A Ten-Millennia Lens: Landscape, Culture and History at Russell Cave National Monument

Jesse Randall English

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A TEN-MILLENNIA LENS: LANDSCAPE, CULTURE
AND HISTORY AT RUSSELL CAVE
NATIONAL MONUMENT

by

Jesse Randall English

A Thesis
Submitted to the Faculty of
Mississippi State University
in Partial Fulfillment of the Requirements
for the Degree of Master of Landscape Architecture
in Landscape Architecture
in the Department of Landscape Architecture

Mississippi State, Mississippi

May 2012
A TEN-MILLENNIA LENS: LANDSCAPE, CULTURE
AND HISTORY AT RUSSELL CAVE
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Developed out of a need for a reliable methodology of documenting historic landscapes, the National Park Service uses Cultural Landscape Reports to determine the significance and integrity of historic landscapes. Treatment recommendations developed from an analysis of site history and existing conditions guide the management decisions of cultural landscapes.

Russell Cave National Monument, located in Bridgeport, Alabama, contains one of the oldest continuous archeological records in North America. A cultural landscape report for the park had not yet been completed. This research consists of a historical narrative covering the 10,000 years of human occupation in the cave, a documentation of existing conditions, an analysis of historic integrity, and recommendations for management, preservation, and restoration of the landscape.

Keywords: cultural landscapes, russell cave, national park service, prehistory
DEDICATION

To my son, Turner. May you grow to love our public lands and appreciate
the need to protect them.
ACKNOWLEDGEMENTS

First and foremost, I would like to thank my wife, Anna Catherine. She has shown so much patience and understanding during my graduate studies, and her grace and encouragement during all my time away from home is truly appreciated. I would also like to thank both of our families for being so supportive during our time here.

Secondly, I would like to thank all the employees of the National Park Service that have helped me in this research: Tracy Stakely, David Hasty, Beth Byrd, and Mary Troy in the Southeast Regional Office, and Keena Graham, Larry Beane, Sheila Reed, Mary Shew, Mary Dawson, Brenton Bellomy, and Antoine Fletcher at Russell Cave National Monument and Little River Canyon National Preserve. Your assistance and granting of access have been hugely beneficial. Special thanks to Barry Caldwell, of Moses H. Cone Memorial Park, Blue Ridge Parkway, for introducing me to cultural landscape reports and allowing me time to meet Tracy during my internship there. Without him, this project may not have gotten off the ground.

I would also like to thank my professors and colleagues in the Department of Landscape Architecture. You have shown me a profession that I love, and I am incredibly grateful.
Lastly, to my committee: Michael Seymour and Wayne Wilkerson from the Department of Landscape Architecture, and Dr. Nick Herrmann from the Cobb Institute of Archeology. Thank you so much for your help and guidance.
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CHAPTER I
INTRODUCTION

Culture and landscape are inextricably tied together.¹ Throughout history, they have informed and built upon each other, slowly developing into the cultures and landscapes we know today.² Though every landscape has a history, some have been deemed essential for telling the story of the United States of America. These places are conserved within the National Park Service.

One of the principal missions of the National Park Service is to preserve and protect the country's most valuable natural and cultural assets for future generations.³ Though many components assist in accomplishing that mission, cultural landscape reports, or CLRs, play an important role in that mission's success. Containing detailed analyses of a site's history, existing conditions and historical significance, along with recommendations for treatment, a CLR serves as a guide for the management and treatment of these important landscapes.⁴

_____________________
Landscape architects, particularly ones with a focus on historic landscapes, have been at the forefront of CLR development. Robert Z. Melnick, FASLA, now a professor at the University of Oregon, wrote widely of the necessity and practice of cultural landscape preservation.\(^5\) His work, along with the work of other landscape architects, has been influential in the development of a methodology of preservation within the Park Service.\(^6\) Even now, the National Park Service's Olmsted Center for Landscape Preservation employs landscape architects to write cultural landscape reports and protect and preserve those already in their care.\(^7\) The Olmsted Center also has a partnership with the State University of New York's Center for Cultural Landscape Preservation, which is a component of its landscape architecture program. In this program, students periodically write cultural landscape reports as theses in partial fulfillment of their Masters in Landscape Architecture degree program.\(^8\)

As interest in preservation increases, programs like this will continue to grow in popularity and importance. Professionals with this focus are needed, and

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7. Olmsted Center for Landscape Preservation, "Olmsted Center for Landscape Preservation."

opportunity exists for students to play a role in this facet of the Park Service’s mission.

Though the Park Service endeavors to protect and accurately preserve and interpret every property under their jurisdiction, some have not had a CLR developed. Russell Cave National Monument, located in Bridgeport, AL, was dedicated to protect one of the oldest archeological records in North America.9. Housed in the cave that gives the park its name lies a record of over 8,000 years of human history.10. Though it is widely recognized as an important source of knowledge about the prehistoric peoples that inhabited the Southeast, the landscape of the park has yet to be fully studied and understood.


Statement of Problem

Russell Cave National Monument has existed for over fifty years, yet a CLR has not been written to guide the management of the park. This document is an important part of the overall management and planning of the park, as such a CLR is critical for future planning.

Landscape architects, particularly ones with a historical focus, are usually the project leaders in the development of a CLR.11 As noted previously,

academic precedents for this type of project exist, and this project is a valid and important project for any landscape architecture student to undertake.

The purpose of this case study/historical narrative is to understand the culture and landscape of Russell Cave National Monument and the historical ties between the two, how to bring those ties into the present, and how the interpretation and preservation of those ties will affect the monument's future for the National Park Service and the visiting public. The history of the cultural landscape of Russell Cave National Monument is generally defined as any cultural event, landscape feature or interaction between the two that has made Russell Cave National Monument an important asset to the nation.

**Scope**

Because CLRs are important to the management of the parks, some consistency in their format and content is necessary. The Park Service has developed guidelines for the development of the report, which are published in *A Guide to Cultural Landscape Reports: Contents, Process and Techniques* by Robert Page. This guide is referenced heavily throughout the introduction and literature review. Just as an experiment might be replicated using a specific methodology in a different situation, this publication is a methodology for developing consistent reports about different parks.

A CLR has three sections. Part I deals with site history, existing conditions, and analysis and evaluation. Part II deals with treatment recommendations, and Part III is a record of the treatment. This project only
deals with the first two parts; Part III is generally undertaken after some time, in order to record and evaluate the success of the treatment recommendations set forth in Part II. The definitions for each section in Page's guidebook will be quoted on the subsequent pages, followed by a discussion of the scope of each section in relation to Russell Cave.

This thesis addresses the significant features of Russell Cave National Monument and the changes to its landscape over time. Due to the prehistoric significance of the monument, this covers a timeframe from prehistory (10,000 years ago) to present day. The transient nature of the peoples using the cave makes it impracticable to limit this portion of the study to the boundaries of the park. Unless necessary for accurate discussion, however, the scope of this section is limited to the Doran Cove area, in which the park is located.

**Site History**

Site History gives a historical description of the landscape and all significant characteristics and features. The text is based on research and historical documentation, with enough support material to illustrate the physical character, attributes, features, and materials that contribute to the significance of the landscape. This section identifies and describes the historical context and the period or periods of significance associated with the landscape.12

This section consists of six timeframes:

1. Prehistory (8000 BC - AD 1500)

2. Tribal Indians and European contact (AD 1500 - AD 1800)

12. Ibid., 36.
3. White settlement and early American history (AD 1800 - AD 1900)
4. Early 20th century (AD 1900 - AD 1960)
5. Park development (AD 1961 - AD 1967), and
6. Recent park development (AD 1968 - present).

The prehistoric time frame is the most significant time frame to discuss due to the park's significance in the understanding of the era. However, as most information from this time is derived from archeological reports, the discussion will be general in its scope, dealing mainly with what can be gleaned about the landscape. The second timeframe discusses the use of the area by tribal Indians such as the Cherokee and how the first Europeans arriving in the area may have altered the landscape. The third timeframe is a discussion of land use by the first settlers of the area, and how the area was affected by and used during in Civil War-era and afterward. The fourth section is a discussion of the land use of the area in the early 20th century, and also an overview of the first archeological studies performed at the site. The fifth section discusses the designation of the monument and the development of the site by the National Park Service, while the most recent timeframe will cover changes to the park since it was dedicated.

**Existing Conditions**

Existing Conditions describes the landscape as it currently exists, including the documentation of such landscape characteristics as land use, vegetation, circulation, and structures. It is based on both site research and site surveys, including on-the-ground observation and documentation of significant features. Contemporary site functions,
visitor services, and natural resources are described to the extent that they contribute to or influence treatment.13.

This section consists of an in-depth documentation of the existing conditions of the land within the boundaries of Russell Cave. Three site visits were conducted to document and study the site. Land use, buildings, trails, natural features, and vegetation are documented and discussed. Development of up-to-date maps, including work with Geographic Information Systems (GIS), was undertaken as well.

**Analysis and Evaluation**

Analysis and Evaluation compares findings from the site history and existing conditions to identify the significance of landscape characteristics and features in the context of the landscape as a whole. Historic integrity is evaluated to determine if the characteristics and features that defined the landscape during the historic period are present. A statement of significance for the landscape is included, and the analysis and evaluation may be summarized in the identification of character areas, or the development of management zones.14.

This section is again limited to the lands within the boundaries of the park. Significant features of the park are discussed, along with the timeframe in which they are significant and the integrity of those features in regards to the timeframe. This section deals with the National Register of Historic Places process for landscape evaluation, and uses it to determine significance. The previously-designated period of significance for Russell Cave is prehistory, and

13. Ibid., 36.
the potential (or lack thereof) for adding other periods of significance is discussed.

**Treatment**

This section describes the preservation strategy for long-term management of the cultural landscape based on its significance, existing condition, and use. It also includes a discussion of overall management objectives for the site as documented in planning studies or other management documents. The treatment section may address the entire landscape, a portion of the landscape, or a specific feature within it. Treatment is described in a narrative text, treatment plan, and/or design alternatives.\(^\text{15}\).

Based on the results of the previous section, treatment recommendations for the landscape are suggested. This section only applies to the land within the park boundaries. Treatments are suggested for natural systems, built elements, and visitor experience.

**Objectives**

The ultimate goal of this project is to develop and submit a properly-formatted cultural landscape report on Russell Cave National Monument to the National Park Service. However, there are specific objectives this project meets:

1. This document is exhaustive in its depth of study and satisfactory in its usefulness to the National Park Service and the staff of Russell Cave National Monument.

\(^\text{15}\) Ibid., 36.
2. This document compiles all pertinent information known about the history of the culture and landscape surrounding Russell Cave, and presents new information that is useful to the mission of the park.

3. This document presents an in-depth survey of the existing conditions of the park, including natural and planted vegetation, archeological sites, built elements, and hydrological and topographical characteristics.

4. This document presents an exhaustive analysis and evaluation of the history of the park and its elements, in order to properly evaluate the park and its historical integrity in relation to specific time periods.

5. This document provides treatment suggestions based on accurate analysis and evaluation that furthers the mission of the park, allows it to be more accurately and engagingly interpreted, ensures the significance of park is preserved and protected, and improves the visitor experience.

Methodology

This project follows the process and methodology set forth in A Guide to Cultural Landscape Reports: Contents, Process, and Techniques, written by Robert Page. This guidebook has been developed by the National Park Service over a period time to provide a consistent resource for writing CLRs. The parts
of a CLR have been previously discussed in the "Scope" section of this
introduction.

**Site History**

This section entailed the most academic research. Academic sources
consisted of any papers and articles that dealt with Russell Cave, specifically,
and the surrounding region. Due to the prehistoric nature of Russell Cave, any
papers that dealt with the archeology of the region were of particular
importance. Research for this section also involved three site visits to the park
to review the archival materials available there, including pictures, management
journals, plans, and other park documents. Due to the informed realization that
most of the information available would be primarily archeological in nature and
therefore very limited in its focus on the landscape, expanded research into
academic and national archives such as The University of the South, The
University of Tennessee, and the archives of National Geographic in
Washington, DC were not undertaken.

**Existing Conditions**

A survey of existing conditions required one focused site visit. A general
site inventory was undertaken. Remote sensing technology, including GIS data
from the National Park Service as well as GPS surveys done on-site, were used
to determine tree cover, hydrology, soils and other pertinent information.
Photography was employed to capture the current conditions of significant
features. A review of the trail system was undertaken, as well as an assessment of any important views from the site. The cave itself was studied for its integrity.

**Analysis and Evaluation**

Analysis and evaluation of the park corresponding to the criteria set forth in the National Register requirements was completed. This evaluation covers the integrity of significant features of the park in regards to the timeframes laid out previously in this proposal.

**Treatment**

The conclusion of the study is treatment recommendations. In light of the site history and analysis of integrity, these conclusions attempt to highlight what the park can change about its existing conditions to preserve or improve its historical integrity. Ranging in breadth from watershed plans to reducing the number of picnic tables, the treatment recommendations will guide the park to a path of preserving and protecting its valuable natural and cultural assets for future generations.
CHAPTER II
LITERATURE REVIEW

Introduction

Landscape is a palimpsest, revealing traces of past events, actions and ideas. It is simultaneously a valuable source of information about culture, past and present, and a reflection of cultural history as we understand it from other sources. It is also the slate for tomorrow’s environment. 16.

Figure 2 Old agricultural irrigation channel in the woods of the Crosby Arboretum, Picayune, MS.

Photo by author.

On every landscape are signs of culture. Humans have left their mark on environments worldwide, and the land carries these marks like an old photograph. If one looks hard enough, much can be learned. This forest used to be a farmer's field, or that cave used to be an important exchange, for example. Knowledge gleaned from the land can tell the story of the people who lived on it, such as how the farmer was a pioneer in irrigation or how the cave was a regional market for ideas, tools, and culture. By studying these landscapes, we know how tribes communicated and how certain farming technologies spread across the land. These lands carry our history, and many times, in the absence of written letters and photographs, are the only record of events past. To lose the opportunity to study these lands is to lose a bit of our heritage. Landscapes are “repositories…of cultural meaning from which a society may learn about itself,” and therein lies their importance.


So what is a cultural landscape? According to the National Park Service, a cultural landscape is “a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with an historic event, activity, or person, or that exhibit other cultural or aesthetic values.”20. Carl O. Sauer, considered “the father of cultural geography,” tied culture and landscape together by saying, “under the influence of a given culture itself changing through time, the landscape undergoes development, passing through phases, and probably reaching ultimately the end of its cycle of development.”21.


Though the idea of landscape and culture inextricably tied together has been around since at least the 5th century, serious academic study of cultural landscapes did not begin until the mid-1920s, when the aforementioned Sauer began publishing papers on the topic. Since then, the study of cultural landscapes has largely been propagated by the National Park Service as the product of their need to define preservation and management strategies for historic landscapes, such as Frederick Law Olmsted’s home, Fairsted.

Figure 4  Fairsted, Frederick Law Olmsted’s home and studio. Photo courtesy of Frederick Law Olmsted National Historic Site.

From this need for definition, the Cultural Landscape Report (CLR) was born. This document, which contains detailed analyses of a site’s history, existing conditions, and historical significance along with recommendations for treatment, serves to “guide management and treatment conditions about a landscape’s physical attributes, biotic systems, and use.”24. Since the early 1930s, it has steadily developed into a highly structured, exhaustive study of a landscape.25. The writings of Charles Birnbaum and Robert Melnick in the 1980s propelled the conservation effort, culminating in an official policy for the protection of cultural landscapes in the Park Service’s Management Policies in 1988.26.

Russell Cave National Monument, located in Bridgeport, AL, was dedicated in 1961 to protect the rich archeological record preserved in the cave vestibule for which it was named.27. Though a master plan was designed and park buildings were constructed, no cultural landscape report has been attempted for the park. This document is instrumental in planning and management decisions; thus, the park has been at a virtual standstill, unable to make historically-informed decisions on its future progress. This literature review

25. Ibid., 7.
will discuss the cultural landscape report – its history, methods used in its
development, and its significance to the National Park Service in general and
Russell Cave National Monument in particular.

**Cultural Landscape Reports: A History**

Though the policy of protecting cultural landscapes has only been a part
of the National Park Service’s official mission since 1988, the recognizance of
landscapes as culture is a much older idea. According to Stilgoe’s *Common
Landscape of America, 1580 to 1845*, “landscape” was introduced to England
through the German word *landschaft* around AD 400. Meaning “a collection of
dwellings and other structures crowded together with a circle of pasture,
meadow, and planting fields and surrounded by unimproved forest or marsh,” or
later, “an agricultural community with intimate ties joining the residents to one
another and the land,” it aptly described the link between the land and the
human culture that happened upon it.

