 miles north of the site of the settlement. No cultural resources were noted here in the 1996 Unrau study.

Cultural Resources: No cultural resources were observed at the historic site of the mine or mining settlement, but at a terrace approximately 1 mile northwest of the site stone ruins of a structure with a

⁵⁸Peters and Carden, *History of Fayette County*, p. 260; 283.

⁵⁹Rice, “History of the New River Gorge Area,” p. 16.

⁶⁰Cavalier, *Panorama*, p. 8.



Figure 9: Probable Powder House at Stonecliff
IHTIA, 2003

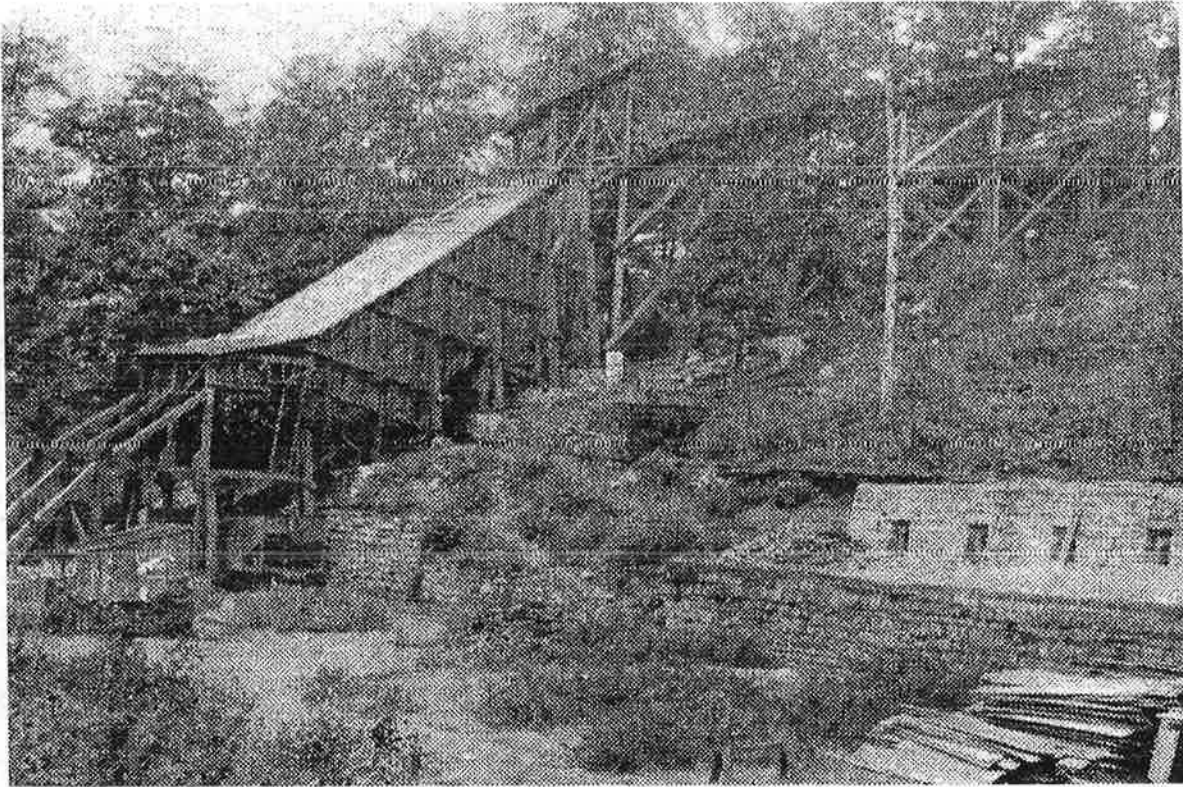


Figure 10: Beechwood Coal and Coke tipple at Claremont
NERI Historical Collection

partial brick chimney were found, along with a cemetery with scores of tombstones dating from the 1890s to the 1950s (see Figure 11). This cemetery does not appear on any of the maps. Several unmarked graves are included in the cemetery. In addition, remains of a ca. 1960 mine and mine processing plant, presently known as the Royal Coal Company, were found about 0.5 mile directly north of the historic settlement (see Figure 12). These remains included reclaimed mine portals, a concrete-lined sluice, two large concrete silos, a thickener, and scattered structural remains. The silos, used for the storage of coal, are of large capacity, stable, and present a monumental appearance.

Statement of Significance: Claremont was one of the earliest mines and settlements in the gorge, while the Royal Coal Company was one of the latest. The Claremont settlement, itself, appears to have all but disappeared. The Claremont cemetery is one of the few found in the gorge. It is not potentially eligible for the National Register, however, because cemeteries are ineligible. Although impressive, the structures present at the Royal Oak site are less than fifty years old, so that site is also ineligible for the National Register. Nonetheless, both sites are important and represent historical values the park has been charged to preserve. Both rate a "2".

Recommendations: Ruins may be obscured by the vegetation, but it appears that little remains of the historic settlement of Claremont. Further field work should be done to substantiate this. The cemetery should be tended and clearly marked. Consideration should be given to preserving the silos at the Royal site to provide a physical record of modern mine processing in the gorge.

Alaska

Historical Background: The Alaska mine was opened in 1888 by the Alaska Coal & Coke Company, with Mr. Lawton, Dr. J.E. Robins, and W.A. Brown as promoters. The company also had 20 coke ovens here by 1899, but was not operating by the 1920s.⁶¹

The 1916 WVGs 15 minute map shows Alaska situated as a linear settlement along the C&O main line, with about 16 structures. A mine in the Fire Creek seam is depicted on the slope above, linked to the settlement by a 1.3 mile rail or monitor line. The 1929 USGS 15 minute map shows only 3 structures and no inclined plane or rail line at this mine, indicating the mine had been shut-down. The 1969 Thurmond 7.5 minute map (updated in 1988) shows no structures or mines at this site.

Cultural Resources: A stone wall, probably a retaining wall or pier support for a tramway crossover, along with a cut for a railway sidetrack, was found near the site of the mining settlement.

Historical Significance: The Alaska mine and settlement was one of the earliest in the gorge, so it is significant on a local and regional level. But, since only the remnants of a single property type was found, it lacks integrity and rates only a "3".

Recommendation: Additional archival research in manuscripts, historic mining journals, and other sources should be conducted to learn more about the history of this mine and settlement. In addition, a

⁶¹Peters and Carden, *History of Fayette County*, p. 260; *Annual Report*, West Virginia Department of Mines, 1899, p. 153.

more extensive field survey should be conducted to ascertain whether additional elements exist in ruinous condition.

Ephraim-Dundee

Historical Background: The mine and settlement at Ephraim were started by the Ephraim Creek Coal & Coke Company in 1902. With an office at nearby Thayer, the company opened the Buffalo and Slater mines in the Fire Creek seam here or nearby (see Figure 13). Both mines were linked to the C&O main line by inclined planes, with monitor cars moving the coal. The mines were taken over by the New River Coal Company in 1926, which took the coal out through its Layland opening. Dundee is known only as a C&O train stop, site of a loading by the New River Silica Company, which quarried sandstone on Mann Mountain and processed it for sale to glass plants.⁶²

The 1916 WVGS 15 minute map shows a mine and a settlement at Ephraim, with about 20 structures situated on the slope above the gorge. A mine is shown about 0.5 mile above the C&O Railroad, linked to it by a rail line or inclined plane. The 1929 USGS 15 minute map shows the same features, along with another mine connected to the C&O by a 0.5 mile rail line or monitor and a small settlement of about 10 structures about 0.5 north of Ephraim. In both of these maps, the flat terrace below (site of Dundee) is taken up by railroad sidings. The 1969 Thurmond 7.5 map (updated in 1988) depicts strip-mining at the historic site of Ephraim, which may have obliterated any cultural resources. This map does, however, show mines and quarries above the strip mine, as well as a conveyor line from this point leading down to a tipple along the C&O main line. This is probably the Dundee site. The Thurmond map also shows 4 structures situated on the terrace below Ephraim.

Cultural Resources: Cultural resources associated with Ephraim include kudzu-covered ruins of a large masonry building with a partially-intact chimney situated just south of the historic settlement on a terrace. This could be associated with the Dundee sand processing operation as a powerhouse. In addition, along the McKendree Road south of this point are several structures, including a brick building with no roof, which could have been a shop associated with the Dundee sand operation and stone retaining walls and pillars for a conveyor or other materials movement facility. Down by the C&O main line, the remains of the Dundee sand-processing plant were found. These include four concrete silos (see Figure 14), reinforced with metal straps, a wood superstructure with hoppers, conveyor parts, and scattered pieces of metal equipment and hardware, including buckets possibly for a tram line. In addition to sand, coal was found in the silos and among the ruins, so the plant probably was used to store coal as well as sand. This is large site with many elements. Materials used in the construction of the silo suggest a construction date from 1900 to 1940. No cultural resources related to the mining settlement of Ephraim were found, though the coal in the silos suggests a connection with mining in the area.

Statement of Significance: The New River Silica Company was the only significant non-coal mining and processing operation in the gorge, so it is significant on a local and regional level. This is an

⁶²Peters and Carden, *History of Fayette County*, p. 283; Bragg, *Window to the Past*, p. 101; Cavalier, *Panorama*, p. 420.



Figure 11: Cemetery at Claremont
IHTIA, 2003



Figure 12: Concrete silo and thickener at Royal Coal Company
IHTIA, 2003

EPHRAIM CREEK COAL & COKE CO.

Executive Office

11 BROADWAY, NEW YORK

Mine Office

THAYER, FAYETTE COUNTY, WEST VIRGINIA

New River Coal

Location and Acreage

The property consists of approximately seven thousand acres in one tract, located in Fayette County, West Virginia. It is in the New River District of the smokeless fields, long and well known as producing the highest grade coal procurable of this character.

It is located on the main line of the Chesapeake & Ohio R. R., conveniently and favorably situated for shipments to Tidewater and inland markets both East and West.



More Than 15,000 B. L. U. in Every Pound

Quality

This Company mines the Fire Creek Seam which is noted for its cleanliness, thus eliminating artificial methods of preparation.

An idea of the uniformity of this coal may be gained from the fact that, as a result of investigation by The U. S. Government, it has for a number of years been on the U. S. Navy Acceptable List and is rated as Pool No. 1 in Tidewater Classification.

Analysis

Moisture	.45
Volatile	21.43
Fixed Carbon	74.20
Ash	3.92
	100.00
Sulphur	.55
B.t.u.	15,147

The above analysis of the Ephraim Creek coal, as made by the West Virginia Geological Survey, is a matter of record.

Capacity and Equipment

The mine has a daily capacity of 1,200 tons and is fully equipped with modern machinery.



Masonry Mine Portal

COAL CATALOG

Figure 13: Ad for Ephraim Creek Coal & Coke Co.
Keystone Coal Catalog, 1930

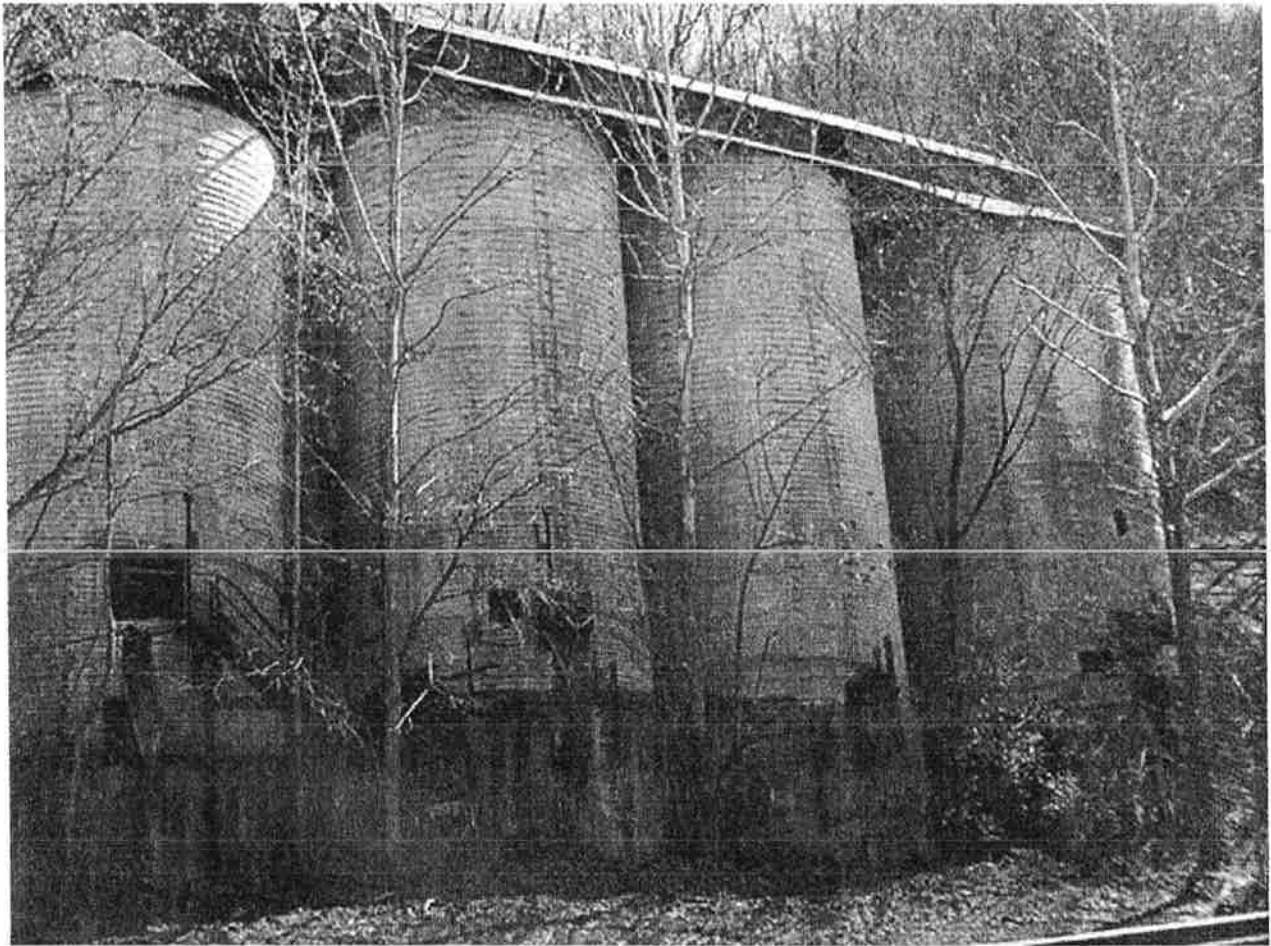


Figure 14: Concrete silos for sand storage at Dundee (near McKendree)
David Fuerst, NERI, 2003

interesting site with many standing components, but since the quarry was not found it lacks integrity and is not potentially eligible for the National Register. It rates a "2".

Recommendations: Further survey work should be conducted in the fall and/or winter months to locate any additional elements of this site. Additional historical/archival research should be undertaken to develop an outline of the history of the New River Silica Company.⁶³ The site should be thoroughly surveyed and mapped. The silos, which are in fair to good condition, could be preserved as a monument to the this unusual New River industry.

Thayer

Historical background: Thayer was a miner's settlement of the Ephraim Creek Coal and Coke Company, which opened the Buffalo and Slater mines near Ephraim in 1902. Cavalier called the settlement a "good, clean, substantial, well-ordered town." He wrote that in 1916 the settlement consisted of a large company store and office, a number of dwellings, powerhouse, new theater which held one thousand people, amusement hall, all built along the railroad on a stretch of river bottom land, while the superintendent's house, several employees houses, and Methodist Episcopal Church were situated on a bench a couple of hundred feet up the mountain side. He noted that the 250 employees of the company were nearly all white Americans and Russians. Most company houses had four, five, or six rooms, though some had only two. There were also three school buildings, two for whites and one for the small black population. The community had a population of 403 in 1919. The post office operated from 1901 to 1968.⁶⁴

The WVGS 1916 15-minute quad shows over 30 structures at Thayer, most set-out in a linear pattern along the railroad. It shows a side track linked to the rail or monitor line at Ephraim passing through the settlement, suggesting that some of the structures could have been coke ovens. It also shows another mine, the Slater Mine, 0.2 mile west of the settlement, linked to the railroad by a 1 mile rail or inclined plane. The USGS 1929 15-minute quad shows about the same number of structures, but the Slater Mine does not appear. The 1969 Thurmond 7.5 minute map (updated in 1988) shows about 20 structures, but no mines. Unrau lists the Little Rock Assembly Church, which is located at the intersection of the McKendree Road (State Route 25) and the road leading down to Thayer, as the only cultural resource here. It is unclear whether this church is the former Methodist Episcopal Church mentioned by Cavalier.

Cultural Resources: Cultural resources at Thayer included the Little Rock Assembly Church, which has been utilized by the public through a NPS special use permit (see Figure 16). Also, three miner's houses, similar in design, were situated in a short row (see Figure 15). Two of the houses appear occupied. Although somewhat rundown, they appear original with little alternations since

⁶³According to Marshall, "Cultural Resource Project," p. 272, the Sun Sand Company began extracting sand there in 1923, but little else is known about the history of this industry in the gorge.

⁶⁴Cavalier, *Panorama*; pp. 420-22.

construction. A large, two-story frame structure with dormer windows on the second floor, possibly a boarding house, is located about 0.25 mile west of Thayer on the McKendree Road. This building is privately-owned and in dilapidated condition (see Figure 17). Near Thayer Bottom, stone retaining walls, possibly associated with the historic sidetrack or monitor line, were observed.

Statement of Significance: Thayer was typical of mining settlements in the gorge and in southern West Virginia during the 1880 to 1930 period. What was once typical is now rare, however, as the “company houses” here were the only ones encountered in the survey. While company houses still exist in large numbers in southern West Virginia, nearly all have been dramatically altered. The three company houses here are an unusual resource, because they have not been remodeled. Though significant on a local and regional level, the site lacks many property types, so it is not potentially eligible for the National Register and rates a “2.” However, it may be possible to list one of more of the company houses on the National Register as individual structures.

Recommendations: There is some potential here for archaeological investigation of both domestic and industrial remains. In addition, consideration should be given to preserving one or more of the company houses. The large, boarding house building is probably too dilapidated to be saved. This site also should be thoroughly surveyed and mapped.

McKendree

Historical Background: A small lumbering community existed here prior to the establishment of Miners’ Hospital No. 2 in 1899. The 1880 census listed 44 residents living here in a small village, with many of the adults engaged in lumbering. A rooming house, store, depot, and post office were located here. Miners’ Hospital No. 2 was established by the state legislature on February 24, 1899. It was built on 6 and a half acres of land donated to the state by Joseph L. Beury, who also donated a five-year supply of coal. The hospital treated mostly miners, but was also open to those of other occupations. The hospital was constructed of red brick and was two stories. A nursing school was established here in 1910 (see Figure 18). It was also built of red brick and had two stories. Stone walls hand-crafted by Italian stone masons enclosed the grounds, which were landscaped with terraces, lawns, and plantings. Water was pumped from the New River, and stored in two wood tanks. The hospital treated an average of 1,250 patients annually for forty years. During the first twenty years, patients arrived by train. In 1919 the community of McKendree had a population of 61. In the 1920s, a road (now State Route 25 or McKendree Road) was built from Thurmond to Prince to provide automobile access to the facility. During the 1930s some of the masonry stone here was salvaged by the Civilian Conservation Corps for construction at Babcock State Park.⁶⁵ In 1941 the state converted the McKendree Hospital into a nursing home for elderly blacks. But in 1956, following the *Brown vs Board of Education* decision which mandated integration, the patients were moved to Huntington. The site was abandoned and later vandalized and razed in 1969. The post

⁶⁵W.T. Lawrence, personal communication to David Fuerst, 2002.



Figure 15: Former miner's houses at Thayer off State Route 25
IHTIA, 2003

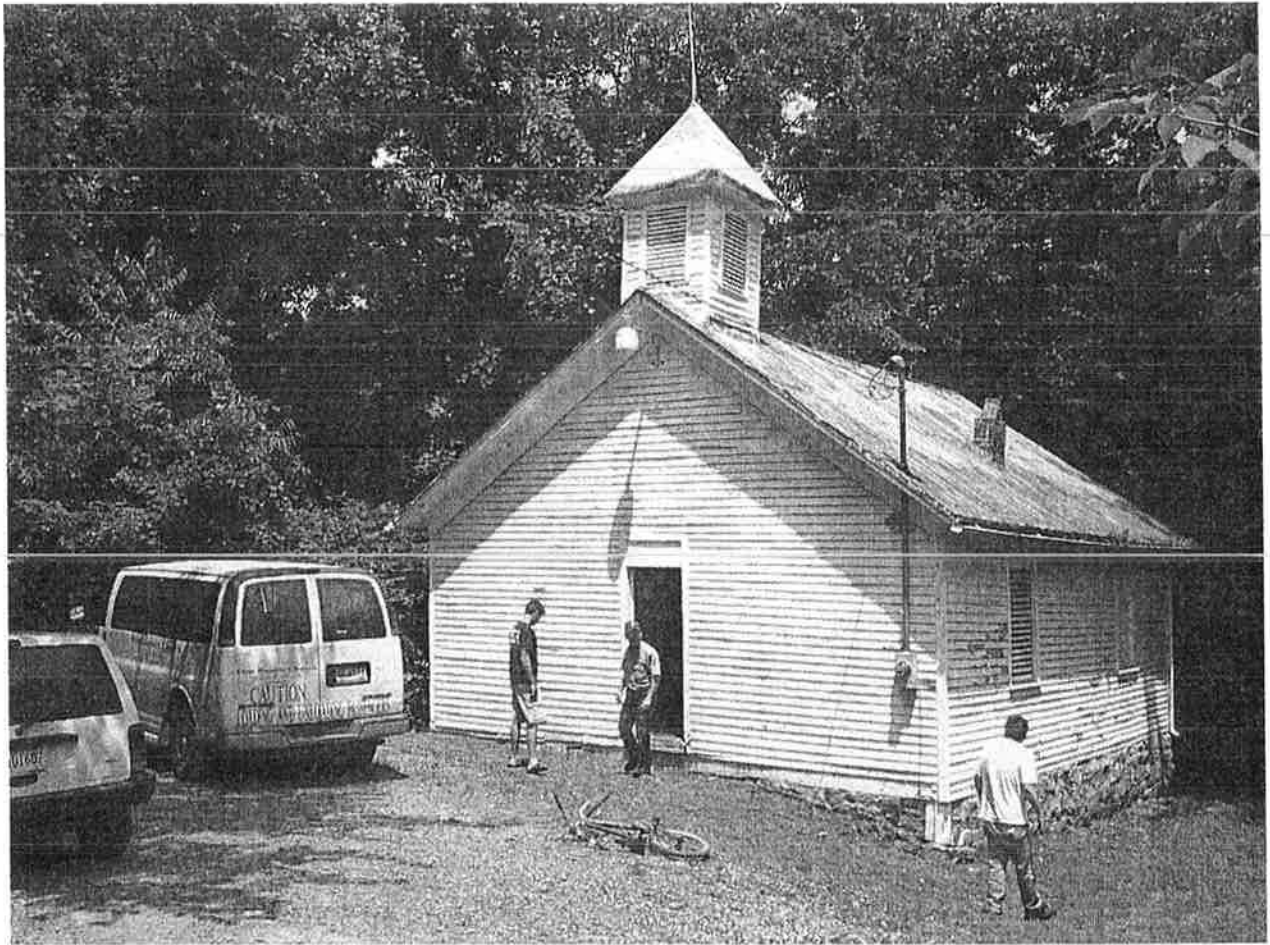


Figure 16: Little Rock Assembly Church at Thayer off State Route 25
IH'IA, 2003



Figure 17: Former boarding house at Thayer off State Route 25
IHTIA, 2003

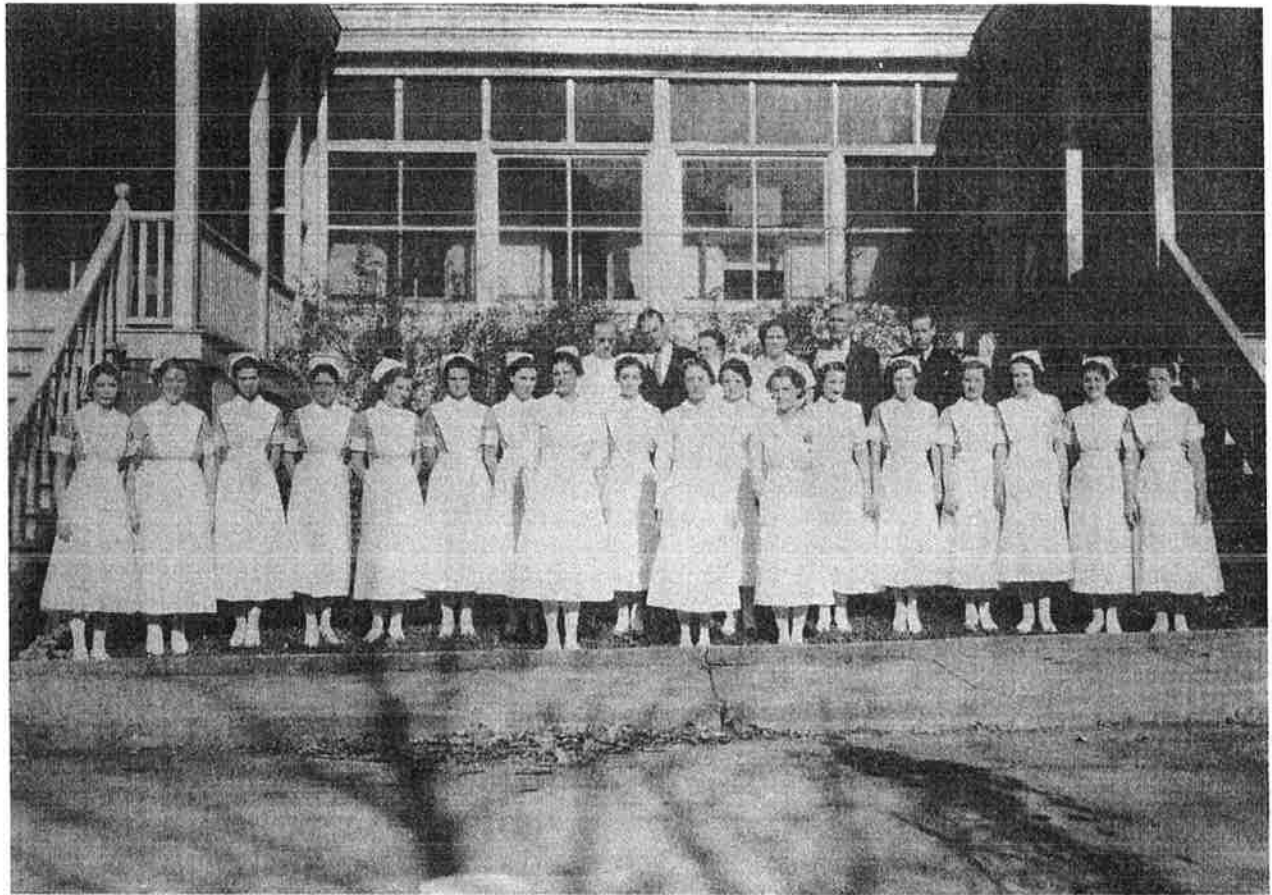


Figure 18: Nurses at McKendree Hospital
NERI Historical Collection



Figure 19: Stone walls at McKendree
IHTIA, 2003

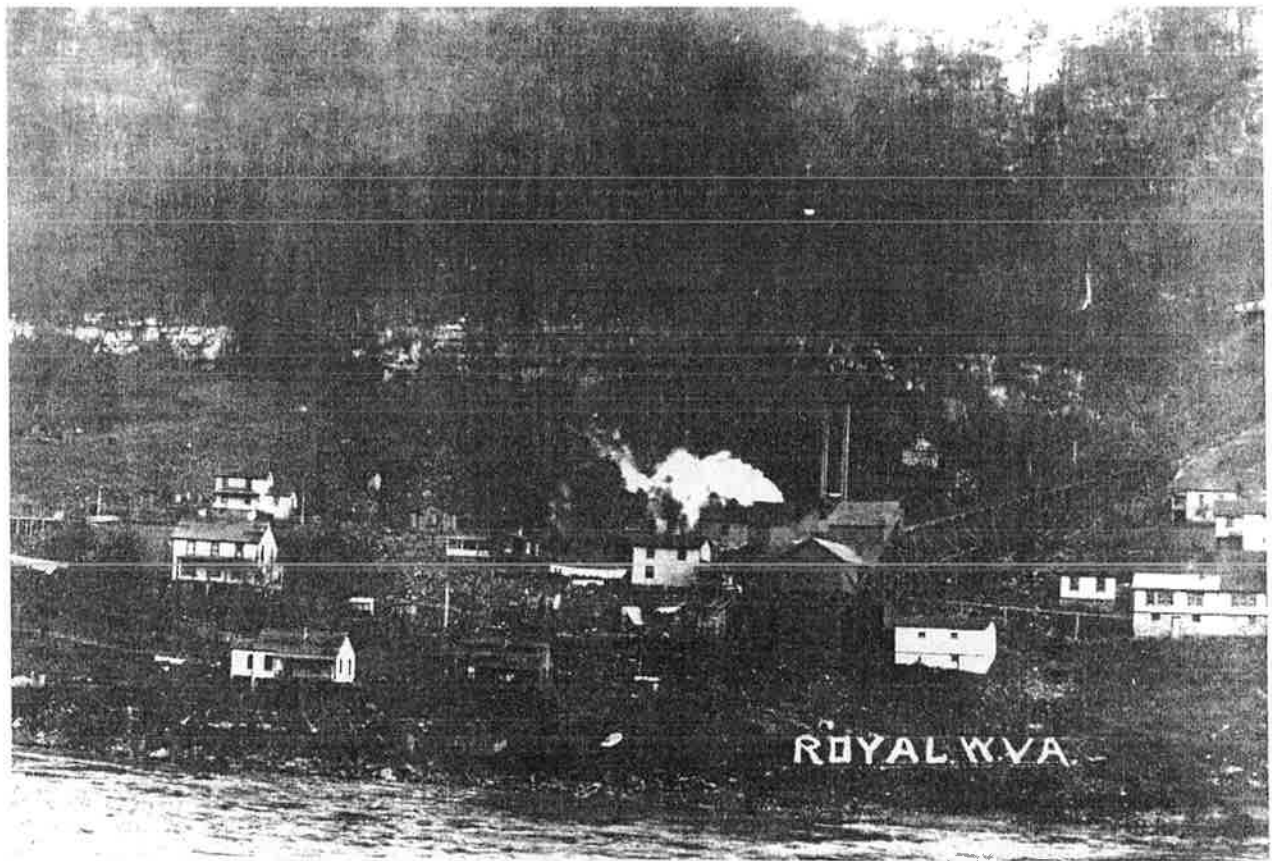


Figure 20: Panorama of Royal showing Power House at center
NERI Historical Collection

office here operated from 1873 until 1955.⁶⁶

The WVGS 1916 15-minute quad shows a only a single structure situated on the terrace above the tracks, along with one located on the New River side of the C&O main line. The 1929 map depicts four structures on the terrace, connected to the railroad by an access road. A structure is situated at the end of this road near the railroad. Two structures, probably a store and railroad depot, are shown beside the railroad. The McKendree Road is shown, connecting the facility to Prince and Thurmond. The 1969 USGS Thurmond 7.5 minute map (updated in 1988) depicts the access road and McKendree Road, but no structures. Unrau lists the McKendree hospital ruins as a cultural resource.

Cultural Resources: Cultural resources found at McKendree included several concrete structures, with stone walls enclosing a large complex, probably a garage (see Figure 19), as well as various foundation stones. The access road was plainly visible, and stone ruins of a two large structures—possibly the admission building and superintendent’s office—with concrete steps were located along it, not far from the railroad. On the river side of the tracks, the partial ruins of a building, mainly a masonry chimney, were found. These may be remnants of the depot or store. It appears that all the components of the site were present in ruinous condition.

