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I am submitting herewith a dissertation written by Donald Edward Davis entitled "Where There Be Mountains: Environmental and Cultural Change in the Appalachian South, 1500-1800." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Sociology.

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WHERE THERE BE MOUNTAINS: ENVIRONMENTAL AND CULTURAL
CHANGE IN THE APPALACHIAN SOUTH, 1500-1800

A Dissertation
Presented for the
Doctorate of Philosophy
Degree
The University of Tennessee, Knoxville

Donald Edward Davis

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DEDICATION

To Margaret, my love and my life.

ABSTRACT

"Where There Be Mountains" is an ethnohistorical study of environmental and cultural change in the Appalachian South. Utilizing a large body of primary and secondary sources, and drawing on the methodology of several disciplines, the author documents the evolution of subsistence techniques, land-use patterns, and ecological cultural practices in the southern mountains from 1500 A.D. to 1800 A.D.. One of the main goals of the study was to demonstrate the environment's influence on the formation and development of Mississippian, Cherokee, and early European culture.

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A whole history remains to be written of spaces...

Michel Foucault

PROLOGUE

When I was four years old my parents left me alone in the backyard for a short time, and I somehow discovered a book of matches. Within minutes, I set fire to the adjoining field, and within an hour, three fire trucks of firemen and several bulldozer crews were attempting to put out the blaze. The year after the fire, hundreds of loblolly pines sprouted in the burned-over field, and as I grew older, those seedling pines matured into a small woods. By the time I entered college, the trees and fields surrounding my rural childhood home were giving way to industrial development, strip malls and subdivisions.

In trying to understand the environmental change going on around me, I embarked on an intellectual journey that continues to this day. During summer vacations and Christmas holidays, I worked with Jeremy Rifkin at The Foundation on Economic Trends in Washington, D.C. There, I became part of the movement to preserve genetic diversity and did research that ultimately led to the publication of Biosphere Politics, a book about humanity's changing relationship to nature.¹ I also became politically active, joining a widely recognized grassroots environmental organization known as Save Our Cumberland Mountains.

¹New York, NY: Crown, 1991.

In 1985, soon after starting work with the Foundation on Economic Trends, I enrolled in a master's program at Goddard College in Plainfield, Vermont. At Goddard I studied with Murray Bookchin and Dan Chodorkoff of the Institute for Social Ecology and gained great insight into the role that nature has played in the development of western thought and civilization. The major outcome of the Goddard degree was my first book, Ecophilosophy: A Field Guide to the Literature, an annotated bibliography surveying major trends in contemporary environmental thought.²

In the fall of 1988, I entered the doctoral program in sociology at the University of Tennessee, with hopes of working on a dissertation that would look at the historical development of human-environmental relationships in the region of my birthplace, the southern Appalachians. Under the guidance of Donald Clelland, Samuel Wallace, John Gaventa, and Charles Cleland, I was allowed to explore the new field of environmental history while at the same time study related areas of academic inquiry. Charles Cleland kindly encouraged me to explore rural development issues and agricultural history. Donald Clelland introduced me to the world systems theory of Immanuel Wallerstein, while John Gaventa was helpful in directing me in the field of Appalachian Studies. Sam Wallace increased my knowledge of urban and social ecology and even found time to share with me his expertise in home

²San Pedro, CA: R & E Miles, 1989.

gardening.

Friends and fellow graduate students, Chris Baker and Jeffrey Stotik, provided stimulating discussions concerning the influence of external markets on Appalachian subsistence patterns in the eighteenth and nineteenth century. Ongoing conversations with frontier scholar Lucy Gump helped me to better understand the material culture of eighteenth century rural Appalachia. Collectively, their work has initiated a new and important debate among Appalachian Studies scholars concerning the role of surplus agricultural production in the pre- and post-Civil War economy.

My knowledge of the modern Appalachian environment derives from many sources, so I am indebted to a number of scholars. Perhaps the most heavily consulted texts were Ronald Eller's Miners, Millhands, and Mountaineers³ and Raitz and Ulack's Appalachia; A Regional Geography.⁴ I also owe special thanks to Margaret Lynn Brown for sharing her knowledge of mountain culture and settlement patterns in what is now the Great Smoky Mountains National Park.

As I immersed myself fully into doctoral work, I consciously made the decision to return to living a more rural lifestyle and began tending a large garden. After joining the Tennessee Valley Poultry Club, I started raising "minor" or rare breeds of chickens. Carl Diehl became a close friend and

³Knoxville, TN: University of Tennessee Press, 1982.

⁴Boulder, CO: Westview Press, 1984.