Once this holistic view of landscape is established, it becomes clear as to
what these definitions intend to say. Neither culture nor landscape can be
preserved independently; each is a product of the other, so to preserve one is to
preserve the other. For example, to preserve the culture of the Mayan Indians,
their pyramids must be preserved. But what influenced the building of the

Landscapes in the National Park Service,” 78. 1987.
temples? What aspect of their lives determined the direction the temple was to face, and following that orientation, the foundational axis for the rest of the city? To fully understand the culture, the landscape itself must be understood. The landscape is the key.

It is also the canvas. Every early culture’s landscape determined the characteristics of that culture: building materials, diet, water access – their lives related directly to the landscape in which they lived.30. A culture’s buildings cannot be separated from the site. However, acknowledging this view was a problem in the beginning of cultural landscape preservation. Historic preservation, both in the parks and in the private sector, was focused on what Robert M. Utley, in his article “A Preservation Ideal,” calls “associative monuments.” By using this term, Utley tried to convey how a historic structure is usually viewed. Preservationists tended to focus on the structures on a site, lessening the importance of the landscape they were “associated” with.31. Even until the 1960s, most reports dealing with historic resources within the National Park Service centered on structures.32.

Structures’ potential for preservation is much easier to identify than landscapes due to their static nature. A product of the time in which it was built,

an historic structure clearly points to its heritage. It may reflect a certain architectural style or use a certain type of building material. While it is fairly straightforward to determine the why and how of preserving a historic building, reading the historic significance in a landscape is much more difficult.\textsuperscript{33} As author Mac Griswold said, “Gardening is the slowest of the performing arts,” which strikes at the heart of one of the toughest aspects of landscape preservation.

Figure 5  Monticello, home of Thomas Jefferson, Charlottesville, VA.

Photo taken by author.

A landscape is not static. Trees grow, soil erodes, streams change course; it is a living thing, and living things are rarely still. Thomas Jefferson’s Monticello is a prime example. Researchers and horticulturalists have been able

\textsuperscript{33} Meinig and Jackson, \textit{The Interpretation of Ordinary Landscapes: Geographical Essays}. 1979.
to reconstruct what Jefferson’s gardens around his estate probably looked like, but they will never be able to replace the 200-year-old, six-foot diameter poplar tree that frames the back of the house.34. Therein lies the major contrast between historic structure preservation and landscape preservation. Do we save the trees? Are the plants what make it historic? While the physical aspects of a landscape may contribute to its historical significance, the real value of the landscape lies in the culture it supported. The landscape holds information about the culture, and the physical aspects of the landscape must be read to interpret knowledge about that culture.35.

The acknowledgement of a holistic view of cultural landscape preservation marked a move toward “a multi-dimensional expression of caring for the world around us.”36. But even this more-inclusive philosophy contained division within. The National Park Organic Act of 1916, which created the National Park Service, outlines the duty of the Park Service to “conserve the scenery and the natural and historic objects and the wildlife therein…”37. This created a conflict between those who would place the conservation of “natural objects” and wildlife above the conservation of “historic objects,” and vice


versa. So then, a conflict not only exists in the definition of what a cultural landscape actually is, but in the determination of the scope (at what point on the land does a significant landscape cease to be significant?), the determination of the specificity of its significance (how many colonial gardens in the state of Mississippi should be preserved?), and the determination of the balance between the preservation of natural processes and ecosystem and the preservation of an altered landscape.38.

The problem of landscape preservation is a complex one, one which the National Park Service has acknowledged and attempted to solve since the 1930s.39. Some of the first actions taken were after the mismanagement of the Cades Cove area of Great Smoky Mountains National Park. Park staff had initially planned to allow natural succession to take over the pastoral fields of the Cove in an attempt to erase all signs of human occupation and restore the park to its natural state.40. Visitors loved the site because of the contrast between fields and forest, and the staff soon realized one of the park’s biggest draws would disappear. A well-intentioned but mishandled cultural program was implemented “to make as complete and accurate a record as possible of (the Southern Appalachian) culture without delay, and before intrusive influences

have been exercised…” 41. Though the program appealed to visitors, it was dishonest in its portrayal of life in the Southern Appalachians. 42. Combined with a near-ignorance to the ecological disruptions the program was inflicting on the landscape, the Park Service only recently has begun to manage the Cove with a focus on sustainability and genuine portrayal of culture. 43. This, while just one example, is indicative of the need for exhaustive and honest research into the cultural histories of landscapes.

The 1960s saw the rise of “Historic Grounds Reports” as precursors to CLRs.44. These reports, however, along with nods to scenic vistas during road and building construction, represented only “components of the larger landscape” rather than evaluation of the landscape as a whole.45. Throughout the 1980s, the development of standards for the management and preservation of cultural landscapes progressed.46 By 1985, CLRs were identified and defined in Cultural Resource Management Guideline, NPS-28, Release No. 3, and, in 1988, __________________


NPS Management Policies identified cultural landscapes as cultural resources within the National Park system.\textsuperscript{47} As the cultural landscape report grew in importance, and as recognition of the necessary scope increased, its structure was revised. In 1998 A Guide to Cultural Landscape Reports: Contents, Process, and Techniques was published, giving clear methods for assembling a CLR and standardizing its content.

**Cultural Landscape Reports: The Content**

Cultural landscape reports for the National Park Service have five parts: an introduction; site history, existing conditions, analysis & evaluation; treatment; record of treatment; and appendices, bibliography, and index.\textsuperscript{48} Because the report builds upon itself, each component of the report should be completed in order.\textsuperscript{49} This is not to say the process is not iterative, however. Discoveries made in later research must inform previously completed components. Each of these components is made up of smaller sections that combine to present a comprehensive look at the landscape being studied.

**Introduction**

The introduction to a CLR sets up the context of the report and is divided into five sections: a management summary, an historical overview, the scope of

\textsuperscript{47} Ibid., 18.

\textsuperscript{48} Ibid., 6.

\textsuperscript{49} Ibid., 35.
work and methodology, a description of study boundaries, and a summary of findings.\textsuperscript{50}.

The management summary usually describes the purpose and goals of the project and how any previous management documents may have affected the existing conditions of the site.\textsuperscript{51} In the case of Lucy Lawliss’ and Susan Hitchcock’s CLR for Abraham Lincoln’s Birthplace, the authors describe the development of the CLR and the various contributors to the project. In the case of John Milner Associates’ CLR for Chickamauga Battlefield, however, the authors simply give a brief outline of the report’s contents and overall purpose.

“Focusing on human interaction with and modifications to the natural landscape,” the historical summary is a brief overview of the historic context of the site.\textsuperscript{52} In the CLR for the Dungeness Historic District of the Cumberland Island National Seashore, Susan Hitchcock recounts the history of the site from the first signs of Indian occupation 4,000 years ago, the arrival of the Spanish in the 1600s, and onto the construction and occupation of the Carnegie mansion complex that gives the district its name.\textsuperscript{53} In contrast, John Auwaerter, in the CLR he prepared for the Poplar Grove National Cemetery, concentrates his

\begin{itemize}
\item \textsuperscript{50} Ibid., 37.
\item \textsuperscript{51} Ibid., 37.
\item \textsuperscript{52} Ibid., 41.
\item \textsuperscript{53} Hitchcock, \textit{Cultural Landscape Report for the Dungeness Historic District, Cumberland Island National Seashore}, 1-3. 2007.
\end{itemize}
historical summary on the period from the mid-1800s to the present day. The summaries in different CLRs will vary depending on the scope of history they analyze and the writing style of the authors.

The next section, scope of work and methodology, gives a short description of the project purpose, issues addressed, amount of investigation required, limitations to the work, techniques and processes used, and the format of the report. The CLR for the historic Mount Desert Island hiking trail system in Acadia National Park details the primary sources (such as correspondence, interviews, and map collections) and secondary sources (such as trail guidebooks and technical assistance projects) used, as well as the use of Geographic Positioning Systems (GPS) and Geographic Information Systems (GIS) technologies to inventory the trails. It also describes the labeling and naming methods used to identify the trails in the system. In their CLR for the Chickamauga Battlefield at the Chickamauga and Chattanooga National Military Park, John Milner Associates, Inc. (JMA) and History Matters give a very detailed breakdown of their methodology, describing methods for historical research, existing conditions documentation, comparative analysis, integrity assessment


and treatment, along with the standards and policies used as guidelines.57. Again, this seems to vary depending on the authors’ writing style and whether they wish to call any special attention to certain methods used.

Figure 6 Photo/diagram of the cultural landscape boundary of the Battery Weed Headland.

From the Cultural Landscape Report for Battery Weed Headland prepared by Jean B. Gleisner and John Auwaerter.

The description of study boundaries is the fourth section of the introduction, and both the specific site boundary and the regional context of the site should be discussed, in both narrative and graphic form.58. Though it may sound straightforward, defining the boundary of a landscape can be difficult. As


Peirce Lewis says in his article, “The Future of the Past: Our Clouded Vision of Historic Preservation,” “all human landscape has meaning,” and cultural landscapes consist of “nearly everything that we can see when we go outdoors.” In the example of the Battery Park Headland, the cultural landscape being investigated lies with Gateway National Recreation Area in New York.59. Boundaries for the cultural landscape had to be determined to accurately access the site. On the other hand, because Ocmulgee National Monument was small enough to be covered in one CLR, the boundaries of the landscape were the same as the park boundaries.60.

The last section of the introduction is the summary of findings. Depending on the scale of the project, this section may vary in size. Generally this section will tell of any key findings, such as new periods of significance, potential threats, and recommendations for future research.61. Wiss, Janney, Elstner Associates, Inc. and JMA give a very detailed summary findings section in their CLR for Stones River National Battlefield. It summarizes the significant time period of the site, the threats to the integrity of the site, and gives a brief overview of the seventeen different treatments they recommend for the site.62. In


the Camp Curry Historic District CLR, however, the summary of findings is fairly brief. This is due to their suggestion that the historic districts boundaries and period of significance should be changed, as well as exceptional complexity in the treatment recommendations due to the content of the site, which are issues that need to be explained in greater detail than would be feasible for a summary.63. These two CLRs show a good contrast of what could be contained in a summary.

Site History

The next section of the cultural landscape report contains the bulk of the investigative work. Site history, existing conditions, and analysis and evaluation of the landscape must be thoroughly investigated and documented before any recommendations for treatment can be made.64. Generally, these sections are used to “identify the historical values associated with the landscape, document extant landscape characteristics and associated features, and define the significance and integrity of the landscape.”65.


65. Ibid., 41.
Because cultural landscapes are not static, finding information on site history can be difficult. As mentioned before, a building bears obvious and stable signs of its past, while landscapes are “dynamic and changing.”\textsuperscript{66} For a cultural landscape, the site history should be concentrated on how humans have formed and changed the site.\textsuperscript{67} All modes of information can and should be used, from photos and plans to newspapers and archeological field reports. For 


example, Guy Prentice’s “Archeological Investigations Conducted at Russell Cave National Monument” contains a great deal of useful information about the cultural landscape, from locations of old coal mining areas to prehistoric Indian artifacts that hint at what prior land uses could have been. In the instance that extensive documentation of the landscape has not been previously attempted, the collection and analysis of primary sources can inform a large part of the site history. The analysis of these primary sources may lead to the discovery of new information about a site or uncover long-forgotten events that may be key to the accurate interpretation of the site. In the case of Ian Firth’s study of the cultural landscape of Moses H. Cone Memorial Park on the Blue Ridge Parkway, oral histories, field journals and inventories, old photographs, and the personal writings of Moses H. Cone were used to reconstruct the history of the site and the intentions of its designers.

An important aspect of the site history is defining the scope of the history to be investigated. This is dependent on three things: management objectives, the complexity of the landscape, and the availability of documentation.

Besides these three areas of consideration, another is the period of significance.

68. Prentice, Archeological Investigations Conducted at Russell Cave National Monument, Jackson County, Alabama. 2006.


Figure 8  Landscape plan for Visitors Center at Russell Cave National Monument.

Illustrated by Killian. Dated November 14, 1963. From the National Park Service ETIC database.

The National Register of Historic Places, a program developed by the National Park Service to encourage historic preservation through both public and private means, has a set of criteria upon which cultural landscapes are evaluated to determine what time period in its history makes it significant.71. This may be as direct as a time period of construction and occupation, as was the case with Moses H. Cone Memorial Park, or as vague as the early archeological era, as is the case with Russell Cave National Monument.72. Generally, the

71. Savage and others, "How to Apply the National Register Criteria for Evaluation," i. 1998.

research is documented as a historic narrative, and period plans developed from the research are prepared for each significant period.73.

**Existing Conditions**

No matter what a site may have looked like in its past, a CLR must fully explore and document its present condition in order to make accurate planning decisions that properly interpret that past. This section, which consists of current site functions and services as well as technical data such as soils and hydrology, has two main parts: site research and site survey.74.

Site research involves a review of all available documentation of the site. This may include databases (such as Park Service inventories or geographic information repositories such as the Mississippi Automated Resource Information System), park files (such as photo collections, maps, and document archives), reports and special studies (such as National Register nominations, archeological inventories, and management plans), other site materials (such as USGS surveys and aerial photographs) and findings from historical research (such as tax records, deed information, and oral histories).75. Site surveys consist of fieldwork ranging from an inventory of vegetation to detailed assessments of


74. Ibid., 56.

75. Ibid., 56-63.
site feature conditions.\footnote{Ibid., 62.} Detailed examination of the vegetation was particularly important in developing the CLR for Moses H. Cone Memorial Park. Due to a dearth of records about the plantings, it was not detailed how the white pine plantations on the site were planted or managed. By closely examining the stands, the age, planting patterns, and time that had passed since they had been effectively managed was determined.\footnote{Firth, \textit{Cultural Landscape Report for Moses H. Cone Memorial Park, Blue Ridge Parkway}. 1993.}

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\begin{figure}
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\caption{Existing conditions site map for Hyde Farm, Chattahoochee River National Recreation Area, Cobb County, Georgia.}
\end{figure}

From the Cultural Landscape Inventory for Hyde Farm, Chattahoochee River National Recreation Area prepared by Beth Byrd. Map prepared by author.
Analysis and Evaluation

Analysis and evaluation is a “critical step for sorting and integrating natural and cultural resource data so it can be used to develop appropriate treatment strategies.” Using National Register criteria, this step in preparing a CLR involves defining the historical significance and evaluating the historic integrity of the site. Presenting information in the form of schematic drawings, period plans, and narratives, the landscape is evaluated holistically in an attempt to determine its significance.

According to the criteria of the National Register, a landscape must demonstrate significance in at least one of four aspects of cultural heritage it defines. From these findings a statement of significance is prepared that details a cultural landscape’s case historic importance. The National Register’s four criterion of cultural heritage are as follows:

A. Associated with events that have made a significant contribution to the broad patterns of our history, or

B. Associated with the lives of persons significant in our past, or

C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a


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master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or

D. Have yielded, or may be likely to yield, information important in prehistory or history.\footnote{Page, Gilbert and Dolan, \textit{A Guide to Cultural Landscape Reports: Contents, Process, and Techniques}, 71. 1998.}

The National Register also contains seven aspects of historic integrity, which direct the assessment of how well the site has retained the characteristics of its period of significance.\footnote{Ibid., 72.} The depth of this investigation should be reliant on the size and complexity of the site. The seven aspects of historic integrity are as follows:

1. Location – the place where the cultural landscape was constructed or the landscape where the historic event occurred.

2. Design – the combination of elements that create the form, plan, space, structure, and style of a cultural landscape.

3. Setting – the physical environment of the cultural landscape.

4. Materials – the physical elements that were combined or deposited during the particular period(s) of time and in a particular pattern or configuration to form the cultural landscape.

5. Workmanship – the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

6. Feeling – a cultural landscape’s expression of the aesthetic or historic sense of a particular period of time.


\footnote{Ibid., 72.}
7. Association – the direct link between the important historic event or person and a cultural landscape.\(^{83}\)

In the case of the Ocmulgee National Monument CLR, it was determined that several periods of time were significant to the site (prehistoric, historic and modern).\(^{84}\) Several qualities of the site (spatial organization, circulation, archeological features, small scale features, structures, natural systems, topography, vegetation and views) were evaluated across the three aforementioned timeframes to determine their relative integrity.\(^{85}\) The summary statement of the analysis and evaluation organizes all of the previous investigative work to allow for the development of specific treatments for the site.\(^{86}\) This can follow a number of formats. In the Ocmulgee CLR, Wheeler used a table to give a clear overview of the landscape integrity of the site over several time periods. Several other CLRs reviewed used a similar table format.

**Treatment**

The products built off the work of the aforementioned sections of a CLR are the treatment recommendations. Here, the assessments of historic significance and existing conditions are combined with park management goals, current uses, and interpretation to develop a series of goals that will guide

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83. Ibid., 71.
85. Ibid., 49.
interpretation, planning and management decisions for the park.\textsuperscript{87} Guided by Park Service policies and standards found in \textit{NPS Management Policies}, \textit{Cultural Resource Management Guideline} and \textit{The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes}, these treatment recommendations align to the four accepted levels of treatment: preservation, rehabilitation, restoration, and reconstruction, the definitions of which are as follows:\textsuperscript{88}

1. **Preservation** – the act or process of applying measures necessary to sustain the existing form, integrity, and material of a historic property. Includes initial stabilization work, where necessary, as well as ongoing preservation maintenance and repair of historic materials and features.