Statement of Significance: McKendree was the site of one of the three miner’s hospitals in the state, so it is significant on a local and regional level. Despite the razing of the structures and a good deal of scavenging of materials, all the elements of the site are present in ruinous condition. As such, it is potentially eligible as an historical archaeology site for the National Register and rates “2”.

Recommendations: Although several brief histories of the hospital exist, no thorough historical narrative of the hospital’s operation has been written. Using state reports and other records, such a history should be completed. The site should be thoroughly surveyed and mapped. Cultural resource specialists from the State Historic Preservation Office should be consulted to determine if the site is actually eligible for the National Register.

Royal

Historical Background: This mine and settlement were established in 1891 by the Royal Coal and Coke Company, which had as its principal stockholders J. Fred Effinger, William Prince, J.B. Berkeley, and C.M Figgott, all of Virginia (see Figure 20). The mine was operated by superintendent John Kay and foreman James Laing. Until the construction of the Piney Creek Railway in 1901, which linked Royal and other mines to the C&O main line, coal was moved across the New River to the C&O by a 2,300-foot bucket tramway, operated by pulley system.⁶⁷ There were 78 coke ovens

⁶⁶William E. Cox, “McKendree No. 2: The Story of West Virginia’s Miners Hospitals, *Goldenseal*, VII (Fall 1981), pp. 30-35; Cavalier, *Panorama*, pp. 290-92; Melody Bragg, *Window to the Past*, Part III (Glen Jean, W.Va.: Gem Publications, 1990) pp. 1-20.

⁶⁷Jim Wood, *Raleigh County West Virginia* (Beckley, W.Va.: BJW Printing, 1994), pp. 32-21; Unrau, “New River Gorge,” pp. 29-30.

here in 1899.⁶⁸ Royal miners participated in the national UMWA-sponsored strike of 1902. When scabs were brought in to replace union miners at Royal, snipers from across the New River near Prince fired upon them. Then, in February, 1903 Royal was one of the mining settlements that a group of 142 strikers passed as they marched from Quinnimont and up Piney Creek to Atkinsville, near Beckley. The strikers were drawn into a gun battle at Stanaford City, where seven were killed. This ended UMWA efforts to organize the New River field for ten years.⁶⁹ The post office for Royal, which was located on the opposite side of the New River in a building next to the Prince Brothers store, was established in 1910.⁷⁰

The WVGS 1916 15 minute quad shows approximately 30 structures at Royal, with a mine opening on the hillside above, linked to a short spur of the Piney Creek Railway by a rail line or inclined plane. The USGS 1929 15 minute quad shows the same. The 1969 Thurmond 7.5 minute map (updated in 1988) shows two structures at Royal. Unrau lists no cultural resources there.

Cultural Resources: Cultural resources found at Royal included several stone retaining walls (see Figure 21) and sections of wire rope, possibly related to an early tramway or other coal-moving system, and a holding pond above the road. An intact stone building, possibly a substation; a second stone building with a sloped roof, along with a stone pier, were situated below the road. In addition, a cemetery with several burials was located about 1 mile east of the former settlement.

Statement of Significance: Royal was one of the earliest mines and settlements in the gorge, and the first in Raleigh County. It was also prominent in the early labor movement, the 1902 strike, and situated along route of the ill-fated miners' march of 1903. For these reasons, it is significant on a local and regional level. However, critical elements of the industrial plant are missing. This lack of integrity limits its eligibility in regard to the National Register, however, and it rates a "2".

Recommendations: Additional historical research should be undertaken to develop an outline of the history of the mine and settlement. Such a history is being developed by historian Lou Athey. In conjunction with the development of a New River labor history study, the 1902 battle and the 1903 miners' march should be documented. Also, the site should be surveyed and mapped.

Rush Run

Historical background: Established in 1887, this mine and settlement was operated by the Rush Run Coal and Coke Company, established by J. Fred Effinger. The mine was in the Fire Creek seam, with the opening several hundred feet above the railroad grade. Cars were lowered to a tippie on an

⁶⁸*Annual Report*, West Virginia Department of Mines, 1899, p. 154.

⁶⁹Wood, *Raleigh County*, pp. 367-73; McLean, "Labor History," p. 182; Ray Sutphin, "Union and Workers."

⁷⁰Cavalier, *Panorama*, p. 9.

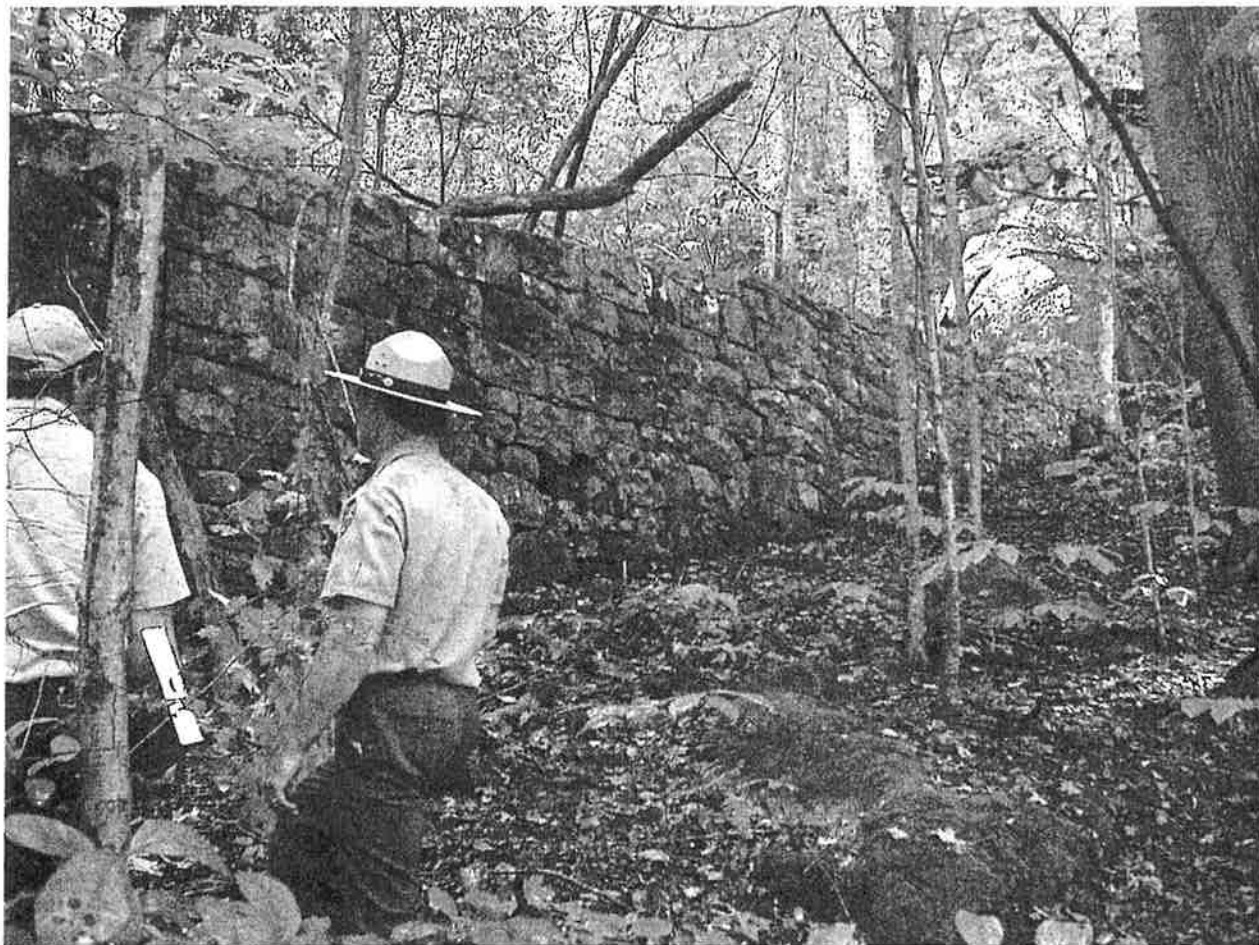


Figure 21: Stone retaining wall at Royal
IHTIA, 2003

inclined plane 1,000 feet long.⁷¹ In 1897, a state mine inspector stated that the ventilation in the mine was very good, but the company was experiencing difficulty with slides distorting the alignment of the incline.⁷² The Rush Run mine was connected to the nearby Red Ash mine underground and operated by the same company. In 1905 a mine disaster occurred at Rush Run. Methane gas and coal dust, ignited by a miner's dynamite blast, ignited, killing 8 men in Rush Run and 5 at Red Ash. A rescue effort was mounted shortly thereafter from Rush Run, but the entire rescue team of 11 perished in a second explosion. The victims of this explosion were buried at nearby Red Ash island.⁷³ A local of the Knights of Labor, which was affiliated with the UMWA, was organized here by 1893.⁷⁴ A C&O Railway right-of-way map drawn in 1916 shows a wood and corrugated metal tipple, boiler and powerhouse, two schoolhouses, company store, ice house, loading platform, church, small store, and four dwellings along the right-of-way. Other houses and coke ovens were also located here. The settlement had a population of 210 in 1919. The mining plant was taken over and operated by the Scotia Coal & Coke Company sometime before 1923. The mine and settlement were abandoned in the mid-1940s. The post office operated here from 1889 to 1939.⁷⁵

The WVGS 1916 15 minute quad shows nearly 40 structures at Rush Run, including a dense cluster of coke ovens on the river bottom. The mine is situated on the hillside, linked to the west side of the settlement by a rail line or inclined plane. The USGS 1929 15 minute quad shows the battery of coke ovens, along with 15 other structures, perhaps indicating a decline. The 1969 Thurmond 7.5 minute map (updated in 1988) shows the settlement as abandoned; a strip mine above may have obliterated any trace of the mine. Unrau lists no cultural resources there in his 1996 study.

Cultural Resources: Cultural resources found at Rush Run include ruins of coke ovens; stone ruins of a large building with walls seven feet high, possibly a company store; scattered foundation ruins, possibly of a tipple; stone foundation ruins of another large building, possibly a domestic structure; ruins of a building with a stone chimney; and a large ashlar building, possibly a power house.

Statement of Significance: Rush Run was one of the earliest mines and settlements in the gorge and site of the 1905 mine disaster. As such, it is significant on a local and regional level. This site has a large potential for historical archaeology. Lacking road access, the site was not subjected to scavenging as much as other historic gorge sites. With its association with the 1905 mine disaster and many intact ruins, Rush Run is an important site, but, unless more elements can be located, it is not

⁷¹Marshall, "Cultural Research Project, " pp. 286-287; Cavalier, *Panorama*, pp. 391-92; Bragg, *Window to the Past*, p. 97.

⁷²*Annual Report*, West Virginia Department of Mines, 1897, pp. 180-81.

⁷³Cavalier, op.cit.; Bragg, op.cit.

⁷⁴McLean, "Labor History," p. 181.

⁷⁵Cavalier, op. cit.; Peters and Carden, p. 280.

potentially eligible for the National Register. It rates a “2”.

Recommendation: The site should be thoroughly surveyed and mapped to portray the locations and extent of the present ruins. If ruins of more property types can be identified, it may be eligible for the National Register as an historical archaeology site.

Red Ash/Red Ash Island

Historical background: Red Ash was established in 1891 by the Red Ash Coal & Coke Company, which also had 80 coke ovens there. The mine was situated about 450 feet above the river, with coal moved to the railroad by an incline 1350 feet long.⁷⁶ In the 1897 *Annual Report*, the inspector noted that it was a “model mine,” and that a new tippie was being built. He added that 94 “new Welch coke ovens” were near completion. A local assembly of the Knights of Labor, affiliated with the UMWA, was organized there by 1893.⁷⁷ The Red Ash mine was the site of two disastrous mine explosions. On March 6, 1900, an explosion probably caused by an open flame that ignited methane gas killed 46 men.⁷⁸ The mine was connected underground through a passageway with a sister mine, Rush Run, so when a mine explosion occurred there on March 19, 1905, it spread to the Red Ash mine, killing 5 men. A rescue operation, mounted from the Rush Run, met disaster as well as a second explosion occurred, killing 11.

Red Ash Island was used during the 1890s for the isolation of smallpox victims. Victims of the 1900 and 1905 disasters, as well as those from the 1909 mine explosion at the Echo Mine at Beury, were buried here. Other burials occurred here as well until the cemetery was abandoned in the 1940s. The island also served as a recreational center for surrounding mining settlements, as a ballfield and community park were located there.⁷⁹

The WVGS 1916 15 minute quad depicts nearly 40 structures at Red Ash, with most of the structures situated along the C&O main line. A mine is located situated about 1 mile west of the settlement toward Rush Run. The USGS 1929 15 minute quad show only about 15 structures and no mine, suggesting that the Red Ash portal was no longer in use. The 1969 Thurmond 7.5 minute map (updated in 1988) shows no structures here. Unrau lists no cultural resources there in his 1996 study. None of the maps depict any cultural features on Red Ash Island.

Cultural resources: Stone/masonry ruins were observed at Red Ash, including those of a small building next to the railroad tracks; extensive ruins of an industrial structure with walls about 5 feet

⁷⁶James W. Paul, “The Red Ash Mine Disaster,” in *Annual Report*, West Virginia Department of Mines, 1905, pp. 309-314.

⁷⁷McLean, “Labor History,” p. 181.

⁷⁸Paul, op. cit.

⁷⁹Bragg, *Window to the Past*, pp. 116-119.



Figure 22: Coke oven ruins at Red Ash
IHTIA, 2003

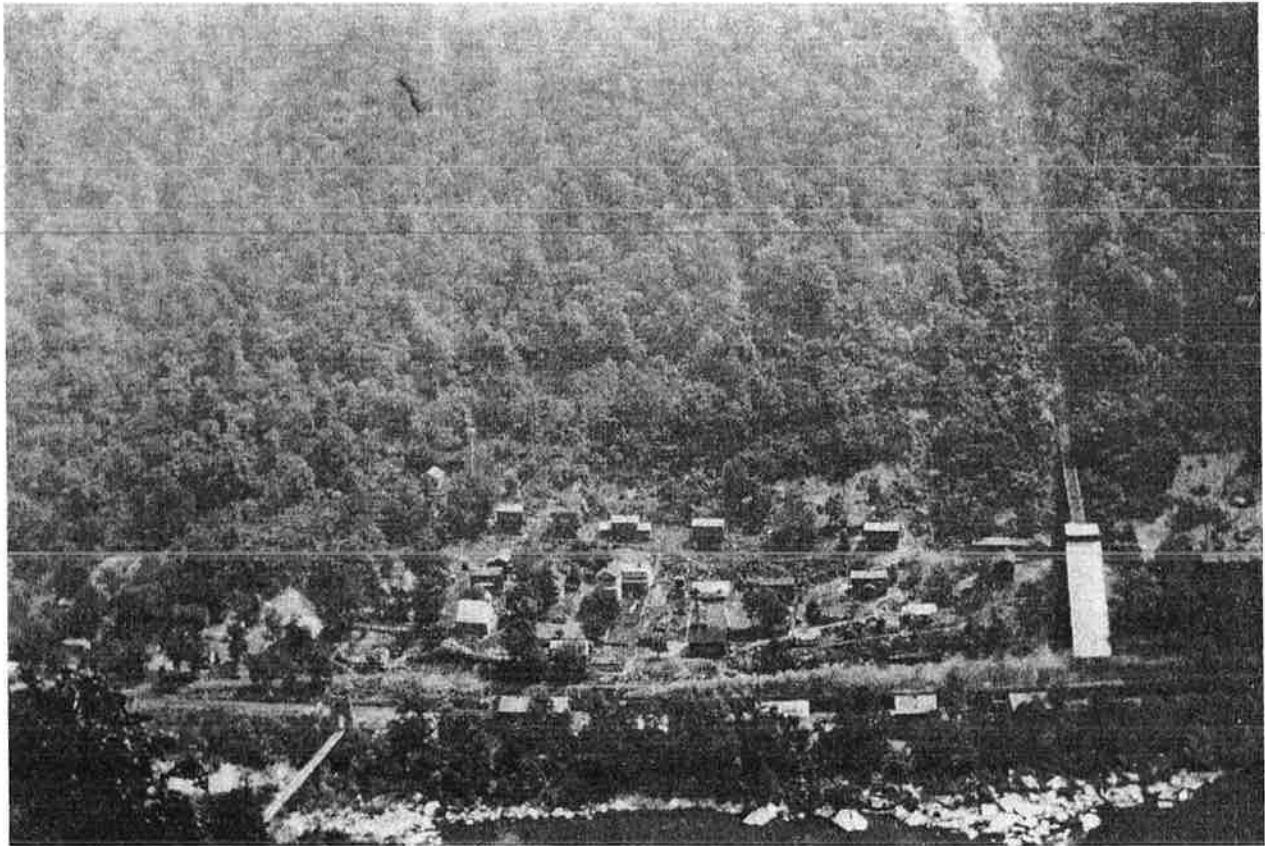


Figure 23: Panorama of Caperton
NERI Historical Collection

tall; and ruins of yet another building (see Figure 22). On nearby Red Ash island, several marked burials, a fence line, and several large sycamores were observed.

Statement of Significance: Red Ash was one of the early collieries and settlements in the gorge, site of the site of two mine explosions, and important in the early labor movement. The site has some potential for historical archaeology. Like Rush Run, Red Ash was isolated from road traffic, so little scavenging occurred here. With ruins little disturbed and numerous structures, it may be potentially eligible for the National Register, but only if more of its components can be located. The Red Ash Island cemetery is one of several cemeteries found in the gorge. Although it is not eligible for the National Register, its connection to the two mine disasters, and its integrity, make a significant resource on a local and regional level. Both sites are rated "2".

Recommendations: The colliery site and island should be surveyed and mapped in fall or winter to ascertain whether additional elements are present. The cemetery should be tended and marked.

Caperton

Historical Background: Established in 1880 by Beury, Cooper & Company, Caperton is another mine and settlement associated with pioneer coal operator, Joseph Beury. After establishing the Quinimont, Fire Creek, and Ansted mines, he joined with John Cooper to open the Fire Creek seam at this place, then known as Ellen (or Elm).⁸⁰ The mine was linked to the mining plant by an inclined plane 1,460 feet long. While the use of inclined planes was common in gorge operations (see section above on Royal, for example), Beury and Cooper developed a unique monitor car to move the coal down the plane: a large plate or boiler-iron cylinder about ten feet long and four feet in diameter mounted on four wheels.⁸¹ A local assembly of the Knights of Labor, National Trade Assembly 135, was established at Caperton in the 1880s.⁸² The New River Coke Company established a mine here in the 1890s, as well as one across the river at South Caperton. Its Caperton mine used a tail rope haulage of 4,000 feet in length, with the engines for the haulage plant located at the foot of the mountain near the tippie. Coal from the company's South Side Mine was carried by a suspended cable line 18,000 feet long across the river to the tippie on the north side.⁸³ (A similar coal haulage system was used at the Royal mine.) The two settlements of Caperton and South Caperton were linked by a suspension bridge across the river, 500 feet long (see Figure 23). Similar to the suspension bridge linking Nuttallburg and South Nuttall, this link made the two settlements a single community. In 1899, the New River Coke Company had 212 coke ovens. Caperton was named in honor of George Henry Caperton, a prominent pioneer coal operator and president of the New River Coal Company.

⁸⁰Marshall, "Cultural Research Project," p. 293; Unrau, "New River Gorge," pp. 28.

⁸¹*Annual Report*, West Virginia Department of Mines, 1884, p. 31.

⁸²McLean, "Labor History," p. 180.

⁸³*Annual Report*, West Virginia Department of Mines, 1897, pp. 178-79.

The population of Caperton was 250 in 1919. The community had a post office from 1880 to 1954.⁸⁴

The 1928 USGS Fayetteville 15 minute quad indicates that nearly 30 structures were at Caperton, including a mine on the hillside linked to the railroad with an inclined plane. The settlement is laid-out in a grid pattern, unusual for New River gorge mining communities. The 1976 Fayetteville 7.5 minute map shows no structures there. Unrau lists no cultural resources there in 1996.

Cultural Resources: Cultural resources found at Caperton included ruins of two large masonry structures, ruins of a large industrial structure, possibly a tipple, and abutments and anchors for the suspension bridge. This site also included a standing structure, a 3-story stone and frame domestic structure, possibly a boarding house or mansion (see Figure 24). These ruins appear to retain much integrity, in part because the isolation of the site has prevented scavenging.

Statement of Significance: Caperton was one of the earliest mines and settlements in the gorge, and associated with pioneer coal operators Joseph Beury and George Henry Caperton. Although the site has local and regional significance and contains many archaeological resources, Caperton is not potentially eligible for the National Register and rates a “2”.

Recommendations: Historical research should be conducted to establish the layout of the town and colliery, and the site should be mapped and documented.

Michigan

Historical Background: Established ca. 1900 by the Michigan Coal Company, the Michigan Mine was in the Sewell seam. Reflecting the twentieth-century trend of coal operations in the gorge to ship coal, rather than coke, to market, the colliery included no coke ovens. According to the 1904 mine inspector’s report, a large furnace was used to ventilate this mine.⁸⁵ By 1923 this mine was operated by the New River Export Smokeless Coal Company.⁸⁶ The settlement that grew up around the mine was never large and lacked a post office. Michigan later became associated with three others--Ajax, Elmo and Sunnyside--which together were known as Ames, derived from the first letter of each of the four names.⁸⁷

The 1928 USGS Fayetteville 15 minute quad depicts about 12 structures situated just south of the mine, linked to the C&O main line by a rail line or inclined plane. An improved road connects the community south to Newly, site of the closest post office. The 1976 Fayetteville 7.5 minute map shows no structures here, though a mine and conveyor are depicted about 1 mile north at Ames.

⁸⁴Cavalier, *Panorama*, pp. 127-28.

⁸⁵*Annual Report*, West Virginia Department of Mines, p. 112.

⁸⁶Peters and Carden, p. 280.

⁸⁷Marshall, “Cultural Resource Project,” p. 297.



Figure 24: Three-story domestic structure at Caperton
IHTIA, 2003



Figure 25: Kay Moor Bottom looking south with Nuttallburg conveyer at upper left
NERI Historical Collection

Unrau lists no cultural resources here in his 1996 study.

Cultural Resources: Cultural resources found at Michigan included concrete block ruins, a spring house, intact fan house, foundations of a conveyor or monitor, powder house ruins, a mine opening, a spring house, and a gob pile. These remains dated to the 1920s and possibly later.

Statement of Significance: Michigan is an example of twentieth-century mining in the gorge. Of some local significance, this site is not, however, potentially eligible for the National Register and rates a "3". One interesting aspect of the site is the gob pile: once ubiquitous in the gorge and in all of Southern West Virginia, they are now very rare.

Recommendations: More historical research should be conducted to determine the layout of the mine. Further surveying and mapping should be conducted as well.

Kay Moor

Historical Background: Kay Moor was established in 1899 by the Low Moor Iron Company in order to obtain coke for its iron furnaces in Covington and Low Moor, Virginia. Situated on the South Branch of the C&O, the colliery included two mines, Kay Moor No. 1 and No. 2, in the Sewell seam. Two hundred and two beehive coke ovens were built at the site. Although most coal from the mines went into the coke ovens, some was marketed through the Chesapeake & Ohio Coal & Coke Company. The colliery and settlement were named for James Kay, first superintendent of the mine. In addition to the inside mine workings and coke ovens, the colliery consisted of a powerhouse, head house, powder house, electrical shop, coal processing plant or tippie, and three inclines—one used for lowering coal to the tippie, a second for raising shale and other waste from the mine to the top of the canyon, and another, the "mountain haulage," to move people up and down the steep slopes of the gorge (see Figure 25).

The settlement itself was divided into two parts: Kay Moor Top was located on the ridge above the gorge, while Kay Moor Bottom was situated on the terrace next to the river. In addition to over 60 dwellings, the settlement included two churches, Methodist and Baptist; two schools, one for African-American children and another for whites; pool room, hotel, theater, and a post office, which operated from 1901 to 1952. Kay Moor remained a captive colliery of Low Moor until 1924, when it was purchased by the New River and Pocahontas Consolidated Coal Company, a subsidiary of Berwind-White Corporation. The New River company built a new corrugated metal processing plant shortly thereafter, and continued to operate the colliery until 1952.⁸⁸

⁸⁸Kay Moor is the best documented mine and settlement in the gorge. Peters and Carden, *History of Fayette County*, p. 276; Marshall, "A Cultural Research Project," pp. 295-96; Cavalier, *Panorama*, pp. 231-33; Bragg, *Window to the Past*, pp. 98-99; and Unrau, "New River Gorge," p. 29 contain information. In addition, two monographs, Lou Athey, *Kaymoor: A New River Community* (Eastern National Parks and Monuments Association, 1976); and Sharon A. Brown, "Kay Moor: Historic Resource Study," National Park Service, 1990), along with two articles, Jack Berkstresser, "Kay Moor Coal Mine," HAER No. WV-38, unpublished manuscript,

Both Kay Moor Top and Bottom are depicted on the 1928 USGS Fayetteville 15-minute quad. Over 25 structures and the coke ovens and tipple are on the bottom. Two inclined planes are shown, and Kay Moor Top is marked “Kaymoor No. 1,” with approximately 20 structures. The 1976 Fayetteville quad depicts no structures at Kay Moor Bottom, though a “conveyor” is shown at the location of the mine incline. Kay Moor Top is marked “Kaymoor No. 1,” with about ten structures. Unrau lists 29 significant structures and objects at Kay Moor, and includes two site maps in his 1996 study.

Cultural Resources: As observed in the summer of 2003, the Kay Moor site includes the structures, ruins, and objects placed on the National Register in 1990, but a considerable amount of deterioration has occurred. Despite stabilization efforts, the head house has collapsed, and the preparation plant has been toppled, if not demolished (see Figure 26). It does, however, retain as many elements of a historic New River colliery as any of sites visited.

Statement of Significance: Kay Moor was listed on the National Register of Historic Places in 1990. The collapse of two of the principal components of the site has compromised its integrity. However, the site still contains all of the elements of a New River colliery and should stay listed on the National Register. It rates a “2.”

Recommendations: The site should be stabilized and made safe as soon as possible. While the collapsed head house and tipple probably cannot be saved, they-particularly the tipple—contain elements which could be salvaged and used in interpretation.

Nuttallburg

Historical Background: This colliery and settlement was established by John Nuttall, an Englishman who migrated to the New River area from Pennsylvania. Nuttall purchased property on Keeney’s Creek and developed his mine before the C&O Railroad was completed. His mine on Keeney’s Creek, situated just north of its confluence with the New River, was the second to ship coal out of the gorge in 1873. Shortly thereafter, Nuttall opened the Nuttall Mine on Short Creek just downstream from Keeney’s Creek. Nuttall also built the seven-mile Keeney’s Creek branch railroad between 1892 and 1896, which included several outstanding bridges/trestles. A true polymath, Nuttall was a well-known naturalist and the author of an important work about the gorge, *Trees Above With Coal Below*.⁸⁹ During 1873-1874 Nuttall erected 17 two-family dwellings, 80 one-family residences, 80 coke ovens, and 4 two-car monitors at the two mine sites. The Nuttall Mine, which had a drift opening, had a scalehouse, scales, head house, blacksmith shop, carpenter shop, and tipple. By 1880 the Nuttallburg Coal Company was the largest producer in the New River field. Reorganized as the

19866 and Michael Workman, “The Kay Moor Mine, 1901-1962: A Case Study of Underground Mechanization in the Bituminous Coal Fields of Southern West Virginia, *Canal History and Technology Proceedings*, vol. XIX (March, 2000): pp. 143-180, are devoted to Kay Moor. There are also several oral histories of former Kay Moor residents by Paul Nyden in the New River Oral History Collection, 1980-85.

⁸⁹John Nuttall, *Trees Above with Coal Below* (San Diego: Neyenesch Printers, 1961).



Figure 26: Remains of Kay Moor Tipple
IHTIA, 2003

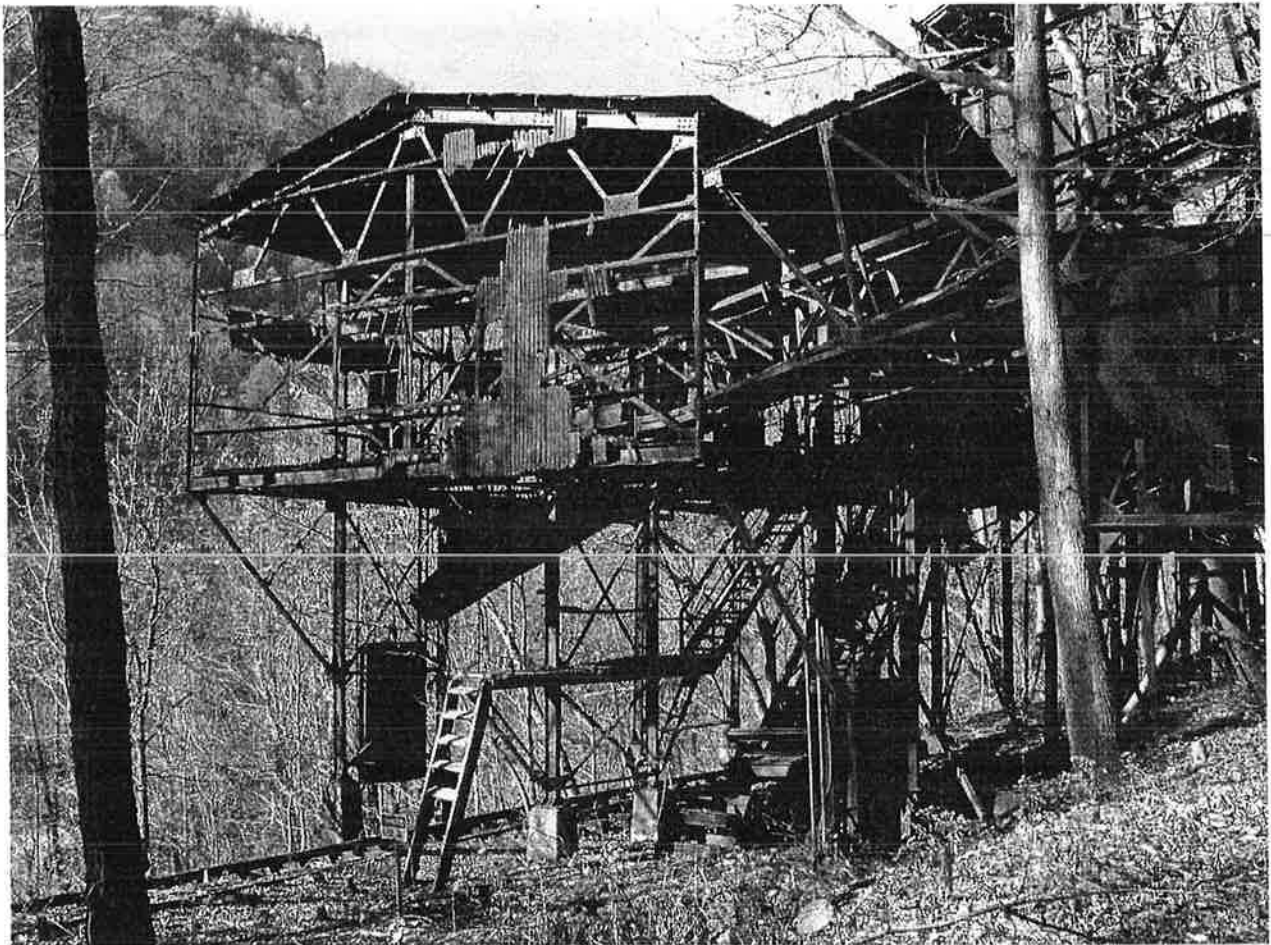


Figure 27: Tipple at Nuttallburg
IHTIA, 2003

Nuttallburg Coal and Coke Company in 1882, the coal company was under control of the Nuttall family until 1908. It was reorganized in 1913 as the Nuttallburg Smokeless Fuel Company.⁹⁰ Nuttallburg had one of the earliest union organizations in the gorge. The Knights of Labor, National Trade Assembly 135 had a local here during the 1880s. The strength of the union here may account for the visit of "Coxey's Army" in 1894. On their march to Washington, some of Jacob Coxey's army of unemployed workers slept in the coke ovens at Nuttallburg.⁹¹

In 1920 Henry Ford purchased the lease and equipment of the Nuttallburg Smokeless Fuel Company through the newly formed Fordson Coal Company. Ford was in the process of expanding his great manufacturing empire through vertical integration: he sought to gain control of all factors of production and distribution, including raw materials. With wartime shortages of coal, Ford's goal with the New River acquisition was to ensure a supply of steam coal for his River Rouge, Michigan auto plant. At Nuttallburg, Ford modernized the colliery, first contracting with the Roberts and Schaefer Company of Chicago to build a state-of-the-art steel tippie in 1923-1924; then contracting with the Fairmont Mining Machinery Company of Fairmont, West Virginia to erect a new steel head house and retarding or "button and rope" conveyor in 1925-1926. Ford's venture proved short-lived, however, as he was unable to achieve the low production costs he sought and the glut of coal in national markets made it unnecessary. Fordson sold the lease to Maryland New River Coal Company in 1928. It continued to be a productive colliery through the 1930s and World War II years, but declined in the late-1940s. The Maryland New River Coal Company attempted to update the tippie in 1952 by installing a Belknap chloride washer, but this had very limited success, and they ceased operations there in 1953. The mine was reopened in 1954, but closed for good in 1958.⁹² The community of Nuttallburg had a population of 335 in 1920. It was linked to the South Nuttall depot on the opposite side of the New River by a suspension bridge, making these two settlements a single community. South Nuttall had one of the few cemeteries in the gorge. Another small community known as Brown or Browntown was located on the rim of the gorge above South Nuttallburg, and was part of the larger Nuttallburg community. The Nuttallburg post office operated from 1893 to 1955.⁹³

The USGS 1928 Fayetteville 15 minute quad shows over 40 structures at Nuttallburg, including a mine and inclined plane near Short Creek. It also depicts the suspension bridge across the New River

⁹⁰Peters and Carden, *History of Fayette County*, pp. 257-258; Marshall, "Cultural Research Project," pp. 294-95; Unrau, "New River Gorge," pp. 26; 30-31; Bragg, *Window to the Past*, p. 98; Lee R. Maddex, "The Nuttallburg Mine Complex: Documentation Project" (Morgantown, W.Va.: Institute for History of Technology and Industrial Archaeology, 1992), pp.20-25.