Mr. Scott, a fellow club member, kindly entrusted me with his Silver-Spangled Hamburg bantams. My collection of "heirloom" gardens seeds grew larger, mostly thanks to Jeff McCormick at the Southern Exposure Seed Exchange. Jeff, the founder of the Exchange, also deserves credit for his assistance in identifying crop varieties grown on the southern frontier.

Neighbor and friend Frank Capps shared numerous conversations about Depression-era farming in the Norris Basin and Powell River Valley of East Tennessee. Bill Hartsock, an accomplished hunter and fishermen, taught me the value of a good squirrel dog. Arthur Warren, in his 91st year, provided detailed knowledge about stock laws, apple trees, and whiskey distilling in the north Georgia mountains. The late Arthur Manning deserves thanks for teaching me "grappling," the lost art of catching fish with one's hands.

In 1992, with a deeper knowledge of Appalachian studies, and a more intimate knowledge of the land and people, I began the task of writing an environmental history of southern Appalachia. By that time I fully believed that environmental historians, by carefully documenting subtle shifts in land-use and subsistence patterns, were documenting the important relationship that occurs between human communities and the natural environments they inhabit. And this approach certainly matched what I had gained in first-hand experience. I concluded that the environmental historians' approach was sociological without being anthropocentric, yet at the same

time went beyond "environmental determinism" as a theoretical tool for explaining both cultural and environmental change. To my knowledge, no one had done an extensive environmental history of the southern Appalachian region, so the idea still seemed a challenging, timely, and intellectually important task.⁵

After getting the formal okay from faculty members, I immediately began refamiliarizing myself with William Cronon's Changes in the Land,⁶ Alfred Crosby's Ecological Imperialism,⁷ and Carolyn Merchant's Ecological Revolutions⁸. I assumed, of course, that these authors' basic analytical approaches could

⁵Timothy Silver has since published A New Face on the Countryside, a book that focuses on the ecological and cultural history of the forests of the southern Piedmont and Atlantic coastal regions of Georgia, South Carolina, North Carolina and Virginia. A preliminary attempt at an environmental history of southern Appalachia appears in the traveling museum exhibit "The Great Forests: An Appalachian Story," and the accompanying 30 page booklet by that same name (Boone, N.C.: Appalachian Consortium Press, 1985). The authors of the four essays in the Great Forests volume present a chronological outline of environmental change in the southern Appalachians from prehistory to the present, but their treatment of each period is brief and exploratory. Albert Cowdrey's earlier, and much more general survey, This Land, This South: An Environmental History, documents environmental changes in the larger southern landscape but lacks specific treatment of Appalachia. In contrast, Where There Be Mountains provides a more detailed account of environmental and cultural change in southern Appalachia, with particular historical emphasis on the evolution of subsistence techniques and strategies.

⁶New York, NY: Farrar, Straus & Giroux, 1983.

⁷New York, NY: Cambridge University Press, 1987.

⁸Chapel Hill, NC: University of North Carolina Press, 1989.

be applied to my own environmental-historical study of the Appalachian region. This was not the case. The first problem encountered was simply when to begin the study, or more precisely, at what historical period should I start my analysis of environmental and cultural change. Many environmental historians have begun by simply examining the massive influx of Anglo-American settlers upon the landscape, avoiding detailed discussions about the impact that Native Americans had on the environment prior to Anglo-European contact. In the case of southern Appalachia, I found this approach problematic since the region has been home to a number of native peoples, many of whom substantially altered the landscape prior to contact with the Anglo-Europeans. Equally important was the fact that the Mississippians, first encountered by the Spanish in the early 1500s, were virtually extinguished by the spread of disease, initiating a century of social and ecological change before the permanent settlers even arrived. A more systematic examination of Native American subsistence patterns prior to and after initial contact was essential to understanding the full extent of environmental and cultural change in the Appalachian south. By beginning the study at 1500 A.D., I could provide a more detailed discussion of the pre-contact environment of southern Appalachia as well as observe the social and environmental effects of Spanish presence in the region.

After fixing the starting point, I was saddled with

another important question--what are the boundaries of the southern Appalachian region? Since there is considerable historical debate and argument surrounding the definition of southern Appalachia, I felt I had to give some kind of explanation for drawing my own boundaries. After surveying the development of the area as both a physiographic and cultural region, chapter 1, "The Map is Not the Territory," summarizes my reasons for defining the area as I did. Chapter 2, "History, Culture, Nature" explains in greater detail my own approach to environmental history, particularly in comparison with the methodological tool-kits of other practitioners. It is also, in part, an explanation of my own decision to continue the study to the mid-nineteenth century.

Chapter 3, "Mississippia, 1500," focuses specifically on the cultural and ecological landscape of the native peoples living in the region during the pre-contact era. Here, as in later chapters, I use the terms "Mississippian," "Muskogean," or "Cherokee" to designate specific Indian tribes and "Native Americans" or "Indians" when discussing native peoples in general. This chapter provides sketches of Mississippian settlement patterns, their material culture, agriculture practices, hunting and gathering techniques, exchange networks, and nature cosmologies.