2. **Rehabilitation** – the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

3. **Restoration** – the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by removing features from other periods in its history and reconstructing missing features from the restoration period.

4. **Reconstruction** – the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object

\textsuperscript{87} Ibid., 81.

\textsuperscript{88} Ibid., 83; Birnbaum and Peters, \textit{The Secretary of the Interior’s Standards for the Treatment of Historic Properties: With Guidelines for the Treatment of Cultural Landscapes}. 1996.
for the purpose of replicating its appearance at a specific period of time and in its historic location.89

Along with the treatment recommendations, a management philosophy must be developed to guide the treatments. Requiring a balance of many factors, these recommendations are usually presented in an issue/recommendation format, organized by location on site.

**Conclusions**

The history and debate surrounding cultural landscapes and how they should be assessed is a deep and interesting discussion. It involves thought about landscape as a singular feature, as well as human culture and the interaction between it and the land upon which it forms. Philosophies about the boundaries of cultural landscapes, truth in representation, and significance in history are wide-ranging in the field. Through a long process of development (and in some cases, trial and error), the National Park Service has produced a reliable and effective structure for the accurate evaluation of cultural landscapes. Though the cultural landscape report is a flexible document, it has proven to be an effective means of assessing the important history of these sites.

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89. Ibid.
CHAPTER III
SITE HISTORY

Introduction

Management Summary

This report for Russell Cave National Monument, located in Jackson County, Alabama, near the town of Bridgeport, records the landscape history and existing conditions of the landscape surrounding Russell Cave, which was occupied by prehistoric peoples for nearly 10,000 years. It documents the historical development of the landscape, inventories existing conditions, and analyzes historic and existing conditions to evaluate the significance and integrity of the landscape. Treatment recommendations are provided to guide the park's rehabilitation and preservation of its significant resources.

The park is significant for the archeological record preserved inside the Russell Cave vestibule, which is one of the oldest in North America. Rockshelters in the park give additional clues into the lives of these prehistoric cultures. Further historical resources within the park are reflective of rural Appalachian life in the late 19th and early 20th centuries.

In the mid- to late-1950s, a series of archeological investigations, first by the Tennessee Archeological Society and later by the Smithsonian Institution
and the National Geographic Society, raised the profile of the cave into the national spotlight. The park was established by presidential proclamation in 1961, and was designed and built amid the National Park Service's Mission 66 capital investment program.

The park boundaries are defined by the property lines of its former owners, the Ridley family. They first allowed researchers to enter the cave, and sold the land to the National Geographic Society, who in turn gave it to the National Park Service. Once a standalone unit of the national park system, it is currently being managed in conjunction with Little River Canyon National Preserve, located in nearby Fort Payne, Alabama.

**Historical Summary**

Russell Cave National Monument is a significant cultural resource. Housed in the cave vestibule, the cultural deposits represent one of the most complete archeological records in North America, showcasing near-continuous occupation from 10,000 BC to around AD 1500. Along with the cave vestibule, numerous other sites within the park display a wide range of habitation, from ancient points and tools to moonshine stills and coal mines.

The information gathered from Russell Cave has been especially important in the study of the Paleoindian (ca. 11,500 – 9200 BC), Archaic (9200 BC – 1000 BC), and Woodland (1000 BC – AD 900) periods in the southeastern United States, and has contributed greatly to the understanding of the
movement of goods, techniques, and other elements of culture across people groups.90.

First used as a temporary home for nomadic Paleoindians, it transitioned into more of a hunting shelter as the later Archaic and Woodland people permanently settled along the Tennessee River Valley. These groups would venture to the valleys and mountainsides in search of game, as well as nuts, berries and other plants. Remains of deer and raccoon have been found, as well as the bones of extinct species of peccary, coyote, and porcupine.

Hernando de Soto traveled near Russell Cave during his exploration of the New World, and the European settlement of the area in his wake led to a period of disuse for the cave. The earliest record of permanent settlement was by John Woods, a Cherokee Indian who was given the property in return for his service to the United States in the Revolutionary War. The cave was passed down through the Doran, Russell and Ridley families before coming to the attention of a group of amateur archeologists in the early 1950s. This led to a flurry of archeological study and national involvement by the Smithsonian Institution and the National Geographic Society, which ultimately purchased the property and donated it to the United States.

The process of park development began in 1961, upon President Kennedy’s proclamation of its new status as a unit of the national park system.

Roads, a visitor center, employee housing, and trails were constructed, as well as landscaping. The park was officially dedicated in 1967, and little about it has changed since then.

The area is sparsely populated even today, with very little development to disrupt the wider landscape. Most of the land on the valley floor has been used for agriculture since European settlement, and that is still largely the case. The area’s hardwood forests have virtually all been logged at least once, and the timber industry remains a threat to the landscape. Coal mining has also had an impact on the valley, but operations in Doran Cove have been closed for some time.

**Scope of Work**

This report addresses the significant features of Russell Cave National Monument and changes to the landscape over time. The history of the park covers a span of over 10,000 years, from prehistory to present day. As with most prehistoric sites, the lack of written documentation resulted in research primarily from archeological investigations.

Studies at Russell Cave have revealed prehistoric occupations in the area, as well as land uses and cultural transitions. Archeology reports and academic papers account for much of the primary documentation of prehistoric times within the monument, while local histories and journals were consulted for information from the early 1800s until the archeological investigations began.
These investigations were fairly well-documented; being mostly limited to the cave vestibule, they did not have much effect on the landscape.

The park archives were an especially important source of primary documentation, providing historical pictures, maps, and drawings of the park, particularly in the time period from the archeological investigations through park development. The archives also yielded unpublished manuscripts and journals, as well as internal documents concerning park resources and management. The library at the Southeast Regional Office of the National Park Service in Atlanta, Georgia provided a number of internal documents as well, such as master plans, resource management plans, and superintendent reports. Overall, though, the park is not well-documented. The oldest superintendent report found was from 1987, and the most recent planning document was a Resource Management Plan from 1993. Little River Canyon National Preserve ranger Larry Beane, who worked at Russell Cave for over 20 years, was a great resource of unrecorded information about the park. Other secondary sources were consulted to flesh out necessary information about regional and local history, culture, and geography.
Study Boundary

Figure 10  Context map.

Russell Cave National Monument is located near the northern reaches of Doran Cove, a small valley in Jackson County, Alabama. The park itself is less than a mile from the Alabama-Tennessee border, and the nearest municipalities are Orme, TN (2.2 miles), Bridgeport, AL (5.6 miles), and South Pittsburg, TN (6.1 miles). State Highway 72 runs southeast and east of the park, and it is accessed directly by County Road 98. The park occupies 310 acres in Doran Cove, and this study addresses all of the land within these boundaries. However, in certain cases, proper context necessitated a wider look at the region.

Prehistory

Though the cultural history of Russell Cave is thought to have begun around 10,000 years ago, the process of constructing the landscape as we
know it began about one thousand years earlier. Eleven to twelve thousand years ago, Montague Mountain was much as it is today. It sloped fairly steeply down to the floor of Doran Cove, the descent interrupted occasionally by rocky outcrops. The Ice Age was waning, and northern Alabama was a good bit colder than it is now. The cold weather contributed to a freeze/thaw process that took its toll on the fragile karst limestone geology of the area. One fateful day, the limestone roof of an underground cavern had had enough, and the frost action precipitated a collapse.91 The event revealed to the light a large cavern and the subterranean stream that ran through it. Russell Cave as we know it today was born.

When the cave opening is observed, it is easy to see why someone would want to live there. It is relatively secluded, with a constant source of running water right at hand. The vestibule itself is large and deep, with ceilings over 20 feet tall running back about 150 feet into the mountain. At the back of the vestibule is an opening that conducts air from the larger Russell Cave system into the vestibule itself, keeping it at a consistently cool temperature. The mountainsides around the cave are covered with nut-bearing trees and prime habitat for turkey and deer. Stone for making tools and points is also readily available.

Though the cave vestibule gets most of the attention, and rightly so, it is in the broader landscape of the cave that the first signs of human occupation have been discovered. Fluted points indicative of Paleoindian occupation have been found in two archeological sites partially within the park, which places the first humans in the park around 10,000 years ago. The age of artifacts found in the cave vestibule, in contrast, date its earliest occupation to around 8,560 years ago, plus or minus 400 years. These Early Archaic residents of Russell Cave used the vestibule only sporadically, attested to by the limited amount of artifacts from this time period. Carl Miller’s investigation remains the only source of evidence from this time period, as his is the only one to date that has excavated down to the original floor of the cave - a depth of over 30 feet.

The archeological record these and later residents left behind has traditionally been the primary academic interest in the park. Though vitally important, a detailed discussion of the inhabitants and their implements is best left to the archeologists. This history will be discussed, but only in relation to what it can tell us about the surrounding landscape and how it was used during this time period. Though the limitations of such research should be obvious, hints and clues about the historic landscape can be found in what the archeologists have discovered. Pollen, charred wood, bones, tools, and other


remnants have been left behind, allowing one to build a fairly accurate, if
general, picture of the park over time.

Figure 11  Carl Miller's team excavating Russell Cave for the National
Geographic Society.

Date taken and photographer unknown. From Russell Cave National
Monument park archive.

Vegetation

According to Delcourt and Delcourt, the glaciers of the Ice Age never
reached northern Alabama, but they certainly had an impact on the local flora.94.
As the glaciers began to recede, the hillsides and coves were covered with a
mix of jack pine (Pinus banksiana) and spruce (Picea sp.), while the more
moderate river valleys were mixed hardwood forests.95. Conditions remained this

94.  Delcourt and Delcourt, "Vegetation Maps for Eastern North America: 40,000 Yr. B.P. To

95.  Ibid., 146-147.
way until around 9500 BC, when continued warming pushed out the jack pine and spruce, giving way to the mixed hardwood forest. 96. It was in this environment that the first human presence has been detected.

From around 6900 to 3600 BC, as the warming trend continued, the mixed hardwood forests were gradually pushed to higher elevations, replaced by an oak-and-hickory-dominated forest type. 97. These forests are "one of the most complex types of plant and animal communities," and "the abundant and varied plant life that provided the basis for the complicated food chains in this type of environment was an important factor in the Archaic subsistence pattern." 98. Table 1 compares the date ranges determined by Griffin during his excavations to Schoenwetter’s pollen and Stern’s charred wood analyses found in Miller’s unpublished manuscript, giving as clear a picture as possible given available evidence of the makeup of the forests around the cave vestibule throughout its history. This arrangement has held stable for the last 5,000 years or so, a view supported by Stern’s charred wood analysis. 99.

96. Ibid., 146-147.
97. Ibid., 150-153.
Table 1  Comparison of Pollen and Charred Wood Analyses to Archeological Time Frames

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<tr>
<td>0</td>
<td>AD 1480 - present</td>
<td>Alnus sp. (alder) Quercus sp. (oak) Fraxinus sp. (ash)</td>
<td>Carya sp. (hickory) Celtis sp. (hackberry) Fagus grandifolia (American beech) Fraxinus sp. (ash) Juniperus sp. (cedar) Pinus sp. (pine) Quercus sp. (oak) Ulmus americana (American elm)</td>
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<td>1</td>
<td>AD 275 - AD 1680</td>
<td>Compositae (sunflower family) Juniperus sp. (cedar) or Cupressus sp. (cypress) Quercus sp. Pinus sp. (pine)</td>
<td>Carya sp. Celtis sp. Fagus grandifolia Fraxinus sp. Juniperus sp. Pinus sp. Quercus sp. Ulmus americana</td>
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<td>2</td>
<td>350 BC - AD 1185</td>
<td>Carya sp. Celtis sp. Fagus grandifolia Fraxinus sp. Juniperus sp. Pinus sp. Quercus sp. Ulmus americana</td>
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<tr>
<td>3</td>
<td>350 BC - AD 1185</td>
<td>Compositae</td>
<td>Carya sp. Celtis sp. Fagus grandifolia Fraxinus sp. Juniperus sp. Pinus sp. Quercus sp. Ulmus americana</td>
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102. Stern, "Charred Wood From Russell Cave National Monument."
The pollen grain analysis done by Schoenwetter was limited by a scarcity of pollen grains present in the deposited soils and sediments inside the cave vestibule. He posits that this could indicate the sediments built up inside the vestibule was made up exclusively of decaying vegetation, which would have formed too slowly to protect the pollen from oxygen degradation. One could then take this to mean the area surrounding Russell Cave remained well-forested, as the residents of the cave would have brought sediments in from nearby. He tempers this theory by citing a lack of organic matter in the soil

Table 1 (continued)

|   | 3740 BC - AD 135 | Carya sp.  
|   |                  | *Fagus grandifolia*  
|   |                  | *Fraxinus*  
|   |                  | *Juniperus*  
|   |                  | *Pinus*  
|   |                  | *Quercus*  
|   |                  | *Ulmus americana*  
|   | 4500 BC - AD 135 | Carya sp.  
|   |                  | *Fagus grandifolia*  
|   |                  | *Pinus*  
|   |                  | *Quercus*  
|   | 4500 BC - 3830 BC | *Gramineae* (grass family)  
|   |                  | *Quercus*  
|   | 6870 BC - 3830 BC | *Compositae*  
|   |                  | *Pinus*  
|   | 10,000+ BC - 6000 BC | *Gramineae*  
|   |                  | *Malvaceae* (mallow family)  
|   |                  | *Quercus*  
|   |                  | *Pinus*  
|   | 10,000+ BC - 6000 BC | *Gramineae*  
|   |                  | *Gramineae*  

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104. Ibid., 6.
samples, but recent research has shown the presence or absence of organic
matter in archeological soil samples is not a reliable indicator of soil age or
origin.105. Because water tends to be an excellent preserver of pollen, these
results also seemed to show the stream in Russell Cave has never intruded into
the cave vestibule, at least since it has been occupied.106. Griffin later refuted
Good on this point, saying the vestibule was inundated fairly often, at least until
the deposits in the vestibule rose to the point of being above flood stage.107. This
conflict might be explained, Schoenwetter says, if the water in the cave came
from an underground source.108. Stern's charred wood analysis, however, gives a
clearer picture of the nearby woods. Though he was not able to specifically
identify most of the remains, he was able to determine genus and age; the
oldest specimens possibly date from as far back as 6400 BC.109. It shows quite
affirmatively that Russell Cave has been surrounded by oak-and-hickory-
dominated hardwood forests for a very long time.

According to Miller's unpublished manuscript detailing his excavations at
Russell Cave, he and his team uncovered 116 specimens of charred vegetal

105. Ibid., 6; Schmidt and others, "Persistence of Soil Organic Matter As An Ecosystem
Property." 2011.
remains. Most of the specimens were charred wood from fires, but the second most common were seeds and nuts. This evidence, along with the analyses previously mentioned, further aids in the reconstruction of the makeup of surrounding prehistoric forests. Many of the nuts were black walnut \((\textit{Juglans nigra})\), hickory, and acorns, all of which are still present within the park. Seeds found include hackberry, pumpkin and squash \((\textit{Cucurbita} \text{ sp.})\), corn, and, possibly most significantly, \textit{Chenopodium}, otherwise known as lambs' quarters or goosefoot. Fritz and Smith give a timetable for the domestication of \textit{Chenopodium}, placing it around 4,000 years ago in the Eastern Woodlands of North America. While this does not mean it was grown at Russell Cave specifically, it does mean it was possible. The \textit{Chenopodium} seeds were found in what Miller described as a woven basket; upon later investigation, Smith suggested it was simply a grass-lined storage pit. His determination of big bluestem grass \((\textit{Andropogon gerardii})\) as the material led him to this conclusion; its use for this purpose had been documented elsewhere. Evidence of wax myrtle \((\textit{Myrica cerifera})\) was also found.


114. Ibid., 63.
The remains of squash and pumpkin are especially interesting. These plants would not have been found in the wild in this area, and so point to the Indians either practicing agriculture on site, practicing it elsewhere and bringing it to the cave, or trading with neighboring groups that were practicing it elsewhere. Precedence for this has been found at Mammoth Cave, Big Bone Cave, and other dry shelters in eastern Kentucky and Arkansas.\textsuperscript{115} The presence of well-worn deer jaw bones also lends to the interpretation that the Indians were practicing agriculture nearby. These bones were often used in the making of reapers, and would have been used to gather seeds from grasses and other plants.\textsuperscript{116} Either these grasses naturally occurred in stands large enough to make it worthwhile to construct these tools, or the plants were raised in beds and harvested in fairly large amounts. Regardless, ample evidence exists that these people knew of their value as food sources and actively gathered \textit{Chenopodium}, as well as amaranth and other wild grasses, from around the cave as early as 5,000 years ago.\textsuperscript{117}

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\textsuperscript{116} Miller, "Manuscript on Russell Cave," 462. 1980.