⁹¹McLean, "Labor History," p. 179; Marshall, "Cultural Research Project," pp. 294-95..

⁹²Maddex, "The Nuttallburg Mine Complex," pp. 26-32..

⁹³Cavalier, *Panorama*, p. 12.

to South Nuttall. The USGS 1976 Fayetteville 7.5 minute map depicts only a mine conveyor and tipple there. Since it was outside the park boundary, Unrau did not deal with Nuttallburg in his 1996 study.

Cultural Resources: The cultural resources at Nuttallburg include the suspension bridge towers, ruins of a domestic structure, possibly the colored school, ruins of a weigh station, coke oven ruins, ruins of the head house, which has collapsed, and the standing tipple (see Figure 27) and conveyor (see Figure 28). Dating to the 1920s and associated with Henry Ford, the tipple and conveyor are in fair condition, particularly in light of the ruinous state of most other coal-related structures in the gorge. These structures are currently being stabilized.

Statement of Significance: The Nuttallburg colliery is historically significant as one of the earliest mines and settlements in the gorge. It was the second to ship coal from the gorge. It was closely associated with pioneer operator John Nuttall, as well as automobile magnate Henry Ford during the 1920s. It was also the site of an early union local, and served as a camp for the famous march on Washington by Coxey's Army in 1894. Moreover, with most of the industrial elements of the colliery present today, it has a great deal of integrity. Although the headhouse has collapsed, it is one of the most complete coal-related industrial sites in the gorge, the state, and in the United States. With its national significance and integrity, it is potentially eligible for the National Register and rates a "1".

Recommendations: Current stabilization measures by NERI directed to the tipple and conveyor should provide a safe environment for further field work and interpretation at the site. Other elements of the industrial plant, including the coke oven ruins, which can be linked to the national labor movement, should also be stabilized and interpreted. Further research and field work should be conducted to identify the non-industrial, community elements present at the site. The site should be nominated for listing on the National Register. It may be possible to include the suspension bridge piers and other ruins in this nomination.



Figure 28: Conveyor at Nuttallburg
IHTIA, 2003

Tabular Summary of Management Information, Coal Related Cultural Resources

Property Name	Location	Occupation Dates	Category	Rating
Beury	Fayette County	1881 - ca. 1940	Ruins	"2"
Fire Creek	Fayette County	1876 - ca. 1950	Ruins	"2"
Sewell	Fayette County	1873 - 1956	Ruins	"2"
Stonecliff	Fayette County	1881 - ca.1950	Ruins/standing structure	"2"
Claremont	Fayette County	1887 - ca 1950	Ruins/standing structures	"2"
Alaska	Fayette County	1888 - ca. 1940	Ruins	"3"
Ephraim/Dundee	Fayette County	1901 - ca. 1950	Ruins/standing structures	"2"
Thayer	Fayette County	1902 - Present	Standing structures/ruins, inc. Little Rock Assembly Church	"2"
McKendree	Fayette County	1880 - 1956	Standing structures/ruins	"2"
Royal	Raleigh County	1891 - ca. 1950	Standing structure/ruins	"2"
Rush Run	Fayette County	1887 - ca. 1945	Standing structure/ruins	"2"
Red Ash	Fayette County	1891 - ca. 1940	Ruins	"2"
Caperton	Fayette County	1880 - ca. 1960	Ruins	"2"
Kay Moor	Fayette County	1899 - 1952	Standing structures/ruins	"2"
Michigan	Fayette County	ca.1900 - ca. 1950	Standing structures/ruins	"3"

Nuttallburg	Fayette County	1873 - ca. 1960	Standing structures/ruins	"1"
-------------	----------------	-----------------	------------------------------	-----

Revisions of Railroad Industry Context

Completed in 1873, the Chesapeake and Ohio Railroad became the first post-war trunk line constructed through the Central Appalachians. Created by the consolidation of three pre-war lines--the Virginia Central, the Blue Ridge, and the Covington and Ohio railroads--the C&O stretched 419 miles from Richmond, Virginia to Huntington, West Virginia, connecting the Ohio River Valley with Richmond, one of the South's leading industrial cities. New construction carried the C&O down the New River Gorge, opening the isolated region to settlement and industrialization. Soon after its construction, coal became the principal item shipped on the C&O. In this traffic, the New River Field was important from the beginning. New River coal first met regional needs, serving in particular the regional iron industry. It later reached larger national markets, especially after the completion of the line to Newport News, Virginia and tidewater in 1882. Even with the decline of the New River Field in the 1950s, and the general decline of the American railroad industry in the 1960s and 70s, the C&O, now a part of CSX, remains a viable and important railroad, nationally and for West Virginia.

Current Scholarship

The general history of the Chesapeake and Ohio Railroad is well documented. Authors, ranging from avocational amateurs to scholars have published books and monographs on this storied railroad. Perhaps most important among the few scholarly works is Charles Turner's *Chessie's Road*, which is largely a corporate history. Principal among the avocational authors are Eugene Huddleston and Thomas Dixon, both of whom have written at length on various railroad subjects ranging from railroad structures to rolling stock to specific studies. Huddleston's *Riding That New River Train* provides an excellent account of the C&O in the New River Gorge. Most amateur-authored monographs are readily available through the C&O Historical Society. One of its most recent publications is Dixon's *The Chesapeake & Ohio at Hawks Nest*, published in 2000, which looks at the railroad at Hawks Nest. Another recent publication is *West Virginia Narrow Gauge: Manns Creek Railroad*. Published in 1999, by Ron Lane and Ted Schnepf, this book focuses on the towns and industries of Landisburg, Clifftop, and Sewell, and their interrelationships with the Manns Creek Railway.

Without question there is a need for more contemporary scholarly research on the history of the C&O Railroad. One overriding need is a detailed history of the railroad's construction through the New River Gorge. Several essays and a thesis have been written about this important subject, but none focus on construction through the gorge. Ronald Eller's masters thesis, "Mountain Road: A Study of the Construction of the Chesapeake and Ohio Railroad in Southern West Virginia, 1867-1873, is an outstanding, brief account of the railroad's construction. His *Miners, Millhands, and Mountaineers* provides an excellent summary of Southern Appalachian railroad development, emphasizing the importance of the Chesapeake and Ohio, the motivations of Collis B. Huntington, and the evolution of the route as it expanded to face the challenge of the Norfolk and Western, and other competitors.⁹⁴

⁹⁴Ronald D. Eller, "Mountain Road: A Study of the Construction of the Chesapeake and Ohio Railroad in Southern West Virginia, 1867-1873." (Master's Thesis, University of North Carolina: Chapel Hill, 1973); Eller, *Miners, Millhands, and Mountaineers*.

Unrau's railroad context provided a thorough review of previous scholarship on the Chesapeake and Ohio Railroad, a brief summary of other West Virginia railroads, and a detailed recounting of the construction of the railroad and its operation up to the dieselization in the 1950s. Unrau also added several pages on the short lines and branch lines in the lower New, but reserved most of his energy for an exhaustive description of the development of railroad towns in the Gorge. The New River railroad context below builds upon Unrau's work with a focus on aspects that received less attention in previous New River scholarship, including a national context for railroad development, a review of important scholarship on American railroads and the C&O, and an assessment of the significance of railroad-related properties in the New River Gorge National River.

When assessing the significance of the C&O Railroad and its place in history, one must develop a broad understanding of the development, spread, and maturation of the American railroad network. This is undertaken in the first two sections below. The first section covers *antebellum* railroads in the United States, including the earliest railroads and the first trunk lines. The second section recounts railroad developments after the Civil War through the twentieth century. This includes the first transcontinental railroads, the completion of the C&O, its early operations, and its storied course through the twentieth century.

Beyond historical narrative and recounting of important events and facts, these sections also include important scholarship and ideas about the American railroad landscape, Mid-Atlantic railroads, and specifically to the Chesapeake and Ohio. Among these writers, German scholar Wolfgang Schivelbusch's *The Railway Journey*, produced an important social analysis of the railway environment and the revolutionary changes that the railway brought about as a new form of travel on civilians and workers. John Stilgoe's *Metropolitan Corridor* examined the influence of railroads on the American landscape, its built environment and culture in the half century following 1880. Christopher Baer's *Canals and Railroads of the Mid-Atlantic States, 1800-1860* was the most exhaustive study ever completed of *antebellum* transport in this region, which includes West Virginia.

The Earliest U.S. Railroads and Trunk Lines, 1826-1865

The first railroads in the United States were short line tramways built in 1826 and 1827 to move extracted mineral resources. The short-lived Granite Railroad of Quincy, Massachusetts used gravity and horses to get quarried granite to a dock on Boston Harbor two miles away. The Mauch Chunk gravity railroad in the anthracite region of Pennsylvania was several times longer, moving coal from the mountain down to the Lehigh River by similar means. It ran for about 100 years, moving not only coal, but also tourists on a thrilling journey through the mountains of Eastern Pennsylvania.⁹⁵

About the same time the Erie Canal was completed from the Hudson River across upstate New York to Buffalo, connecting New York City to the Great Lakes and giving it an incredible advantage over other eastern cities in exploiting the resources of the Midwest. Over the next five years, four

⁹⁵George Rogers Taylor, *The Transportation Revolution, 1815-1860* (New York: Rinehart, 1951), pp. 76-77; Vince Hydro, *The Mauch Chunk Switchback* (2002).

commercial centers moved to secure western materials and markets by building rail connections: Baltimore, Charleston, Boston, and Philadelphia.

Baltimore got the quickest start. The B&O railroad is touted by many as the first important railroad in America. With sights set on the Ohio, crossing the Appalachians on a course roughly parallel to the National Road (later U.S. Route 40), the B&O was chartered in 1828 and had thirteen miles of track in place two years later. Charleston, South Carolina completed 136 miles of railroad by 1833, diverting cotton and other materials away from rural Savannah. This was the longest railroad in the world under single management. After years of frustration, three Boston interests finally got charters from the Massachusetts legislature and made connections to Lowell, Worcester, and Providence by 1835.⁹⁶

Philadelphia interests were not far behind, and by the end of the 1830s their efforts dwarfed those of the other states. A number of local efforts followed along the model of Mauch Chunk railroad, connecting coal fields to the Pennsylvania canal system and navigable rivers via short railroad lines. By 1835, Philadelphia was linked to the canal system by the state-owned Philadelphia & Columbia Railroad, and to New York City via the Philadelphia & Trenton. By 1840 the Commonwealth of Pennsylvania boasted over 1,500 miles of canals and railways, about 450 more than New York, its nearest rival. By this date, The United States had about 3000 miles of track in operation, about twice that of Europe. The leaders were Pennsylvania and New York with about 600 and 450 miles respectively. Massachusetts and Virginia were next with about 300 miles each.⁹⁷

The 1830s and 40s saw a number of advances in railway technology as established conventions were abandoned in favor of new ones with practical advantages. The stage-coach design of early railroad passenger cars gave way to a more streamlined shape. Wooden cross ties embedded in a gravel roadbed became the standard. As freights grew heavier, wooden rails topped with thin iron straps were replaced with solid iron nails and then the T-rail. Horse power was widely abandoned by the mid-1830s in favor of steam locomotives and the swivel truck-eight wheeled engine, developed in the 1830s, came to dominate locomotive design throughout the century to such an extent that it became known as the "American-type locomotive."⁹⁸

In the 1830s and early 40s, canals were still more important than railroads. With its Main Line canal and portage railroad system completed to the Ohio River at Pittsburgh in 1834, Pennsylvania had stormed past neighboring states to the south. New York's advantages were being extended as numerous canals crossed Ohio from the Ohio River to the Great Lakes, opening up the Ohio Valley and Midwest to New York influence. Maryland's Baltimore and Ohio Railroad was blocked by

⁹⁶Taylor, *Transportation Revolution*, pp. 77-8.

⁹⁷Taylor, *Transportation Revolution*, pp. 78-9; John Stover, *The Routledge Historical Atlas of American Railroads*, pp.14-15.

⁹⁸Stover, *Routledge Historical Atlas*, pp. 14-15; Wolfgang Schivelbusch, *The Railway Journey*, translated by David Jacobson, (New York: Pantheon Books, 1983), pp. 98-106.

lawsuits with its rival the Chesapeake and Ohio Canal so that by 1842 it had only reached as far as Cumberland on the upper Potomac. A second wave of canal building and improvements were undertaken during the late 1830s and early 1840s including the enlargement of the Erie Canal, the rebuilding of the James River and Kanawha Canal and the extension of the Pennsylvania Main Line with the Susquehanna & Tidewater and the Pennsylvania and Ohio, which connected the growing canal network of these two states.⁹⁹

Three important railroad trunk lines were completed between 1851 and 1854: the Baltimore and Ohio, the New York and Erie, and the Pennsylvania. By 1860 a vast railroad network had been laid across the Midwest branching out from the trunk lines and revolutionizing American transport practices. Although the enlarged Erie Canal carried most of the western trade, its freight was limited to lumber and grain, the cheapest bulk cargoes. Railroads carried virtually all of the western traffic in flour, passengers, and merchandise, putting many farmers, local flour mills, canals, turnpikes, stage lines, and related interests out of business. Christopher Baer's *Canals and Railroads of the Mid-Atlantic States, 1800-1860* provides a brief context for the spread of the trunk lines in the *antebellum* period:

As with the canals, the trunks reflected the urban hierarchies. New York was served by two lines within its borders and tapped the Pennsylvania Railroad through the Jersey Central and East Penn railroads. Philadelphia had the PRR, but its line to Erie [Pennsylvania], through an unproductive territory, remained incomplete and was never an economic success. Baltimore was served by the B&O, but that line was hampered by a politically imposed terminal at Wheeling. By building the Northwestern Virginia it obtained a direct line to Parkersburg, but a similar attempt to complete a line from Cumberland to Pittsburgh failed in the depression of the late 1850s. Because of its location, the B&O concentrated on the lower Ohio Valley and thus lost ground as the Lakes and Chicago grew in importance. In Virginia both the James River & Kanawha Canal and the Virginia Central (Louisa) Railroad were prostrated at the foot of the Alleghenies despite heavy state aid. The Virginia equivalent of a trunk line led into the southwest, reinforcing ties to the deep South, while the western part of the state remained oriented to the Ohio.¹⁰⁰

Wolfgang Schivelbush's *The Railway Journey* was a drastic departure from previous railway literature. Previous scholarship on railway history had focused mainly on the infrastructure: the stations and depots, engines, bridges, tunnels, and other buildings. Schivelbusch had other concerns.

⁹⁹Christopher Baer, *Canals and Railroads of the Mid-Atlantic States, 1800-1860* (Wilmington, Del.: Regional Economic History Center, Eleutherian Mills-Hagley Foundation, 1981), pp.1-10.

¹⁰⁰Baer, *Canals and Railroads*, pp. 6-7; Schivelbusch, *Railway Journey*, pp. 93-112.

He wondered what it was like to travel on a rail coach after having traveled your whole life on boats or in stage coaches. He wrote of the drastic change in speed, about the changing interior spaces of the coach and human interaction among travelers. This work sounded more like psychology, and drew ire from some historians. Yet it stands as a benchmark in railway history. Perhaps not the first social history or the railroad, it is one that cannot be ignored by those who study historic railway facilities.

The Chesapeake and Ohio Railroad and the Maturation of the American Railway Network, 1865-1930

After the Civil War, railroad networks continued their spread throughout the Northeast and Midwest. In 1869 the Transcontinental Railroad connected the Pacific coast, but the C&O was still years away from completion. Thus the Chesapeake and Ohio is indicative of the *prolonged frontier* described by Robert Mitchell and others (see Agriculture and Early Settlement historic context). Once finished, the railroad opened up the timber and coal wealth of the lower New River region and attracted new settlers and disrupted local agricultural markets with an influx of cheap Midwestern farm goods.

In 1866 the legislatures of West Virginia and Virginia passed legislation rechartering the Covington and Ohio Railroad. The company was charged with completing the railroad to the Ohio River within six years of the charters effective date, April 20, 1866. The plan was to connect to the Virginia Central near Covington, Virginia and to the Ohio near the mouth of the Great Kanawha River by way of the Greenbrier and New rivers. The following year the Covington and Ohio was consolidated with the Virginia Central into a new company called the Chesapeake and Ohio Railroad.¹⁰¹

The president of the new company, Confederate General William C. Wickham, turned to Collis B. Huntington, the New York financier that had just finished the Central Pacific Railroad. Surveying and engineering took place in 1868 and 1869 under the direction of Chief Engineer H. D. Whitcomb. By July 1869, the road was completed to White Sulphur Springs. Despite financial difficulties and the collapse of the New York Stock Market, the project moved in both directions, with the section from Huntington to Charleston completed in December 1871 and to Kanawha Falls the following summer. Concurrently, the Stretcher's Neck Tunnel was completed in July, and by late autumn, only a few difficult sections of the lower New River remained to be completed. On January 29, 1873, the last spike was ceremoniously driven by dignitaries from Richmond, Virginia at Hawks Nest and the 419-mile route was complete.¹⁰²

Beginning in the 1880s the C&O was rivaled by the Norfolk and Western Railroad, the only other Central Appalachian trunk line. Both connected Tidewater Virginia with the Midwest and Kentucky; and, by the twentieth century their primary cargo was bituminous coal. As the C&O opened up the coal reserves of the New River Field for exploitation, the N&W opened the Pocahontas Field and by

¹⁰¹Charles Bias, "Building the Chesapeake and Ohio Railroad through the New River Region," *Proceedings, New River Symposium*, 1982, pp. 168-70.

¹⁰²Bias, "Building the Chesapeake and Ohio Railroad," pp. 171-2; Stover, *The Routledge Historical Atlas*, pp. 82-3.

1900, this freight made up 60% of the railroad's tonnage. During the first decade of the twentieth century, the Pennsylvania Railroad bought large amounts of stock in both railroads under the presidency of Alexander J. Cassatt. The C&O quickly regained its freedom and for generations, turned the tables, taking over regional rival lines. The C&O continued to grow, from 1,425 miles in 1900 to 2,500 miles in 1920, and 5,100 by 1950. The C&O did not stop there, but continued acquiring other railroads, including the Baltimore and Ohio in 1962, which prompted the name change to the Chessie System. In 1980, after another merger, the Chessie System became CSX, a company headquartered in Jacksonville, Florida with 27,000 miles of track in 22 states with 70,000 employees and annual revenue of about \$5 billion.¹⁰³

The spread of the American railroad network and the continued relative isolation of Central Appalachia is evident in a comparison of maps of 1860 and 1920 (see Figure 29). This makes the lower New River region unique. Through the 1860s the gorge was among the least populated areas of Central Appalachia, which itself was the most isolated region east of the Mississippi. From 1873 through the past century, it has been on the main stem of the C&O, a major trunk line. The transformation of the landscape and the culture was immediate and drastic. Over the next five decades, thousands of workers and their families flooded into the gorge to exploit the vast coal and timber resources that rested within easy reach of the railroad. The literature about the development of the coal and timber industry in the gorge and its relationship to trends in American industry is told elsewhere in this volume, the Unrau study and other works. So let us turn to review some important works and ideas that may enlighten our understanding of the C&O Railroad itself and its maturation.

From the title, John Stilgoe's *Metropolitan Corridor: Railroads and the American Scene* may seem to have little relevance to a rugged, rural landscape such as the New River Gorge. Today it is difficult to imagine the gorge as "metropolitan" in any way, but when we consider what it looked like before the railroad it is easy to understand the relevance of his seminal book. Stilgoe's look at the half century of railroad dominance in the United States, 1880-1935 begins with an explanation of the title:

Metropolitan Corridor designates the portion of the American built environment that evolved along railroad rights-of-way in the years between 1880 and 1935. No traditional spatial term, not *urban*, *suburban*, or *rural*, not *cityscape* or *landscape*, adequately identifies the space that perplexed so many turn-of-the-century observers. Reaching from the very hearts of great cities across industrial zones suburbs, small towns, and into mountain wilderness, the metropolitan corridor objectified in it unprecedented arrangement of space and structure a wholly new lifestyle. Along it flowed the forces of modernization, announcing the character of the twentieth century, and abutting it sprouted new clusters of building. Its peculiar juxtaposition of elements attracted the scrutiny of photographers and advertising illustrators; its romance inveigled poets and novelists; its energy

¹⁰³Stover, *The Routledge Historical Atlas*, pp. 64-5; 82-85.

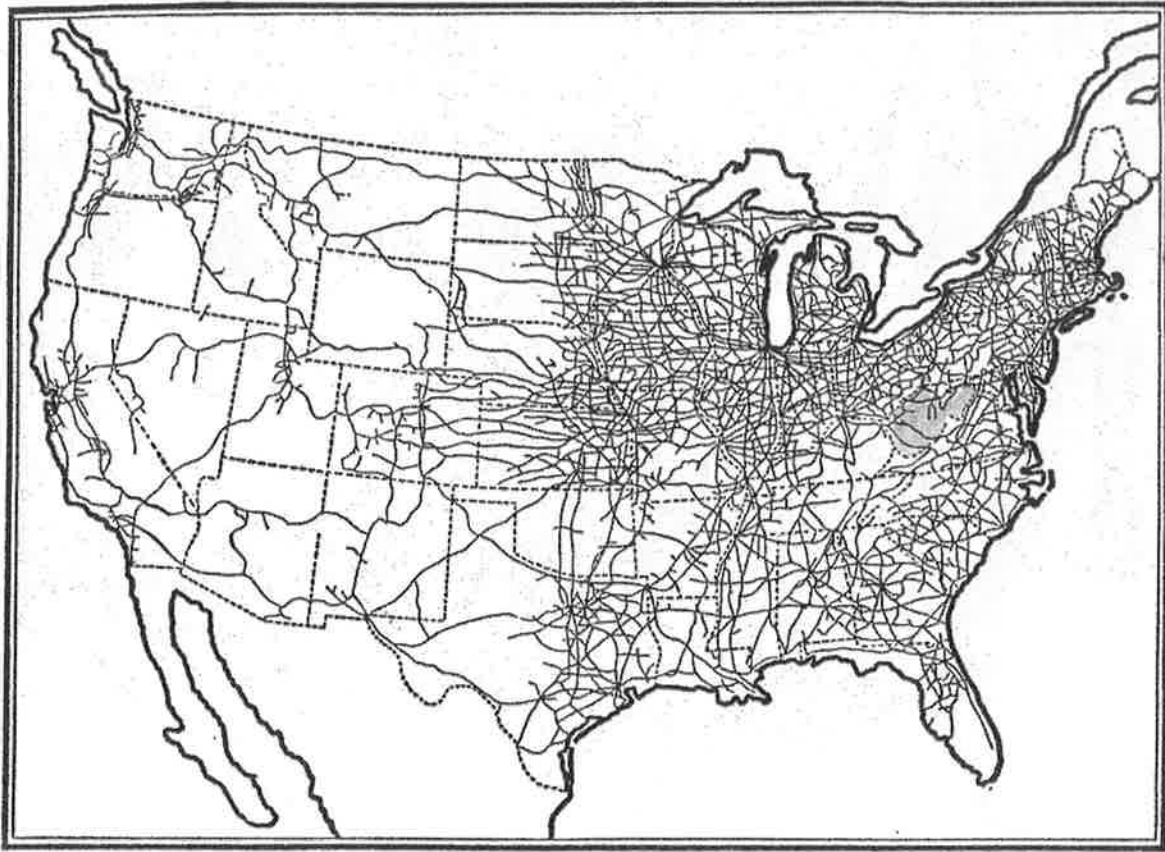


Figure 29: Railroad network of the United States, ca. 1890
Brigham, *Commercial Geography*



Figure 30: View of Quinnimont
IHTIA, 2003

challenged architects, landscape architects, and urban designers. Always it resisted definition in traditional terminology. And suddenly, in the years of the Great Depression, in the ascendancy of the automobile, it vanished from the national attention. Yet the corridor remains, although now often screened by sumac and other jungle like trees and avoided by highways, still snaking from one well-known, often-studied sort of space to another.

Stilgoe examines common features of the "metropolitan corridor" and in so doing gives us a summary and description of the main components of the railroad landscape: *Gateway*, on railway stations; *Zone* on the industrial areas that parallel the railroad; *Generator*, on industrial and railroad power-generating stations; *High Iron* on bridges and culverts, signal towers and tunnels; crossings on road intersections; *Depots*; and *Beyond*, on antebellum towns that fell to ruin after being bypassed by the railroad. Other chapters do not seem immediately relevant, but may indicate directions for further investigation: *Garden* explores the manicured grounds often built near stations to attract passengers, *Villa* discussed the suburban districts that were built on the metropolitan corridor near urban centers, and *Trolley* presents the urban, suburban, and interurban lines that became popular in the late nineteenth century. *Ruins*, his epilogue on railroads in the Interstate age holds out hope for a revitalization of the old rail lines due to the ever increasing cost of motor fuel. The work is of value to cultural resource managers since it illuminates historic, and sometimes hidden, elements of the railroad landscape.

Inventory and Evaluation of Cultural Resources for Railroad Context

Numerous settlements arose along the C&O Railroad following its completion through the New River gorge. The majority of these settlements were coal camps, but five--Hinton, Quinnimont, Prince, Thurmond, and Fayette Station--became important railroad towns

Quinnimont

Historical Background: The wide flat area at the mouth Laurel Creek was first settled by Jacob Smith in 1827, but with the arrival of the C&O Railroad in 1873, it became known as Quinnimont (so named for the five mountains which surround the town). It was there that Joseph L. Beury shipped the first New River coal east in 1873 and built coke ovens up Laurel Creek to supply fuel for the Quinnimont Iron Furnace. The New River Car Company erected the furnace and its railroad car manufactory shop in 1874. This concern failed, and the furnace was run intermittently under various ownership until 1885. In the early 1890s Quinnimont became an important rail yard, with a depot, freight house, boiler house and other railroad structures. Further, due to its proximity to both the Piney and Laurel creek branch lines, Quinnimont became a pick-up point for coal from mines along these lines. By 1900, Quinnimont had a population of 400. Because Quinnimont was one of the busiest points along the C&O during World War I, its population swelled to 500 by the end of the decade. In 1930, the Coal Associates in the New River Gorge erected a monument at Quinnimont honoring Joseph Beury's accomplishment as the pioneer operator in the New River Field. However, Quinnimont began to decline during the 1930s because of the Great Depression. Its decline was further hastened with dieselization in the 1950s. However, Quinnimont remains an important CSX shipping point.¹⁰⁴

Statement of Significance:: Today, Quinnimont remains a railroad town, functioning as a pick up and shipping point for coal trains (see Figure 30). Although much of the community is no longer extant, Quinnimont's two churches still stand, but several historic houses were recently demolished. The depot is gone as is much of the railyard. The remains of the Quinnimont Furnace still stand, and are perhaps the most important resource at Quinnimont. Although deteriorated from neglect, the furnace is one of a few standing or partially standing transitional coke iron furnaces in the United States. The Beury Monument is extant as well (see Figure 31). It stands approximately 35 feet tall and was carved from granite. The Quinnimont Furnace is potentially eligible for listing on the National Register of Historic Places under Criterion A for its association with the New South iron industry. Additionally the Joseph L. Beury monument is potentially eligible for inclusion in the National Register of Historic Places under Criterion B for significant individuals. Both rate "2."

Recommendations: The Quinnimont Furnace and Beury Monument should be nominated to the National Register of Historic Places.

¹⁰⁴Peters and Carden, *History of Fayette County*, pp. 544-47; Lee R. Maddex, "The Quinnimont Furnace: A New Look at Fayette County's Iron Furnace," *Proceedings, New River Symposium*, 1995, pp. 77-80.