Chapter 4, "Apalachee," addresses the impacts of Spanish exploration of the region, the conquest and eventual demise of the Mississippian culture. Cultural exchanges are examined,

particularly those having significant impacts on the mountain landscape. Horses, cattle, peaches, and other agricultural crops were first brought to the southeast by the Spanish and these cultural artifacts were adopted by the Mississippians and their descendants. Also important is the extent to which the introduction of disease facilitated the demise and subsequent migration of the Mississippians to areas outside the region. The effect of Spanish conquest on location, population, and subsistence patterns of these people are critical to the analysis, providing a historical backdrop for the next stage of cultural and environmental development in the Appalachian south.

Chapter 5, "Kituah," examines the culture and environment of the Cherokee Indians as it evolved over the course of the eighteenth century. By the early 1700s, Cherokee culture was being influenced by the fur trade and fur traders. Using deerskins as currency, the Cherokee could purchase iron tools, cloth, and even apple trees. The trade in furs also hastened their use of guns and horses, which ultimately led to the scarcity of deer, elk, and beaver. Along with the trader came domestic livestock, and so as game became harder to locate, the raising of hogs, cattle, and horses became more appealing. The Europeans, in turn, borrowed many subsistence techniques from the Cherokee. Today, southern Appalachia abounds with Cherokee place names, and a large percentage of its "Anglo"

population claims Cherokee ancestry.⁹

Chapter 6, "Southwest Frontier," looks at the effects of the Anglo-American settlers on the Appalachian landscape. The Scotch-Irish, Germans, English and Swedes each contributed to the settling of the frontier, and each group left its mark on the mountain landscape. By 1780 pioneer settlements were dispersed throughout the region, very often far away from the largest streams and rivers. In many of these areas, virgin timber was cleared for homes, gardens, and pastures. Water-powered grain and saw mills were erected, changing streams flows and water levels. The largest mammals of the southern Appalachians--buffalo, elk, and deer--were hunted to the brink of extinction. Cattle and hogs were fed on the open range, clearing additional lands for human settlement. By 1810, the frontier had ended in many parts of southern Appalachia.

Chapter 7, "The Nature of Culture," is the dissertation's conclusion and begins by examining the effects of agricultural and industrial development in Appalachia shortly after 1800. For many commentators, industrialization is largely a post-Civil War phenomenon.¹⁰ However, industrial forces--e.g. iron

⁹Terry G. Jordan and Matti Kaups, Backwoods Frontier: An Ethnic and Ecological Interpretation (Baltimore, MD: John Hopkins University Press, 1989), 89, fig. 4.3 ("Percentage of Population Reporting Partial Indian Ancestry, 1980"). Jordan and Kaups' figures are taken from U.S. Census data.

¹⁰See, for example, Ronald D Eller, Miners, Millhands and Mountaineers: Industrialization of the Appalachian South, 1880-1930 (Chapel Hill, NC: University of North Carolina Press, 1982).

furnaces and salt works--played an important role in the region as early as 1800. Agriculture remained, nevertheless, the dominant mode of subsistence for most residents of Appalachia and important subregional differences emerged in crop selection, styles of livestock herding, and land-use patterns. A final concern is an examination of the role that nature played in shaping the culture and subsistence practices of the region given the evidence of three hundred years of human history. The environment of the southern Appalachians had a direct and important influence on all those who settled in the mountain region. The Mississippians, Cherokees, and European settlers, all owe a cultural debt to the mountain landscape.

To complete this project, I am indebted to the Interlibrary Loan Services staff at the University of Tennessee John C. Hodges Library. Their courteous and efficient service is directly reflected in the dissertation's bibliography. The Special Collections staff of the University of Tennessee McClung collection were equally helpful in granting my requests to peruse and photocopy portions of rare books and manuscripts. Kathleen Manscill, archivist, and Annette Evans, librarian, of the Great Smoky Mountains National Park, provided important materials concerning the history and settlement of the Blue Ridge. The staff of the Georgia State Historical Archives in Atlanta, Georgia, also showed patience and professionalism in granting my numerous

requests.

Finally, special gratitude must go to my family members and close friends who, over the years, have shared with me the spiritual and ecological virtues of rural living. My grandmother, Janie Ross Davis, and my now deceased Aunt Virginia Dailey remain inspirations to this day. These individuals, perhaps more than all the others, were my closest companions during the writing of this dissertation.

Chapter One

THE MAP IS NOT THE TERRITORY

Every environment encourages a special mythology.

--Frederick Turner, Beyond Geography

Cartographers manufacture power...a power embedded in the map text. We can talk about the power of the map just as we already talk about the power of the word or about the book as a force for change. In this sense maps have politics.