\textsuperscript{117} Miller, "The Use of Chenopodium Seeds As a Source of Food by the Early Peoples in Russell Cave, Alabama," 32. 1960.
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From the exterior treatments and patterns of pottery found in the cave, it is clear these ancient potters used fibrous plant materials in the making of their vessels. Though it cannot be determined exactly what kind of plants were used in their processes, early explorers recorded Indians using the fibers of wild hemp (*Apucynum cannabium*), basswood (*Tilia heterophylla*), and mulberry (*Morus rubra*); the latter two exist in the park today.¹¹⁸

Reeds found in the cave could have been used for mats and basketry, or for constructing walls to keep out unwanted gusts.¹¹⁹ Miller found evidence of post holes, which he thought signified structures were built inside the cave.¹²⁰ Griffin, however, did not feel as though the evidence supported this interpretation, instead suggesting they were the remains of "hide racks or simple devices for suspending possessions above the living floor."¹²¹ The existence of the atlatl, a hunting weapon which utilized a cane stalk as the shaft, combined with the presence of cane breaks within the park, suggests the weapons could have been made on site.¹²²

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¹²⁰ Miller, "Life 8,000 Years Ago Uncovered in An Alabama Cave," 555. 1956.


Animal Life

Studying the remains of animal life present in the area can also tell us about the landscape at the time. Several species of mammal no longer present in the region were found here, including wolves (*Canis lupus*), porcupines (*Erethizon dorsatum*), red deer (*Cervus elaphus*), elk (*Cervus canadensis*), and mountain lions (*Felis concolor*).123. Bones of two extinct species were found as well. Passenger pigeons (*Ectopistes migratorius*), once extremely common throughout the eastern United States, are now extinct due to overhunting. No evidence of prehistoric megafauna such as mastodons, mammoths, and giant bison have been discovered at the cave.124. However, two molar teeth of an extinct peccary (most likely *Mylohyus nasutus*) were uncovered, the first of their kind to be found in Alabama. This animal is usually associated with the Pleistocene, so to find it associated with human remains from 5000 to 7000 BC was "particularly interesting," according to Weigel.125.

Bones of animals still prevalent in the region were present in relative abundance. American black bear (*Ursus americanus*), turkey (*Meleagris gallopavo*), white-tailed or Virginia deer (*Odocoileus virginianus*), squirrel (*Sciurus*...}


carolinesis), skunk (Mephitis mephitis), raccoon (Procyon lotor), heron (Ardeidae family) or crane (Gruidae family), fish, box turtles (Terrapene genus), and woodchucks (Marmota monax) have been unearthed in the cave, having been used as food, tools, or, most probably, both.126 As far back as 5000 BC, occupants of Russell Cave were using bear fat and bear bones to make rudimentary candles.127 Judging by the amount of bones discovered, the occupants' meat diet mainly consisted of deer, turkey, raccoon, squirrel and bear.128 Shellfish were consumed regularly in the cave, mostly mussels, river snails (Campeloma regularis) and periwinkles (Pleurocera canaliculata and Goniobasis laqueata).129 The mussels were all brought from the Tennessee River, says Clench, while the snails were likely from the nearby tributaries of Widows Creek and Crownover Branch. It's fairly possible, he also states, the shellfish were brought alive from the river and stored in the creek below the vestibule until they were eaten.130 The river was also their source for ducks and turtles, as well as fish. Weigel states the species identified indicate reliance on a large river


system, rather than the smaller streams near the cave.\textsuperscript{131} Taken as a whole, the array of shellfish found in the cave show the climate (at least as far as shellfish are concerned) has not changed in a very long time; nearly all of the species found are still prevalent in the area.\textsuperscript{132}

This look at the prehistoric fauna of Russell Cave can tell us several things. Mainly, it shows the surrounding environment has not changed very much. Squirrel, deer, turkey, skunk and raccoon are all still very common within the park, while black bears, though surely not as common as they once were, are still present in the area. While viable conditions and habitats for these animals have persisted for a long time, the remains of animal life extinct or absent from the area shows some aspects of it have changed. Wolves, elk, and mountain lions all require large amounts of undisturbed land to thrive, and so their disappearance from the area says less about climactic change than habitat degradation and overhunting upon the arrival of European settlers. The passenger pigeon was also a victim of chronic overhunting. The recent (and successful) reintroduction of elk into nearby Great Smoky Mountains National Park shows the environment is still conducive to their survival.\textsuperscript{133} The

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\textsuperscript{133} Yarkovich, "Elk Progress Report, July 2011."
appearance of porcupines are an exception to this, and may indicate either an increased range in the past or trading patterns with groups farther north.\textsuperscript{134}

**Landscape Use and Alterations**

Very little direct evidence exists depicting how the Indians interacted directly with the landscape. Signs of agriculture, logging, land clearing, and other forms of active management are nonexistent, faded with the passing of time. The residents of Russell Cave did modify the land for one purpose, however: burial. Several human burials have been uncovered within the cave vestibule. The Indians also buried their dead outside of the cave.

About 200 feet north of the mouth of the cave exists a burial mound, which was investigated by Miller. According to his account, the mound was built by successively stacking limestone slabs and layers of soil, thereby fitting numerous burials into one mound.\textsuperscript{135} However, because the mound is over 2,000 years old, it’s visual appearance in the landscape is quite subtle, a barely noticeable rise covered with trees and other vegetation.

\textsuperscript{134} Parmalee, "A Prehistoric Occurrence of Porcupine in Alabama." 1963.

\textsuperscript{135} Miller, "Russell Cave (Alabama) Archeology," 120. 1972.
As far as ancient usage in other areas of the park, Prentice's 2006 study of the park uncovered evidence of sporadic use in small rockshelters present in the higher elevations of the park. A very small amount of artifacts were obtained from the study of these shelters, and Prentice theorizes they were used as temporary bases for small parties gathering nuts or hunting game.136 One shelter, though, bore signs it may have been used as a kind of spiritual retreat for the undertaking of a vision quest, which was meant to be a time of hardship and deprivation that resulted in the receiving of a guardian spirit.137.


137. Ibid., 54.
Conflicting Views on Occupation

Though it is accepted that Russell Cave has been occupied for a very long time, disagreement persists on the intensity of that occupation. Miller thought the build up of sediment in the cave was due to the residents of the cave periodically burying their trash to "clean" the floor of the cave, a condition that would only have been necessary if the cave was regularly occupied.\textsuperscript{138} The five tons of artifacts he and team removed from the cave also lent to the interpretation that the cave was heavily used. Griffin, though, upon summarizing his investigation, figured differently. He argued if the amount of deposited earth in the vestibule along with the number of specimens present in the vestibule were thought of on a per-year basis, the cave could not have been used intensively. He also argues the animal bones uncovered speak to the cave only being occupied in the fall and winter, due to greater likely success of hunting in those seasons. The remains of the passenger pigeon, a migratory bird that would only have been present in the cooler months, also point to this conclusion.\textsuperscript{139} Either "the cave was not occupied every year," he says, "or the time spent annually was very short, or the groups were indeed quite small."\textsuperscript{140}

From the evidence, it is hard to conclude which is correct. What is known for sure is the people that occupied the cave were transient in nature; it was

\textsuperscript{138} Miller, "Life 8,000 Years Ago Uncovered in An Alabama Cave," 543. 1956.
\textsuperscript{140} Ibid., 104.
never used as a permanent settlement. As one piece of evidence of this nature, pottery with the distinctive markings of Chickamauga Cherokees was found in one small location in cave, just long enough "to break a cooking vessel and (move) on." In addition, several of the discoveries by Miller's team, including jointed fishhooks, bear bone lamps, knife handles, and the atlatl, seem to suggest the archeological record of the cave holds an important recording of human movement and trade in the ancient world. Even in the case of the seeds found in the cave, it would be nigh impossible to determine if their origin was a garden plot outside of the cave or a larger agricultural operation near more permanent settlements along the Tennessee River. This rise of settlement and agriculture among the Indians marked the end of regular usage in the cave; evidence of occupation drops off drastically after the late Woodland period.

**Tribal Indians and European Contact**

The late 16th century marked the beginning of a relatively quiet period for Russell Cave. The Indians, mostly Cherokees and Creeks, had begun to settle into villages along the Tennessee River and take up farming, making trips to the

142. Ibid., 434.
cave unnecessary. They no longer required caves for shelter, as the settlements provided all the shelter they would need. Long Island Town, a Cherokee settlement across the river from the present location of Bridgeport, was one of these settlements. Indeed, Griffin speculates the cave "probably only served as a stopping place for a...party engaged in the hunt." Agriculture had begun to play a much larger role in providing food, supplanting much of the gathering and foraging that had come before it (though this activity still went on occasionally).

Crops had previously centered around three plants: sumpweed (*Iva annua*), sunflower (*Helianthus annuus*), and *chenopodium*. Only until after AD 900 did maize (*Zea mays*) become a major part of their agricultural regimen. What little historical records we have indicate the Indians "found the area quite productive."

Though it had no immediate effect on the landscape, the arrival of Spanish explorer Hernando de Soto was a harbinger of the massive changes to come. De Soto came to the area in the summer of 1540, sent on a mission by


the Spanish government to explore the New World. It is said he met a group of Indians from Chiaha, a village the Smithsonian’s de Soto Expedition Commission determined to be in the vicinity of Russell Cave.\textsuperscript{150} Others have placed this village farther north along the river, into what is now Tennessee.\textsuperscript{151} Regardless, the expedition’s journals show de Soto crossed the Tennessee River near what is now Bridgeport and progressed southward along a route close to the modern day Highway 72 corridor, which would have led his crew just past Russell Cave.\textsuperscript{152} With his explorations, de Soto blazed the trail for more European settlers to come into the area, though this did not start happening on any appreciable level until the mid-1700s.

**White Settlement and Early American History**

Starting in the early 1700s, European settlement in the area was beginning to take its toll on the natives. Smallpox had been introduced by the early white settlers, and the Cherokee population was starting to dwindle.\textsuperscript{153} Most of the early settlers came to this part of Alabama from Virginia and North Carolina, usually by way of Tennessee. Most of those came by land; the

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\item Ibid., 17.
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Tennessee River had not been controlled to the extent it is today, and the rapids and potential for Indian attacks made this route unpopular.\textsuperscript{154}

The first official attempt at settlement came in October of 1785, when John Sevier (namesake of Sevierville, Tennessee) and John Donelson, along with others, opened a land office in Long Island Town. They organized a county, which they called Houston, and went about surveying the land in an effort to claim it for the state of Georgia. The Cherokees refused to acknowledge the claims, eventually driving the group out of the area; Donelson was killed on his way home. Their settlement attempt ended on August 7, 1786, when the Georgia state legislature refused to pass legislation ratifying Houston as a county of the state.\textsuperscript{155}

A Cherokee by the name of John Woods was the first recorded owner of Russell Cave.\textsuperscript{156} Woods had first come into the area with the aforementioned settlement group and was apparently allowed to stay.\textsuperscript{157} He had fought with the United States in the Revolutionary War, and as payment for his service the government gave him a 640-acre reservation in what was then called Boxes Cove. He was joined soon after by Major James Doran, a first-generation Irish-

\textsuperscript{154} Ibid., 25.
\textsuperscript{155} Ibid., 18.
\textsuperscript{157} Kennamer, \textit{History of Jackson County, Alabama}, 2. 1935.
American and Revolutionary War veteran from Virginia.\textsuperscript{158} He was the first recorded white settler in the cove, arriving sometime between 1803 to 1816.\textsuperscript{159} He and Woods became friends, and Woods eventually allowed Doran to share his land, on the condition he be allowed to live in Doran's house and sit at the head of his table. The agreement was signed on June 16, 1817, and recorded on a piece of goat skin.\textsuperscript{160} Curiously, this was about one month before Woods officially received his reservation from the U.S. government, which occurred on July 10, 1817.\textsuperscript{161} It could reasonably be assumed Woods did this in a effort to stay on his land, as the U.S. was already trying to push the Indians out of the territory. The Treaty of Washington, an agreement between the Cherokee and the United States to give the U.S. claim to land east of Madison County, Alabama and north of the Tennessee River (in which Russell Cave is located), was ratified on February 27, 1819, leading to the first large influx of white settlers.\textsuperscript{162}

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\textsuperscript{158} Lee and Lambert, Jr., \textit{Bridgeport, Alabama: Gateway to the Sequatchie Valley: A Photographic History}, 196. 2007.

\textsuperscript{159} Miller, "Manuscript on Russell Cave," 59. 1980; Raulston, "My Lifetime Experience on the Woods Reservation," 3.

\textsuperscript{160} Ibid., 1; Woodall, "Capt. John Wood," 1.


\textsuperscript{162} Miller, "Manuscript on Russell Cave," 60. 1980.
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Doran set about building a house, constructing the original structure out of logs and then adding a large stone addition. His brother-in-law, Thomas Russell, aided Doran in building the home, and they completed it sometime in 1820.\footnote{Woodall, “Capt. John Wood,” 5.} This home, which was sited about 100 yards north of the current park entrance, still stands and is currently privately owned and occupied.\footnote{Marsh, \textit{Life at Russell Cave}, 9. 1980.} A stage coach road running through Doran’s land was opened during this time connecting Winchester, Tennessee with Bolivar, Alabama, and his home was used as an inn.\footnote{Lee and Lambert, Jr., \textit{Bridgeport, Alabama: Gateway to the Sequatchie Valley: A Photographic History}, 197. 2007.} He even housed, on at least a couple of occasions, President

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Andrew Jackson, for whom the county is named.\textsuperscript{166} Doran eventually sold part of his land to Russell, a piece which included Russell Cave. It is said Russell and his family lived in the cave for a period of time, and it was known then as “Russell’s Rock House.”\textsuperscript{167}

Both Russell and Doran, being some of the first settlers to the area, became prominent members of the local community. Russell was appointed to a commission to site the county seat of newly formed Jackson County, while Doran set aside portions of his land for a church, school building, and cemetery.\textsuperscript{168} Their contributions were such that the cove itself was renamed after Doran, and the cave on his property was named in honor of Russell.

\textsuperscript{166} Raulston, “My Lifetime Experience on the Woods Reservation,” 2.

\textsuperscript{167} Miller, "Manuscript on Russell Cave," 59. 1980.

The oldest known photograph in the United States dates to 1839 (John W. Draper's portrait of his sister, Dorothy). Russell would have been 78 then. That fact, combined with the observance that this photo appears to be of a man younger than 78, makes it highly unlikely this is Thomas Russell.

Date taken and photographer unknown. From Russell Cave National Monument park archive.

With these new settlers came profound changes to the landscape. The thick woods gave way to their new owners, who built houses out of local wood and stone. Fields were cleared for livestock and agriculture, and roads were built to connect nearby communities. Besides these physical effects, the forests

also bore the brunt of new diseases brought by the new immigrants. Much as the Indian population was affected by introduced diseases to which they had no immunity, Dutch elm disease and chestnut blight had severe effects on the local populations of American elm and American chestnut (*Castanea dentata*).\(^{170}\)

The Indian population itself was eventually forced out; the Treaty of New Echota, signed in 1835, marked the beginning of the Trail of Tears. It is not known whether John Woods was forced out or not; the last known mention of him and his family in Doran Cove was in 1829. What is known is his son Charles was a part of the Cherokee Nation of Indians of Arkansas in 1832 when he attempted to sell the reservation to a member of the Cherokee Nation and State of Alabama; this would seem to mean his family moved voluntarily to Arkansas before forced removal occurred. James Elliott, the intended buyer of the land, never gained possession of it, and the land stayed in James Doran family after his death in 1840.\(^{171}\)

The settlers also had an eye for the area’s potential in resource extraction. Timber operations and mining outfits sprung up. Especially after the Civil War, as Bridgeport gained importance as a port on the Tennessee River, timber and coal were hot commodities in the area. Many larger caves in the southeast were mined for saltpeter (an ingredient in gunpowder) during the Civil War.

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War, and bat guano from the caves was harvested for fertilizer.172. Thankfully Russell Cave shows no signs of this activity, which could have been very damaging to its archeological record.173. A hand tool resembling 19th century saltpeter mining artifacts found in other southeastern caves was found in Ridley Cave (a smaller cave also located inside the park), however, so mining could have occurred in caves very close by.174.

Little else is known about the landscape of the park during this time.175. Though Bridgeport was a fairly active battle site during the Civil War (due to it being one of the few crossings of the Tennessee River in the area), no evidence has been found that anything more than troop movements occurred within park boundaries. Legends persisted from the early settlers that the Creek or Cherokee had hidden gold within the cave, as well as a story of a cache of loot left there by train robbers that were killed before they could return and collect it. These stories naturally led to fortune-seekers exploring the cave, but no successes were ever reported.176. As far as other signs of use during this period, the only thing found was a 1830s-era cobalt blue bead, located just south of the

entrance to the vestibule.177 Much of the cove has remained in the same agriculture-dominated condition for the past 150 years; just a few families own most of the land within a mile radius of the park, and they have been there for quite some time.178.