Figure 31: Joseph L. Beury Monument at Quinnimont
IHTIA, 2003



Figure 32: View of Prince
NERI Historical Collection



Figure 33: Prince Brothers Store at Prince
David Fuerst, NERI, 2003

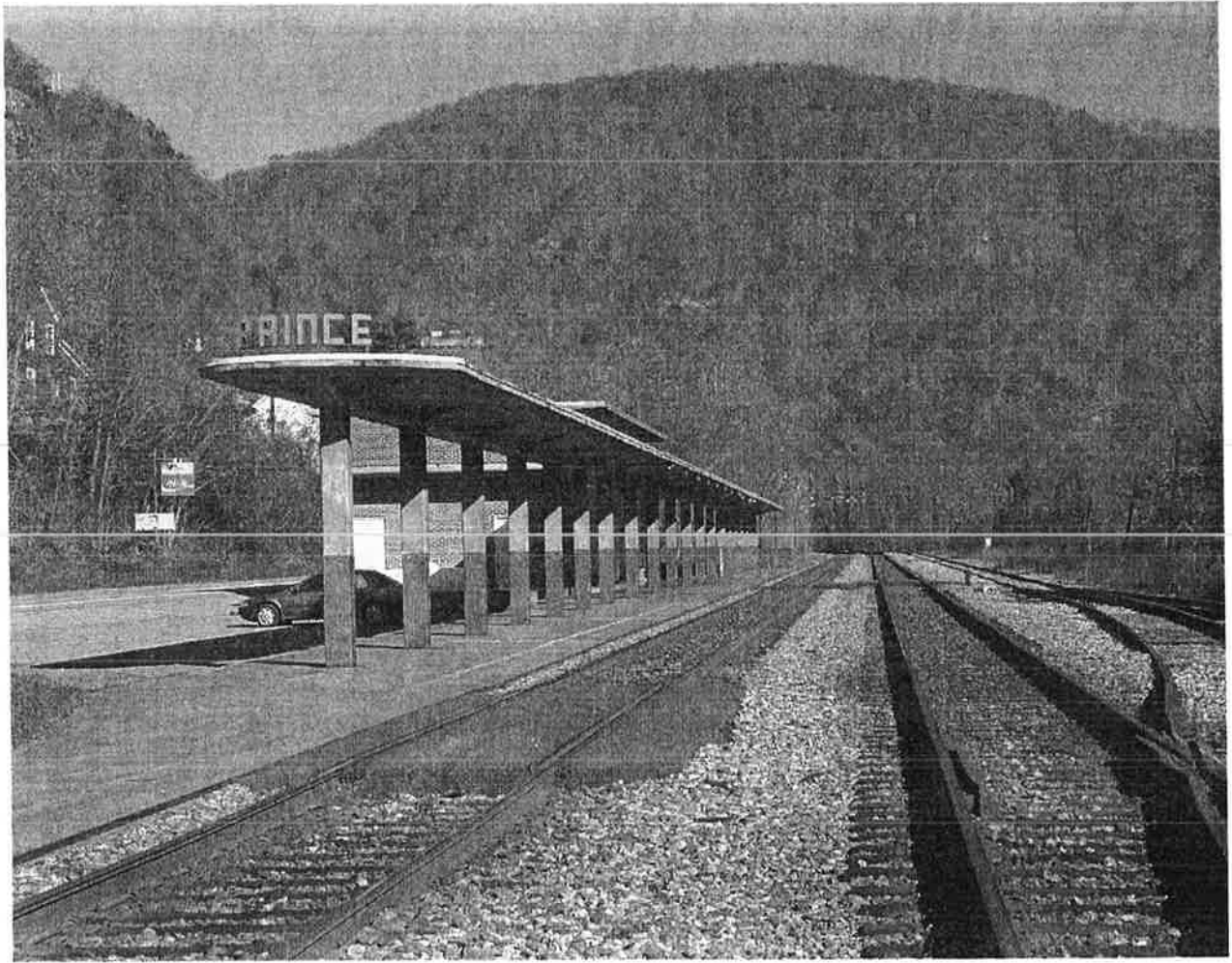


Figure 34: CSX Railroad Depot at Prince
IHTIA, 2003

Prince

Historical Background: The Prince Brothers, William and James, founded Prince in 1870 on an 300 acre tract, purchased in anticipation of the arrival of the C&O Railroad. The Prince brothers built a house and established a grocery and dry goods store and negotiated a right-of-way agreement requiring the C&O to locate a railroad station at Prince, which it did in 1880. Because of the store, Prince quickly became a commercial center (see Figure 32). In 1891, Prince became the shipping point for the Royal Mine which operated across the New River and delivered coal to the railroad via an aerial tram system. In fact, the post office for Royal was located next to the Prince Brothers' store. Prince's importance grew again with the construction a railroad bridge across the New River connecting the Piney Creek Branch with the mainline in 1900. With the new bridge came stronger ties with Beckley and growth as a commercial center. Never a large settlement, Prince's maximum population was about 250. The Art Deco-style Prince Depot, owned by CSX, was opened for passenger service in 1946. The Prince Store was listed on the National Register in 1986.¹⁰⁵

Statement of Significance: Many structures and homes, including the Prince Brothers store (see Figure 33) and the post office still stand at Prince. The significance of these buildings was not determined during the field work. Field work focused on the CSX-owned Art Deco style Prince Depot (see Figure 34), easily the most significant resource at Prince. Today it is the only manned depot between Charlottesville, Virginia and Charleston, West Virginia. The Prince Depot is potentially eligible for the National Register of Historic Places under Criterion C for its exceptional architecture design. Rating for the depot: "2."

Recommendation: Pending approval of CSX, the Prince Depot should be nominated to National Register of Historic Places.

Thurmond

Historical Background: William Dabney Thurmond of Minden established Thurmond in the early 1880s. It grew to be an important railroad town, serving as the commercial center of the New River coal industry. Across the New River was Southside or Southside Junction at the confluence of Dunloup (aka Loup) Creek and New River. While part of Thurmond, Southside's character was decidedly different. Thurmond was a dry town, while Southside tended to be wide open with saloons and gambling. Thomas McKell developed the area which included the Dun Glen Hotel, the finest hotel in the New River Gorge. In 1889, the C&O constructed a 4-track yard, passenger and freight depots, a turntable, water towers, and engine house at Thurmond. The years 1910 to 1930 witnessed the greatest growth at Thurmond and by 1930 it had a population of 450 (see Figure 35). Thurmond began to decline in the 1930s as many banks and other commercial enterprises relocated to Oak Hill and Beckley and the Dun Glen burned in 1930. A further decline came in the 1950s when the coal field began to play out and by the railroad's switch from coal to diesel fuel and the subsequent loss of jobs. In late 1960s, John Dragan started the first New River rafting company and Thurmond became the birthplace of the New River rafting industry. Now part of the New River Gorge National River,

¹⁰⁵Carden & Peters, History of Fayette County, pp. 544-47.

the Thurmond Historic District was listed in the National Register of Historic Places in 1984.¹⁰⁶

Statement of Significance: Thurmond is one of the last inhabited town in the New River Gorge. Although Thurmond has lost a number of its historic railroad resources, it retains the restored Thurmond Depot, as well as much of its commercial row (see Figure 36). There is an on going NERI building stabilization program. A recent kudzu control program has revealed additional cultural resources at Thurmond, such as sheds and foundations. Rating: "1"

Recommendations: The Thurmond National Register District should be expanded to include Southside Junction and the African-American Church above Dun Loup Creek. An eye to the future should be keep on the rafting industry as it is in its 35th year of operation. In the not-to-distant future, it will mark its fiftieth anniversary, and some of the resources associated with the rafting industry may well be eligible to the National Register.

Riverview

Historical Background: Located at the mouth of Mollys Run, about 0.5 mile upstream of Thurmond, Riverview was once a small railroad community, perhaps occupied by African-Americans in the historic period. Riverview reportedly predates the establishment of Thurmond.

Cultural Resources: Riverview today is only ruins. Only scattered foundations, perhaps a pair of bridge abutments (see Figure 37), and other surface artifacts identify the site.

Statement of Significance: Riverview has a high potential for historic archaeology, but it lacks many elements. However, its significance will increase if it is corroborated as an African-American settlement. Rating: "3"

Recommendations: The Riverview site needs to be surveyed and mapped. More research needs to be undertaken to determine who settled Riverview and its historic function.

Hinton

Historical Background: Located in Summers County, Hinton was first settled by Isaac Ballengee and John Hinton in the early nineteenth century, near the confluence of the New and Greenbrier Rivers. With the coming of the railroad in the early 1870s, Hinton grew rapidly and the courthouse was located there in 1875. The construction of the Summers County courthouse there in 1875 was instrumental in the incorporation of Hinton in 1880. One of the nation's first YMCA buildings was constructed at Hinton in 1891. In 1892, the C&O constructed a large railyard at Hinton comprised of a coaling station, turntable, seventeen locomotive roundhouse, car shop for forty cars, and a machine shop. The Hinton yard was an important subdivision headquarters where powerful locomotives

¹⁰⁶Unrau, "New River Gorge," pp. 70-74; a more recent and thorough assessment of Thurmond's historic structures is provided in Lisa Sasser, "Thurmond Historic Structures Assessment, New River Gorge National River, (Lowell, Massachusetts: National Park Service, Northeast Historic Preservation Center, 2001).



Figure 35: View of Thurmond
NERI Historical Collection



Figure 36: Downtown Thurmond looking south toward Thurmond Depot
IHTIA, 2003



Figure 37: Stone ruins at Riverview
IHTIA, 2003



Figure 38: Concrete Coaling Tower at Hinton
IHTIA, 2003

replaced the lighter engines used in the New River Subdivision for the ascent of the Alleghenies. The town continued to grow and had a population of 6,000 in 1907 and 8,800 in 1925. The change to diesel in the 1950s caused a decline, but Hinton remained an important rail center into the 1970s. Today Hinton has a population of 3,433. Because Hinton's residential and commercial districts possesses high historic integrity, the Hinton Historic District was listed in the National Register of Historic Places in 1984.¹⁰⁷

Cultural Resources: Most of Hinton's railroad-related resources have been lost. CSX razed the roundhouse in the early 1990s, but the Hinton Depot (see Figure 39) still stands unoccupied as well as the early twentieth century concrete coaling station (see Figure 38) and a few administration buildings. Both the coaling station and depot are included in Hinton's historic district. Only the depot building, however, is located within the park's boundaries. Rating: "2".

Recommendations: The Hinton Depot has a great potential for adaptive reuse, potentially to interpret railroading in the New River, or some other type of historic interpretation.

Fayette/South Fayette (Fayette Station)

Historical Background: Fayette was founded ca. 1873 by Martin Blume, who opened a mine here. Blume negotiated a right-of-way agreement with the C&O in exchange for free passenger service. In 1875 a post office was established at the settlement, and by 1910 Fayette had a population of 410. South Fayette was established by the Low Moor Iron Company. The two communities were connected in 1889, when the Fayette Station bridge was erected (a road to Fayetteville from South Fayette, State Route 16, was completed in the 1920s). The same year the railroad constructed a large freight house and depot at South Fayette. In 1906, the C&O acquired land at South Fayette from the Low Moor Iron Company and erected a section foreman's house. The depot and freight house were razed in the 1960s, and the section foreman's house was demolished in the late 1990s to make way for the Fayette Station rafting pick-up point facilities.¹⁰⁸

Statement of Significance: Field work revealed no historic resources at either Fayette or South Fayette. The Fayette Station Bridge, although reflecting its historic counterpart, was fabricated with all new steel, when completed in the late 1990s, and the loss of the Cole House and its outlying structures greatly diminish the historic integrity of the area. Rating: "3"

Recommendations: Further field work should be conducted to locate any historical archaeological resources.

¹⁰⁷Unrau, "New River Gorge," pp. 68-70; also see Summers County Historical Society, *History of Summers County, West Virginia* (Hinton, W.Va.: Summers County Historical Society, 1984).

¹⁰⁸Unrau, "New River Gorge," p. 75.

Keeney's Creek Branch Line

Historical Background: Various branch lines or C&O subdivisions were constructed which enabled the opening of additional mines along the tributaries of the New River. Several branch lines also prevented and deterred rival railroad lines from penetrating the gorge. Many of these lines were truly engineering marvels, with roadbeds snaking up the tributaries on very steep grades. The first short line was constructed in 1873, as a short spur up Laurel Creek to the New River Car Company's coke ovens (not Low Moor Iron Company as reported by Unrau) to supply its Quinnimont Furnace with coke. Branch line construction began in the early 1890s. Some were constructed by the C&O while others were built by coal operators and later absorbed by the C&O. Manns Creek railroad remained in private hands throughout its existence.¹⁰⁹ Perhaps the most spectacular of the branch lines was the Keeney's Creek Branch with its long switchback and multiple trestle crossings. Initiated in 1891 by John Nuttall, the line was completed to Tothwell in 1893, then extended to Lookout in 1904. The line linked Nuttall Station to mining communities such as Winona and Lookout up Keeney's Creek.

Cultural Resources: Despite some flood damage, the Keeney's Creek Branch roadbed is largely intact for much of its 7.8 mile length and its five trestles are still standing. The trestles do not appear to be from the 1892 construction, but plate girder replacements from ca. 1920 (see Figure 40). The increased weight of locomotives and rolling stock was undoubtedly the reason the trestles were replaced.

Statement of Significance: Keeney's Creek Branch is potentially eligible for inclusion in the National Register of Historic Places under Criterion A for its association with the development of the New River field and the history of the C&O; Criterion B for its association with John Nuttall; and Criterion C for engineering. Because it is a linear resource, it could be nominated as a Historic District, which would permit including the roadbed, trestles, and any other contributing resources which might be identified along its right-of-way in one nomination. Rating "2"

¹⁰⁹Eugene L. Huddleston, *Riding That New River Train: The Story of the Chesapeake & Ohio Railway through the New River Gorge of West Virginia* (Alderson, West Virginia: The Chesapeake and Ohio Historical Society, 1989), p. 46.



Figure 39: CSX Depot at Hinton
IHTIA, 2003



Figure 40: Steel plate girder bridge on Keeney's Creek
IHTIA, 2003

Tabular Summary of Management Information, Railroad Related Cultural Resources

Property Name	Location	Occupation Dates	Category	Rating
Quinnimont	Fayette County	1827 - Present	Standing structures, ruins	"2"
Prince	Fayette County	1870 - Present	Standing structures	"2"
Thurmond	Fayette County	1880 - Present	Standing structures	"1"
Riverview	Fayette County	Unknown	Ruins	"3"
Hinton	Summers County	ca.1820 - Present	Standing structures	"2"
Fayette/South Fayette	Fayette County	ca. 1873 - Unknown	None observed	"3"
Keeney's Creek Branch Line	Fayette County	1891 - Unknown	Standing structures/ruins	"2"

Revisions of Lumbering Historic Context

While there was timbering in the New River Gorge prior to the railroad, it was the arrival of C&O Railroad in the early 1870s which opened the region to exploitation. The harvesting of timber soon became one of the dominate gorge industries as timber operations began clearing the slopes and surrounding plateau of its virgin stands of hardwoods and conifers. The development of C&O branch lines and the infiltration of rival trunk lines like the Virginian and the Norfolk & Western enabled harvested timber and lumber to be shipped to eastern markets. Timber was also required by local markets to supply the burgeoning building, mine construction, and domestic needs of the gorge itself. The heyday of the New River Gorge timber industry was from the 1880s into the early 1910s, when large corporations heavily timbered the region, virtually harvesting all the virgin stands of timber. This huge endeavor required an equally large and culturally diverse workforce. To house its workers lumber companies, such as Meadow River Lumber Company, Blue Jay Lumber Company, and the Sewell Lumber Company established towns and lumber camps in key locations around the gorge. In this same period, saw mill technology changed as well from the use of circular saws to the erection of huge bandmills, capable of cutting thousands of board feet of lumber per day.¹¹⁰

Current Scholarship

The documentary history of the West Virginia timber and lumber industry is extremely poor. Principally two works, A. B. Brook's *West Virginia Geological Survey: Volume Five, Forestry and Wood Industries* and Roy B. Clarkson's *Tumult in the Mountains: Lumbering in West Virginia, 1770-1920* are consistently cited. Both studies have their merits, but both are lacking in any form of a larger context of West Virginia's lumbering industries. Since Harlan Unrau's report was finished, two new books related to West Virginia's lumber industry have been published. The first is *West Virginia Narrow Gauge; Manns Creek Railway*. Published in 1999, this monograph focuses on the town and industries of Sewell, Clifftop, and Landisburg and their relationship with the Manns Creek Railway. The authors Ron Lane and Ted Schnepf provide brief but useful histories of these coal and lumber towns. The second and more important is the 1998 publication of *Transforming the Appalachian Countryside: Railroads, Deforestation, and Social Change in West Virginia, 1880-1920*, by Ronald Lewis. While not strictly about the New River Gorge, Lewis's book examines the history of the West Virginia's logging industry in a much broader context than any previous publication.

¹¹⁰Unrau, "New River Gorge," p. 83.

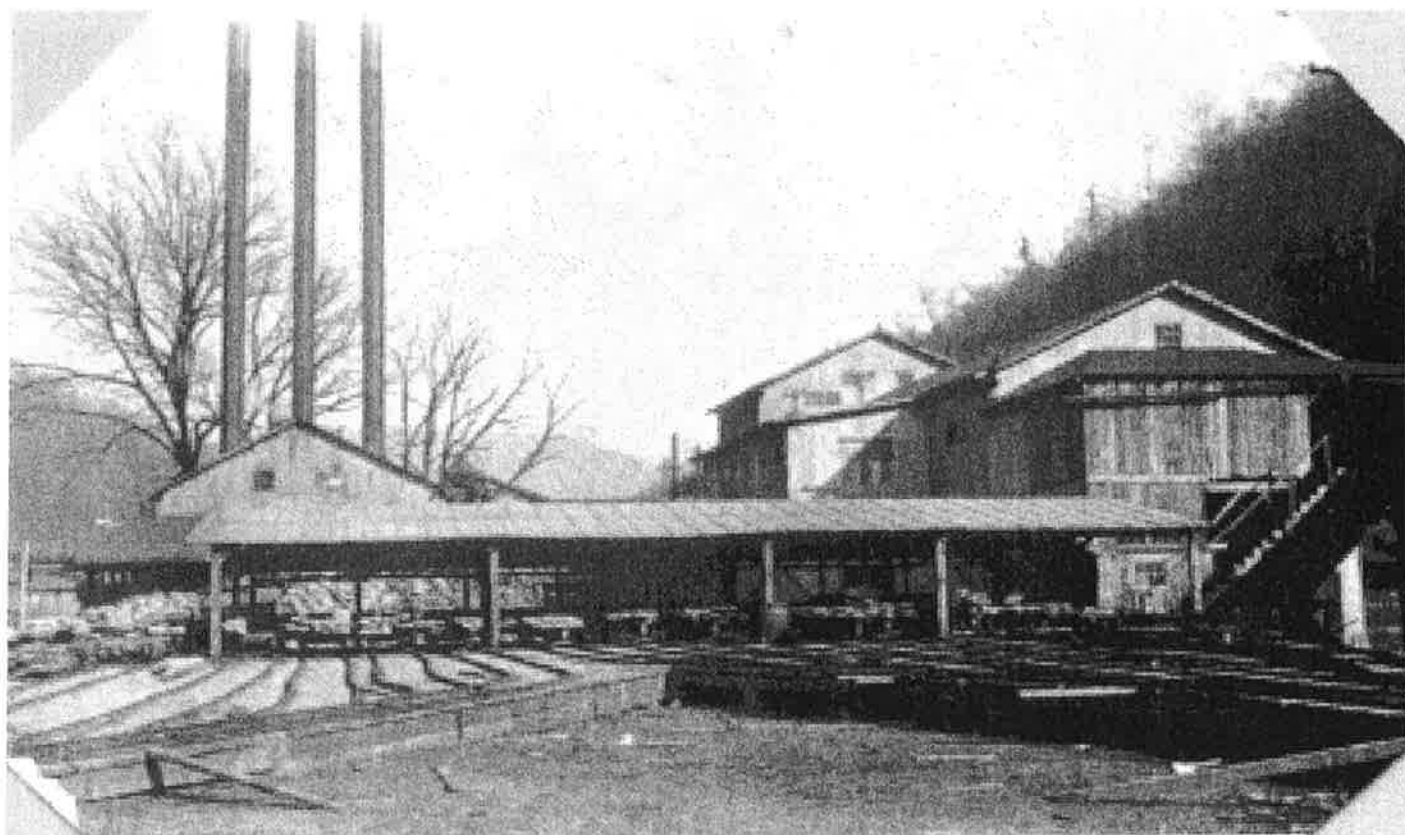


Figure 41: Lumber Mill at Hamlet
NERI Historical Collection

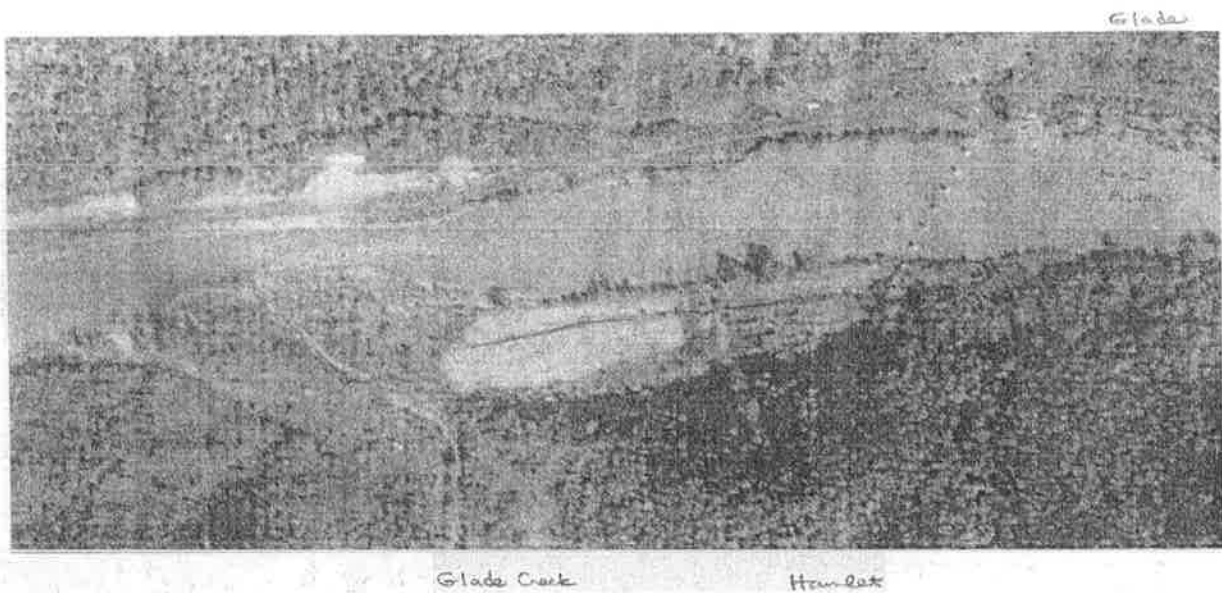


Figure 42: 1945 Aerial Photo of Hamlet showing railroad piers
across New River to the upper right

Inventory and Evaluation of Cultural Resources Related to Lumbering

Hamlet

Historical Background: Hamlet was a lumbering community located near the mouth of Glade Creek in Raleigh County. The Glade Creek gorge accessed the stands of timber near present-day Crow where a circular saw mill was operated by the Beatty Lumber Company. In ca. 1898, the Blue Jay Lumber Company constructed a narrow gauge railroad up Glade Creek to the Crow area. Sawn lumber was shipped by rail to the mouth of Glade Creek and ferried across the river to Glade where it was shipped on the C&O. Socially and economically Hamlet was tied to the town of Glade across New River, first by a ferry and after 1923 via a railroad bridge. In the late 1890s, Hamlet was established with the erection of a large band mill there, probably by the Blue Jay Lumber Company (see Figure 41). A small settlement arose on the terrace above the river. After the sawmill burned in 1936, the town was dismantled and the workers moved onto other mill towns (see Figure 42).¹¹¹

Cultural Resources: The Hamlet sawmill site is in a state of ruins. Most prominent are the many foundations associated with band mill (see Figure 43) and the remains of the mill pond and waterworks, and rail line and piers for the railroad. There are many other above ground features including, a fire hydrant (see Figure 44), the former railroad siding that serviced the mill, and the piers which carried the lumber railroad across the New River to Glade (see Figure 45). This site has apparently lain undisturbed for the last 70 years and has a very high archaeological potential. Hamlet is the best site in the New River Gorge associated with the production end of the lumbering industry. It is potentially eligible for inclusion in the National Register of Historic Places, under Criterion D, as an archaeological site. Rating: "2"

Recommendations: The above-ground features of the site should be surveyed and mapped, and Phase II testing undertaken to ascertain the below ground features. There is dearth of information about Hamlet, so more research is necessary to understand what is on the ground currently.

Meadow Creek

Historical Background: Located in Summers County, Meadow Creek was apparently one of the first lumber towns in the New River Gorge. The 1981 Marshall study reports that the first sawmill to operate at Meadow Creek was run by a Mr. Moore of Pennsylvania, who was supplanted by B. F. Hall of Ohio and Owen Barse, Jr. from Massachusetts. Hall and Barse operated an extensive stave, lumber, and mercantile business there (see Figure 46). Meadow Creek is also the junction of the Sewell Valley and C&O railroads. The Sewell Valley Railroad (later part of the Nicholas, Fayette and Greenbrier Railroad) extended forty miles up Meadow Creek to Rainelle and along the Meadow River to Nallen, West Virginia. It was principally a lumber railroad, but also transported coal from a mine

¹¹¹A. B. Brooks, *West Virginia Geological Survey, Vol. 5, Forest and Wood Industries* (Morgantown: Acme Publishing Co., 1911), p. 259; Huddleston, *Riding That New River Train*, pp. 85-86.

near Rainelle. In 1924 Meadow Creek had a population of 100.¹¹²

Cultural Resources: Today, nothing of the sawmill remains at Meadow Creek. This small community has a bank building and a post office.

Statement of Significance: With no archaeological remains, the site is clearly not potentially eligible for the National Register. Rating: "3"

Recommendations: More research is needed to determine which buildings in Meadow Creek or other nearby communities are associated with the lumber industry. Once the necessary research is completed, significant buildings and structures might be nominated to National Register of Historic Places individually or as an historic district.

Landisburg

Historical Background: Located in Fayette County within Babcock State Park, Landisburg was established in 1908 by the Sewell Lumber Company. The company town was named for H. M. Landis, secretary and treasurer of the company. Sewell Lumber Company made an agreement with the Longdale Iron Company to ship lumber to Sewell on the Manns Creek Railway to the C&O mainline and a five mile long narrow gauge railroad was constructed connecting the Manns Creek Railway at Clifftop with Landisburg. The mill and town were quickly established along its right-of-way fronting Glade Creek. Along with the eight foot band mill and mill pond, approximately thirty dwellings, company store and office building were constructed. After the failure of the Sewell Lumber Company in 1914, its assets were acquired by the Babcock Coal and Coke Company. Babcock had acquired the Longdale tract and assets including the coking operations and Manns Creek Railroad, in 1913. Babcock increased production with the installation of a double band mill and at its peak employed 300 workers. For the next seventeen years many million board feet of lumber sawn at Landisburg (see Figure 47), but by 1929 Babcock had logged-out its 40,000 acres of timber lands. The mill was abandoned at this time and the town declined rapidly thereafter as workers and their families moved onto other logging operations.¹¹³

Cultural Resources: Today nothing remains of the Landisburg sawmill operation or the historic company town once located along Glade Creek. There is a vernacular bridge spanning Glade Creek, which might date to the historic period and there is potential for archaeological remains of the band mill and town site. There are, however, a number of curious concrete block houses fronting State Route 41, which are not likely associated with sawmill, but were built as tract housing. Additionally, there is cut stone bungalow, the 1917 Dr. John E. Hughart House, once occupied by the Landisburg

¹¹²Marshall, "Cultural Research Project," p. 267; Brooks, *Forest and Wood Industries*, p. 11; and Huddleston, *Riding That New River Train*, pp. 86-88.

¹¹³Lane and Schnepf, *Sewall: A New River Community*, pp. 19-23.



Figure 43: Lumber Mill foundation at Hamlet
IHTIA, 2003



Figure 44: Fire hydrant at Hamlet
IHTIA, 2003

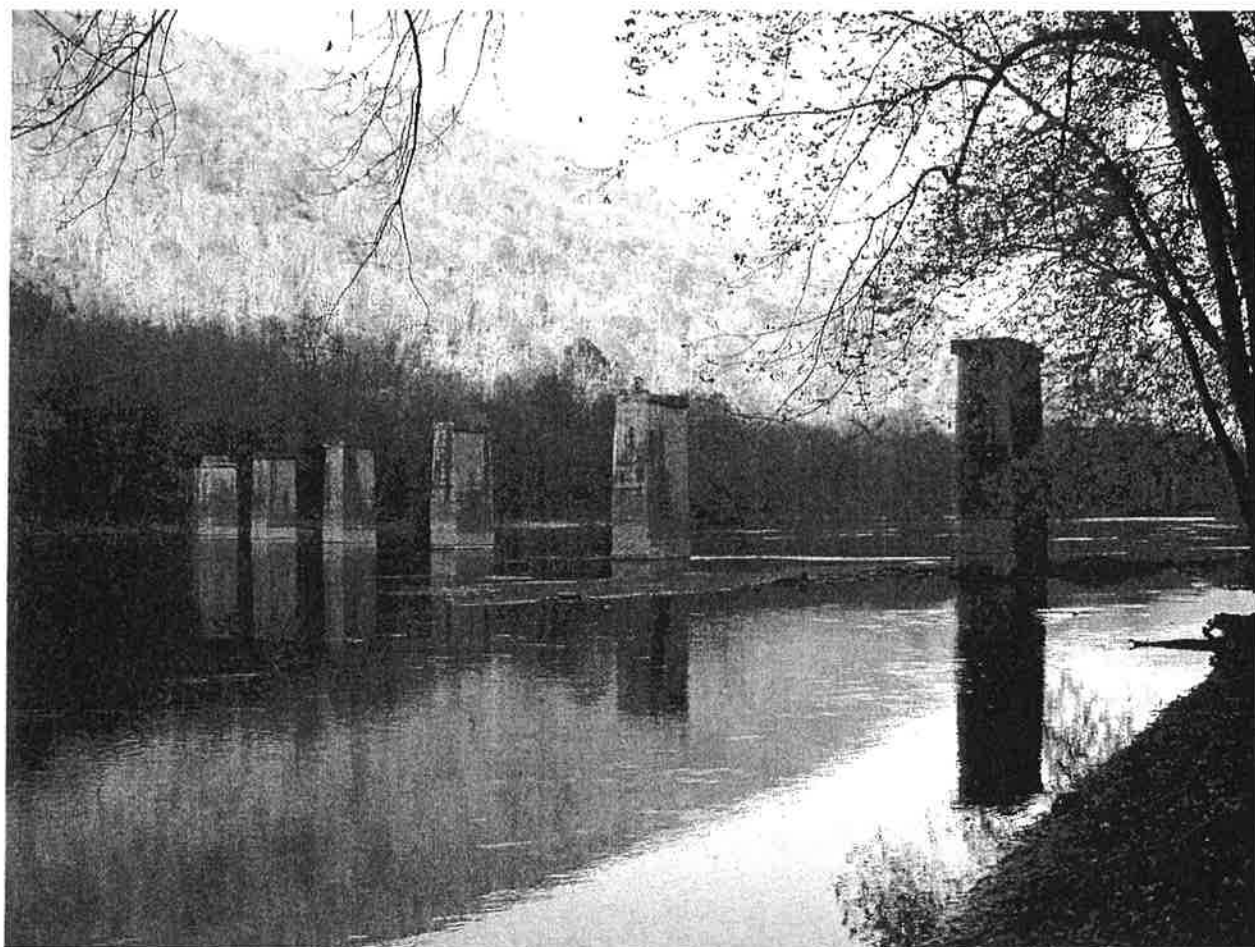


Figure 45: Stone piers of railroad at Hamlet
IHTIA, 2003



Figure 46: Lumbermen at Meadow Creek
NERI Historical Collection



Figure 47: Panorama of Babcock Coal & Coke lumbering operation at Landisburg
NERI Historical Collection

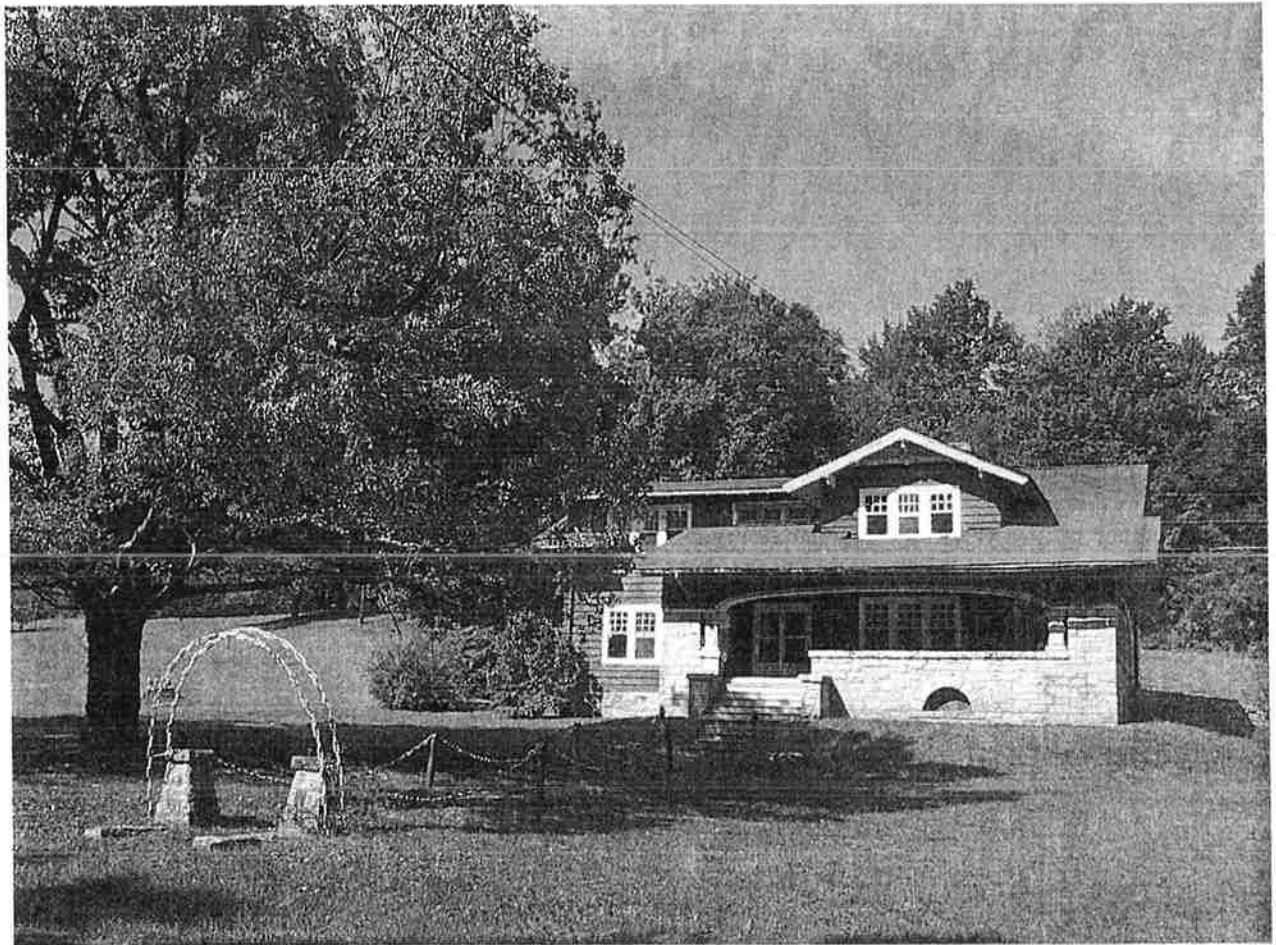


Figure 48: John Hughart company doctor's home off Route 41 near Landisburg
IHTIA, 2003

company doctor (see Figure 48). It was listed on the National Register in 2001.¹¹⁴ Rating for sawmill site: "3."

Recommendations: Phase I background research and archaeological testing should be conducted to determine if there are any subsurface remains. Although probably not very significant, there needs to be more research to establish the builder and function of this small cluster of houses located just west of the Hughart House.

Tabular Summary of Management Information, Lumber Related Cultural Resources

Property Name	Location	Occupation Dates	Category	Rating
Hamlet	Raleigh County	ca. 1898 - 1936	Ruins	"2"
Meadow Creek	Summers County	Unknown	Standing structures	"3"
Landisburg	Fayette County	1908 - 1929	Standing structures	"3"

¹¹⁴ Dr. John Hughart House, unpublished National Register of Historic Places Nomination, listed 5 February 2001, NERI files.

Euro-American Settlement and Agriculture Historic Context

Introduction

The Unrau study provides a useful local context for early settlement. It covers the early exploration of the New River, relationships between European powers and Native Americans, and industrialization, but in many ways it lacks larger regional and national perspectives. Unrau covers conflicts and settlement on the Virginia frontier and local developments on the lower New River well, but the transition from subsistence to market-based agriculture is neglected. A review of scholarship published in the past twelve years reveals that there are a broad body of ideas on Appalachian immigration, movement, and the dynamics of the American frontier that can advance our understanding of early settlement and agriculture along the lower New River. This context covers that ground broadly, citing a range of useful literature and ideas that should be considered when interpreting and evaluating the history and remains of early settlement in the lower New River in West Virginia.¹¹⁵

This context is divided into three parts that proceed chronologically and thematically. The first section (1710-1750) introduces the first two great migrations in American history: Immigration from Europe and movement across America from east to west. The general motivations of the newcomers, their origins, and destinations are explained. Although there is no settlement in the central Appalachians in this period, understanding these newcomers is important, since they form a large proportion of the migrant people that made the second migration in the late 1700s and 1800s.

The second part explains some key concepts in early settlement scholarship such as frontiers, barriers, and transportation. These themes and our understanding of them have improved through the past fifty years with the increasing number of humanities scholars researching and writing on topics related to early Appalachian settlement (1750-1790s). In this section we review frontier scholarship and the important contributions that have been made over the past fifty years.

The third section looks deeper into American settlement patterns as transportation improvements bypass the New River Gorge and spread across the United States (1790s-1870). It examines a variety of factors that left the gorge sparsely settled deep into the nineteenth century including the tremendous physical obstacles that made transportation difficult in and through the gorge and lack of areas suitable for farming, particularly when compared to those nearby on the Greenbrier River watershed. As Native American conflicts receded quickly to the west, the rich agricultural potential of Ohio, Indiana, and Illinois diverted immigration past the Appalachian Plateaus. Improvements in transportation like the National Road and Erie Canal bypassed this section of Appalachia, as did the early railroads, which flooded the Appalachian market with cheap Midwestern farm goods that devastated small commercial farmers.

In the final section, these national and regional contexts inform our understanding of developments at the local level, in and around the New River Gorge in West Virginia. Here historic cultural resources

¹¹⁵ Unrau, "New River Gorge," pp. 107-135.

related to early settlement are examined in detail and evaluated. Recommendations for future management and interpretation are provided.

New Arrivals 1710-1750

The early exploration of western Virginia in the seventeenth to mid-eighteenth century is covered well in Unrau's 1996 study and by numerous works by Otis Rice and others. Likewise the gradual migration and expansion of European settlements toward the interior of the present U.S. by 1700 is well understood: the Spanish expanded from present Mexico; Florida and the Caribbean; the French dominated trade from the St. Lawrence and Great Lakes and moved down the Mississippi; and the British moved toward the Appalachians from the eastern seaboard. The settlement of central Appalachia and the lower New River would come from the British colonies, mainly Virginia and Pennsylvania, but it would not occur until much later. This section compliments the work of Unrau and Rice, focusing on the ethnic groups that would eventually settle the region and addressing the indigenous population that was displaced.¹¹⁶

Our understanding of the earliest European settlers in the New River Gorge can take a lesson from recent studies in Appalachian history where much has been gained by looking closely at their European roots and regional traditions brought from the "old country." The new wave of immigrants that arrived in British North America in the early eighteenth century was different than their predecessors. Who were these people? Why did they come? Where did they settle? And what customs did they bring with them? The bulk of these newcomers came from Germany and the British Isles. Many were destined for Pennsylvania, a colony touted for its religious freedom and high potential for land ownership. Unlike the other colonial leaders, William Penn decided to throw open Pennsylvania's borders, inviting comers from all nations to settle his lands. While many landed in Philadelphia, many others avoided the big city altogether and instead took a route into the Chesapeake Bay and Susquehanna River Valley. These people took part in the first two of America's three great migrations: from Europe or Africa to America and from east to west.¹¹⁷

Many Germanic people fled their homeland *en masse* in the 1710s following several decades of war. Large portions of present day Germany had been overrun by warring armies for nearly seventy of the previous hundred years. In addition religious freedom was unknown throughout Germany as the land's countless kings and princes determined the religious persuasion of their subjects. The Germanic people made up such a large percentage of frontier Pennsylvania's population that they were often collectively referred to as the Pennsylvania "Deutsch" (the German word for "German").

¹¹⁶ Unrau, "New River Gorge," pp.108-9; Otis K. Rice, *Allegheny Frontier: West Virginia Beginnings, 1730-1830* (Lexington: University Press of Kentucky, 1970), pp. 9-30; Colin McEvedy, *The Penguin Atlas of North American History to 1870* (Penguin, 1972), pp. 44-50.

¹¹⁷ Robert D. Mitchell, ed., *Appalachian Frontiers: Settlement, Society and Development in the Preindustrial Era* (Lexington: University Press of Kentucky, 1991) pp. xii-xiii; 32-54; Edwin Tunis, *Frontier Living* (Cleveland: World Publishing Company, 1961), p. 13. The third of the great migrations was from rural to urban settings.

Over the years this was Americanized into a confusing misnomer, the Pennsylvania “Dutch.”¹¹⁸

The second major source of immigration in the early eighteenth century came from Ireland. Most of the newcomers that arrived on the boats from Ireland were Scotch-Irish. Just as the Pennsylvania Dutch were not Dutch, the Scotch-Irish were not Irish. Rather they were Scotch that had emigrated to Ulster in Northern Ireland in the seventeenth century before being pushed away by restrictive laws and tariffs that prevented them from importing goods to their traditional markets in England. Like the German emigrants, they also left their homes due to religious persecution, for the king of England forbade their practice of Presbyterianism.¹¹⁹

This first great migration, from Europe to the New World begat a second great migration; this one (generally) from east to west across North America. In addition to newcomers like the Germans, Scotch-Irish, and other smaller groups, many of the second and third generation offspring of English settlers also viewed the West as a land of new opportunity. But it was not only Europeans that moved west. So too did the Native American Indian tribes.¹²⁰

The growth of European settlements along the coastal plains and Piedmont of New England and the Mid-Atlantic throughout the seventeenth century and early eighteenth had a devastating effect on the Native American population. Small pox, influenza, and other diseases arrived in the sixteenth century with the first explorers, wiping out a large proportion of the population and prompting others to begin a westward migration that would continue for generations. Trading and military alliances promoted by the British and French caused further conflicts and displacements. A prime example of this migration was the Lenape, which the English called Delaware because they lived along the river and bay of that name at the time of European contact. William Penn had respected their rights to the land, but successors ruling Pennsylvania after his death in 1728 were not so enlightened. Subservient to the powerful Iroquois and swindled by fraudulent treaties, the Delaware found themselves at the Susquehanna River in the 1740s, and most moved to the Ohio Country by the 1760s.¹²¹ Maps depicting Virginia in the seventeenth and most of the eighteenth century reveal the limited knowledge that European explorers settlers had of the region, particularly the lower New River. Among the most famous of these, the Fry-Jefferson Map, was completed by Thomas Jefferson’s

¹¹⁸Mitchell, *Appalachian Frontiers*, pp. 46-48; David Hackett Fischer and James C. Kelly, *Bound Away: Virginia and the Westward Movement* (Charlottesville: University Press of Virginia, 2000)..

¹¹⁹Kenneth Keller “What is Distinctive about the Scots-Irish?” in Mitchell, *Appalachian Frontiers*.

¹²⁰Fisher and Kelly, *Bound Away*. p. 67; Mitchell, *Appalachian Frontiers*, pp. 56-91.

¹²¹Gloria Jahoda, *The Trail of Tears* (New York: Holt, Rinehart & Winston, 1975); Michael Paul Rogin, *Fathers and Children: Andrew Jackson and the Subjugation of the American Indian* (New York: Knopf, 1975).

father, Peter, and a colleague in 1751. It's treatment of the New is rudimentary at best and completely wrong by today's standards. It shows the "Greenbrier" and "Cole" Rivers as major tributaries, but the course of the New River between the two is a complete fabrication. It includes a massive fictional "S" near the mouth of the Greenbrier, then a near bee-line toward the northwest to the mouth of the Cole.(see Figure 49)¹²²

This map marks the end of one era and the beginning of another. It is indicative of the Virginia Colony's interest in developing the West. In the previous decade, millions of acres of land were handed out by the Virginia Council. James Patten petitioned for 200,000 acres on the upper reaches of Wood's River in 1743. John Robinson received a grant for half that on the Greenbrier in 1745, and in 1748 about two million acres were given out to prominent Virginians in six companies, including Thomas Walker's Loyal Company and Thomas Lee's Ohio Company.¹²³ These land grants would cause controversy back east, but more importantly, they intensified the violent clash between Indians and European settlers that would last for decades.¹²⁴

Barriers, Frontiers, and Conflicts 1750-1790s

Most communication in colonial America during the eighteenth century was carried on by water. Because of the poor quality and high price of overland transportation in the colonies, all major towns and most of the smaller ones were located on or near a major water course. An overview of transportation corridors ca. 1750s to 1800 includes early trails and river navigation. The early routes through New York were the Hudson River and Genesee Road to the Great Lakes; Early Maryland and Pennsylvania routes were the Susquehanna and Potomac Rivers, Forbes Road and Braddock's Road, which roughly follows the path of the soon-to-be-built National Road.. In Virginia newcomers and their children moved along its many rivers and hoards made their way down the Shenandoah Valley into the valley of Virginia and beyond by way of the Great Wagon Road. Between 1750-1790s, key barriers included the rough and unforgiving landscape of the Appalachians and physical struggles with the indigenous peoples, French, and English.¹²⁵

The first settlements on the New River in Virginia and North Carolina were made in the 1750s to 1770s. These pioneers first settled the New River Valley by way of the Shenandoah and James River Valleys near the crossing of the Wilderness Road. Settlements on the New and Greenbrier rivers followed, including those at Crump's Bottom (also known as Culbertson's Bottom). Additional early

¹²²John Alexander Williams, *West Virginia: A History* (New York: W.W. Norton, 1984), p. 19.

¹²³Wood's River is later renamed New; Greenbrier becomes Greenbrier

¹²⁴Max Savelle, *A History of Colonial America* (Hinsdale, Ill.: Dryden Press, 1973), pp. 412-414; Kenneth P. Bailey, *The Ohio Company of Virginia and the Westward Movement* (Glendale, Calif.: The Arthur H. Clark Company, 1939).

¹²⁵Mitchell, *Appalachian Frontiers*, pp. 2-6; 8-24; 51-63.

settlements on the Virginia frontier occurred on and near the Potomac River and a bit later in spots along the Ohio River and its tributaries (see Figure 50). Throughout the second half of the eighteenth century, pioneers moved rapidly west and migration moved quickly through Appalachia to settle the mid- and far West. Interrupted only slightly by warfare with the Indians and treaties, like that following the French and Indian War, that resulted in the temporary expulsion of settlers in the 1780s and 90s.

Over the past fifty years scholars have developed new ways of thinking about life on the frontier, the forces that influenced its development, and even the idea of “frontier.” The concept, first introduced as a historical theory in the 1890s, reflects Euro-American perceptions of westward territorial expansion since views of Native Americans were not considered in its formulation. In effect, it legitimizes the more deeply ingrained idea of Manifest Destiny, even going so far as proclaiming the frontier as the birthplace of American democracy, self-sufficiency, and adaptability. At the same time, it has become laden with host of pejorative notions denoting the backwardness, poverty, and isolation of certain American mountain sub-cultures, particularly in Appalachia.¹²⁶

This section reviews some of the more influential thinking on the subject including the work of recent historians that have introduced concepts such as the *extended frontier* and *multiple frontiers* as a means of furthering our understanding of early life in central Appalachia.¹²⁷ Among the writers that have considered Appalachian settlement in the context of American development, few compare to John Alexander Williams (2001). His concept of Dunmore’s wedge is an efficient vehicle for explaining and understanding the opening up of transmontane area and Midwest for wider settlement. The Appalachians stood as a great barrier to the eighteenth century European settlers. The two most inviting national pathways through the mountains were the Hudson-Mohawk valleys through upstate New York to the Great Lakes and the Great Valley to the Cumberland Gap. Yet as Williams explains, human barriers blocked these “most attractive routes.”

They were blocked by foreign powers, variously France, Britain, and Spain, and by the most powerful Indian nations, the Iroquois in the north, Cherokees, Creeks, and Choctaws in the south. It was man and not nature that made the Chesapeake-Ohio corridors the spearhead of advance into the interior. The Anglo-American frontier surged through the mountains here in spite of great natural obstacles precisely because of the region’s border location. It was territory remote from the centers of foreign power on the St. Lawrence and Mississippi, claimed but not

¹²⁶Frederick Jackson Turner, *Frontier in American History* (New York: Holt, 1920); for a analysis of how the frontier concept has been applied to Appalachia see Henry D. Shapiro, *Appalachia on Our Mind: The Southern Mountains and Mountaineers in the American Consciousness, 1870-1920* (Chapel Hill: University of North Carolina Press, 1978).

¹²⁷Patricia Givens Johnson, *The New River Early Settlements* (Pulaski, Virginia; Edmonds Printing Inc., 1983), pp.6-14; 183-203; Fisher and Kelley, *Bound Away*, pp. 183-203..

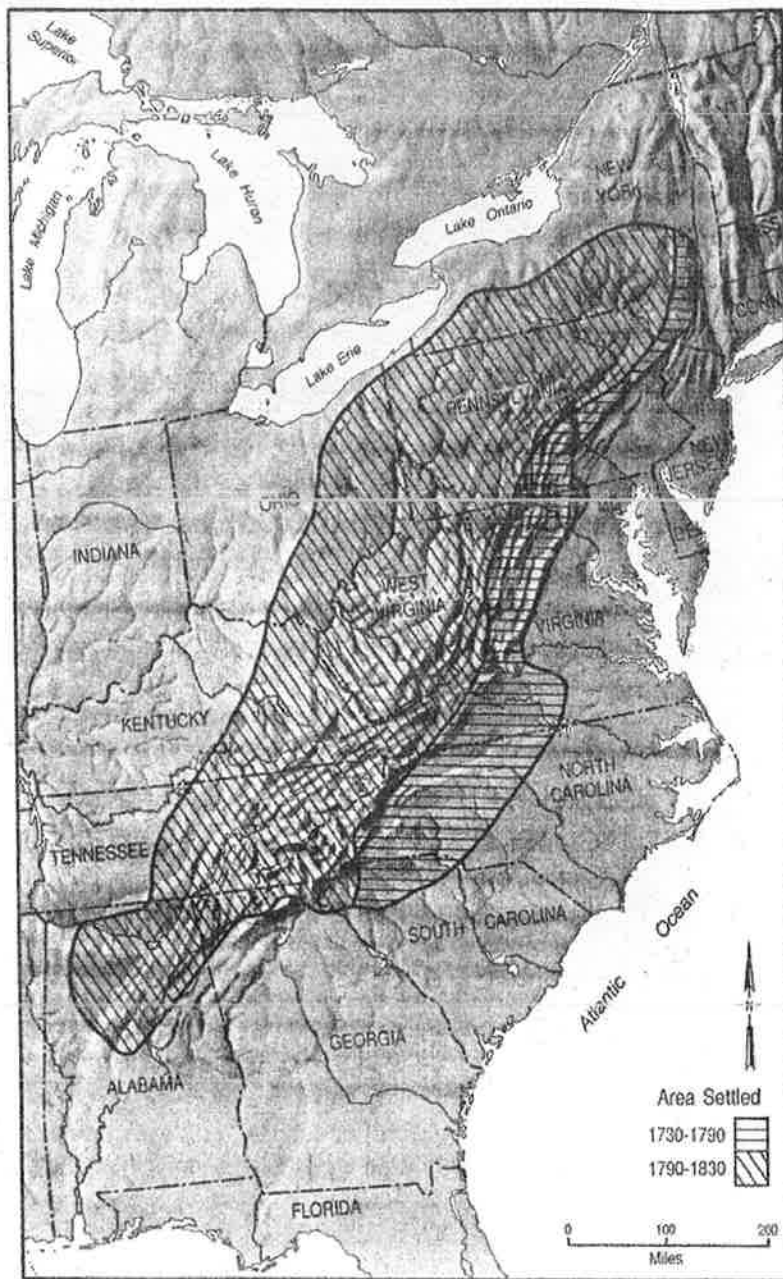


Figure L1. Appalachian Frontiers, 1730-1830

Figure 50: Appalachian Frontiers, 1730-1830
Mitchell, *Appalachian Frontiers*

contested by the most powerful Indian tribes, (and) unoccupied by any significant groups of Indians.¹²⁸

With Dunmore's Wedge, Williams explains the bypassing of West Virginia in simple terms. "The changes that followed the Revolution opened up more inviting pathways of empire than the rivers that flowed past Point Pleasant [the Kanawha and Ohio]; the Revolution also made available millions of acres of land more attractive than the uplands drained by these rivers."¹²⁹ In the course of a decade the frontier had moved from Appalachia to the fertile Mississippi Valley.

Forty years before William's wrote of Dunmore's wedge in *West Virginia: A History*, Edwin Tunis's *Frontier Living* (1961) presented readers with a new way of understanding life in early American frontier communities. With a fine balance of words and original illustrations, Edwin Tunis created a new cultural interpretation of frontier life. Such communities were composed of forts, springs, farmland, and transportation crossings. Most were in the Piedmont, but soon daring settlements clustered near forts on the Upper Potomac and Ohio Rivers and their tributaries, and also near the Cumberland Gap. Tunis' attempts to empathize with early settlers was as exhaustive as it was comprehensive. This quest for empathy with pioneers families made Tunis less sympathetic to Native Americans, so as public sentiment shifted toward empathy with Native peoples, his work was open to criticism for being one-sided and unbalanced. Still, his social and material histories of the frontier published in the 1950s and 60s were vast improvements over the work of earlier historians.¹³⁰

The main influence on historians before Tunis was the *frontier thesis* of Frederick Jackson Turner. In 1893 Turner suggested that the presence of a frontier was a central and powerful influence in the spirit and culture of America. He was inspired by the coincidence of two events. First, a government agency had reported earlier that year that it could no longer delineate the western frontier. There was no longer a frontier. Second, the World Columbian Exposition was being held in Chicago to celebrate the 400th anniversary of the discovery of America. Turner used this venue to present his thesis as a challenge the dominant *germ theory* of cultural diffusion prevalent among historians of the day. As history moves in cycles, so too does the philosophy and writing of history, so that recent historians, such as Robert Mitchell and Ken Fones-Wolf, have returned to a variation of germ theory.¹³¹

¹²⁸Williams, *West Virginia: A History*, p. 20.

¹²⁹Williams, *West Virginia: A History*, p. 21; See also John C. Inscoe's introduction in John Anthony Caruso, *The Appalachian Frontier: Americans First Surge Westward* (Knoxville: University of Tennessee Press, 2003), for an outstanding review of frontier scholarship.

¹³⁰Tunis, *Frontier Living*; Eric Sloane followed Tunis as the leader of this genre.

¹³¹Fischer and Kelly, *Bound Away*; Ken Fones-Wolf and Ronald L. Lewis, eds. *Transnational West Virginia: Ethnic Communities and Economic Change, 1840-1940* (Morgantown: West Virginia University Press, 2002), a collection of twelve essays demonstrating that the early history of the state cannot be understood without recognizing the

Robert Mitchell is among the foremost authorities on Appalachian settlement. He published the first new social history of frontier Appalachia in 1977 entitled *Commercialism and Frontier* and edited *Appalachian Frontiers* in 1991 which contains a number of important ideas for understanding agriculture and early settlement in the New River Gorge region. In his first work, Mitchell looked at the evolution of the earliest permanent Appalachian settlements in mid-nineteenth century Shenandoah Valley and found that “commercial trends” were “the most dynamic element in the emerging pioneer economy.” In his research he demonstrated that the percentage of goods marketed in such settlements rose from less than 10% of total production in the 1730s and 40s to 30-50% as the population grew in size and diversity over the subsequent decades. In other words, frontier production began primarily for subsistence, but expanded to serve the growing local market as a settlement matured. Mitchell concluded that commercialism was a critical but poorly understood dynamic in pioneer studies.¹³² While the Shenandoah Valley and its extension into the Valley of Virginia to the southwest were undergoing such developments in the second half of the eighteenth century, the Appalachian Plateau contained only a few isolated settlements: most notably those near the Cumberland Gap and in the Upper Ohio River Valley. As this extended frontier was settled in the nineteenth century, places like the lower New River experienced a similar phenomenon.

A Land of Formidable Obstacles 1790s-1873

In *Appalachian Frontiers*, Mitchell assembled an impressive array of scholars that investigated a wide range of ideas and themes in the history of the settlement of the transmontane region. Among the most important for this agriculture and settlement context are his own introduction, Van Beck Hall’s “Politics of Appalachian Virginia, and Paul Salstrom’s “Agricultural Origins of Economic Dependency.” Mitchell, Salstrom, and Hall present their readers with rich ideas, not just about the frontier, but about a series of frontiers, and their concept of multiple frontiers aids in our understanding of Appalachia generally and southern West Virginia in particular. Mitchell summarizes their collective thesis succinctly:

Insofar as we conceive of a frontier as a phase of initial pioneering that all newly settled areas undergo, the Appalachians was not so much a “retarded” frontier as a prolonged one. More specifically, it was a series of frontiers in which the critical variables were the timing and duration of subsistence agrarian forms. The frontier experience was not simply a “phase that passed through” the Appalachians but rather a complex process of differential change that left some places at basic subsistence and other places deeply involved in market operations. In general, those areas in proximity to the Atlantic seaboard—the western Piedmont, ridge and valley, and eastern plateau—were settled first, between the 1730s and 1780s, and had developed considerable economic and social complexity by the early nineteenth century within

diverse waves of migrant workers and the culture of their origins.

¹³²Mitchell, *Appalachian Frontiers*, pp. 4-6.

a free-labor, rather than a slave-labor, context. Areas farther west or in the less accessible southern Blue Ridge were occupied primarily between the 1790s and the 1830s, and the developmental potential of these areas before 1880 was therefore limited, preempted by levels of productivity and trade in the earlier settled areas to the east. Thus, prior to industrialization at least, an east-west regionalization of the Appalachians appears to be more realistic than a north-south distinction.¹³³

While these three writers unite in recognizing multiple frontiers, each defines them in a different way. Although they might at first seem contradictory, their ideas complement each other to help us to better understand the settlement of Appalachia. Where Mitchell identifies two frontiers, Salstrom defines an "intermediate" frontier to the east of the Great Valley. Hall also delineates two but in an evolving temporal context, based on access to local market centers. According to Hall's thinking, the Lower New River settlements were not as isolated as they might appear because of access to nearby market centers. Along with Mitchell's introduction, his work contextualizes the other essays: painting a picture of Appalachia in the New Republic where the way of life and political agendas of market Appalachia conflicted with those that were more isolated and agrarian. Salstrom's closing chapter serves as a bookend to Mitchell, bringing the series of essays to a close as he ties successes of industrialization in the Gilded Age to the failure of farming in mid-century. These are best understood in the larger context of American transportation and the westward migration, the subjects to which we now turn.¹³⁴

As noted in the last section, communication in the country was by carried on primarily via water routes due to the poor quality and high price of overland transportation. With most established settlements in the east and fledgling communities of the west centered on navigable waterways, the need for improved connections between those of the east with those of the west was clear to many. The bounty of the territories west of the Appalachians was vast, but young America's grasp on them was far from certain. In addition, land holders and local leaders in the west demanded better local roads between the western settlements as a boon to commercial development.¹³⁵

The settlement of the land that comprises the New River Gorge National River began in the 1790s. It was promoted by land grants and the completion of the first state road in the region. In the 1780s Virginia established a number of state roads including two through the western country in 1786: the Winchester to Morgantown road by way of Romney and the "Old State Road" from Lewisburg to the

¹³³Mitchell, *Appalachian Frontiers*. p. 3.

¹³⁴Ibid., "Introduction: Revisionism and Regionalism;" Paul Salstrom, "The Agricultural Origins of Economic Dependency, 1840-1880," and Van Beck Hall, "The Politics of the Appalachian Frontier."

¹³⁵ Wood, *Raleigh County*, pp. 63-66.

Falls of the Kanawha which passed through the New River Gorge at Bowyer's Ferry. Over the next two years the Morgantown Road was extended to Clarksburg and marked to the mouth of the Little Kanawha (on the approximate path of today's U.S. Route 50), and authorization was granted to extend the "Old State Road" from Kanawha Falls (in the Glen Ferris-Gauley Bridge vicinity) to Lexington. The first post offices in the region were established at Lewisburg in 1797, Union in 1800, and Charleston in 1801. There would be none closer to the gorge until Beckley got a post office in the 1840s. The first post office on the lower New River was finally opened at Richmond Falls in 1857. The dates of these post offices reveal the relative isolation of lower New River settlements into the antebellum period.. That few people in the gorge today ever heard of Richmond Falls reveals the limited knowledge of the gorge's early settlement.¹³⁶

Albert Gallatin's internal improvements plan of 1808 called for a comprehensive network of canals and roads throughout the United States backed by the federal government. Despite the completion of major works like the National Road and Natchez Trace, state-rights sentiments stifled the grand scheme. Instead a confederation of state, local, and private interests combined to complete numerous turnpikes and canals across today's northeast, mid-Atlantic, and Midwest in the 1810s-50s.¹³⁷

By 1810 the major towns of the northeastern United States were linked together by a series of turnpikes. Most of the network of turnpikes had been financed and built by turnpike companies with the approval of state government. The success of the Philadelphia to Lancaster turnpike in Pennsylvania, completed in 1794, had spurred much of this activity along the eastern seaboard, mostly in New England, New York, and Pennsylvania. Still it was clear that they were expensive to construct, difficult to maintain, and often plagued by shoddy workmanship.¹³⁸

The Bluestone Road, which later became the route of the Giles, Fayette and Kanawha Turnpike, was authorized by the Virginia General Assembly in 1811. Where the old state road ran east to west from Lewisburg down into the gorge and up the other side into Fayetteville and on to the Kanawha, the Bluestone Road was entirely on the west side of the river, running north-south, from a ford near the mouth of the Bluestone through Beckley and on to Fayetteville and the Kanawha. From the Bluestone to Beckley, the road followed the old 1798 Farley Trace. Its course was described in colorful terms by Alfred Beckley as he reflected back on the early days of Settlement in Raleigh County.

The only road was the old Blue Stone road (the salt road) 'running amuck' at all mountains, hills, hollows, ascents and descents and all

¹³⁶Charles H. Ambler and Festus P. Summers, *West Virginia: The Mountain State* (Englewood Cliffs, New Jersey: Prentice-Hall, 1958), p.115; Lucullus Virgil McWhorter, *Border Settlers of Northwestern Virginia from 1768 to 1795* (Hamilton, Ohio: Republican Publishing Company, 1915); Wood, *Raleigh County*, p. 61.

¹³⁷Tunis, *Frontier Living*; Taylor, *Transportation Revolution*, pp. 22-52.

¹³⁸Taylor, *Transportation Revolution*, pp. 15-18.

streams, crossing the Jumping branches, Glade Creek and Piney River, passing the well known 23 mile tree from Pack's Ferry, there the road forked [at present Beckley], the direct straight-forward road leading to Kanawha, and the road to the left leading to Logan and Guyandotte rivers. The road to Kanawha crossed Little White Stick creek and descending the 'Rocky Hollow', and running the 'Devil's Race Path', A very rough, rocky piece of this nature's turnpike to the head of upper Loop [i.e. Dunloup] Creek and down its precipitous rocky bed, crossing the creek twenty or more times, and by the present McCoy place and mill [present Glen Jean], and across Arbuckle's creek to Vandal's settlement in the Loop of New River, then Vandalia, but since Fayetteville, and then on the Cotton Hill and crossing the same down a large branch called Fall branch to Montgomery's ferry on the great Kanawha."¹³⁹

The Virginia Turnpike Act of 1817 authorized the establishment of turnpike companies for the improvement of the transportation infrastructure. The idea was that through the collection of tolls private industry would be able to do a better job than the public of building and maintaining roads. In the lower New River region, the primary toll roads ran in similar fashion to the earlier state roads. In the mid-1820s the James River and Kanawha Turnpike replaced the old state road from Lewisburg to Charleston. Rather than drop down into the gorge at Bowyer's Ferry, however, it avoided the gorge altogether, choosing instead to stay on the east side of the river and cross near the mouth of the Gauley. Today, Route 60, also known as Midland Trail, generally corresponds to the route of this turnpike. The Giles, Fayette, and Kanawha Turnpike was incorporated in 1837, but the 40% matching funds mandated by the state were not raised until 1843. It was completed in 1848, following much of the old Bluestone Road from Pack's Ferry north through Beckley and Fayetteville to the Kanawha River, approximately the path of current Route 3.¹⁴⁰

While turnpikes satisfied many peoples needs for local connections, others schemed at more dramatic transportation improvements schemes. The construction of a canal to link the upper reaches of the James River with those of the Ohio via the New and Greenbrier Rivers had long been a dream of Virginians like Washington and Jefferson with a stake in the west. When the James River and Kanawha Canal Company surveyed the route for a turnpike in 1817, it was seen as an interim connection to link trans-Appalachian traffic while the monumental canal was under construction. In his report to the Virginia Board of Public Works, surveyor Loammi Baldwin was the force behind the

¹³⁹Wood, *Raleigh County*, p. 64.