Early 20th Century

Though Doran Cove has been, and still largely is, a quiet, secluded part of the state, increasing growth and industrialization of the surrounding towns, especially Bridgeport, led to an growing amount of activity. The natural beauty of the coves, including the "cascades, rocky glens and weird caverns," drew locals into the countryside.179. They used Russell Cave (or the "Old Stomping Grounds" as some would call it) specifically for all kinds of events: barn dances, picnics, hunting parties, wiener roasts, and amateur digging expeditions, to name a few.180. It was also attractive to amateur spelunkers. There are even stories of local children going underground under Montague Mountain in the

180. Thornberry-Eehrlich, Geologic Resources Inventory Scoping Summary: Russell Cave National Monument, Alabama, 1. 2009; Miller, "Manuscript on Russell Cave," 1. 1980; Sorrels, "Russell Cave: Here Modern Man Digs Up the Faded Story, 10,000 Years Old, of Stone Age Ancestors." 1958.
morning and coming out of Russell Cave later that afternoon, traversing at least one mile under the earth.\textsuperscript{181}

Figure 15  Summer 1906 picnic inside Russell Cave.

Photo courtesy Mrs. Ruby Atkins. From Russell Cave National Monument park archive.

Natural resource extraction continued its importance to the local economy; coal mining, in particular, grew in prevalence. Coal veins had been struck in the nearby hills, and mining company towns were springing up around the region, promising jobs to those who would make the move. Orme, Tennessee, just a little over a mile north of Russell Cave, was one of the more prominent mining towns to form. Founded in 1892 as Needmore, the town grew

\textsuperscript{181} Raulston, “My Lifetime Experience on the Woods Reservation,” 3-4; Sorrels, “Russell Cave: Here Modern Man Digs Up the Faded Story, 10,000 Years Old, of Stone Age Ancestors.” 1958.
quickly, building schools and a hotel to accommodate the miners and their families.\footnote{Lee and Lambert, Jr., \textit{Bridgeport, Alabama: Gateway to the Sequatchie Valley: A Photographic History}, 246. 2007.} Infrastructure was needed to get the coal to the river to be shipped, and so in 1902 N.C. & St. L. Railway began constructing a railroad running from Orme to Bridgeport, right in front of the present-day park entrance. The Battle Creek Coal and Coke Company was soon extracting 1,000 tons a day on average, and others moved in to find equally lucrative veins.\footnote{Ibid., 105.} One man, a Mr. Gates, claimed a site on Montague Mountain near Russell Cave and began operating as Widows Creek Coal Company, the name referencing the creek flowing through the Russell Cave system and exiting from the base of Montague Mountain. The surrounding community of miner housing was dubbed New Needmore.\footnote{Ibid., 246.}
Traces of their presence still remain within the park, though they are rarely seen, and very little is known about them.\textsuperscript{185} Three or four mining tunnel entrances are found within the boundaries of the park, and at least seven mining entrances exist on Montague Mountain itself, but there is no documentation to directly link them to the New Needmore community.\textsuperscript{186} The entrances had been known by park staff for some time, but they were first documented in Prentice's 2004 archeological study.\textsuperscript{187} All of these mines were decommissioned by the

\textsuperscript{185} Prentice, \textit{Archeological Investigations Conducted at Russell Cave National Monument, Jackson County, Alabama}, 48. 2006.

\textsuperscript{186} Thornberry-Eehrlich, \textit{Geologic Resources Inventory Scoping Summary: Russell Cave National Monument, Alabama}, 6. 2009.

Alabama Bureau of Mines, and they remain unmarked and nearly unrecognizable.  

Figure 17    Lower Woods Road, showing the completion of a culvert (post-NPS acquisition).


Roads were built on the slopes of Montague Mountain to access the mines, and remain today as access roads to the higher elevations within the park. One cabin site, believed to be from the early 20th century, was officially documented by Prentice’s crew, its presence betrayed by piles of stone and

brick, scattered glass and metal, and a bed of daffodils.\textsuperscript{189} Park Ranger Larry Beane also documented another potential cabin site, marked by a partially dammed spring and a rectangular remnant of stone resembling a building foundation.\textsuperscript{190} Photographic evidence also exists of park service staff demolishing a cabin after acquisition by the National Park Service but before development of the park; it is not known whether this cabin was the cabin documented by Prentice. Other signs of use prior to park development include a goat or sheep pen (which is still extant), as well as a moonshine still, which is thought to have been in operation until after the park was established.\textsuperscript{191}

\textsuperscript{189} Prentice, \textit{Archeological Investigations Conducted at Russell Cave National Monument, Jackson County, Alabama}, 48. 2006.


Coal mining continued to thrive in Doran Cove until the mid-1930s, when the largest coal veins were depleted. Declining production led to Orme's railroad service being suspended on January 12, 1938. This, combined with a 1939 miners' strike, marked the end of major mining operations in the cove. N.C. & St. L. Railway pulled up their tracks and abandoned the right-of-way in 1942, giving the metal to the war effort. This did not the mean the end of mining in the cove, however. Charles Peacock, one of the first archeologists to study the cave, documented in his personal journal an instance in 1955 of the Ridley's

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193. Ibid., 247.
(who owned the land surrounding Russell Cave at the time) complaining the miners had been going up the mountain and leaving farm gates open. A rather large strip mining operation also took place atop Montague Mountain in the early 1970s, though it is no longer in operation.

Figure 19  Aerial view of Ramsey-Abbott strip mine atop Montague Mountain, looking north.


The land on which Russell Cave lies was owned by Thomas Russell's family until 1928, when it was purchased by Oscar Ridley. Mr. Ridley was a farmer, and the land was used to grow corn and other crops, as well as raise

livestock such as cows, sheep, and goats.\footnote{Peacock, "Russell Cave Journal." 1954; National Park Service, \textit{Resource Management Plan - Russell Cave National Monument}, 39. 1993.} He and his family knew about relics in the cave, as evidenced by Peacock's recollection of Ridley's daughter showing him her cigar box full of artifacts, as well as Beane's communication with Ralph Ridley, Oscar's son.\footnote{Peacock, "Russell Cave Journal." 1954; Beane, \textit{National Register of Historic Places Registration Form}, 19. 1998.}

Figure 20  
Oscar and Maude Ridley.

Date taken and photographer unknown. From Russell Cave National Monument park archive.
Life in Doran Cove went on as it had for a hundred years until 1951, when a power line survey crew for the Tennessee Valley Authority (TVA) began finding projectile points along their route. Aware of his amateur interest in archeology, the crew notified Paul Brown, a civil engineer with the TVA and a member of the Tennessee Archeological Society. Brown began studying their route and noticed a "Russell Cave" denoted not far off their line. He decided to gather some colleagues (namely, LeBaron Pahmeyer, Charles Peacock, and J.B. Graham) and take a closer look at the cave.198.

198. Miller, "Life 8,000 Years Ago Uncovered in An Alabama Cave," 548. 1956.
The Tennessee Archeological Society conducted small investigations of the cave for the next several years, issuing at least one report authored by Bettye Broyles in 1958, entitled "Russell Cave in Northern Alabama."199. Their work attracted the interest of Dr. Matthews W. Stirling, director of the Smithsonian Institution's Bureau of American Ethnology at the time, who sent archeologist Carl F. Miller down to investigate the site. Stirling and Miller were very excited by the potential of the site, and so petitioned the National Geographic Society to fund an expedition to the cave. They agreed, and Miller returned to the cave in April of 1956. He conducted a second investigation during the summer of 1958. The investigations proved so successful the National Geographic Society purchased a 262-acre portion of the farm from the Ridleys in 1958 for a sum of $17,000.200.


The archeological expeditions did not change the landscape of the park in any significant way. Their digs altered the interior of the cave, but this has since been repaired, and the cave looks much as it did before the expeditions took place. No roads were constructed into the cave; the early investigators often parked at Oscar Ridley’s home and hiked to the site. Later, workers at the cave created a temporary parking area west of the cave along the county road and built a small wooden bridge over Dry Creek. The major alteration to the landscape, heavy logging, occurred in the late 1950s, just prior to National Geographic’s acquisition of the cave.  

young timber and underbrush” attests. Regardless, this was the condition of the land upon it becoming a park: active agricultural fields in the lowlands, with young and recently logged timber on the hillsides.

Figure 23   Temporary foot bridge and parking area.

Photo taken by Bert Speed and Dorothy Bradford on February 9, 1962. From Russell Cave National Monument park archive.

**Park Development**

As early as 1956, based on the preliminary findings of the National Geographic Society’s expeditions, the National Park Service was in talks concerning Russell Cave becoming a national monument. After their final expedition wrapped in 1958, the National Geographic Society announced they


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were giving the site to the American people, in the form of a donation of the land
to the National Park Service.\textsuperscript{204} In 1959, after a series of high-profile National
Geographic articles by Carl Miller had brought the cave into the national
spotlight, the Interior Department came before Congress to request the funds
necessary to develop, manage, and maintain the site as a unit of the National
Park system.\textsuperscript{205} Boundary studies had been done in 1958, and a final survey in
December 1959 placed the official size of the park at 310.45 acres.\textsuperscript{206} A geology
report was completed the next year.\textsuperscript{207} Having determined the resources were of
a high-enough quality for preservation and the area suitable for park
development, President John F. Kennedy declared Russell Cave National
Monument the newest addition to the national park system on May 11, 1961.\textsuperscript{208}

\textsuperscript{204} Grosvenor, "National Geographic Presents Russell Cave to the American People." 1958.
\textsuperscript{205} Staff, "Russell Cave Plans Progress Reported." 1959.
\textsuperscript{206} National Park Service, "RUCA-414-2000." 1959.
\textsuperscript{207} Good, \textit{Report on Russell Cave Geology}. 1960.
\textsuperscript{208} Kennedy, "Proclamation. Establishing Russell Cave National Monument, Alabama,
Russell Cave was approved in the midst of the massive Mission 66 campaign, a capital improvement program intended to restore and modernize the national parks. World War II had led to dramatic underfunding of the park system, and the wave of post-war use by a newly-mobile middle class had overwhelmed the parks. Mission 66 was intended to remedy this, by improving existing buildings, constructing new ones, and accommodating the automobile to an extent never before seen. Though still controversial in whether its costs (both financial and environmental) were justified, its intent of making the parks more accessible to the average American was met. Russell Cave National Monument is a prime, if small, example of this design philosophy.


210. Ibid.
Designed by Park Service landscape architect Bernard Grace, the plan for the park consisted of four main parts: entrance road and parking, visitor and administrative facilities, residential facilities, and in-place exhibits and nature trails.\textsuperscript{211} The short asphalt entrance road exits west off of Jackson County Road 98, taking the visitor across the former corn fields, crossing the channel of Dry Creek before widely curving into the parking area, which situated just north of the visitors' center; a loop directly in front the visitors' center allows for turnaround. A side road takes one around to the back of the two residences, which, due to the rural nature of the park, were originally intended to house park personnel and researchers. The roadwork and parking area was completed in November 1962, and the visitor center and two residences were completed in January 1963.\textsuperscript{212}


\textsuperscript{212} Ibid., 39.
Figure 25  View from entrance road looking west.

Note Russell Point in the background. The bridge crossing Dry Creek and the two residences can also be seen on the right. Photo taken by Zorro Bradley in February 1963. From Russell Cave National Monument park archive.

The visitors' center was designed by architects Northington, Smith and Kranert of Huntsville, Alabama. In the style typical of the day, the single-story building had a low-slung roofline, large windows in front, and a large terrace on the south side. Visitor space and exhibits were in the south wing of the building, while administrative offices and utility space were in the north wing. A utility court was behind the building, providing space for vehicles and other maintenance equipment.
Due to the agricultural use of the land, the landscape around the park development was virtually treeless. Grace, along with his landscape architect colleagues Charles Clapper, Jr. and Thomas Dell, designed a site plan reforesting parts of the landscape and keeping open lawn for views and gathering space. His design called for more than 550 native trees to be planted in the general landscape, along with over 120 native trees and shrubs around the visitor center and residences. The intent, it seems, was multifaceted: to provide a variation of scenery (woods, lawns, edges), to screen the residences from the more public areas of the park, to shore up vegetation along Dry Creek,

and to bring the native forest back into the park landscape. Split-rail fencing was placed along the entrance road and property lines not delineated by the creek channel, in order to prevent neighboring livestock from wandering into the park, and to provide a level of security from would-be cave robbers.\(^{214}\) The reforestation work was done by Veterans' Landscaping of Birmingham, Alabama, and completed in the summer of 1964.\(^{215}\)

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The landscape design around the buildings had a very dense, naturalistic feel to it. Native trees, such as flowering dogwood (*Cornus florida*) and sourwood (*Oxydendrum arboreum*), were interspersed with buckeye (*Aesculus parviflora*), St. Johnswort (*Hypericum prolificum*), winterberry (*Ilex verticillata*), and spicebush (*Lindera benzoin*). Room was also made for some non-natives and ornamentals, such as live oak (*Quercus virginiana*), Washington hawthorn (*Crataegus phaenopyrum*), periwinkles (*Vinca minor*) and English ivy (*Hedera helix*). Small lawn spaces were found in front of the large window of the visitor center, giving those inside a clear view to the larger lawn beyond the drive.
A small trail system was also an important feature of the park design. Grace wanted two; a cave-loop trail taking the visitor into the cave and an ethnobotanical trail breaking off from the cave trail. He wanted the cave-loop trail to be short, allowing the visitor to quickly leave from and return to the visitor center, as well as show off the archeological exhibits in the cave and allow for a photographic vantage point across from the cave entrance. This was to be designed and built to not "intrude on the scene." The ethnobotanical trail was intended to serve two purposes: educate the visitor on natural features in the park and "offer a pleasant opportunity...to stroll and relax along the wooded
hillside.\textsuperscript{216} A couple of different visions were discussed for the trail system, however. One called for a trail taking the visitor across Dry Creek to a high point providing "a view of the cave and its environs." A nature trail located in the field to the south of the visitor center would have branched from this trail, beginning at the sink just north of the cave.\textsuperscript{217} Another called for a rustic shelter with exhibits along the ethnobotanical trail, providing a rest area for the longer trip up the hillside.\textsuperscript{218}

Figure 29  Stonemason working on cave trail retaining wall.


\textsuperscript{217} Ibid., 37.

\textsuperscript{218} Ibid., 19.
The cave-loop trail started at the terrace on the south side of the visitor center, winding through the woods, over the Buckeye entrance to the cave system, past a burial mound and a large sinkhole, and hugging the north side of the Russell Cave sinkhole before slowly descending into the cave vestibule. It was built using stone retaining walls to bridge the uneven terrain, with a surface of crushed limestone. Aluminum railings protected visitors from the steeper slopes. A wooden observation platform offering a clear view of the cave entrance was built at a lower level along Dry Creek, with several sets of wooden steps descending down the hillside to access it. Wooden steps were also built where the steepness of the terrain made the crushed limestone unfeasible.

Figure 30  Completed observation deck, opposite stream entrance to Russell Cave.

Photo taken by Herbert Olson in December 1965. From Russell Cave National Monument park archive.
The cave-loop trail culminated in an elaborate interpretive exhibit of the archeological investigations. A raised wooden walk, designed to protect the unearthed deposits below, encircled the pit, with steps down to a platform cantilevered into the trench. Through a program of sound and lights, the visitor was guided through the history of the cave and the peoples that occupied it.219.

Figure 31   Viewing platform, cast, and temporary display board in the archeological alcove.


The ethnobotanical trail was a 1.5 mile loop breaking off from the cave-loop trail just before the large sinkhole was reached. It offered a view of the sinkhole before winding through the woods, up the hillside, and back down.

219. Ibid., 18.
Paved with narrow strip of asphalt, workers laid the trail with minimal
disturbance of existing grade, using mules to haul the tar up the mountain.
Culverts and retaining walls were constructed out of stone, and wooden bridges
and benches were built as needed. The preexisting roads up the hillside were
also repaired, with culverts and ditches installed to aid in proper drainage.

Figure 32  Completed foot bridge on ethnobotanical trail.

Photo taken by Dale Smith in January 1964. From Russell Cave
National Monument park archive.

Throughout all of this, the primary experience was to be a visit to the
cave. By presenting a "broad segment of the prehistoric past" in "intimate, local
terms," the designers hoped the park would "provide for the visitor new insight
into the long panorama of human life on this continent."220 The whole aim from

220. Ibid., 4.
this design, the mission of the park, was to give the visitor a chance to "project himself back over the millennia to the simple hunting and gathering way of life which prevailed."²²¹ Though the park had been open for visitors since 1961, it wasn’t until May 7, 1967 that the National Park Service dedicated the park as Russell Cave National Monument, and named the visitor center in honor of the late Dr. Gilbert H. Grosvenor, former President and Editor of the National Geographic Society.²²² The park has not undergone any major changes since then, but small adjustments here and there have been made in an effort to better serve the public.