¹⁴⁰ Wood, *Raleigh County*, pp. 61-64; W.T. Lawrence, "Dr. John Cooper of Locust Lane and Coopers Mill," *Proceedings of the New River Symposium* (1989); Shirley Claymore Scott, "New River Crossings, Then and Now: Ferries and Bridges from the Narrows to Kanawha Falls," *Proceedings of the New River Symposium* (1986). See also I.F. Boughter, "Internal Improvements in Northwestern Virginia," (Ph.D. dissertation, University of Pittsburgh, 1930).

alignment that would bypass the gorge and the Bowyers Ferry route of the old state road. He proposed avoiding the gorge altogether, since the “Cotton hills, Shades of Death Creek and New River Cliffs on each side of Bowyer’s ferry are formidable obstacles.”¹⁴¹

The early settlement patterns of the lower New River would cluster along these first routes through the region. After the first settlement at Crumps or Culbertson’s Bottom in the 1770s, settlers arrived near Bowyer’s Ferry in 1786 and along the old state road between Lewisburg and Fayetteville. Another group would settle along the fertile banks of the New River further south in and around New Richmond and Brooks near present Sandstone Falls, where the water is relatively calm and navigable by flat bottomed boat. Another batch of settlement would occur along and near the old Bluestone Road, including Beckley and Fayetteville, including the old trail down Piney Creek to the New River. Finally, the completion of the James River and Kanawha Turnpike (1824) would change settlement patterns and attract additional settlers along its length near Sewell Mountain and upper Mann’s Creek. These pre-railroad settlements are covered further in the next section.

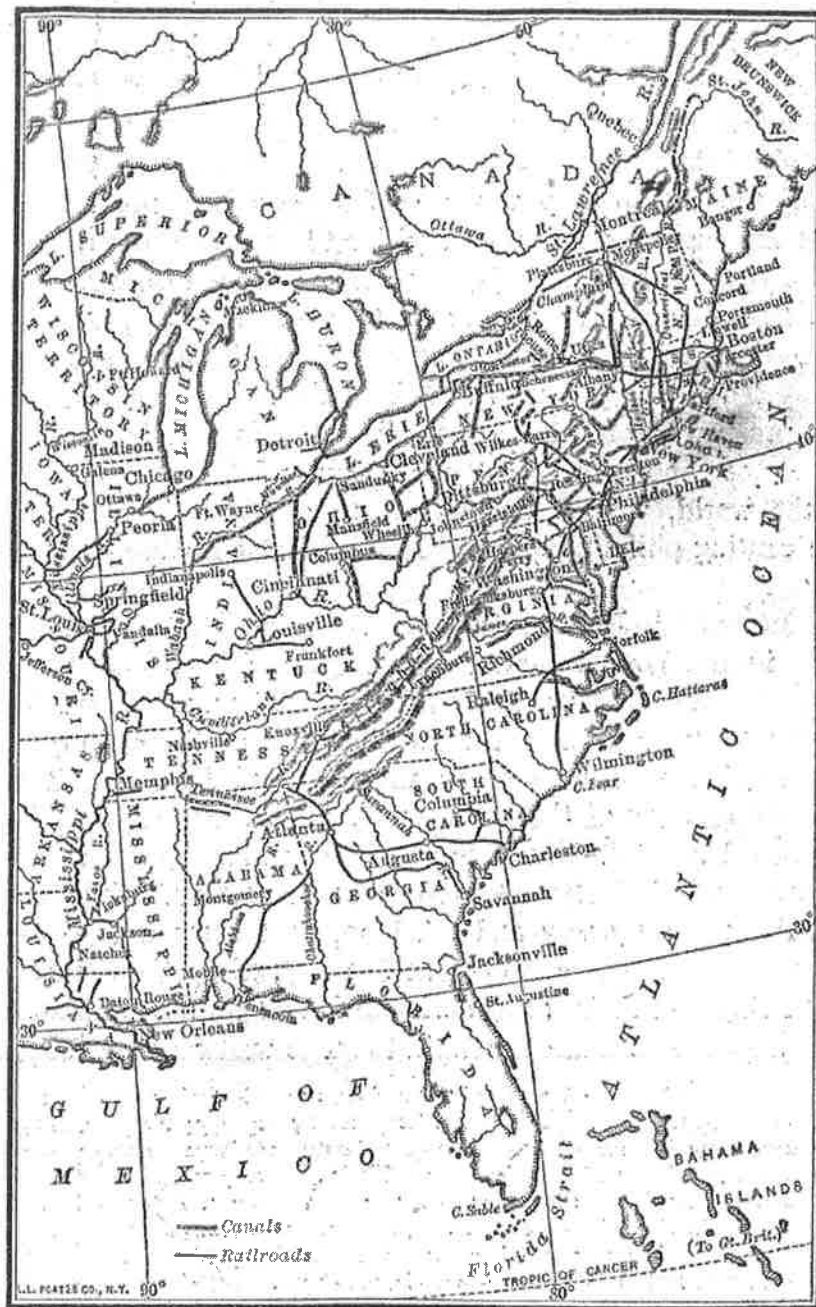
Maps of railroads in the United States in 1850 and 1860 reveal the extent of the country’s uneven development. The southern and central Appalachians were excluded from this growth. That the great barrier of the Appalachians remained formidable is evident in the history of both the C&O Canal and the James River and Kanawha Canal. Both of Washington’s inland navigation schemes for Virginia petered out in 1850s facing similar barriers: the main ridge of the Appalachians, the astonishing success of the railroad, and bleak financial prospects (see Figure 51).¹⁴² The lower New River region remained isolated, but the Civil War was a harbinger of the great change to come as it brought potential investors into the area who learned of its bountiful timber and coal resources.

The coming of the Chesapeake and Ohio Railroad in 1873 changed everything. Where the New River Gorge had been a bypassed land of insurmountable obstacles, suddenly it was in the middle of the transportation revolution. Between the Cumberland Gap and the Erie Canal, there had been only two trans-Appalachian railroads: the Baltimore and Ohio and the Pennsylvania. In 1873, the gorge was thrown wide open as the Chesapeake and Ohio Railroad completed the third trans-Appalachian link. Over the next two decades, the regional agriculture market was saturated with Midwestern farm products and the population of the region exploded as thousands of people came to work in the new coal and timber operations. Most descendants of early settlers were forced to make a decision: move west or enter the new world of wage work. The dynamics of this choice and clash of the two worlds in the New River gorge has yet to be examined.¹⁴³

¹⁴¹“Second Board of Public Works Report,” Commonwealth of Virginia, 1817, p. 69 cited in *New River Atlas*, p. 88.

¹⁴²Taylor, *Transportation Revolution*, pp. 52-5.

¹⁴³ Two authors have examined the subject in a broad way: Eller, *Miners, Millhands, and Mountaineers* and Ronald L. Lewis, *Transforming the Appalachian Countryside: Railroads, Deforestation, and Social Change in West Virginia, 1880-1920*, (Chapel Hill: The University of



CANALS AND RAILROADS OPERATED IN 1850

Figure 51: Canals and Railroads Operated in 1850
Muzzey, *An American History*

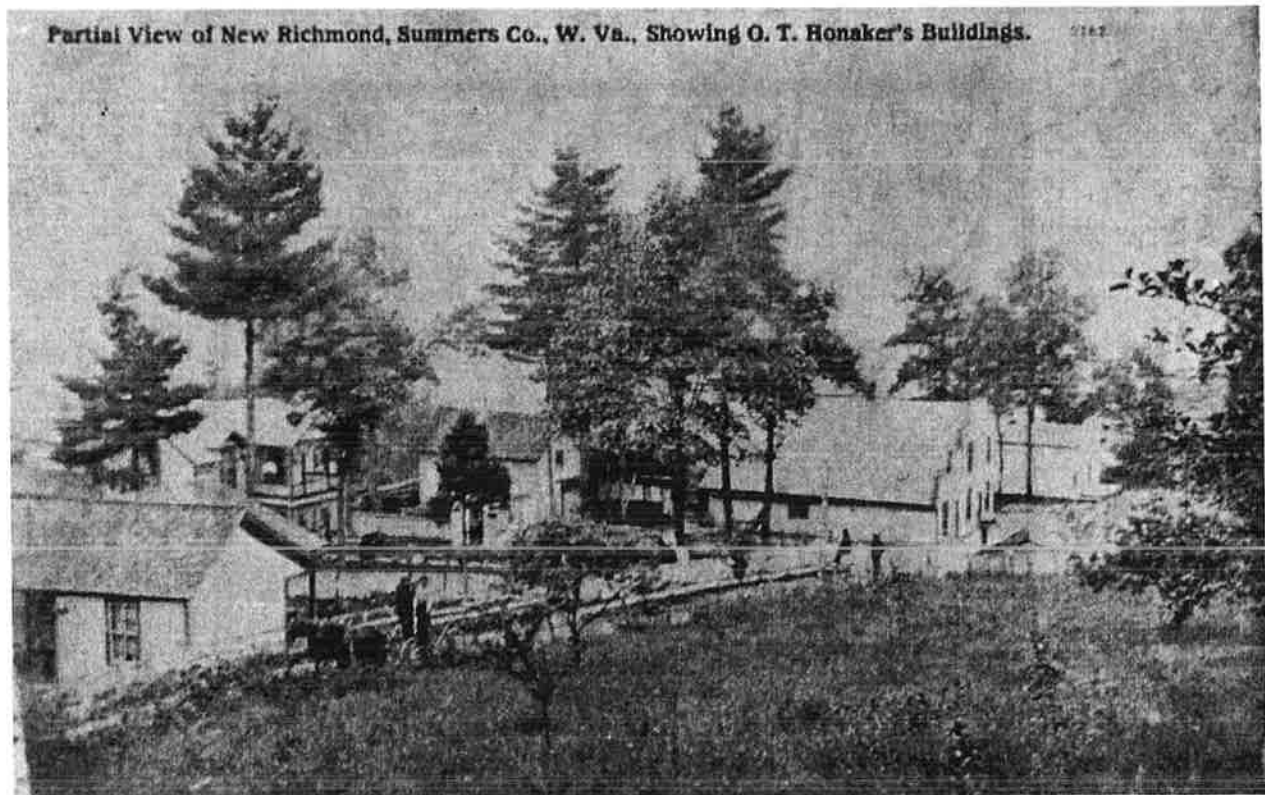


Figure 52: Historic postcard of "New" Richmond (Sandstone)
NERI Historical Collection

Inventory and Evaluation of Early Settlement and Agriculture Sites

New Richmond (later known as Sandstone) Vicinity

Historical Background: William Richmond was among the very first settlers on the New River below the Greenbrier. Richmond (also spelled Richman in many early documents) was an English immigrant who served in the Revolutionary War. He acquired a ten acre tract of land in 1799 including an island one mile below Sandstone Falls. William sold the property to Jacob Richmond in 1807 and both men are listed in the 1810 census along with Mary Richmond. Their farm, mill and holdings near Sandstone Falls were reported by Chief Justice Marshall during his expedition down the New River in 1812 (see Figure 52). The family flourished like no other on the lower New River and descendants of the pioneer family still live in the gorge and park area.

Cultural Resources: Several early log cabins and related structures have been identified. Because the are largely in private hands, they were excluded from previous inventories. The Richmond site and adjacent area contains numerous historic resources likely dating to the early 19th century (see Figures 53 through 58).

Statement of Significance: Because of the rarity and longevity of this settlement along the lower New River and its association with the Richmond family, the remaining frontier-era structures are of very high significance locally and regionally. Rating: 2, due to large number of modern intrusions. However, structures should be further evaluated individually to see if any should rank 1.

Recommendation: An intensive effort should be undertaken to identify and evaluate all remains of early and ante-bellum settlement in this vicinity.

Trump-Lilly Farm

Historical Background: The Trump-Lilly farm is representative of the move from the fertile bottom lands to the highlands that occurred in the late nineteenth century as the population grew to a point where the land could no longer support a large number of people. The 104 acre property was deeded from William C. Richmond, a prosperous farmer and descendent of the first settlers, to his daughter, Mary E. Trump in 1888. The farm was sold to the Lilly family in 1912 and they occupied and operated it until 1973 (see Figure 59). By that time, the children had matured and moved away, and the parents were no longer able to complete the arduous labor necessary to sustain the family farm.

Statement of Significance: The farm is an excellent example of post-bellum subsistence agriculture in the uplands of the lower New River. Its acquisition by the NERI shortly after its abandonment secured the integrity of the resource. Combine these factors with its association with the Richmond family and the site has great significance locally and regionally. Listed on the National Register of Historic Places, this site is rated a "2."

Recommendations: The site would be an excellent place to interpret early subsistence agricultural

North Carolina Press, 1998).

practices in the region. It should be interpreted with durable illustrative signage and further integrated into the interpretive programs of NERI.

McCreery/ Batoff Mountain

Historical Background: Oral tradition holds that Batoff is a degradation of the name batteaux, a French term for the flat boats that were used to move goods over shallow watercourses in early America. This may have originally been called Batteau Mountain because the mouth of Piney Creek (across from Army Camp) was the last place where batteaux floating down the lower New could land and get their freight hauled up the hill to the modern-day Piney View-Beckley area. On Chief Justice Marshall's 1812 map, this area is labeled "War Crossing." The 1815 tax list of Giles County lists 27 heads of households on Glade Creek, Piney Creek, Little Falls (Sandstone), and New River. This substantiates early settlement on this watershed, but the literature review has not revealed much more about the people or the location of their homesteads.

Cultural Resources: None related to early settlement have been identified.

Statement of Significance: The use of batteaux on the New River is well documented, but most sources discuss their use above and around the mouth of the Greenbrier. Batteaux were certainly used to transport goods further down the New River; the Piney Creek watershed up to Batoff Mountain provided a steep but passable route up to the Beckley area. With further substantiation, this fact would enrich the story of early settlement and is of great local significance. Rating: Further research required.

Recommendations: Early traces of this haulage route up Piney Creek should be investigated further. Research should include a review of the earliest land grants in this watershed, and research in deeds, and county tax and plat maps.

Bowyer's Ferry and the Old State Road

Historical Background: Bowyer's Ferry was established in the 1790s above the mouth of Mann's Creek. It served as the crossing of the state road that connected the James River Canal with the Ohio by way of the Kanawha River. Around 1789 Peter Bowyer built a cabin at the mouth of Mann's Creek and established a ferry operation that served as the only crossing of the New River below the Greenbrier River for many decades (see Figures 60 and 61). This ferry and adjacent lands were later sold to Stephen Sewell, a pioneer coal operator.

Cultural Resources: None related to pre-Sewell development have been identified.

Statement of Significance: This state road and ferry crossing was part of the most significant Appalachian crossing route in Virginia prior to the completion of the National Road to Wheeling ca. 1820. The route was bypassed in the 1820s by the improved James River and Kanawha Turnpike, which selected a northerly route around the gorge. The Locust Lane tavern along the Chesnutburg Road was where John Nuttall stayed in his first travels to Fayette County. Rating: Further research required.



Figure 53: Richmond farm across from Sandstone
IHTIA, 2003

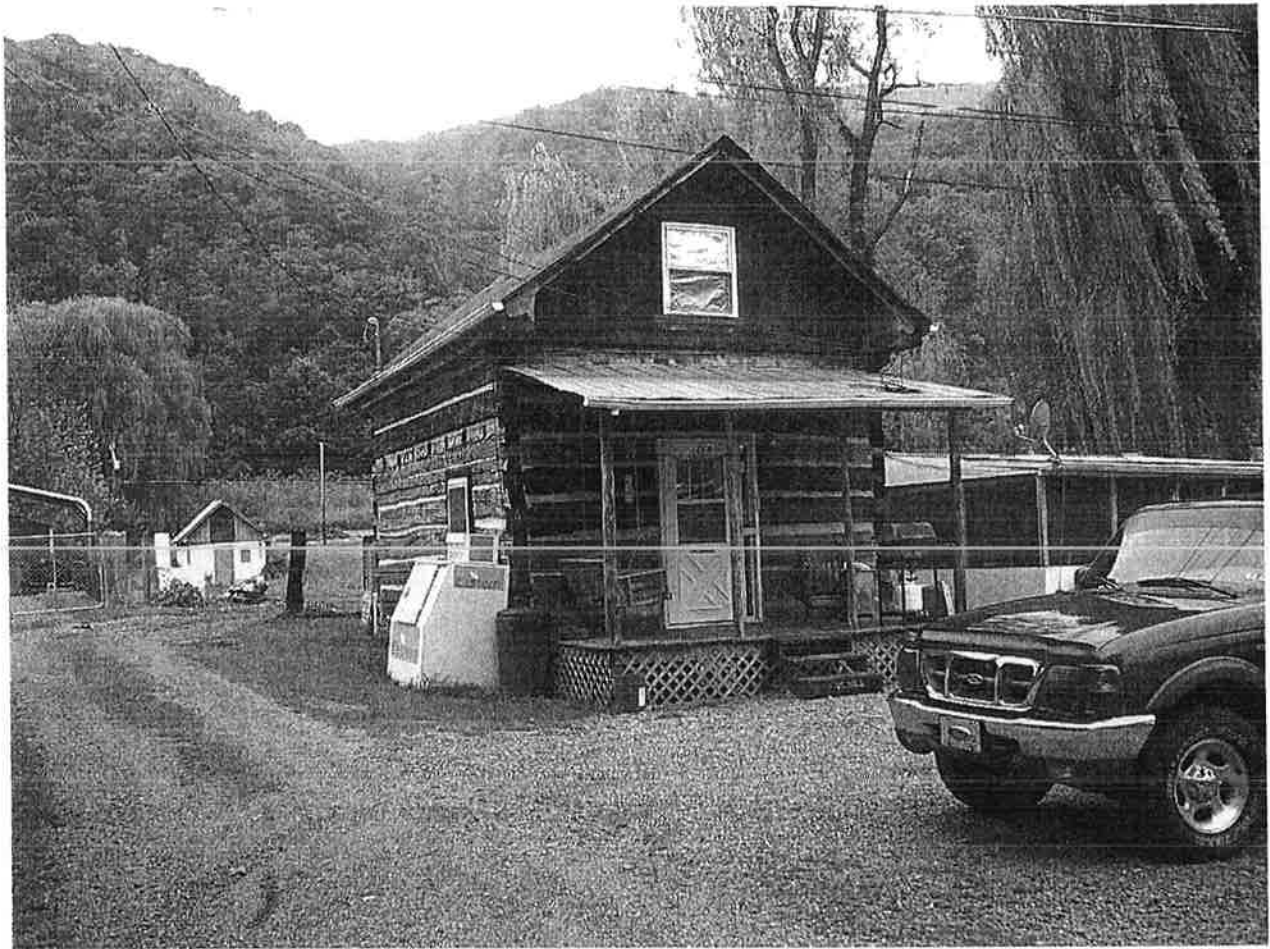


Figure 54: Berry Cabin (ca. 1890) at Richmond Bottom, Raleigh County, off State Route 26
IHTIA, 2003



Figure 55: Keaton House (ca. 1890) at Richmond Bottom, Raleigh County, off State Route 26
IHTIA, 2003

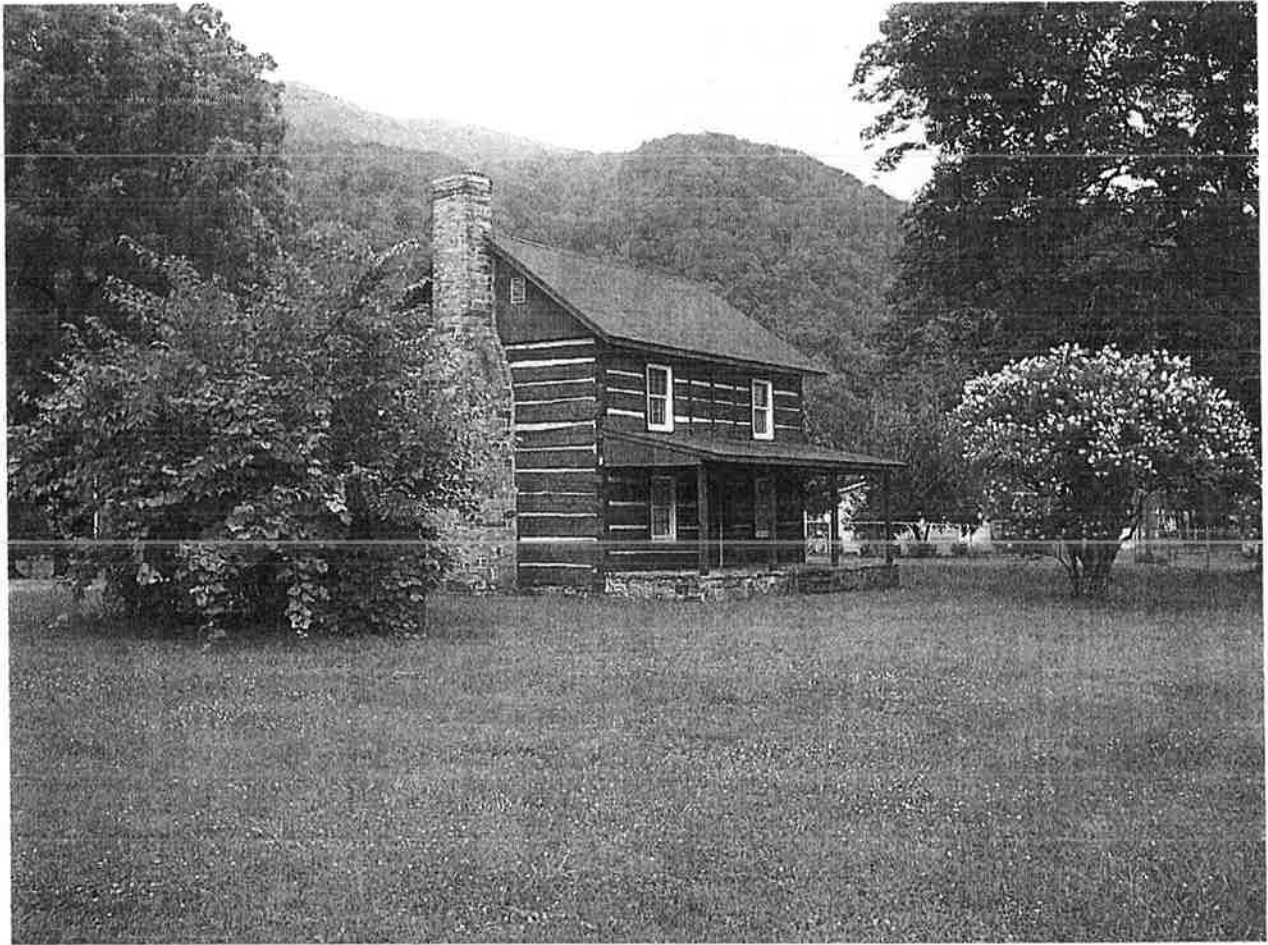


Figure 56: Christina Vallandingham house (ca. 1890) at Richmond Bottom,
Raleigh County, off State Route 26
IHTIA, 2003



Figure 57: Stone wall along River Road (State Route 26) at Richmond Bottom
IHTIA, 2003



Figure 58: Richmond Hamilton Farmhouse (ca. 1902) at Richmond Bottom,
Raleigh County, off State Route 26
IHTIA, 2003

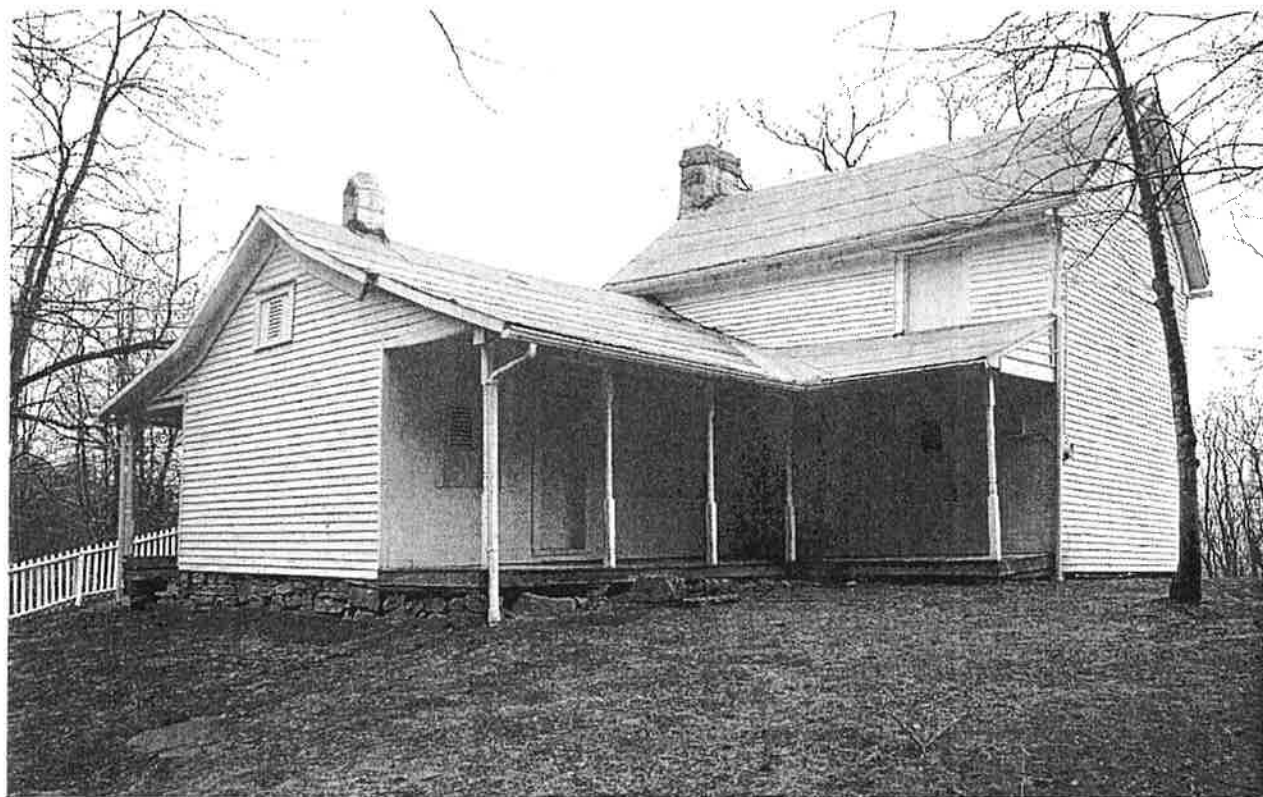


Figure 59: Trump-Lilly Farmhouse, Raleigh County, off State Route 26/3
David Fuerst, NERI, 2001



Figure 61: Putative location of Bowyer's Ferry, CSX Bridge crossing New River
looking southeast toward Mann's Creek
David Fuerst, NERI

Recommendations: Numerous resources related to the state road are likely hidden above Bowyers Ferry on Sewell Mountain. Many were mapped by W.T. Lawrence in "Dr. John Cooper of Lanes Lane and Coopers Mill." Although the map and essay lack footnotes, they provide a large number of leads that should be further investigated in search of related cultural resources.

Other Sites to Consider

The Old Bluestone Road (ca.1812) and its successor the Giles, Fayette and Kanawha Turnpike (ca.1848) passed through part of the Bluestone National Scenic River and west of the New River Gorge National River. Similarly, the James River and Kanawha Turnpike (ca. 1824) passed along the plateau east of the gorge near the eastern boundary of the park (the approximate route of Rt. 60). These early routes were corridors for early settlement, but were not developed or investigated in the Unrau study. Archival research and field investigation would likely yield numerous sites that would compliment our limited understanding of the New Richmond area, Bowyers Ferry, and Batoff Mountain.

Tabular Summary of Management Information, Settlement & Agriculture Related Resources

Property Name	Location	Occupation Dates	Category	Rating
New Richmond/Sandstone	Summers County	1799 - Present	Standing structures	"2"
Trump-Lilly Farm	Summers County	1888 - 1973	Standing structures	"2"
McCreery/Batoff Mountain	Raleigh County	Unknown	No resources observed	Further research required
Bowyer's Ferry	Fayette County	1798 - Unknown	No resources observed	Further research required

Revisions of Historic Context for Recreation and State Parks

The development of the national state parks system, as noted by Unrau in his 1996 study, was both a National Park Service initiative and the direct result of the state level conservation movement. Stephen Mather first proposed the development of state parks, as a response to the public demand for more national parks. He envisioned state parks would be established primarily on lands which lacked the intrinsic natural beauty of Yosemite, Yellowstone, and the other early western national parks, but still retained very good scenic qualities. There were six state parks established in the United States by 1921, when Mather convened the first National Conference of State Parks at Des Moines in January of that year. The National Park Service took the lead in promoting state parks by offering advice and guidance to state park commissions, and acting as an information clearinghouse.

The Civilian Conservation Corps (CCC) facilitated the development of state parks. Born of the New Deal, the CCC put men 17 to 28 years of age to work on reforestation, road construction, soil erosion projects, flood control projects and recreation work. In its ten year existence, it has been estimated that the CCC accomplished fifty years worth of projects, including the construction of Babcock State Park. At its peak there were 2,635 CCC camps, including those at Beaver and Washington Carver (Babcock), working on projects across the United States. Many of these projects (561) involved work on national, state, and local parks.

The conservation movement began in West Virginia under the direction of I. C. White, the first state geologist, whose most important endeavor was the creation of a state conservation commission in 1908. The commission's 1908 report on the destruction of the state's natural resources was instrumental in initiating the state's conservation movement.¹⁴⁴

The State Forest, Park, and Conservation Commission was established in 1925 under the direction of A. B. Brooks. The commission was authorized to investigate and report on the possibility of establishing state parks and forests. Their report was issued in 1927. It recommended that lands with exceptional scenic and natural qualities be acquired and that the state be allowed to accept donated land. They further recommended a number of natural sites for acquisition, including Coopers Rock, Cranberry Glades, Hawks Nest, Pinnacle Rock and Blennerhassett Island, as well as a number of historic sites such as Grave Creek Mound, Carnifax Ferry Battlefield, and Droop Mountain Battlefield. Droop Mountain was the first to be acquired by deed in May 1928.¹⁴⁵

Although organized in 1927, the West Virginia state parks system did not begin to flourish until 1933. Franklin D. Roosevelt's New Deal supplied the impetus and the labor required to develop the West Virginia state parks. With the establishment of the Civilian Conservation Corps, the labor force was

¹⁴⁴White's 1908 report is an extremely rare volume, but much of its substance can be found in A.B. Brooks, *West Virginia Geological Survey: Volume Five, Forestry and Wood Industries* (Morgantown, W.Va.: Acme Publishing Company, 1910).

¹⁴⁵Ambler and Summers, *West Virginia: The Mountain State*, pp. 468-71.

in place to develop the parks.

Watoga State Park was the first to be developed. Starting in May 1934, CCC camps were established at Watoga, Babcock, Lost River, and Cacapon state parks. Guiding the design of the parks was the "state park concept," a master plan formulated by the Conservation Commission which would guide the development of state parks for the next 50 years. The plan dictated that parks would be for recreation and the preservation of aesthetic and historic values, and that the land return to a reforested state.

The first parks, Babcock, Watoga, Cacapon, Lost River, and Hawks Nest, while not completely finished, were opened to the public in the summer of 1937. Each park was designed to provide horseback riding, swimming, picnicking, bicycling, and fishing. By 1939, the number of West Virginia state parks had grown from five to twelve, including Grandview. World War II brought park development to a halt.

After the war, visitation to West Virginia's state parks grew very rapidly. The parks had fallen into a state of disrepair, however. The state parks division was inadequately funded and struggled to meet this new demand while maintaining the deteriorated infrastructure. The increased visitation resulted in a demand for more parks and increased facilities. To fund this initiative, West Virginia in 1953 became one of the first states to approve the sale of bonds to finance park improvements. Bonds totaling \$4.4 million were sold in 1954-55 which enabled the park system to expand both facilities and services. Improvements included cabin and lodge construction, as well as road, bridge, and utility construction, and the expansion of campgrounds.

The 1950s also saw the shift of park philosophy away from preservation to recreation and the development of scenic natural resources. A new master plan was created during the period from 1958 to 1968 emphasizing conservation and recreation. Thus by 1967, there were twenty one-state parks and three under construction. With the construction of the state's interstate and Appalachian highway system during the 1970s, tourism became one of the state's leading industries, so the state park system was expanded; by 1988 there were thirty-four parks embracing more than 75,000 acres.¹⁴⁶

Current Scholarship

Very little has been written on the history of the West Virginia state parks system with the exception of McKeever's 1988 volume, which is perhaps the only published park history account. While it is based on official state commission documents and annual reports, it lacks a broader national view of the state parks movement started by Stephen Mather in the 1920s. Fortunately, this scholarly gap has been recently filled by Langdon Smith, Jr.'s dissertation "The Democratization of Nature: State-Park Development During the New Deal." Smith examined in detail the role of the National Park Service in the development of the state parks, setting it in a broad national context. This new work is extremely useful in understanding the development of the state parks system's in the 1920s and 30s.

¹⁴⁶Kermit McKeever, *Where People and Nature Meet: A History of the West Virginia State Parks* (Charleston, W.Va.: Pictorial Histories Publishing Company, 1988), pp. 5-12.

Smith draws out a number of important points in his dissertation. Significantly the National Park Service stressed three basic design concepts for state parks: (1) preservation of existing natural features, (2) placement of parks within reach of most Americans, and (3) the blending of constructed facilities with the natural environment, also known as the “government rustic style.” He also emphasizes the importance horseback riding, swimming, and picnicking in the democratizing of nature, with the use of water features in the parks, such as lakes, ponds, or swimming pools being central to this principle. Although state parks were segregated in this period, swimming minimized the physical and social differences of park visitors.¹⁴⁷ Perhaps, the only shortcoming of this dissertation is that it does not discuss the West Virginia state parks movement, but it does complement *Where People and Nature Meet* very well. However, both Smith and McKeever, as well as Unrau, have focused solely on the institutional aspects of recreational development—the formation of state parks—and have not treated the private aspects of the issue.

¹⁴⁷Langdon Smith, Jr., “The Democratization of Nature: State-Park Development During the New Deal” (Ph.D. dissertation, Kansas State University, 2002), pp. 28, 42-43.

Inventory and Evaluation of Cultural Resources, Recreation and State Parks Context

Babcock State Park

Historical Background: Babcock State Park was one of the first West Virginia state parks. It is located approximately three miles south of Route 60 on State Route 41 near Clifftop, West Virginia. Construction on the park commenced in 1934 by workers from Camp Beaver and Camp Lee of the Civil Conservation Corps. Although work at the park was not completed, Babcock was opened to the public in 1937. At that time thirteen vacation cabins, a picnic area, and foot and horse trails had been finished, while completion of the swimming pool, administration building, and other recreational facilities were delayed by CCC cutbacks. Work on Babcock continued until 1941, when World War II brought work to a halt. By that time, work on landscaping, grading, stone walls, the contact station and other projects had been completed.

After the war, Babcock was severely impacted by strip mining and logging just outside the park that killed fish in Glade and Manns Creeks and forced the closure of the swimming pool for a time. The acid drainage problems were remedied very quickly and the pool, located just below the mills next to the mill, remained in use until 1970, when a new pool was opened. The 1950s witnessed renovation of Babcock's facilities, and a series of capital improvements were made during the mid to late 1960s, notably the addition of Boley Lake an eighteen acre lake with boat docks, boathouse, and boat launch. Purportedly, masonry salvaged from the McKendree Hospital along the New River was used in construction of Babcock during this period. In 1976, the water-powered Glade Creek Grist Mill, built from two salvaged mills, was opened to the public near the site of the historic Coopers Mill. It is one of the most photographed spots in the entire state park system. Babcock became part of the New River National River Park in 1978¹⁴⁸ (see Figure 62).

Statement of Significance: Babcock State Park is one of the finest West Virginia state parks. It represents the pinnacle of New Deal-Era CCC constructed state parks. Its many design features are very reminiscent of those design elements found in the national park system, most importantly Skyline Drive in Shenandoah National Park, Babcock retains many of the original design elements, such as the entrance station, landscaping, stone work, parking lots and overlooks. Because of its high level of integrity, Babcock is potentially eligible for the National Register under Criterion A for its association with the New Deal and Criterion C for landscape architecture. Rating: "1"

Recommendation: A comprehensive park history should be completed for Babcock State Park. This history should focus on the park's construction and history as well as its association with the CCC and the design elements. A multiple-property National Register nomination should also be completed. This nomination could be linked to Camp Washington Carver ("Negro 4-H Camp"), which is listed already on the National Register.

¹⁴⁸Kermit McKeever, *Where People and Nature Meet: A History of the West Virginia State Parks* (Charleston: Pictorial Histories Publishing Co., 1988), pp. 19-25.

Grandview State Park

Historical Background: Grandview was first settled in 1855 by Joseph Carper, a tanner and gunsmith. He named his homestead “Grand View” because of its remarkable vista of the New River Gorge and Stretcher Neck. By 1900, extensive mining and timber operations were operating around Grandview, and the world’s first overhead log skidder was installed here. By the 1930s, the natural resources were exhausted and operations abandoned. One legacy of the mining period is the Joseph Ingram house (ca. 1906) foundation located behind the current Amphitheater; Ingram worked at the Royal mine.¹⁴⁹ In 1939 the former coal and timber lands were purchased by the state of West Virginia and Grandview State Park was established. The initial park construction was undertaken by CCC Camp Raleigh workers and continued until the start of World War II. Work completed by the CCC included a picnic shelter (No. 1), walkways, curbs, steps, trails, parking areas and roads (see Figure 63). Park facilities were improved during the mid-1950s with the addition of new trails, the pavement of parking areas, and the planting of 500 evergreen trees. Then in 1960, the Cliffside Amphitheater was constructed. Always a popular destination, Grandview visitation tripled between 1960 and 1970, and, by 1980, it was one of the most popular day-use parks in the West Virginia park system. It became part of New River Gorge National River in 1990.¹⁵⁰

Statement of Significance: Grandview State Park lacks much of the naturalistic character exhibited by many other West Virginia New Deal-era parks. Yet there are many CCC design elements present, such as cut stone steps, stone curbing, and the park’s emphasis on its remarkable overlooks. However, many of its extant resources such as the picnic shelters date to the post World War II period of renovation and development. Because of its association with the New Deal and the CCC, it is potentially eligible for inclusion in the National Register of Historic Places under Criterion A. Rating: “2”

Recommendation: A multiple-property National Register nomination for Grandview, excluding the Cliffside Amphitheater, should be prepared. .

Camp Brookside

Historical Background: Camp Brookside was established in 1947 by Union Carbide’s Alloy Plant as a recreational summer camp for its employees children. Camp Brookside was constructed along the New River near Brooks, an early (ca. 1790) settlement. Nearby is Brooks Falls, where a possible mill seat was situated, along with a channel bypassing the falls. Camp Brookside is a 31.28 acre site that offered four two-week sessions every summer, with two for boys and two for girls. Campers were assigned a cabin for their stay and divided into two tribes, Cherokee and Iroquois, which competed

¹⁴⁹For an assessment of the archaeological resources at Grandview, see John Milner and Associates, “Management Report of Phase 1 Archeological Investigations at Grandview, New River Gorge National River,” (1992).

¹⁵⁰McKeever, *Where People and Nature Meet*, pp. 97-98; Land and Community Associates. “Cultural Landscape Report,” Grandview, New River Gorge National River, West Virginia. June 1994..

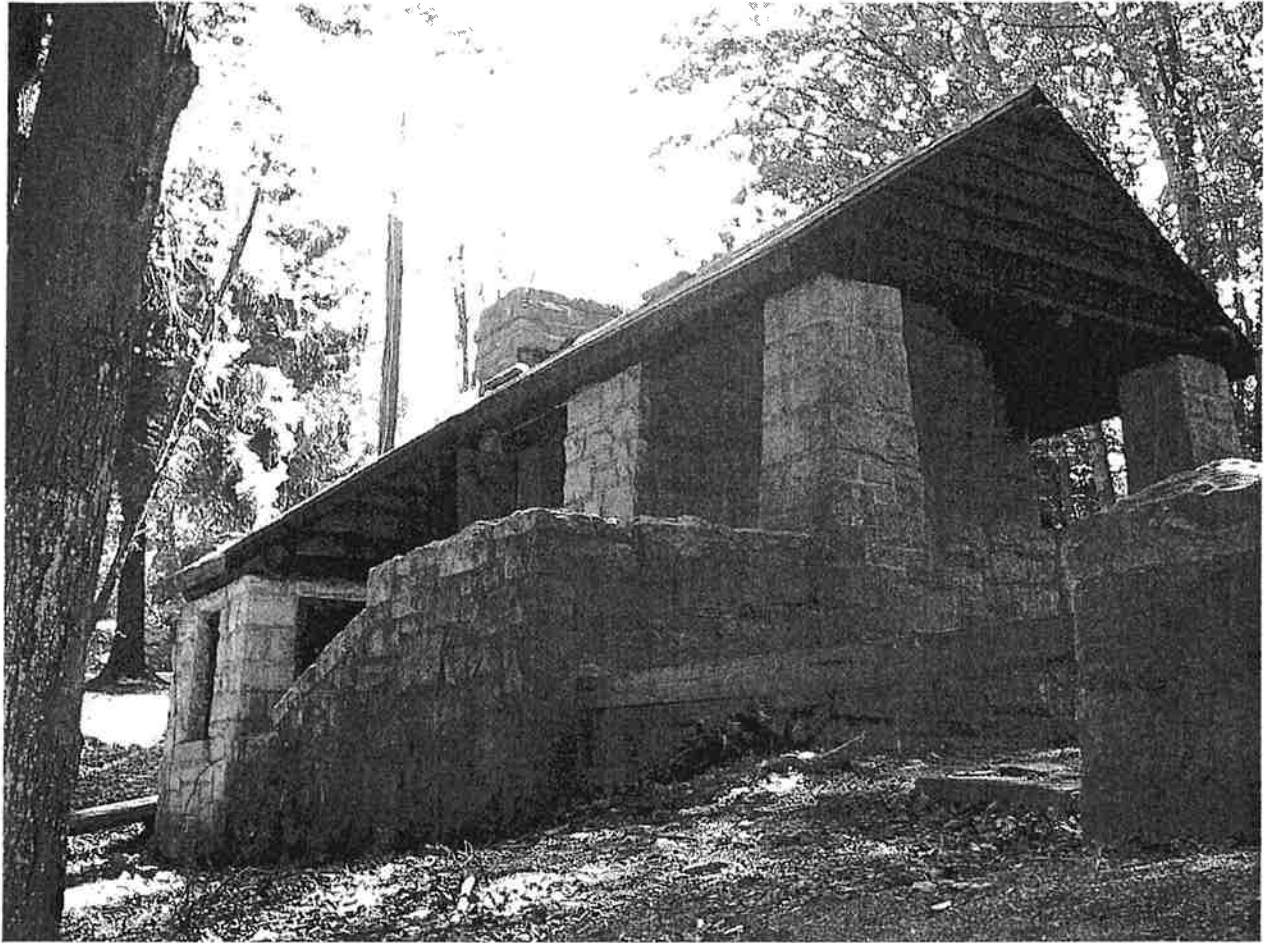


Figure 62: Shelter at Babcock State Park
IHTIA, 2003

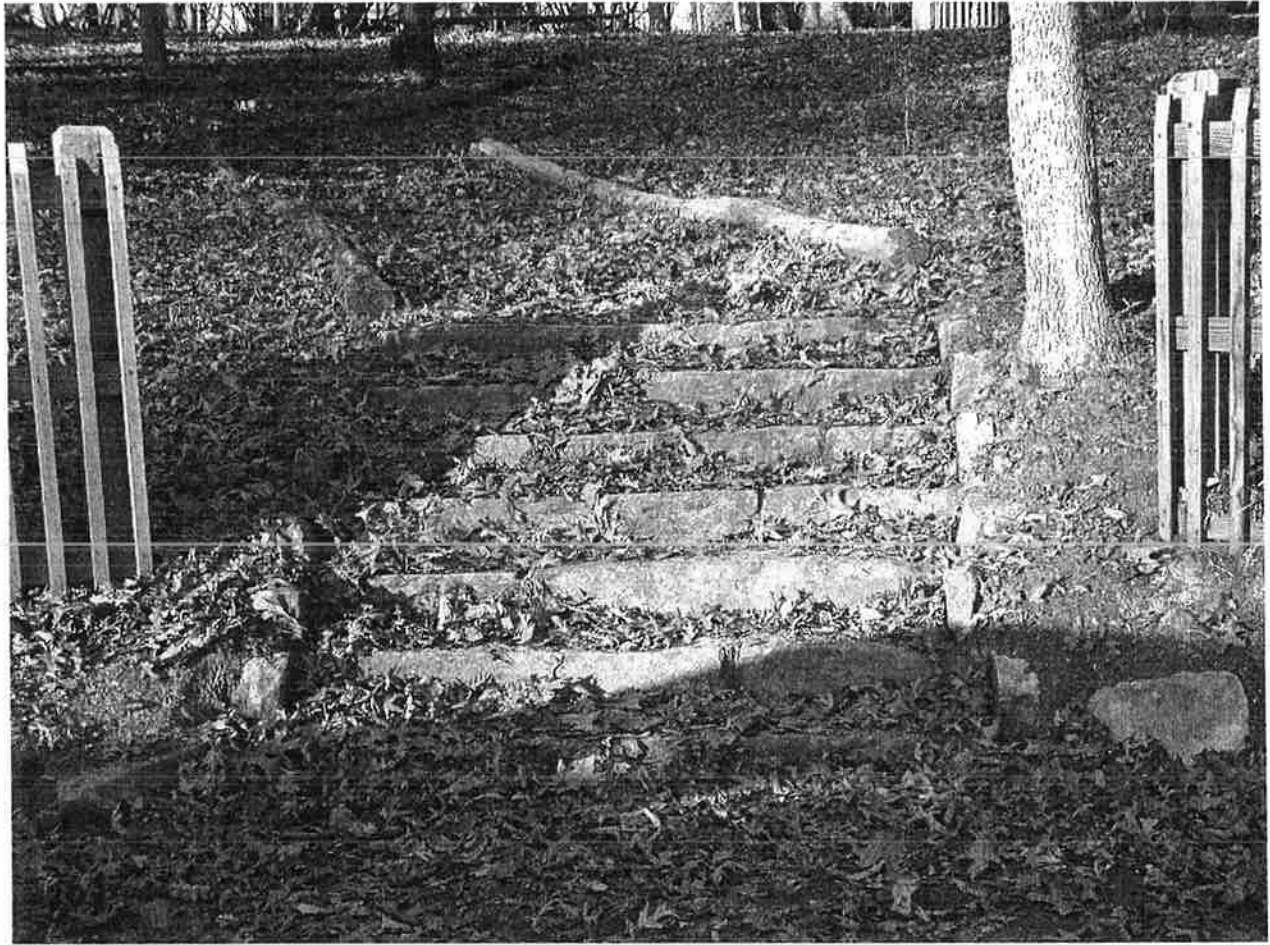


Figure 63: Steps to Shelter One at Grandview State Park
IHTIA, 2003

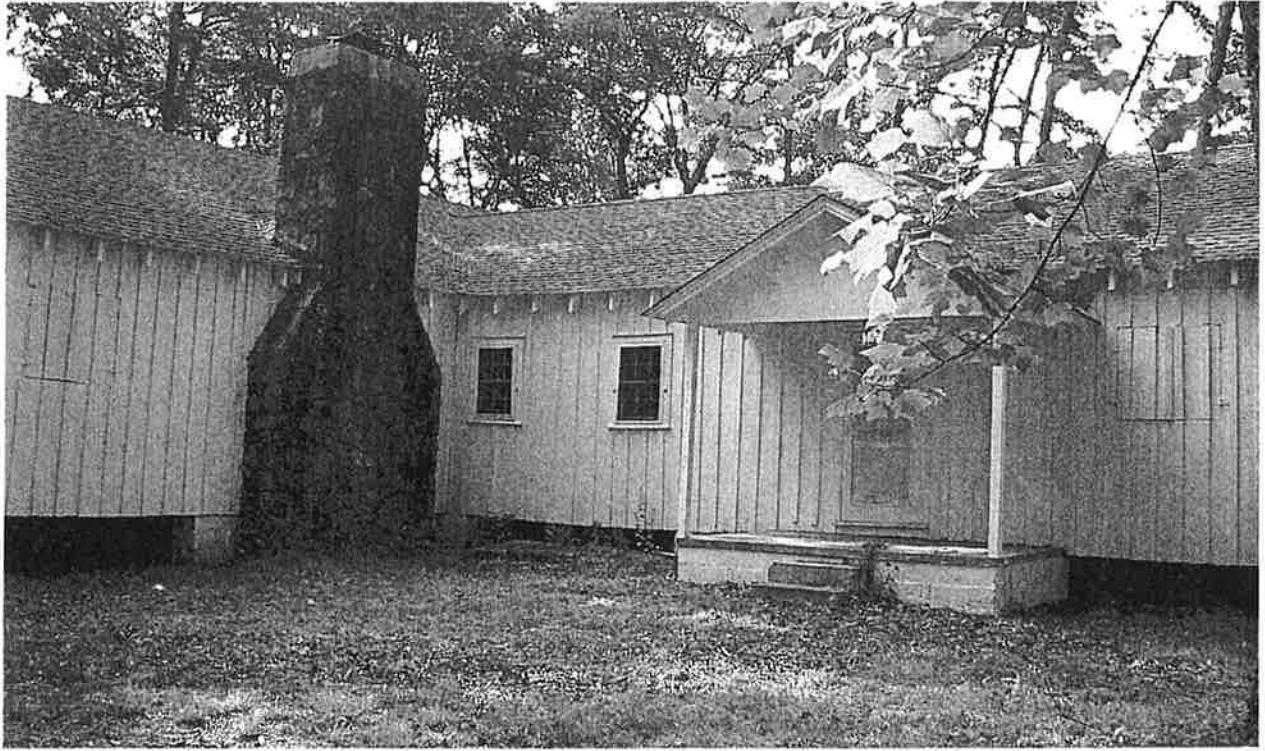


Figure 64: Camp Brookside Administrative Building
IHTIA, 2003



Figure 65: View of grounds, cabins and water tower at Camp Brookside
IHTIA, 2003

against each other in all camp sports. They also engaged in other various recreational activities, such as fishing, swimming, badminton, basketball, horseshoes, horseback riding, riflery, canoeing, archery, arts and crafts, and nature study. The camp was one of seven sites developed by Union Carbide exclusively for its employees. It was purchased by the National Park Service in 1993.¹⁵¹

Statement of Significance: The abandoned Camp Brookside is virtually intact. All cabins are extant as is the, lodge, and water tower, a notable feature (see Figures 64 and 65). The camp also retains its naturalistic setting. Given its high level of integrity, Camp Brookside is potentially eligible for inclusion in the National Register of Historic Place under Criterion A for its association with the development and practice of leisure time. It may also be potentially eligible as a labor history site, representing an example of a social welfare program designed to promote congenial labor relations. Rating: "2"

Recommendation: Camp Brookside should be nominated to the National Register, restored to a functioning capacity, and utilized by the National Park Service or other licensed agency. In addition, to provide a basis for the consideration of other private recreational resources in the park, a historic private recreation context should be developed. This context could be amended to the current state parks recreational context.

Army Camp

Historical Background: Army Camp, or more precisely Camp Prince, was a World War II military training installation located on Stretcher Neck opposite Terry. Little if anything has been written regarding the history of Camp Prince, but historic photos at NERI library reveal that Camp Prince trained soldiers to erect pontoon bridges and taught fording techniques. It is not clear when the camp was established or abandoned, nor the range and type of structures once located there. After World War II it was used by various hunting and fishing clubs.

Cultural Resources: Once a thriving camp, now only concrete foundations and other remains exist in the woods flanking the entrance road.

Statement of Significance: Army Camp is an historical archaeology site. It is unknown whether all its elements are present, so it is not potentially eligible for the National Register. Rating: "2"

Recommendations: The site should be surveyed and mapped and its ownership traced through deed records. Further research needs to be undertaken to establish the camp's role and duration during and after World War II.

¹⁵¹Tim McKinney, *Elkem Metals: 90 Years of Progress in the Kanawha Valley* (Charleston, WV: Pictorial Histories Co., Inc., 1992), pp. 61-65.

Tabular Summary of Management Information, Recreation Related Cultural Resources

Property Name	Location	Occupation Dates	Category	Rating
Babcock State Park	Fayette County	1934 - Present	Standing structures	"1"
Grandview State Park	Raleigh County	1855 - Present	Standing structures	"2"
Camp Brookside	Summers County	1947 - Unknown	Standing structures	"2"
Army Camp at Stretcher Neck	Fayette County	Unknown	Ruins	"2"

Recommendations for Further Study and Inclusion in General Management Plan

- ▶ A major cultural resource study should be undertaken that includes 1) preservation and interpretation of Nuttallburg and Kay Moor; and 2) an effort to identify, survey, and map historical archaeology sites throughout the gorge, particularly those related to coal, lumber, railroads, and early settlement. The study should relate the historic resources to the concept of community, and the differential scaled use of the landscape over time. Community patterns in towns and other functional units should be defined and delineated based on their different social and economic activities, and more specifically, their residential, religious, agricultural, commercial, and industrial use of public and private spaces.
- ▶ A social history of the park should be undertaken using census records, oral histories and other sources to answer such questions as: Where did early settlers and post-1870 migrants come from? How did they live and work, and what did they do for leisure? What did they leave behind? Where were they buried? In this effort particular attention should be paid to cemeteries. Also, as coal mining, lumber and other industries declined in the gorge after 1930, where did the residents move? Such a study should consider the labor history of the gorge, with an effort to discover labor sites.
- ▶ A study should be made of underground mining technology and the nature of work underground; this work would inform park interpretation, and allow for the use of mine maps and underground resources in interpretation..
- ▶ A study of the state-owned New River Gorge Bridge should be undertaken. The site is of clear national (if not international) significance. It has stood as the longest single span steel arch bridge in the world since its completion in 1976. Although state-owned, the bridge is related to the park's mission and its recreational functions.
- ▶ A private recreation context should be developed to guide preservation efforts at Camp Brookside, the New River Gorge Bridge, and early rafting and hunting and fishing sites. This context, which could be amended to the present state parks context, should be coupled with field work to identify resources within the park related to this theme.
- ▶ With such vast territory and holdings to maintain, adaptive reuse of NPS-owned structures should be considered, and successful models in other parks should be consulted. Continuous use would ease the maintenance burden of NERI. A public-private partnership, with stipulations on preservation, could prove a successful way of managing properties and involving private resources in a common mission.
- ▶ New River Symposium should be revived. The symposium took place fifteen times between 1982 and 2000 at locations ranging from North Carolina to the National River. It was not only an outlet, but also a promoter tourism and of scholarship related to the natural and cultural resources of the New River and its communities.

- ▶ The formation of an active “Friend’s of the Gorge” group should be promoted to undertake preservation and interpretative work

Bibliography

COAL INDUSTRY

Collections

Glen Jean, West Virginia. New River Gorge National River. Historical Files.

Morgantown, West Virginia. West Virginia and Regional History Collection. West Virginia University Libraries. The West Virginia and Regional History Collection, perhaps the most comprehensive collection of primary and secondary materials relating to West Virginia history, contains numerous entries on coal mining in the state, as well as the New River coal field.

Coal Records. Smokeless Coal Industrial Exhibition, 1936. West Virginia and Regional History Collection. Eight items, including list of names of visitors, information circular, list of Winding Gulf Coal Operators' Association, and pamphlet associated with this educational exhibit presented at Mt. Hope.

The historical files at New River Gorge contain copies of a variety of newspaper and periodical articles and other works relating to coal towns, mining sites, and coal-related issues in the gorge.

Books

Ambler, Charles, and Summers, Festus P. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, Prentice-Hall, 1958.

Athey, Lou. *Kaymoor. A New River Community*. N.P., Eastern National Parks and Monuments Association, 1986.

Bragg, Melody E. *Window to the Past*. Glen Jean, West Virginia, Gem Publications, 1990.

Chapman, W.R. *The Cleaning of Coal*. London: Chapman and Hall Ltd., 1928.

Comstock, Jim, ed.. *The West Virginia Heritage Encyclopedia, Shirley Donnelly Sampler*, Volume Sixteen, Supplemental Series. Richwood, West Virginia, Jim Comstock, 1974.

Conley, Phil. *History of the West Virginia Coal Industry*. Charleston, West Virginia, Education Foundation, Inc., 1960.

Corbin, David Alan. *Life, Work, and Rebellion in the Coal Fields: The Southern West Virginia Miners, 1880-1922*. Urbana, Chicago, and London, University of Illinois Press, 1981.

Craig, Robert, ed. *The New River Company: "Seventy Years of West Virginia Coal History."* [Mount

Hope, West Virginia, New River Company, 1976.]

Dictionary of American History. Rev ed. New York, Charles Scribner's Sons, 1976.

Dix, Keith. *Work Relations in the Coal Industry: The Hand-Loading Era, 1880-1930*. Morgantown, Institute for Labor Studies, West Virginia University, 1977.

Eller, Ronald D. *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930*. Knoxville, University of Tennessee Press, 1982.

Evans, Chris. *History of the United Mine Workers of America*. Indianapolis: The United Mine Workers of America, 1918.

Fayette Journal, Special Edition, Historical, Industrial, November 2, 1911.

Given, Ivan A. *Mechanical Loading of Coal Underground*. New York: McGraw-Hill Book Company, 1943.

Goodrich, Carter. *The Miner's Freedom*. New York, Arno Press, 1977.

Hudson Coal Company. *The Story of Anthracite*. New York: Hudson Coal Company, 1932.

Hunt, Edward Eyre, Tryon, F.G., and Willits, Joseph H. *What the Coal Commission Found*. Baltimore, Williams and Wilkins Company, 1925.

Lane, Ron, and Schnepf, Ted. *Sewall: A New River Community*. N.P, Eastern National Parks and Monuments Association, 1985.

Lane, Winthrop D. *Civil War in West Virginia*. New York: Arno and the New York Times, 1969.

Lawall, C.E. *Mining Methods in West Virginia*. Research Bulletin No. 4, Engineering Experiment Station, Morgantown: West Virginia University, 1929.

Lee, Howard B. *Bloodletting in Appalachia*. Morgantown, W.Va.: West Virginia University Press, 1969.

Lewis, Helen, ed. *Colonialism in Modern America: The Appalachian Case*. Boone, N.C.: Appalachian Consortium Press, 1978.

Lewis, Ronald L. *Coal, Iron and Slaves: Industrial Slavery in Maryland and Virginia, 1715-1861*. Westport, Connecticut: Greenwood Press, 1979.

Lewis, Ronald L. *Black Coal Miners in America: Race, Class and Community Conflict, 1780-1980*. Lexington: The University Press of Kentucky, 1987.

Miller, Donald L., and Sharpless, Richard E. *The Kingdom of Coal: Work, Enterprise, and Ethnic Communities in the Mine Fields*. Philadelphia, University of Pennsylvania Press, 1985.

Lunt, Richard D. *Law and Order vs. the Miners: West Virginia, 1907-1933*. New York: McGraw-Hill, 1924.

Morris, Homer. *The Plight of the Bituminous Coal Miner*. Philadelphia: University of Pennsylvania Press, 1934.

Nelson, A. *A Dictionary of Mining*. New York: Philosophical Library Inc., 1965.

Nuttall, John. *Trees Above With Coal Below*. San Diego, Neyenesch Printers, 1961.

Peters, J.T., and Carden, H.B. *History of Fayette County, West Virginia*. Charleston, West Virginia, Jarrett Printing Company, 1926.

Robinson, Neil. *The Kanawha and New River Coal Fields of West Virginia, U.S.A.* Charleston, West Virginia, 1904.

Schroder, John L. and D.L. McElroy. *Mechanical Mining with Mobile Loading Machines in West Virginia*. Charleston, W.Va.: Charleston Printing Company, 1942.

Smith, Charles. *Fire Creek: A New River Coal Mining Community, 1877 to 1976*. Glen Jean, West Virginia, Gem Publications, 1991.

Sullivan, Charles Kenneth. *Coal Men and Coal Towns: Development of the Smokeless Coalfields of Southern West Virginia, 1873-1923*. New York and London, Garland Publishing, Inc., 1989.

Thurmond: A New River Community. Glen Jean, Eastern National Parks and Monuments Association, 1989.

Tams, W.P., Jr. *The Smokeless Coal Fields of West Virginia: A Brief History*. Morgantown, West Virginia, West Virginia University Library, 1963.

Thompson, James. *Significant Trends in the West Virginia Coal Industry, 1900-1957*. Morgantown, W.Va.: West Virginia University Center for Business and Economic Studies, 1958.

Toothman, Fred Rees. *Conveyor Mining in West Virginia*. West Virginia University Bulletin. Morgantown, W.Va.: Morgantown Printing and Binding Company, 1947.

Turner, William H., and Cabbell, Edward J., eds. *Blacks in Appalachia*. Lexington, University Press of Kentucky, 1985.

Williams, John Alexander. *West Virginia: A History*. New York, London, and Nashville, W .W. Norton and Company and American Association for State and Local History, 1976.

_____. *West Virginia and the Captains of Industry*. Morgantown, West Virginia University Library, 1976.

Workman, Michael, Paul Salstrom, and Philip Ross. *Northern West Virginia Coal Fields: Historical Context*. Morgantown, W.Va.: Institute for the History of Technology and Industrial Archaeology, 1994.

Periodicals

Athey, Louis L., with assistance of Geoffry B. Skaggs. "A Kind of Pittsburgh': Beehive Coke Making in the New River Gorge." *Proceedings, New River Symposium*, 1982, pp. 161-67.

Auchmuty, H.L. "Hoisting Drums." *Mines and Minerals* 25 (1904): 37-38.

Bragg, Melody E. "Glen Jean: Echo of an Empire." *Goldenseal*, XIV (Winter 1988), pp. 9-16.

Brasack, William. "Retarding Conveyor in a West Virginia Mine." *Coal Age* 7 (1914): 965-966.

Coal Catalog. Pittsburgh: Keystone Consolidated Publishing Company, published annually from 1920 through the 1950s.

Cox, William E. "McKendree No. 2: The Story of West Virginia's Miners Hospitals." *Goldenseal*, VII (Fall 1981), pp. 36-40.

Coxe, Edward H. "Transportation on Inclines." *Mines and Minerals* 21 (1900): 10-11.

Eller, Ronald D. "The Coal Barons of the Appalachian South, 1880-1930." *Appalachian Journal*, IV (Spring-Summer 1977), pp. 195-207.

"Evolution of Mine Haulage." *Mines and Minerals* 25 (1904): 715-720.

Finley, Walter H. "The Incline." *Mines and Minerals* 25 (1904): 40-41.

Hamill, R.H. "Design of Buildings in Mining Towns." *Coal Age*, XI (June 16, 1917), pp. 1045-48.

Hammond, M.B. "The Coal Commission Reports and the Coal Situation." *The Quarterly Journal of Economics*, XXXVIII (August 1924), pp. 550-66.

Hill, R.T. "Line Villages in Southern West Virginia: Examples in the New River Gorge." *Proceedings, New River Symposium*, 1985, pp. 121-29.

Huebner, A.F. "Houses for Mine Villages." *Coal Age*, XII (October 27, 1917), pp. 717-20.

Knipe, Edward E. and Helen H. Lewis, "The Impact of Coal Mining on the Traditional Mountain Subculture." *The Not So Solid South*. J. Kenneth Morland, ed. Athens: University of Georgia Press, 1971.

Lane, Ron, and Schnepf, Ted. "The Saga of Sewell: Case Study of A Ghost Town in the New River Gorge." *Proceedings, New River Symposium*, 1983, pp. 89-106.