**Recent Park Development**

Most of the changes to Russell Cave since park development have been rather minor. The visitor center and quarters are much as they were when they were built, with only minor updates and cosmetic changes. The entrance road and parking remain unchanged, as well as the ethnobotanical trail. Other changes to the landscape have been relatively minor and reflective of changing land use patterns within the park. The most significant changes have been made to the cave-loop trail, and work to stabilize the channel of Dry Creek has been fairly ongoing.

²²¹ Ibid., 3.

The entirety of Doran Cove, an area of over 20 square miles, drains to Russell Cave at some point, which can occasionally lead to floodwaters creating a large pool of water at the cave entrance. Though the archeological record shows, at least very early on, flooding was a problem in the cave vestibule, as time went on the floor of the vestibule rose above the high water mark. Sometime in the 1960s or 70s (it is unclear as to which), the Corps of Engineers and landowners straightened some bends in Dry Creek farther upstream towards Orme in an effort to remediate flooding on their lands. This had the


unfortunate effect of increasing both the intensity and amount of floodwater entering the cave entrance. Prior land use, such as logging and mining, increased siltation in the creek channel, further increasing the power of the floodwaters.225. The pool in front of the cave has been measured to be as much as 20 feet deep, and the sharp bend in the creek just before it enters the cave creates a swirling eddy that has had deleterious effects on the stream bank in front of the cave vestibule.226. Trash and debris regularly wash down the creek, creating jams in the creek channel as well as the cave itself.

Figure 34  Debris in Dry Creek, just south of the entrance road bridge.

Photo taken by author on July 25, 2011.


The first instance of work being done to remedy the situation occurred in 1989, when exceptionally heavy rains (80.85 inches that year; the average is 56 inches) led to soil eroding from the entrance road bridge foundation. Riprap was placed under the bridge to slow the erosion. After the floodwaters from a particularly heavy storm on July 4th of that year receded, it became apparent the floodwaters were a threat to the archeological resources of the cave. The creek had undercut the bank in front of the cave vestibule, and a few days later a large portion of the bank fell into the creek. Restoration work was undertaken in March of the following year, which reduced the bank slope to 65 degrees and installed geo-web and native plantings to stabilize the bank. In 1992, additional work was completed that further stabilized the bank and moved the creek back to its original channel, which was cut off by channelization in the 1970s. During this time, large amounts of debris and trash were removed from the cave itself. The undercutting claimed another victim during this time, with the wooden observation platform directly across from the cave collapsing into


the creek after a flood. Trees falling into the creek channel are a regular occurrence.231.

Figure 35 Recycled lumber boardwalk on the cave-loop trail.

Note the original stonework below the boardwalk. Photo taken by author on October 11, 2010.

The cave-loop trail itself has been substantially reworked, with an Americans with Disabilities Act (ADA)-compatible wooden boardwalk being built over the original trail in 1997.232. After the wood was found to be slippery and prone to warping, the boardwalk was rebuilt in 2005 using composite lumber made from recycled materials.233. The archeological pit in the cave vestibule was


also filled in 1997, after it was determined the elaborate walkway system posed accessibility problems to handicapped visitors. This interpretive exhibit was reimagined in an attempt to show the cave as it might have been in prehistoric times, with posed figures of cave residents and interpretive signage.234.

![Figure 36 Cave-loop trail boardwalk and interpretive exhibit inside the cave vestibule.](image)

Photo taken by author on October 11, 2010.

The coal mines previously discussed were first noticed in 1991, and were closed over the course of the next year (1992-1993) by a local contractor and "safed" by the Alabama Bureau of Mines.235. At least one still contains some


dynamite.236. The roads leading up to the mines were originally used as horse
trails, a practice discontinued in 1993 due to frequent intrusion by users onto
nearby private lands.237. Several thousands dollars a year were spent on
maintaining the roads, up until 1996.238.

Other changes to the landscape since park development include invasive
species management, expansion of picnic areas, plant propagation programs,
and the planting of an "Indian garden." The area behind the residences was
used as a garden by the park staff for some time.239. Chinese privet (Ligustrum
sinense), Japanese honeysuckle (Lonicera japonica), and kudzu (Pueraria lobata)
have been managed since the park was opened; honeysuckle and kudzu are
prevalent in the woodlands around the park, while privet is more prominent
along the creek channel.240. Goats were used in an attempt to manage the kudzu,
but that practice has since been suspended.241. A picnic area, while proposed,
was never a major intention of the original designers. Due to the remote location
of the park, however, visitor demand led to the establishment of several lunching

236. Thornberry-Eehrlich, Geologic Resources Inventory Scoping Summary: Russell Cave


240. Beane, Cultural Resources Management Overview Update for Russell Cave National

locations. In 1990, this area consisted of only 7 tables, but it has since become much larger, with picnic tables in at least 3 distinct areas of the park. A ginseng propagation program was begun in the early 1990s, and a healthy population still exists in the park, though the location remains undisclosed due to fears of poaching. The Indian garden, which no longer exists, was located off the terrace on the south of the visitor center. It was intended to aid in the interpretation of day-to-day life for the Indians, and was a popular attraction with visitors. Special-use permits were issued in 1984 and 1985 for the field south of the visitor center to be used for cutting hay, but for aesthetic and economic reasons this program was discontinued soon after.

CHAPTER IV
EXISTING CONDITIONS

Russell Cave National Monument occupies 310 acres in the northeastern corner of Alabama, in a small, limestone-floored valley known as Doran Cove. The landscape at the monument varies from relatively flat, open fields at the base of Doran Cove to steep, boulder-strewn, heavily-forested hillsides. Though it was founded primarily to protect the important archeological remains present on the site, the park also an example of the woodlands and topography of the Cumberland Plateau. Lying within the southern portion of the Mixed Mesophytic Forest Zone, the park is covered by a hardwood-dominated forest. More oak, hickory and maples are present in the drier uplands, while the moist ravines are populated with sweetgum (Liquidambar styraciflua), poplar (Liriodendron tulipifera) and white oak (Quercus alba). Some pines grow in the more acidic soils. Also typical of the region are the invasive species afflicting the park, with Chinese privet, kudzu, and Japanese honeysuckle the major offenders. A diverse assemblage of fauna is also present in the region, including white-tailed deer, black bear, turkey and quail.

Rising anywhere from 1,500 to 1,800 above mean sea level (AMSL), finger-like ridges separated by narrow, steep-walled valleys resting at around 620 to 700 AMSL typify the region. At more than 1,000 feet above the mouth of Russell Cave, Montague Mountain forms a part of the wall surrounding Doran Cove. Geologically, the park is situated on the western edge of the Appalachian Plateau, on the southeastern flank of the Nashville Dome formation. Paleozoic sedimentary rocks are exposed within the park, including Mississippian Monteagle and Bangor limestones, Mississippian Pennington and Pennsylvania Pottsville formations, and Quaternary colluvium. These limestones frequently form karst features, including sinkholes, caves, sinking streams and springs, all of which are present in the monument. According to the Alabama Geological Survey, Russell Cave is within an area of moderately low seismic risk.

Figure 37  Example of colluvial deposits on the slopes of Montague Mountain within the park.

Photo taken by author on July 27, 2011.
Figure 38  Existing conditions map of Russell Cave National Monument.
Figure 39  Existing conditions map of the developed area.
Approximately 14,000 acres of surrounding land drain into the mouth of Russell Cave, much of it channeled through Dry Creek. This ephemeral stream traverses the monument and flows into the large entrance of Russell Cave, frequently flooding the vicinity of the cave during high flow events. Water entering the cave, combined with springs inside the cave, form the beginnings of Widows’ Creek, which flows southeastward to the Tennessee River. Several perennial springs are also present on site, one of which flows into the cave at a rate of 300 gallons per minute. Flooding is still a constant threat to the archeological resources of the cave, continuing to undercut the slope in front of the vestibule.248.

As it exists today, the monument is much as it was in 1967, when it was officially dedicated. No significant changes to the landscape, or truly to the surrounding landscape in general, has occurred since, aside from plants growing. The changes that have occurred have centered on the designed features of the landscape installed during park development. The cave-loop trail and the landscape plantings in particular have either been altered or no longer exist in the manner they were intended.

The park is entered from Jackson County Road 98, through a narrow strip of land cut out of surrounding agricultural fields to allow access to the cave. The entrance sign is situated on a small piece of land across County Road 98,

opposite the entrance; this sign is not the original, but was replaced sometime in the 1980s. Plantings on this side of the road, originally consisting of three live oaks and small planting beds around the sign, no longer exist; lawn has taken its place. The original split-rail fence is still extant, however, and marks the property line.

Figure 40  Lawn area across from entrance, looking south.

Park sign is behind. Note spilt-rail fence and lack of plantings. Photo taken by author on July 25, 2011.
Figure 41 Entrance sign shrub bed.


The original spilt-rail fence still demarcates the entrance on the opposite side of the county road, stopping at a gate. Wire fencing runs along the property line on each side of the road. Very few of the original plantings remain along this strip. Oaks (neither of which are the specified live or southern red \(\textit{Quercus falcata}\)) and a few loblolly \(\textit{Pinus taeda}\) and Virginia \(\textit{Pinus virginiana}\) pines have done well. Lawn dominates both sides of the road, with a gentle swale on both sides channeling runoff into Dry Creek. A high voltage power line, carrying electricity from the TVA's nearby Widows Creek plant, cross overhead. Long views of the surrounding countryside can be seen from either side of the road here, looking north and south along Doran Cove. Russell Point, a prominent piece of land once considered for acquisition but currently outside park
boundaries, looms overhead. The entrance road then crosses the channel of Dry Creek.

Figure 42  Entrance road looking west.

Note the split-rail fence and lack of trees along the road. Photo taken by author on July 25, 2011.

Figure 43  Reforestation plantings north of entrance road.


The original bridge is still present, serving as a break in the dense foliage surrounding the creek channel. Much of the plant material along the channel is native and healthy; invasive privet is a continual problem, however, though much more so along the field south of the visitor center. The creek bed itself is heavily silted and channelized, with large piles of debris and trash throughout. Large amounts of riprap have been used in a effort to stem erosion, and the stones lie strewn about in the creek bed. The wide-ranging views of the cove afforded by the agricultural nature of the surrounding land use disappear once the bridge is crossed; the vegetation along the creek bank close off the viewsheds to make a more insular experience.
Figure 44  Debris in Dry Creek channel.

Note riprap and concrete intended to stem erosion. Photo taken by author on July 25, 2011.
Figure 45  Dry Creek, at the proposed (and eventual) location of entrance road bridge crossing.

Note lack of siltation and buildup of debris. Photo taken by Bert Speed and Dorothy Bradford on February 9, 1962. From Russell Cave National Monument park archive.

The split-rail fence picks back up on the other side of the bridge, separating the road from a large lawn area to the south. On the north side, the fence runs along the break line between the elevated ground on which the employee residences are located and a drainage swale. The fence on the south side ends at another gate, while the north fence continues into the tree-line, due west. A small break allows maintenance vehicles easy access between the visitor center and the residences. Intersecting the entrance road from the north, a short spur road begins between the second gate and the picnic area, leading around to the back of the two residences. A small picnic area lies under trees (mostly pines) planted in the original reforestation efforts, off the north side of
the entrance road between the spur road and Dry Creek. This road ends at a small metal storage shed. Just before this shed, a small gravel road gives access to the Woods roads. A lawn/picnic area lies to the north of the spur road, between it and Dry Creek, which marks the boundary of the park. This area is also populated with pines, oaks, and other deciduous trees, but at not-near the density prescribed in the original design. The woods become much more dense on the west side of this area, with a large sinkhole containing the entrance to Ridley Cave just inside the tree-line.

![Figure 46 Picnic area north of the entrance road, between Dry Creek and residences.](image)

Note grove-like character of the landscape. Photo taken by author on July 25, 2011.

The residences ("A" being the westernmost, "B" being the easternmost) themselves look much as they did when they were first constructed, with only
small cosmetic changes. The original design called for two planting beds next to
the front and rear entrances; these no longer exist. The only remaining plants
from this design are three flowering dogwoods, two around residence B and one
in front of residence A. A small lawn area was originally intended to surround the
buildings, with heavy reforestation plantings on the south side separating the
residences from the more public areas of the park. This is currently not the case;
the pines planted in the area have done very well, but the area exists more as a
grove than the intended reforestation.

Figure 47  View looking east showing residences and reforestation plantings.
Note split-rail fence, original dogwood in front of residence, and
grove-like character of landscape. Photo taken by author on July 25,
2011.
Proceeding through the gate, the entrance road continues its slow sweep to the south. A small picnic area sits atop elevated ground to the west of the bend, between the spilt-rail fence and the parking area. This picnic area has been added since the park was built. The plans originally called for the fence to run in front of it, with the tree-line beginning there, but the fence now runs some 50 feet back from its intended location. Most likely this intent was due to drainage; a large amount of water runs off the mountainside and into a small cave opening just beyond the fence, making the area fairly wet much of the time.
The picnic area is directly ahead, while the residences are outside the picture to the north. Photo taken by author on July 25, 2011.

The parking area consists of angled spaces off the west side of the entrance road, and has spaces for cars, RVs, and buses. The original plan called for live oaks to be planted on the hillside, just up from the sidewalk and curb. These trees were planted, but they are no longer extant. The road continues in front of the visitor center, ending in a cul-de-sac.
Figure 50  View of parking area looking south.

The visitor center can be seen in the background. Photo taken by author on July 25, 2011.

Figure 51  Planting along parking area bank.

A sidewalk leads from the parking area to the front of the visitor center, crossing the entrance to the utility court in between. A sign for the visitor center is on the left of the sidewalk immediately after the crossing. A small planting bed is around the sign; of the original plantings only three flowering dogwoods remain. A small lawn area is enclosed by this planting bed, the sidewalk, the entrance road, and the main entrance sidewalk connecting the cul-de-sac with the front door. Between the sidewalk from the parking area and the building is another small lawn area and a foundation planting bed, but, again, the only remaining plants are two dogwood trees. The main entrance sidewalk is flanked on the left by a small stone wall, which carries on around the building to eventually form the railing for the terrace on the south side of the visitor center. Small, currently empty (save for a young American holly \( Ilex opaca \)) foundation beds exist between the walk and the building. Several original plants remain on other side of the stone wall: three sweet bay magnolias \( (Magnolia virginiana) \) and a sourwood tree. A large southern magnolia \( (Magnolia grandiflora, \) not depicted in the original plan) grows a few feet off the southeastern corner of the terrace.
Figure 52  View of the front of the visitor center, looking north.

Note the empty planting beds, the stone wall, and the original dogwoods (in front of the visitor center) and sweet bay magnolias (behind the stone wall on the right). Photo taken by author on October 12, 2010.
Figure 53  Superintendent Herbert Olson giving a talk to the Tennessee Historical Society.


The visitor center itself is very well-preserved, with very little change since it was built in 1963. It is "a prime example of a simple Mission 66 Visitor Center in a small park," as a National Park Service survey of Mission 66 visitor centers attests.\textsuperscript{250} The immediate landscape around the visitor center is a different story, however. The original plan called for intensive foundation plantings around the front of the building and the entrance to the utility court, but, as previously stated, these no longer exist. The terrace, surfaced with concrete and bordered by a stone wall to the south, offers visitors a nice view of the field to south. Railings in the terrace, which used to be aluminum, have since been replaced by

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the blue recycled lumber used in the cave-loop walkway. Vegetation along the Dry Creek channel closes off views of the rest of the cove. A couple of small foundation beds separate the building from the terrace, and non-original azaleas border the terrace to the west. A stone drinking fountain, original to the design, is just past these plantings. From here, the trails begin.

Figure 54  View of terrace, trail boardwalk, and demonstration shelter, looking west.

Photo taken by author on October 12, 2010.
Leaving the terrace, the surface of the trail transitions from concrete to recycled lumber. Built in 2005, the material already shows signs of warpage. Immediately after this transition, a short spur to the south leads to a hexagonal shelter, a wooden structure with a concrete pad built in the early 2000s. Typically it is used for demonstrations and other interpretive activities. The trail begins to ascend the hillside and immediately turns to the south, following the path originally set in the 1960s. It offers a great glimpse at the vegetation of the wider park, as well as offering views of the Buckeye entrance to the west and the field south of the visitor center to the east. Its proximity to the cave system is a matter of concern, however; previously unknown passageways discovered in the early 1990s have led to some worry about the potential collapse of the
trail. Soon after, a stone staircase leading up to the ethnobotanical trail breaks off to the north. At the apex of the bend, an impressive view of the cave entrance is unveiled. A bench has been built into the hillside here, allowing visitors a chance to rest and enjoy the view.