Lucas, F.E. "The Manufacture of Coke." *Transactions of the American Institute of Mining Engineers* 44 (1913): 170-180.

McLean, Lois C. "Labor History in the New River Coalfield" *Proceedings, New River Symposium*, 1982, pp. 176-84.

"Mabel Gwinn, New River Nurse: Interview by Paul J. Nyden." *Goldenseal*, VII (Fall 1981), pp. 30-35.

Maddex, Lee R. "Nuttallburg Mine Complex: A Case Study in Mining Technology," *Proceedings, New River Symposium*, 1992, pp. 20-29.

_____. "The Quinnimont Furnace: A New Look at Fayette County's Iron Furnace," *Proceedings, New River Symposium*, 1992, pp. 77-86.

_____. "Furnaces in Blast on the Chesapeake and Ohio Railroad: A Study of the Early Virginias Iron Industry," *Proceedings, Canal History and Technology*, 1996, pp. 33-47.

Meissner, C.R., Jr., Englund, K.J., and Mory, P.C. "Coal Resources of the New River Gorge, West Virginia." *Proceedings, New River Symposium*, 1982, pp. 146-55.

Munn, Robert E. "The Development of Model Towns in the Bituminous Coal Fields." *West Virginia History*, XL (1978-79), pp. 242-53.

O'Neal, M.L. "Lowering Coal Down Hillsides with Minimum Breakage." *Coal Age* 21 (1924): 715-717.

Pudup, Mary Beth. "Waiting for the Revolution." *Appalachian Journal* 21 (Winter 1994), 178.

Pursglove, Joseph Jr. "Coal Cleaning in the Appalachian Fields," *Coal Mine Modernization, 1940 Yearbook*. Washington, D.C.: The American Mining Congress, 1919, 699-710.

- Raymond, Miner. *Loading Bituminous Coal.* *Coal Age* 7 (1915): 967-969.
- Reisser, H. "The Evolution of Coal Preparation in West Virginia." *Coal Age* 7 (1915): 960-965.
- Rice, George S. "Standardization of Coals for the Trade." *Proceedings of the American Mining Congress* Washington, D.C.: The American Mining Congress, 1919, 699-710.
- Sargent, A. Tappan. "Enduring Coal Enterprise." *The Black Diamond* 96 (1936): 21-32.
- Scholl, George P. "Digest of Current Mining Literature." *Mines and Minerals* 27 (1907): 317.
- Shuf, Murray. "Life on the New River...Fifty Years Ago." *Proceedings, New River Symposium*, 1984, pp. 15-32.
- Simmons, Charles W., Rankin, John R., and Carter, U.G. "Negro Coal Miners in West Virginia." *Midwest Journal*, VI (Spring 1954), pp. 60-69.
- Thomas, P.C. "Progress and Trends in Low Volatile Coal Production." *Proceedings of the Coal Conference on Combustion* Morgantown: West Virginia University, Bulletin, Series 38, No. 10-11, 1983, 49-68.
- The Virginias, a Mining, Industrial and Scientific Journal*, 1880-1886.
- Workman, Michael E. "The Kay Moor Mine, 1901-1962: A Case Study of Underground Mechanization in the Bituminous Coal fields of Southern West Virginia," *Canal History and Technology Proceedings*, Vol. XIX (2000): pp. 143-180
- Zimolzak, Chester E. "Changing Ownership Patterns in the West Virginia Coal Industry: Oligopoly and its Geographic Impact." *West Virginia and Appalachia: Selected Readings*, edited by Howard G. Atkins, Steve Ewing, and Chester Zimolzak. Morgantown, W.Va.: West Virginia University Press, 1976.

Technical Studies

- American Institute of Mining and Metallurgical Engineers. *The Low-Volatile Coal Field of Southern West Virginia*, by Howard N. Eavenson. New York, 1931.
- Bergstresser, Jack. "Kay Moor Mine: Historic American Engineering Record," Historic American Engineering Record No. WV 38, 1986. Unpublished manuscript.
- Hennen, Ray V, and Teets, D.D., Jr. *West Virginia Geological Survey, Fayette County*. Wheeling, West Virginia, Wheeling News Litho. Co., 1919.

"Historical Context for the Coal Heritage Survey," by Michael E. Workman, et al., June 19, 1991
Unpublished manuscript.

Keystone Consolidated Publishing Co. *The Coal Catalog Combined With Coal Field Directory for the Year 1920*. Pittsburgh, 1920.

Krebs, Charles E., and Teets, D.D., Jr. *West Virginia Geological Survey, Raleigh County and the Western Portions of Mercer and Summers Counties*. Wheeling, West Virginia, Wheeling News Litho. Co., 1916.

Paul D. Marshall and Associates, Inc. *A Cultural Research Project: The New River Gorge National River, West Virginia*. 3 vols. Charleston, West Virginia, 1981.

U.S. Department of the Interior. Bureau of Mines. *Coal Reserve Study, New River Gorge, West Virginia*, by Peter C. Mory, Alice V Brocoum, and Armond H. Beers, 1977.

_____. *Houses for Mining Towns*, Bulletin 87, by Joseph H. White. Washington, Government Printing Office, 1914.

_____. National Park Service. *Historic Resource Study, Kay Moor, New River Gorge National River, West Virginia*, by Sharon A. Brown. July 1990.

_____. *Historic Structure Report, Bank of Glen Jean, New River Gorge National River, West Virginia*, by Norma Camarena and Sharon A. Brown. October 1990.

Mid-Atlantic Regional Office. *Coal Fields, Communities and Change, Status of Planning: Study of Coal Mining Heritage and Related Resources in Southern West Virginia*. 1991.

_____. National Register of Historic Places Inventory - Nomination Form, "Bank of Glen Jean," prepared by James C. Blankenship III and Michael J. Pauley. December 15, 1982.

_____. National Register of Historic Places Inventory - Nomination Form, "Prince Brothers General Store," prepared by William E. Cox and Rodney S. Collins. January 29, 1986.

_____. National Register of Historic Places - Registration Form, "Kay Moor; Kay Moor No. 1 Coal Mine," prepared by Sharon A. Brown. November 8, 1990.

West Virginia Geological and Economic Survey. *Coal and Mining in West Virginia*, Coal Geology Bulletin No. 2, by James A. Barlow. Morgantown, West Virginia, February 1974.

West Virginia State Historic Preservation Office. *Coal Heritage Survey, Southern West Virginia Reconnaissance Study of Sites Related to the History of Coal Mining, Phase I, Final Report, Boone, Mingo, Wyoming, McDowell, and Logan Counties*, by Cindy Dobson, Stacy Stone, and Kim Valente.

November 8, 1991.

Theses and Dissertations

Anson, Charles Phillips. "A History of the Labor Movement in West Virginia." Unpublished Ph.D. dissertation, University of North Carolina, 1940.

Gillenwater, Mack Henry. "Cultural and Historical Geography of Mining Settlements in the Pocahontas Coal Field of Southern West Virginia, 1880-1930." Unpublished Ph.D. dissertation, University of Tennessee, 1972.

Herrin, Dean. "Breaking the Stillness": the Coal Industry and the Transformation of Appalachian Virginia, 1880-1920." Ph.D. dissertation, University of Delaware, 1991.

Merrill, William McKinley. "Economics of the Southern Smokeless Coals." Unpublished Ph.D. dissertation, University of Illinois, 1950.

Posey, Thomas Edward. "The Labor Movement in West Virginia, 1900-1948." Unpublished Ph.D. dissertation, University of Wisconsin, 1948.

Simon, Richard Mark. "The Development of Underdevelopment: The Coal Industry and its Effect on the West Virginia Economy, 1880-1930." Unpublished Ph.D. dissertation, University of Pittsburgh, 1978.

Simon, Richard Mark. "The Development of Underdevelopment: The Coal Industry and its Effect on the West Virginia Economy, 1880-1930." Ph.D. dissertation, University of Pittsburgh, 1978.

Thomas, Jerry Bruce. "Coal Country: The Rise of the Southern Smokeless Coal Industry and its Effect on Area Development, 1872-1910." Unpublished Ph.D. dissertation, University of North Carolina, 1971.

Workman, Michael E. "Political Culture and the Coal Industry in the Upper Monongahela Region, 1776-1933," Unpublished Ph.D. dissertation, West Virginia University, 1995.

Congressional Documents

U.S. Congress. Senate. Committee on Immigration. *Reports of the Immigration Commission, Immigrants in Industries, Part I: Bituminous Coal Mining*. 61st Cong., 2d Sess., S. Doc. 633, 1911.

_____. Committee on Mines and Mining. *Report of the United States Coal Commission*. 68th Cong., 2d Sess., S. Doc. 195, Part 1, 1925.

_____. *Report of the United States Coal Commission*. 68th Cong., 2d Sess., S. Doc. 195, Part 3, 1925.

RAILROAD INDUSTRY

Collections

Glen Jean, West Virginia. New River Gorge National River. Historical Files.

Morgantown, West Virginia. West Virginia University, Colson Hall. West Virginia Collection. The West Virginia Collection, perhaps the most comprehensive collection of primary and secondary materials relating to West Virginia history, contains numerous entries on railroad operation in the state, as well as the New River Gorge region. The historical files at New River Gorge contain copies of a variety of newspapers and periodical articles and other works relating to railroading, railway towns and sites, and railroad-related issues in the gorge.

Audiotape

"Interview of Rev. Steward H. Frazier," by Paul J. Nyden, November 12, 1980. New River Gorge National River Oral History, Vols. 20-22, Tape 22, pp. 23-24

Books

Ambler, Charles H. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, PrenticeHall, 1940.

Bragg, Melody. *Window to the Past*. Glen Jean, West Virginia, Gem Publications, 1990.

Dictionary of American History. Rev. ed. New York, Charles Scribner's Sons, 1976.

Dixon, Thomas W., Jr. *Chesapeake & Ohio Standard Structures*. Clifton Forge, Virginia, The Chesapeake & Ohio Historical Society, Inc., 1991.

_____. *Chesapeake & Ohio: Superpower to Diesels*. Newton, New Jersey, Cartens Publications Inc., 1984.

_____. *The Chesapeake & Ohio Railway at Hawks Nest, West Virginia*. Parsons, WV: McClane Publishing Company, 2000.

Dorin, Patrick C. *The Chesapeake and Ohio Railway: George Washington's Railroad*. Seattle, Superior Publishing Company, 1981.

Fayette Journal, Special Edition, Historical, Industrial, November 2, 1911.

Gallagher, P E. *Map and Directory of the New River Coal Field, Fayette and Raleigh Counties, West Virginia*. Norfolk, Virginia, Tidewater Publishing Company, 1906.

Huddleston, Eugene L. *Riding that New River Train: The Story of the Chesapeake & Ohio Railway through the New River Gorge of West Virginia*. Alderson, West Virginia, The Chesapeake & Ohio Historical Society, Inc., 1989.

Lambie, Joseph T. *From Mine to Market: The History of Coal Transportation on the Norfolk and Western Railway*. New York, New York University Press, 1954.

Lane, Ron, and Schnepf, Ted. *Sewall: A New River Community*. N. P, Eastern National Parks and Monuments Association, 1985.

_____. *West Virginia Narrow Gauge: Mann's Creek Railway*. Lynchburg, VA: TLC Publishing Inc., 1999.

Lewis, Ronald L. *Transforming the Appalachian Countryside: Railroads, Deforestation, and Social Change in West Virginia, 1880-1920*. Chapel Hill, University of North Carolina Press, 1998.

Nelson, James Poyntz. *The Chesapeake and Ohio Railway*. Richmond, Virginia, Lewis Printing Co., Inc., 1927.

Peters, J. T., and Carden, H. B. *History of Fayette County, West Virginia*. Charleston, West Virginia, Jarrett Printing Company, 1926.

Rice, Otis K. *West Virginia: A History*. Lexington, University Press of Kentucky, 1985.

_____. *West Virginia: The State and Its People*. Parsons, West Virginia, McClain Printing Company, 1972.

Robinson, Neil. *The Kanawha and New River Coal Fields of West Virginia, U. S. A.* Charleston, West Virginia, 1904.

Sullivan, Charles Kenneth. *Coal Men and Coal Towns: Development of the Smokeless Coalfields of Southern West Virginia, 1873-1923*. New York and London, Garland Publishing, Inc., 1989.

Tams, W. P. Jr., *The Smokeless Coal Fields of West Virginia: A Brief History*. Morgantown, West Virginia, West Virginia University Library, 1963.

Turner, Charles W. *Chessie's Road*. Richmond, Virginia, Garrett & Massie, Inc., 1956.

_____. *Chessie's Road*. 2nd ed. with additions by Thomas W. Dixon, Jr., and Eugene L. Huddleston. Alderson, West Virginia, The Chesapeake & Ohio Historical Society, Inc., 1986.

Periodicals

Bias, Charles. "Building the Chesapeake and Ohio Railroad through the New River Region," *Proceedings, New River Symposium*, 1982.

_____. "The Completion of the Chesapeake and Ohio Railroad to the Ohio River, 1869-1873," *West Virginia History*, 16 (Summer 1979), pp. 393-403.

Brown, Leona G. "Quinnimont: Going Back to a New River Town," *Goldenseal*, XVI (Fall 1990), pp. 23-29.

Earnest, Dale S. "Thurmond, WV - My Boyhood Home Town," *Proceedings, New River Symposium*, 1986, pp. 77-85.

Henderson, Catherine L. "Thurmond," *Wonderful West Virginia*, LII (December 1988), pp. 26-31.

Marshall, Paul D. "Hinton Historical District," *Proceedings, New River Symposium*, 1984, pp. 85-90.

Richmond, Larry S. "Thurmond Revisited," *Wonderful West Virginia*, LIV (June 1990), pp. 2023.

Simmons, Charles W., Rankin, John R. and Carter, U. G. "Negro Coal Miners In West Virginia," *Midwest Journal*, 6 (Spring 1954), pp. 60-69.

"What Makes C & O Grow?" *Tracks*, 41 (April 1956), p. 6.

Witschey, Walter Robert Thurmond. "Smokin' Guns and Smokeless Coal, Thurmond, West Virginia, New River Boom Town," *Proceedings, New River Symposium*, 1983, pp. 9-13.

Technical Studies

Cox, William E. and Rodney S. Collins, National Register of Historic Places -Nomination Form, "Prince Brothers General Store," prepared by William E. Cox and Rodney S. Collins. January 29, 1986.

Harper, R. Eugene, National Register of Historic Places - Nomination Form, "Thurmond Historic District," September 15, 1983.

Hennen, Ray V, and Teets, D. D., Jr. *West Virginia Geological Survey, Fayette County*. Wheeling, West Virginia, Wheeling News Lithograph Co., 1919.

Marshall, Paul D., National Register of Historic Places Inventory - Nomination Form, "Hinton Historic District," prepared by Paul D. Marshall. September 30, 1983.

Peyton, Billy Joe. Historic American Engineering Record. *Chesapeake and Ohio Railroad*:

Thurmond Yards, HAER No. WV-42, 1988.

Peyton, Billy Joe, et al., Institute for the History of Technology and Industrial Archaeology, West Virginia University. *New River Gorge National River, Thurmond Passenger Depot and Offices, Historic Structure Report*, August 1991.

Paul D. Marshall & Associates, Inc. *A Cultural Research Project: The New River Gorge National River, West Virginia*. 3 vols. Charleston, West Virginia, 1981.

_____. *Hinton Historic & Architectural Survey*. Charleston, West Virginia, September 30, 1983.

Reger, David B., and Price, Paul H. *West Virginia Geological Survey: Mercer, Monroe, and Summers Counties*. Wheeling, West Virginia, Wheeling News Lithograph Co., 1926.

Sasser, Lisa. "Thurmond Historic Structures Assessment, New River Gorge National River, West Virginia," Lowell, Massachusetts, National Park Service, Northeast Historic Preservation Center, 2001. .

Small, Sally, Louis Torres and Larry Reynolds, *Historic Structure Report, Thurmond Commercial Buildings, New River Gorge National River, West Virginia*, August 1992.

U.S. Department of the Interior. National Park Service. *Development Concept Plan / Interpretive Prospectus, Thurmond, New River Gorge National River, West Virginia*. September 1992; 2000.

Theses and Dissertations

Eller, Ronald D. "Mountain Road: A Study of the Construction of the Chesapeake and Ohio Railroad in Southern West Virginia, 1867-1873." Master's Thesis, University of North Carolina, Chapel Hill, 1973.

Thomas, Jerry Bruce. "Coal Country: The Rise of the Southern Smokeless Coal Industry and Its Effect on Area Development, 1872-1910." Unpublished Ph.D. dissertation, University of North Carolina, 1971.

LUMBER INDUSTRY

Collections

Glen Jean, West Virginia. New River Gorge National River. Historical files.

The historical files at New River Gorge contain copies of a variety of newspaper and periodical articles and other works relating to timber cutting, lumber camps and towns, and lumber-related issues in the gorge.

Books

Ambler, Charles H. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, PrenticeHall, 1940.

Ambler, Charles H. and Festus P. Summers, *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, Prentice-Hall, 1958.

Bagdon, Phillip V. *Meadow River Lumber Company: West Virginia's Last Logging Railroad*. Lynchburg, VA, TLC Publishing, 2002.

Braun, E. Lucy. *Deciduous Forests of Eastern North America*. Philadelphia, Toronto, The Blakiston Company, 1950.

Clarkson, Roy B. *Tumult in the Mountains: Lumbering in West Virginia, 1770-1920*. Parsons, West Virginia, McClain Printing Company, 1964.

Cox, William E. *Life on the New River: A Pictorial History of the New River Gorge*. Eastern National Parks and Monuments Association, 1984.

Defebaugh, James Elliott. *History of the Lumber Industry of America*. 2 vols. Chicago, The American Lumberman, 1906.

Dictionary of American History. Revised edition, New York, Charles Scribner's Sons, 1976.

Eller, Ronald D. *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930*. Knoxville, University of Tennessee Press, 1982.

Encyclopedia of American Forest and Conservation History. 2 vols. New York and London, Macmillan Publishing Company and Collier Macmillan Publishers, 1983.

Fayette Journal, Special Edition, Historical, Industrial, November 2, 1911.

Garvin, J. B. compiler. *West Virginia Agricultural Resources and Possibilities*. Charleston, West

Virginia, The Tribune Printing Co., 1907.

Huddleston, Eugene L. *Riding That New River Train: The Story of the Chesapeake & Ohio Railway Through the New River Gorge of West Virginia*. Alderson, West Virginia, The Chesapeake & Ohio Historical Society, Inc., 1989.

Lane, Ron, and Schnepf, Ted. *Sewall: A New River Community*. N. P, Eastern National Parks and Monuments Association, 1985.

Lewis, Ronald L. *Transforming the Appalachian Countryside: Railroads, Deforestation, and Social Change in West Virginia, 1880-1920*. Chapel Hill, University of North Carolina Press, 1998.

Lewis, Virgil A. compiler, *West Virginia: Its History, Natural Resources, Industrial Enterprises and Institutions*. Charleston, West Virginia Commission of the Louisiana Purchase Exposition, 1904.

Maury, M. F., and Fontaine, William M. *Resources of West Virginia*. Wheeling, West Virginia, The Register Company, Printers, 1876.

Miller, James H. *History of Summers County: From the Earliest Settlement to the Present Time*. Parsons, West Virginia, McClain Printing Company, 1908.

Peters, J. T., and H.B.Cardon, *History of Fayette County, West Virginia*. Charleston, West Virginia, Jarrett Printing Company, 1926.C

Rice, Otis K. *West Virginia: A History*. Lexington, University Press of Kentucky, 1985.

_____. *West Virginia: The State and Its People*. Parsons, West Virginia, McClain Printing Company, 1972.

Periodicals

Long, Roy, and Huddleston, Eugene L. "New River Crossings at Glade, West Virginia." *Chesapeake and Ohio Historical Magazine*, XXIV (May 1992), pp. 3-11.

Technical Studies

Brooks, A. B. *West Virginia Geological Survey: Volume Five, Forestry and Wood Industries*. Morgantown, West Virginia, Acme Publishing Company, 1910.

Paul D. Marshall & Associates, Inc. *A Cultural Research Project: The New River Gorge National River, West Virginia*. 3 vols. Charleston, West Virginia, 1981.

U.S. Department of the Interior. National Park Service. *Development Concept Plan/Environmental*

Assessment/Interpretive Prospectus, Grandview, New River Gorge National River, West Virginia.
(Draft), January 1993.

West Virginia University. Agricultural Experiment Station, College of Agriculture, Forestry, and Home Economics. *Primary Wood Industries of West Virginia*, Bulletin 461, by W H. Reid, W. W. Christensen, A. W. Goodspeed, and N. D. Jackson. June 1961.

Dissertations

Anson, Charles Phillips. "A History of the Labor Movement in West Virginia." Unpublished Ph.D. dissertation, University of North Carolina, 1940.

EURO-AMERICAN SETTLEMENT/AGRICULTURE

Collections

Glen Jean, West Virginia. New River Gorge National River. Historical Files.
Morgantown, West Virginia. West Virginia University, Colson Hall. West Virginia Collection.

The West Virginia Collection, perhaps the most comprehensive collection of primary and secondary materials relating to West Virginia history, contains numerous entries on EuroAmerican settlement and agriculture in the state as well as the New River Gorge region.

Books

Ambler, Charles H. *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, PrenticeHall, 1940.

Ambler, Charles and Festus P. Summers, *West Virginia: The Mountain State*. Englewood Cliffs, New Jersey, Prentice-Hall, 1958.

Barns, William D. *The West Virginia Grange: The First Century, 1872-1973*. Morgantown, W.Va.: Morgantown Printing and Binding, 1973.

Batteau, Allen, ed. *Appalachia and America*. Lexington: The University Press of Kentucky, 1983.

Blumenson, John, *Identifying American Architecture. A Pictorial Guide to Styles and Terms, 1600-1945*. Nashville, American Association for State and Local History, 1981.

Campbell, John C. *The Southern Highlander and His Homeland*. New York, Russell Sage Foundation, 1921.

Cavalier, John. *Panorama of Fayette County*. Parsons, West Virginia, McClain Printing Company, 1985.

Corbin, David Alan. *Life, Work, and Rebellion in the Coal Fields: The Southern West Virginia Miners, 1880-1922*. Urbana, Chicago, and London, University of Illinois Press, 1981.

Cunningham, Rodger. *Apples on the Flood: The Southern Mountain Experience*. Knoxville, University of Tennessee Press, 1987.

Debar, J. H. Diss, *West Virginia Hand-Book and Immigrants Guide*. Parkersburg, West Virginia, Gibbens Bros., 1870.

Dictionary of American History. Rev. ed. New York, Charles Scribner's Sons, 1976.

Dodge, J.R. *West Virginia: Its Farms and Forests, Mines and Oil-Wells*. Philadelphia: J.B. Lippincott & Co., 1865.

Donnelly, C. Shirley. *Historical Notes on Fayette County, West Virginia*. [Fayetteville, privately printed, 1958].

Eller, Ronald D. *Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930*. Knoxville, University of Tennessee Press, 1982.

Garvin, J. B. compiler. *West Virginia Agricultural Resources and Possibilities*. Charleston, West Virginia, The Tribune Printing Co., 1907.

Hedrick, Charles B. *Memoirs of Raleigh County*. Beckley, West Virginia, Wood Printing Company, 1932.

Holliday, Robert Kelvin. *A Portrait of Fayette County*. Oak Hill, West Virginia, The Fayette Tribune, Inc., 1960.

Johnson, Patricia Givens. *The New River Early Settlement*. Pulaski, Virginia, Edmonds Printing, Inc., 1983.

Johnston, David E. *A History of Middle New River Settlements and Contiguous Territory*. Radford, Virginia, Commonwealth Press, Inc., 1906.

Lewis, Virgil A. comp. *West Virginia: Its History, Natural Resources, Industrial Enterprises and Institutions*. Charleston, West Virginia Commission of the Louisiana Purchase Exposition, 1904.

Lively, Lester. *History of Summers County*. N.P., [1963].

Lovingood, Paul E., Jr., and Reiman, Robert E. *Emerging Patterns In the Southern Highlands: A Reference Atlas*. Produced by the Appalachian Consortium, Inc., in cooperation with Appalachian State University, University of South Carolina, and Tennessee Valley Authority, 1982. Vol. I.

McAlester, Virginia and Lee. *A Field Guide to American Houses*. New York, Alfred A. Knopf, 1991.

Maury, M. A., and Fontaine, William M. *Resources of West Virginia*. Wheeling, West Virginia, The Register Company, Printers, 1876.

Miller, James H. *History of Summers County: From the Earliest Settlement to the Present Time*. Parsons, West Virginia, McClain Printing Company, 1908.

Noble, Allen G. *Wood, Brick, and Stone: The North American Settlement Landscape*. Amherst, University of Massachusetts Press, 1984.

North, E. Lee. *The 55 West Virginias: A Guide to the State's Counties*. Morgantown, West Virginia, West Virginia University Press, 1985.

Peters, J. T., and Carden, H. B. *History of Fayette County, West Virginia*. Charleston, West Virginia, Jarrett Printing Company, 1926.

Rapaport, Amos. *House Farm and Culture*. Englewood Cliffs, New Jersey, Prentice-Hall, Inc., 1969.

Rice, Otis K. *The Allegheny Frontier. West Virginia Beginnings, 1730-1830*. Lexington, University Press of Kentucky, 1970.

_____. *West Virginia: A History*. Lexington, University Press of Kentucky, 1985.

_____. *West Virginia: The State and Its People*. Parsons, West Virginia, McClain Printing Company, 1979.

Rifkind, Carole. *A Field Guide to American Architecture*. New York, New American Library Books, 1980.

Roller, David C., and Twyman, Robert W. eds. *The Encyclopedia of Southern History*. Baton Rouge and London, Louisiana State University Press, 1979.

Salstrom, Paul. *Appalachia's Path to Dependency: Rethinking a Region's Economic History, 1730-1940*. Lexington: University Press of Kentucky, 1994.

Shapiro, Henry D. *Appalachia on Our Mind: The Southern Mountains and Mountaineers in the American Consciousness: 1870-1920*. Chapel Hill, University of North Carolina Press, 1978.

Sullivan, Charles Kenneth. *Coal Men and Coal Towns: Development of the Smokeless Coalfields of Southern West Virginia, 1873-1923*. New York and London, Garland Publishing, Inc., 1989.

Summit County Historical Society. *The History of Summers County, West Virginia, 1984*. Salem, West Virginia, Don Mills Inc., 1984.

Thurmond, Walter R., "The Town of Thurmond," in Walter Robert Thurmond Witschey, *The Thurmonds of Virginia*. Richmond, Gatewood Company, 1978.

Washington, Monroe. *Raleigh's Rich Resources*. Beckley, Beckley Newspapers Corporation, 1955.

Wells, Camille. *Perspectives In Vernacular Architecture*. Vol. II. Columbia, University of Missouri Press, 1986.

Whisnant, David. *All That Is Native & Fine: The Politics of Culture in an American Region*. Chapel

Hill and London, University of North Carolina Press, 1983.

Williams, John Alexander. *West Virginia: A History*. New York, London, and Nashville, W. W. Norton & Company and American Association for State and Local History, 1976.

Writers' Program, Work Projects Administration. compilers, *West Virginia: A Guide to the Mountain State*. New York, Oxford University Press, 1941.

Periodicals

"A Daughter Remembers, from an Interview by William E. Cox," *Goldenseal*, 10 (Spring 1984), pp. 17-21.

Athey, Lou. "Social Change in Preindustrial Fayette County, West Virginia, 1860-1870," *Proceedings, New River Symposium*, 1992, pp. 71-81.

Brown, Leona G. "Round Bottom: Home of the New River Gwinns," *Goldenseal*, 10 (Spring 1984), pp. 16-17.

Donnelly, Shirley. "Early Settlers and Settlements in Fayette County," *West Virginia History*, 10 (January 1949), pp. 125-35.

Gillenwater, Mack H. "A Geographical Analysis of the Demographic Changes in the New River Basin, 1900-1980," *Proceedings, New River Symposium*, 1983, pp. 203-17.

Hauser, Alan J. "Changing Patterns in Agriculture and Their Impact On the People of Appalachia," *Proceedings, New River Symposium*, 1987, pp. 175-88.

Hill, R. T. "Line Villages in Southern West Virginia: Examples in the New River Gorge," *Proceedings, New River Symposium*, 1985, pp. 121-29.

Hudson, Karen. "Architecture and Personal Expression in Southern West Virginia," *Folklife Center News*, 14 (Spring 1992), pp. 3-7.

McLean, Louis C. "Irish Mountain: The Story of a West Virginia Immigrant Community," *Goldenseal*, 17 (Spring 1991), pp. 47-56.

Nicely, John, "The Trump-Lilly Farm," *Proceedings, New River Symposium*, 1993, pp. 140-50.

Schultz, LeRoy G. "Log Barns of West Virginia," *Goldenseal*, 9 (Spring 1983) pp. 4-45.

_____. "The Barns of West Virginia," *Goldenseal*, IV (April-September, 1978), pp. 51-56.

_____. "West Virginia Cribs and Granaries," *Goldenseal*, 9 (Winter 1983), pp. 47-54.

Solecki, R. S. "An Archaeological Survey of Two River Basins in West Virginia," *West Virginia History*, 10 (1949), pp. 338-44.

Theses and Dissertations

Bailey, Kenneth Ellis. "Some Changes In West Virginia Farming Between 1929 and 1959," Unpublished M.A. Thesis, West Virginia University, 1964.

Thomas, Jerry Bruce. "Coal County: The Rise of the Southern Smokeless Coal Industry and its Effect on Area Development, 1872-1910," Unpublished Ph.D. dissertation, University of North Carolina, 1971.

Witzel, William Thomas. "The Resources and Industries of the New River Drainage Basin in West Virginia," Unpublished M.S. thesis, University of Tennessee, 1957.

Technical Studies

Hennen, Ray V, and Teets, D. D., Jr. *West Virginia Geological Survey, Fayette County*. Wheeling, West Virginia, Wheeling News Litho. Co., 1919.

Hudson, Karen E. *Final Report, New River Gorge Folklife Project, Cultural Landscape Windshield Survey*. Submitted to American Folklife Center, Library of Congress, Washington, D.C., March 1992.

Institute for the History of Technology and Industrial Archaeology, West Virginia University. "The Trump-Lilly Farm: Historic Structures & Cultural Landscape Report," Technical Report No. 7, April 26, 1993.

Krebs, Charles E., and Teets, D. D., Jr. *West Virginia Geological Survey, Raleigh County and the Western Portions of Mercer and Summers Counties*. Wheeling, West Virginia, Wheeling News Litho. Co., 1916.

Louis Berger & Associates, Inc. *Archaeological Testing For Boardwalk and Bridge Improvements at Sandstone Falls, New River Gorge National River, Raleigh County, West Virginia*. June 1989.

McGowan, Leigh, U.S. Department of the Interior, National Park Service. National Register of Historic Places - Registration Form, "Trump-Lilly Farmstead," January 31, 1990.

Paul D. Marshall & Associates, Inc. *A Cultural Research Project: The New River Gorge National River, West Virginia*. 3 vols. Charleston, West Virginia, 1981.

Reger, David B., and Price, Paul H. *West Virginia Geological Survey. Mercer, Monroe, and Summers*

Counties. Wheeling, West Virginia, Wheeling News Lithograph Co., 1926.

Rice, Otis R. "History of the New River Gorge Area," Typescript, Montgomery, West Virginia Institute of Technology, [1986]. (Copy in Historical files, NERI).

Scott, Shirley Claymore. "New River Crossings, Then and Now: Ferries and Bridges From the Narrows to Kanawha Falls." ca. 1986. (Copy in Historical files, NERI).

U.S. Department of Commerce. Bureau of the Census. *United States Census of Agriculture 1925, West Virginia Statistics by Counties*. Washington, Government Printing Office, 1928.

West Virginia. Department of Agriculture. *West Virginia Agriculture*. Charleston, West Virginia, 1928.

West Virginia University. Agricultural Experiment Station. College of Agriculture, Forestry, and Economics. *Agricultural Changes In West Virginia, 1940-1950-1959*, Current Report 38. May 1963.