Figure 56   Bench opposite view of cave entrance on cave-loop trail.

Photo taken by author on July 27, 2011.

Figure 57  Bench along cave trail.

Photo taken by Herbert Olson in December 1965. Taken from Russell Cave National Monument park archive.

The trail continues to hug the upper edge of the sink, allowing for impressive views of the cave entrance, cave vestibule, and Dry Creek bed on the way to the vestibule itself. Once inside, the trail ends in a small loop, around which are set-pieces and figurines intended to depict prehistoric life in the cave. Interpretive signs offer information about the time periods in which the cave was occupied, and railings protect the deeper reaches of the vestibule (which remain unexcavated) from damage. From this point, a nice view of the creek bed and surrounding walls of the sink can be seen. After taking this in, the visitor can return to the visitor center or explore the ethnobotanical trail.
The ethnobotanical trail begins at the top of the stone staircase as previously described. Immediately to the left, one can view a large sinkhole, which is connected to the cave system and fills with water when the cave entrance floods. To the right, a narrow strip of asphalt marks the path. This trail offers two choices: a fairly strenuous 1.5 mile hike up and down the hillside, or a shorter cutoff serving as a nature trail, with small metal signs describing various flora and fauna in the park. This side trail is not paved, and due to little use, is not clearly marked in some places.
Figure 59  Stone staircase leading up to the beginning of the ethnobotanical trail.

View of the large sinkhole is to the right. Photo taken by author on October 11, 2010.

The paved path gives a great impression of the natural environment surrounding the park. Views of rock falls and boulders are prominent throughout, as well as the park’s various plant communities. Hikers will be rewarded with views of intermittent streams and springs, ephemeral pools, and the accompanying cane breaks. Stone retaining walls and wooden bridges make an attempt at leveling out the steep terrain, while log benches scattered along the trail give opportunities for rest and quiet contemplation in the woods.
Figure 60  View of ethnobotanical trail.

Note stone retaining wall along the outside edge of the switchback. Photo taken by author on October 11, 2010.

Figure 61  Bench on ethnobotanical trail.

The path is in a state of disrepair, however. The asphalt is covered in moss in many places, creating a slipping hazard during the frequently wet weather. The wooden bridges are decomposing, and hazard trees and treefalls are abundant. The path itself slopes steeply and veers sharply at many points, reflective of the way it was made and the great difficulty the terrain presents for equipment that could have been used to grade the path properly.

Figure 62 Switchback in ethnobotanical trail.

Note moss covering the asphalt in areas and the general unevenness of the walking surface. Photo taken by author on July 27, 2011.

Though the ethnobotanical and cave-loop trails cover a good deal of ground on the hillside behind the visitor center, much of the park is often unexplored. The Woods roads offer the visitor a chance to visit the farther reaches of the park. The lower road begins to the north of the residences,
starting its ascent between these buildings and the sink surrounding Ridley Cave. The gravel road first passes the remains of a goat pen on the left, one of the only extant traces of the land’s agricultural past. The road then progresses steeply up the hillside before leveling off at the intersection of an access road built during park development to construct the reservoir. The large concrete tank was used to store spring water for park use, but is now abandoned due to the park's connection to Bridgeport’s municipal water supply. The pumphouse, also no longer used, is a small block building a little further down this road. The road is unmaintained, but due to its relative youth has not yet succeeded back to the forest. Following this road will eventually lead one back to the ethnobotanical trail.

Figure 63  Abandoned park reservoir.

Photo taken by author on July 27, 2011.
The lower Woods road continues to a sharp bend, where a gate to the left marks the park boundary. Further up the road, another gate regulates visitor access, and is only opened for service vehicles. Past this gate, the road heads due south, slowly ascending the hillside. Along this road, one can view several small cave entrances, intermittent springs, and ephemeral pools similar to those seen on the ethnobotanical trail. Culverts and ditches were built during park development, but regular maintenance on the ceased in the mid-1990s. The effects of this are obvious: clogged culverts and silted ditches have led to several major erosion problems, especially in curves and on the steeper slopes of the road. The lower road eventually ends at a gate on the southern boundary of the park. On the hillside above the road lie the remains of several coal mines, as well as rockshelters that have shown signs of occupation. These features are not obvious, and could only be located if one knew where to look.
Figure 64  View of Lower Woods Road, looking south.

Note the heavy leaf litter covering the surface of the road, as well as erosion caused by clogged culverts and ditches. Photo taken by author on January 19, 2012.

Along the ridge above these features is the sand-and-gravel surfaced upper Woods road. No access to it exists on park land; crossing into private property is necessary for vehicles to drive on it. As such, this road is little-used. It extends from the southern boundary of the park to the northern boundary just south of Russell Point, where a gate marks its crossing back onto private land. An adventurous visitor can easily gain access, however, by hiking up the steep slope to the top of the ridge. From there, one is rewarded with several sweeping vistas of the cove, as well as ridge-top plant communities present nowhere else
in the park. The only way down is to descend the slope and walk the lower road back to the residence spur road.

Figure 65  View of Doran Cove from upper Woods Road, looking east.
Photo taken by author on January 19, 2012.

In terms of vegetation, the park has a diverse, if not unique, array of species present. At least 460 documented vascular plant species exist, but none are considered endangered, threatened, or even a candidate for either list. At least 12% (55 species) are not native to the park, but most are not harmful. The previously mentioned privet, honeysuckle, and kudzu are, however, as well as Japanese stiltgrass (*Microstegium vimineum*) and multiflora rose (*Rosa multiflora*).252.

At least ten distinct vegetation associations are present within the park: Red-cedar Successional Forest, Rich Low-Elevation Appalachian Oak Forest, White Oak-Mixed Oak Dry-Mesic Alkaline Forest, Shumard Oak-Chinquapin Oak Mesic Limestone Forest, Xeric Ridgetop Chestnut Oak Forest, Chestnut Oak-Shagbark Hickory-Sugar Maple Forest, Rich Levee Mixed Hardwood Bottomland Forest, Cultivated Meadow, Appalachian Mafic Cliff, and Cumberland Plateau Sandstone Cliff. Much of these associations are common, and represent the older second/third-growth forests of the park well. Of special note, however, is the Shumard Oak-Chinquapin Oak Mesic Limestone Forest association, which is "at best rare or uncommon and at worse imperiled globally."\(^{253}\)

Though a full diagnosis of the cave system within the park is beyond the scope of this document, the subject must be broached in its relationship to the landscape above ground. The porosity of the karst limestone in the area means decisions about the landscape above the caves impacts the caves directly. Because Russell Cave is the most significant resource in the park, these subterranean impacts must be kept in mind.

The most complete source of knowledge about the cave system within the park comes from an ecological resource assessment done in 1991 by Horton H. Hobbs, III, from Wittenburg University in Springfield, Ohio. In the

\(^{253}\) Ibid., 9-13.
report he documented 70 species living inside Russell Cave, including two that were previously undiscovered. Hobbs was especially concerned about anthropogenic problems in relation to debris in the cave, as well as agricultural practices and clear-cutting, and advised measures be taken by the park to mitigate some of these problems in Doran Cove. The decomposition of washed-in organic debris has caused small, isolated pools in the cave to be "devoid of life," due to lack of oxygen. A water quality study done by the Park Service in 1999 found "water quality has generally been good, with some impacts from human activities," including "agricultural and clear-cutting operations, stormwater runoff, urban and residential development, and quarrying and mining activities."


255. Ibid., 191.

256. Ibid., 184.

CHAPTER V
ANALYSIS AND EVALUATION

This analysis compares the findings of the site history with the existing conditions in an effort to identify landscape features and characteristics within the park that have historical significance. Evaluating the integrity of each characteristic within the landscape as a whole, the process lays the groundwork for establishing significance and identifying changes in the landscape. From this information, appropriate treatment recommendations can be developed.

National Register Significance

Russell Cave National Monument was administratively listed on the National Register for Historic Places with the passage of the National Historic Preservation Act of 1966. The park is significant for contributing to events that are significant to the broad patterns of our history (Criteria A), and for yielding important archeological information (Criteria D).258 The period of significance for the site runs from 10,000 BC to AD 1650, corresponding with the cave's occupation by Paleoindian, Archaic, Woodland, and Mississippian people groups.

The cave itself is the main feature of significance within the park. Thirteen other documented archeological sites contribute to the overall significance of the monument as well. Most of these sites are open-air and virtually unnoticeable. Significant relics have been revealed in nearly every site archeologists have investigated, hence so many being simply "areas" within the park. Of these sites, only five are features in the landscape, and only two are man-made. One is a small goat pen associated with a non-extant log cabin, and the other is a small burial mound just north of the cave vestibule. The others are sinkholes. While most of the park facilities and the park design itself are associated with Mission 66, these elements have been deemed "neither historic nor significant" by the National Register. The coal mines on site are historic and contribute to the greater story of the site in the context of Doran Cove, but more information is needed about them before their true significance to the park can be determined. Virtually no documentation exists about them or the accompanying cabins no longer extant within the park.

The landscape characteristics described below consist of changes, if any, that have taken place to the significant features of the park. These are presented in order to evaluate their integrity, measured against the information presented in the site history. Due to the fact that there is only one significant time period in Russell Cave National Monument, and because the significant features of the

259. Ibid., 9.
landscape are substantial, natural, and very resistant to significant change, the park design and facilities will be discussed as related to their effect on the prehistoric integrity of the site.

**Spatial Organization**

Though archeological investigations have determined Russell Cave was an important location throughout prehistory for the people that lived in the area, no investigations thus far have shown any evidence of settlement or structures outside of the cave. The findings outside of the cave have all been in situ, and while the danger of artifact removal is ever-present, the significant areas themselves are in no danger of being moved. These elements all retain integrity in this area.

The spatial organization of the broader site has only changed in the park development area. In the period of significance, the area was likely heavily wooded, much like the undeveloped portions of the park. Once settlers came into the cove, land was cleared for timber and agriculture. It remained in this condition until the development of the park commenced. The 1960s design has not changed spatially, though the cave-loop trail has been updated with a boardwalk for ADA-compatibility. Reforestation plantings were undertaken that created spatial organization out of the blank canvas of a cornfield, the only remaining elements of which are a fencerow of cedar trees just east of the visitor center. Original design intent was to reforest large areas of the cornfield, but this
has not taken place; the areas are currently maintained as groves and are not reflective of the designers' intent nor the period of significance.

Figure 66  View of lawn area and cul-de-sac in front of visitor center.

This image depicts some of the spatial characteristics of the park. Notice the row of cedars just past the cul-de-sac. Photo taken by author on October 12, 2010.

Ultimately, the spatial organization of the park, as related its the geologic features, has not changed significantly from prehistory. The spatial organization of the park development area is not true to the period of significance, and so therefore detracts from its integrity.

Circulation

While the prehistoric users of Russell Cave surely had regularly-used trail systems and pathways, these have not been able to be determined by archeological investigation. Both the entrance/spur roads and the upper and lower Woods roads constructed within the park have not changed from their
original alignment. The ethnobotanical trail has been virtually untouched since it was laid in 1963, and is showing its age. The cave-loop trail, while having changed significantly in its design, has not changed in its alignment from the original design.

No circulation has been recorded in the period of significance; therefore, no circulation built since can impact this area of integrity. The circulation features that have been built are minor, however, and do not significantly impact the integrity of the larger landscape.

**Archeological Features**

The archeological features within the park are the source of its significance, and so are of utmost importance. Being the source of interest in the park, they have also undergone the most change. Due to their being archeological features, they have by default been disturbed from their original condition due to excavation.

The excavations in the cave vestibule have been the most intensive in the history of the park, and inflicted major disturbance upon the underground strata and appearance of the resource. Large pits were dug in the 1950s and 1960s, during which significant amounts of soil and artifacts were removed from the cave. Rockfalls were also displaced; in Carl Miller's case, this was usually done by explosives. A large pit was preserved for interpretive purposes up until the late 1990s, when the cave-loop trail was redone. This filling-in was completed in
an effort to return the cave vestibule to its prehistoric (or, at least, pre-investigation) appearance.

Figure 67  Workers excavating for footing along the west wall of the interpretative exhibit trench.


The small burial mound was partially excavated in the 1950s, but was mostly left undisturbed. The cave-loop trail passes by it, but it has suffered no other significant disturbances besides the excavation. Many of the field areas have historically been plowed, and so have naturally suffered some disturbance in the plow zone. These areas have not been plowed since park development, though, and have remained fairly undisturbed since, with mowing the only activity taking place upon them. Most of the other significant archeological areas are in undeveloped parts of the park, and so therefore remain pristine as far as
is known. Logging activities that took place before park development could have had an impact, though since the condition of the sites was unknown before then, there is no way of knowing how disturbed they might be. Areas along the creek channel might be suffering from erosion.

Though these areas have been affected by disturbances, they largely maintain their integrity. None of the sites have been moved or substantially destroyed, and they all still hold potential for important archeological finds.

**Small Scale Features**

No small scale features contribute to the significance to the park, and many have been modified or removed since the park opened. The goat pen, while still extant, is in poor repair. The largest change has been to the cave-loop trail. Originally built out of stone and wood with aluminum railings, it has since been reconstructed as an ADA-compatible boardwalk using blue recycled plastic lumber. Though deemed necessary to provide access to the cave vestibule, this is a major and disruptive departure from the designers' intent, which was specifically to not "intrude on the scene" of the cave entrance.260. During this time, the original wooden railings on the visitor center terrace were also replaced with the same recycled lumber. The observation platform that was built opposite the cave entrance no longer exists, having been lost to a flood in

the early 1990s. The interpretive exhibit in the cave vestibule was removed during this time, marking a move in interpretation from the archeological studies conducted on site to a more direct depiction of the site as it might have been in prehistory.

Figure 68  Goat pen just north of the employee residences.

Photo taken by author on July 26, 2011.

Both the entrance sign and the visitor center sign have been replaced, while several newer metal signs have been placed in the park since development. Picnic tables have proliferated since the park opened, now far exceeding any amount originally called for. A bike rack near the visitor center is also a new addition. While none of these features contribute to the significance of the park, they serve to demonstrate the lack of integrity remaining in the
original park design. The stone culverts built during development have remained unchanged, however, as well as the split-rail fence.

**Structures**

Three major structures exist on the site, none of which are from the period of significance nor contribute to the significance of the park: the visitor center and two employee residences. These are largely unchanged from their original appearance; the residences have had minor cosmetic updates, while the major change to the visitor center has been the addition of an audio-visual room in the rear. Original planting installations around the structures are non-existent, save for a few dogwood trees and some sweet bay magnolias. The other two structures onsite, a pumphouse and a water reservoir, have been abandoned.

**Natural Systems**

Dry Creek and the creek flowing into Russell Cave are the two main water features on site, with other intermittent and ephemeral features scattered about the park. Significant work has been done to both. Dry Creek has become heavily channelized and silted, as pictures from pre-park development attest. This has not all been the fault of the park, however; straightening of the channel upstream, as well as damaging land use such as clear-cutting and agriculture, has contributed heavily to its current condition. The increased flow has led to the buildup of debris both in the creek channel and the cave itself. Efforts to stem erosion with riprap and concrete have also largely failed, leaving piles of
stone and broken concrete in the channel. Though the channel of the creek has not moved, the condition of the channel lessens the integrity of this feature.

The creek flowing into Russell Cave has fared better. Bank stabilization efforts in the early 1990s changed the appearance of the stream very little, and have mostly achieved their intended purpose of protecting the bank below the cave vestibule. Its integrity remains intact.

**Topography**

The topography of the park is virtually unchanged from prehistoric times. The only changes have been in the developed area, and even these are subtle. Grading for the entrance road and site drainage have altered the site only slightly, and in no way affect its integrity.

**Vegetation**

As discussed elsewhere in this report, the vegetation of the park has remained relatively stable for the last 5,000 years. Despite at least one instance (and likely more) of heavy logging, the plant communities are representative of what was present since Archaic times. The only major changes have come from the introduction of invasive species, the most destructive of which are privet, honeysuckle, and kudzu.

Vegetation introduced during park development has largely vanished, save for the previously mentioned trees around the buildings and some of the restoration plantings. Several of the major species chosen by the landscape
architects were not native to the area, despite their claims. Live oaks figured prominently in their designs, but are native only to the southeastern coastal plain; none would be found growing wild within 200 miles of the park. Longleaf pines (*Pinus palustris*) are also not native, though they were not as important to the design. The loblolly and Virginia pines have done very well, however; they are native to the area. As mentioned previously, the reforestation plantings have not been maintained in the manner originally intended.

Overall, the vegetation onsite largely maintains its integrity from prehistoric times. Even though the site has been logged it was allowed to succeed naturally, leading to a return of native plant communities. Most of the non-native plant choices in the original design are no longer present, so these do not affect the integrity of the vegetation.

**Views**

Two significant views exist in the park: the view into the cave entrance and the view of out the cave. As very limited knowledge exists to the prehistoric makeup elsewhere in the park, these are the only two views that are known for certain to have existed during the period of significance. Both are still fairly intact. The removal of the interpretive exhibit from the cave vestibule and the return of the floor to soil has greatly improved the integrity of the view into the cave vestibule.

The main threat to the integrity of both views is the boardwalk. As discussed previously, the designers' intent was to intrude upon the scene as
little as possible. Building the original walk out of natural materials, they (mostly) achieved this goal. The blue plastic boardwalk currently present intrudes mightily on the scene, jumping out at the viewer in both directions.

Other views within the park are mostly constricted by the increased growth in vegetation. When the site was still being farmed by Oscar Ridley, the views across the cove were expansive. Now, with the increased growth of vegetation around the park, these views are limited. Vegetation along Dry Creek serves to isolate the development area, cutting off the viewer from the surrounding cove. These views are still present on the entrance road before crossing Dry Creek, though only because most of the original plantings are no longer present. The heavily-wooded nature of the slopes prevent hikers from seeing any long-range views of the cove until they reach the upper Woods road, and even then they are heavily filtered by vegetation. In spring and summer, these views would be nonexistent without clearing. None of these views contribute to the significance to the park, however.

**Evaluation of Integrity**

Possessing integrity is a phrase referencing a landscape’s ability to convey its historical significance through existing landscape features and characteristics. The National Register defines integrity by combining seven qualities: location, design, setting, materials, workmanship, feeling, and association. Due to the ever-changing nature of landscapes, this assessment
addresses the features of Russell Cave National Monument in an overall context and evaluates the conveyance of integrity through each quality.

**Location**

Russell Cave has excellent integrity of location. All of the features of the park significant to the prehistoric period are present and in good condition. The permanence of these features bodes well for their continuing integrity. The archeological sites that are not significant natural features are well-preserved in situ.

**Design**

The overall integrity of the original, prehistoric landscape is difficult to determine, as there has been no detected evidence of occupation anywhere other than the cave vestibule and several small rockshelters in the upper elevations of the park. The floor of the cave vestibule has been restored to a pre-excavation condition, but with the popularity of the cave to residents and visitors before park development, it is difficult to know what the exact condition was in prehistoric times. The only significant manmade structure outside the cave, the burial mound, is well-preserved despite its partial excavation. From what is known, the integrity of the natural features is good.

While not contributing to the significance of the park, knowing the intent of the original Park Service design is important for day-to-day management decisions. As laid out previously, this design has not maintained its integrity.
Setting

While it is hard to know what the conditions of the setting were in prehistoric times, the continuing rural nature of Doran Cove has meant the physical setting of the park has been decently preserved. No major development is threatening the park, though the possibility of nearby logging and mining is always a concern. Land uses around the park do threaten the health of Dry Creek, however, and therefore the health of the cave system. The conditions around the cave vestibule have good integrity, though the developed area of the park is not true to the period of significance.

Materials

Russell Cave has moderate integrity of materials. The cave vestibule is in good condition, as well as the archeological sites around the park. Backfilling of excavations within the vestibule help preserve the integrity of the sites despite the loss of original stratification. Erosion inside the cave is minor, but undercutting by the stream below is an ever-present threat. Erosion park-wide is not a major concern, though future problems exist on the Woods roads. Continued channelization and siltation of Dry Creek is also a concern. The choice of materials used in the construction of the cave-loop boardwalk hurts the integrity of the cave entrance area.
Workmanship

Workmanship overall on the contributing features is good. The restoration of the cave vestibule floor was well done, as well as stabilization work on the slope in front. Many of the archeological sites exist in inaccessible parts of the park, and are of little concern. Bolts placed in the roof of the cave to prevent rockfalls have so far succeeded and are minimally invasive to the experience of being inside the vestibule.

Feeling

The area immediately around the cave vestibule does a good job evoking the mystery of ancient life, with the design isolating the vestibule from the developed area of the park; the view of the cave entrance is the highlight of a visit. The park design overall does a good job of isolating itself from the surrounding land use in the cove, though increased effort in reforestation would help greatly in mimicking what was most likely the feel of the place in prehistoric times. The current landscape of maintained lawns, groves, and picnic areas give the park a feeling more akin to an interstate rest stop than a major archeological resource. The undeveloped areas of the park, while surely not containing the same level of wooded-ness as in prehistoric times, is much improved over its condition pre-development.
**Association**

The associative value of the park is hard to determine, being that it was most intensely occupied before tribe structures became dominant. The park continues a strong connection with these ancient Indians, however, as they are the major interpretive focus of the park staff.

**Summary**

On the whole, Russell Cave National Monument maintains the integrity of its period of significance. The extensive scope of time in which it was significant makes it difficult to determine to what extent, exactly, but overall the significant features have been maintained. The fact that most of the park's significance is derived from permanent landscape features greatly aids in its preservation. The site design, however, does not contribute to the significance of the park. This should not be perceived as a fault, but a great opportunity for improving the setting and feeling of the site, while giving visitors a more enveloping and involving experience.
The treatment recommendations for this report articulate a preservation strategy for long-term management of the cultural landscape based on research, inventory, and analysis. Alongside significance, existing conditions, and current use, the evolution of the landscape is considered in recommending an appropriate preservation approach. The report combines the site history and analysis of integrity with park input to outline appropriate treatment and a management philosophy.

Recommendations follow National Park Service policy, including the NPS Management Policies, the Director's Order No. 28: Cultural Resource Management Guidelines, and the Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes. These documents identify four types of treatment: preservation, rehabilitation, restoration, and reconstruction, each of which were discussed previously in this report.

Management Philosophy

At Russell Cave, long-term management of the cultural landscape should follow these guidelines for treatment, prioritizing the park’s significant
archeological sites. This management philosophy will guide recommendations for the significant features of the site, while also allowing for other park goals. Preserving the park's cultural landscape within the context of natural resources and visitor use will allow for more meaningful interpretation, greater public access and interest, and responsible resource stewardship.

The archeological features of Russell Cave are the most significant asset to the park, and the management of the park should be prioritized towards their preservation. Due to the unique nature of the these resources, this philosophy has a greater reach than in most other archeological sites. Because the features are part of a cave system, and because that cave system drains the entire valley in which the park is located, proper management extends far beyond the usual scope of protection and even beyond the physical boundaries of the park.

While the park cannot control every land use and management decision made outside its boundaries, it can take every precaution within its jurisdiction. The expanse and interconnectedness of the cave system, as well as the porosity of the karst limestone under foot, should mean every management decision is made in light of how it might affect the cave system.

**Treatment**

While the management philosophy provides a vision for the overall landscape, the specific treatment options that follow outline guides for the preservation or rehabilitation of individual features. The options consider visitor safety, resource stewardship, environmental sustainability, contemporary
management issues, and changes to the existing landscape that affect the integrity of the park. They are presented with park-wide recommendations first, followed by individual feature recommendations.

**Park-wide**

*Issue 1.1:* Water flow in Dry Creek has increased in both amount and intensity over the last century, leading to increased channelization and siltation of the creek channel and large amounts of debris in the cave. This has been due to deleterious land uses in the wider context of Doran Cove. The quality of water flowing into the cave system is also a cause for concern, due to potentially negative effects on fragile cave ecosystems.

*Recommendation:* Coordination should be pursued between park staff and local, county, and state officials to development a management plan for the Dry Creek watershed. Anything the park tries to do within its own boundaries will be ineffective; this is a watershed-scale problem, and it needs a watershed-scale solution. This size project is necessary to adequately protect the Russell Cave system and its archeological and natural resources. The plan should address stormwater and waste management, chemical usage and disposal, land usage, and other activities and behaviors damaging to the cave system.

Constructed remedies should be investigated as well. Work upstream from the cave could have a tremendous effect on the amount and intensity of water flowing into the cave. Stream channel restoration, holding ponds, and other efforts to slow the water should be investigated. Inside the park, every
effort should be made to minimize hydrologic impact to the cave system. Allowing the areas intended for reforestation in the original design to naturally succeed instead of maintaining them as groves would have a positive effect on runoff, as well as decreasing the amount of lawn maintained by mowing. Harvesting water off the roofs of the buildings or building flow-thru planters and rain gardens would also have a positive effect, as well as educate visitors and locals on the importance of water quality in their local watersheds. Converting the drainage swales in the park to vegetated bioswales is another option to consider.

**Issue 1.2:** Invasive species are a threat to native vegetation and plant communities within the park. Because they were not present during the period of significance, they also impact the integrity of the resource.

**Recommendation:** Invasive species management has been ongoing for much of the park's history, and it is recommended this continue apace, if not increase. Coordination with neighboring property owners and county officials should also be pursued. Efforts undertaken solely by park management solely on park property will ultimately be fruitless, as invasive species do not respect property lines.

**Issue 1.3:** The National Register does not include the historic coal mining features located within the park, nor the rockshelters and other sites catalogued in Prentice's 2006 archeological investigation of the park.
Figure 69  Map of treatment recommendations.
**Recommendation:** The inventory should be expanded to include all historic features in the park, especially those with proven ties to prehistory. The coal mines and cabin sites must be further investigated, as the almost-total lack of documentation prevents their contribution to the park's significance from being assessed.

**Issue 1.4:** More detailed maps and geographic inventories of the park's resources and trails are needed.

**Recommendation:** The mapping at Russell Cave should be updated and expanded with a park-wide inventory of resources produced with GIS mapping. Plantings extant from the period of park development should be cataloged, as well as any replacement plantings and rehabilitation projects.

**Issue 1.5:** Hazard trees are in relative abundance along the trails and Woods roads.

**Recommendation:** Begin a program to inventory and remove hazard trees.

**Issue 1.6:** Much of the park is unused and uninterpreted. The trail system only covers the hillside behind the park development area.

**Recommendation:** Utilize the Woods roads to expand the park trail system. While these roads are open to the public to hike, they are not advertised, and the causal visitor would not be aware of them. Linking the existing ethnobotanical trail to the lower Woods road would encourage increased visitor use, as well as signage directing visitors to the trails around the
visitor center. Linking the ethnobotanical trail to the lower Woods road via the reservoir access road would also be beneficial. Access trails would need to be constructed from the lower Woods road to the upper, and could easily be designed to make a loop.

These trails could add to the interpretive curricula of the park, expanding the amount of information provided to the visitor about the natural systems and vegetation in the park, as well as how prehistoric residents of Russell Cave might have used the wider landscape. It would also give them publicized access to features of the park heretofore unrepresented, such as the rockshelters and other archeological sites.

**Issue 1.7:** Russell Point, a prominent landscape feature overlooking the park, is not owned by the park or protected from development.

**Recommendation:** The park should reopen investigations into securing Russell Point from future development or logging. Whether by purchasing the land outright, negotiating a scenic easement, or securing development rights, protecting Russell Point is important to maintaining the integrity of the park.

**Issue 1.8:** No major archeological studies by researchers not employed by the National Park Service have been done since the National Geographic investigations in the late 1950s, despite requests and written proposals. The park has been largely mothballed, with much of the relics from Miller’s and Griffin’s investigations simply archived.
**Recommendation:** Russell Cave is a major archeological resource; indeed, it is why it is a national monument at all. To not allow additional study of the resource is to waste it, especially in light of the threat Dry Creek floodwaters present to the cave vestibule. Much research and study remains to be completed, and the park should be more open to allowing it. Requests and proposals should be fielded and evaluated, with satisfactory academic research as the product. Much of the monument's value is found in the information discovered in those now-60-year-old investigations, and new information is waiting to be unearthed.

**Individual**

**Issue 2.1:** In its current state the cave-loop trail negatively impacts the area around the cave entrance, specifically the views into and out of the cave. The choice of blue recycled plastic lumber causes the boardwalk to be highly visible to viewers, disrupting the purity of the view and diminishing its integrity.

**Recommendation:** The original design of the cave-loop trail called for natural materials to be used in its construction, in an effort to minimally intrude upon the views surrounding the cave. The trail mostly achieved this goal, save for the extensive use of wooden stairs and walkways to navigate the terrain. It is recommended other design options be pursued for the walk. One option could be to rebuild the walk to ADA standards in the manner it was originally constructed, with stone retaining walls, crushed limestone walking surface, and
aluminum railings. This and other options should be considered and studied for cost and feasibility.

**Issue 2.2:** The ethnobotanical trail is in a state of disrepair. The asphalt surface is uneven and covered in moss, creating a major slip hazard when wet.

**Recommendation:** One option would be to remove the asphalt trail surface and return it to dirt. While no trail can be totally free of slip hazards, this route would remove the increased chance introduced by the moss-covered asphalt. One consideration of this option would be whether or not enough foot traffic exists to keep the trail legible. This and other, possibly more drastic, options should be studied and considered. The stone retaining walls and culverts should be inspected and repaired as needed, as well as the wooden benches and bridges.

**Issue 2.3:** The Woods roads have not been regularly maintained since 1996, and are showing signs of potentially serious erosion of the roadbed due to clogged culverts and drains. A thick layer of leaf litter covers the roadbed as well.

**Recommendation:** The first priority for the management of these roads should be to reestablish positive drainage in the culverts and ditches. Erosion has already gouged significant gullies in the roadbed, and further negligence could lead to much more expensive restoration costs in the future. These roads are necessary to access the upper reaches of the park, and the loss of them
could mean the abuse of resources and poaching if park staff is unable to patrol the area.

**Issue 2.4:** The Upper Woods road is only accessible from private property.

*Recommendation:* While not a major concern, the lack of access within park boundaries presents a significant obstacle to the adequate patrolling of the area. Options for connecting the upper road to the lower road within park boundaries should be studied and considered.

**Issue 2.5:** The landscape around the developed area of the park is not representative of the period of significance and has a negative effect on the integrity of the site.

*Recommendation:* While the area around the cave still has an appropriate setting, the entrance and developed area of the park are more reminiscent of an interstate rest stop than a major archeological resource. The vegetation along Dry Creek serves to close off views to the rest of the cove, but the visitor area in general should be much more heavily forested. The areas designated for reforestation in the original designs have not been allowed to naturally succeed into native forest; this process should be allowed to proceed. Maintained lawn area in general should be minimized, and further reforestation should be pursued in these areas. In addition to aligning the look and feel of the park with its period of significance, maintenance costs would be much reduced.
CHAPTER VII
CONCLUSIONS

The National Park Service has been developing the Cultural Landscape Report standards over a long period of time, and they have been used on many landscapes within and outside the park system. During this time, they have progressed into a specific methodology for researching and recording a landscape’s history and existing conditions. This data is then analyzed and evaluated with standards and terminology developed by the National Register of Historic Places to determine both the time periods in which the landscape is significant and to what extent the site maintains its integrity from those time periods. The ultimate result is treatment recommendations that suggest remedies to the issues discovered in the analysis and evaluation process.

Russell Cave National Monument has not, to date, had such a rigorous study of its significance and integrity completed. This thesis serves to fill that gap, providing the most complete and thorough review of the landscape’s history yet written. A review of 10,000 years of history on and around the site was completed, and the analysis confirmed the period of significance remains from 10,000 BC to AD 1650, as previously stated in its original 1966 National Register application. The mining activity that took place on site might be of
some significance to the region, but it is by no means unique to the site, and a lack of documentation prevents the operations and associated dwellings from adding to the period of significance to the park. A lack of association with and effect on the significant features of the landscape contributes to this as well.

The park design, though associated with Mission 66, is currently not significant, and, as shown in the analysis presented herein, negatively impacts the historic integrity of the landscape. Treatment recommendations for this and other issues were presented that, in the opinion of the author, will aid in a restoration of integrity to the landscape of Russell Cave.

As with most other forms of research, the product is only as good as the quality of what went into it. The CLR methodology is very solid, and has served the National Park Service well in the time it has been used. Russell Cave is an interesting case, however, and the lack of specific information about the landscape in the period of significance impacts the reliability of a study such as this. No plans exist from the prehistoric occupiers; no maps of their paths, drawings of their favorite hunting spots, or garden notes from their plantings. This presents a major hurdle in accurately reconstructing a picture of what the site was like then, and the researcher can only investigate broadly and present an educated and informed discussion on what might have been.

That being said, additional information pertaining to the landscape during the period of significance remains to be uncovered. A park-wide palynological study could greatly improve knowledge about the vegetation of the park in
prehistoric times; specifically, investigations into the hillside ephemeral pools or the channel of Dry Creek could uncover much more specific information on plant communities in and around the park. A more rigorous paleoecological study based upon fossils already uncovered could also yield important information about the site. The park has been rather reluctant in the past to allow additional archeological study, especially by non-NPS researchers from universities and archeological societies, and this should change. Russell Cave is a valuable resource, and to not study it is to waste it.

The only basis for adding periods of significance to the park would be additional information about and study of the mining and associated lodging activities within the park. Though not unique to the park, that period of history was significant to the region, and could conceivably be used to expand the interpretive program of the monument. This addition could potentially muddle the mission of the park, however, and would have to be studied for its potential benefits or drawbacks.


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