--J.B. Harley, "Deconstructing the Map"

The formation of the region commonly known as Appalachia has been a lengthy and gradual process, with the modern designation occurring late in North American geographic history.¹ The word itself is of Native American origin, named for an important group of Mississippian Indians, the Apalachee, who inhabited the gulf coast of Florida prior to first European contact. In 1528, when the conquistador Narvaez found gold among the Indians at the head of Tampa Bay and asked of its origins, he was told that it came from the Apalachee, a tribe that inhabited a northern province called

¹Richard Drake, "Appalachian America: The Emergence of a Concept, 1895-1964," Mountain Life and Work 40 (Spring 1965), 6; Karl Raitz and Richard Ulack, Appalachia, A Regional Geography (Boulder, CO: Westview Press, 1984), 11.

Apalachen on Florida's gulf coast.² According to most accounts, the Apalachee Indians lived in the forty square miles of the central Florida panhandle, from the west bank of the Aucilla River to the lands just west of the Ochlockonee River.

How the province known as Apalachen became associated with a mountain region four hundred miles to the north remains a perplexing historical question. In his essay "On the Naming of Appalachia," David Walls credits Jacque Le Moyne, an artist who traveled with a French Huguenot expedition to Florida in 1564, with designating the southern mountain region Appalachia or, in Le Moyne's words, the "Montes Apalatchi."³ Le Moyne's map "The Province of Florida in America," published in 1565, identifies the "Montes Apalatchi" as a source for gold, silver, and copper and clearly locates a village called Apalatchi near the headwaters of the Chattooga and Tugaloo Rivers in northeast Georgia (Fig. 1.1). Le Moyne describes the general area as a place of "great mountains...in which as the map shows, arise three great rivers."⁴

²John H. Hann, Apalachee: The Land Between the Rivers (Gainesville, FL: University of Florida Press, 1988), 5.

³David Walls, "On the Naming of Appalachia," in J.W. Williamson, ed., An Appalachian Symposium: Essays Written in Honor of Cratis D. Williams (Boone, NC: Appalachian State University Press, 1977), 58.

⁴Le Moyne, quoted in W.P. Cumming, R. A. Skelton, and D.B. Quinn, The Discovery Of North America, trans. G.B. Watts (New York, NY: American Heritage Press, 1971), 187.



Figure 1.1 Le Moyne, "The Province of Florida in America," 1565.

Source: William P. Cumming, The Southeast in Early Maps (Princeton, NJ: Princeton University Press, 1958), 124-125, Plate 15.

This single phrase, written in the map's legend, only suggests that the mountainous region to the west and north was known as the "Appalachian" mountains. Moreover, it is unlikely that the village was even inhabited by the Apalachee, since it took another century of Spanish colonization and tribal warfare to disperse them from their home on Florida's gulf coast.⁵ Because he himself never traveled north into the mountains, Le Moyne's "Montes Apalatchi" is, at best, a reference to the Blue Ridge mountains of northeast Georgia near an improbable Apalachee townsite, and not to the larger mountain chain that we today refer to as the Appalachians. The reference, nevertheless, is clearly the first referring to a group of mountains as Appalachian.

Unfortunately, Le Moyne's imprecise map continued to influence subsequent cartographers, including Gerard Mercator, whose 1569 map was the first to show the Appalachians "as a continuous mountain range stretching parallel to the coast in a southwest-northeasterly direction..." (Fig. 1.2).⁶ During the last quarter of the sixteenth century, the toponym Apalachee (as well as several derivations, e.g., Apalatchi) remained the most popularly used term for the general southeastern area north of Florida. The Apalachee or Appalachia designation, as historical geographer William

⁵Hann, Apalachee, pp. 160-180, 227-236.

⁶William P. Cumming, The Southeast in Early Maps (Princeton, NJ: Princeton University Press, 1958), 2.



Figure 1.2. Mercator's "Map of the World" showing the province "Apalchen", 1569.

Source: W.P. Cumming, R.A. Skelton, and D. B. Quinn, The Discovery of North America (New York: American Heritage Press, 1917), 93; David Walls, "On the Naming of Appalachia," in J.W. Williamson, ed., An Appalachian Symposium (Boone, NC: Appalachian State University Press, 1977, 62, Fig. 3. Original is housed in Rotterdam's, Prins Hendrik Maritiem Museum.

Cumming noted, "continued to be used by continental geographers until well into the eighteenth century, when it appears as a kind of generic term for the Indian country back of the foreign settlements."⁷

Sir William Talbot used the term often in his translation of John Lederer's travels of 1670, believing "the Apalatean Mountains--though like the prodigious Wall that divides China from Tartary, deny Virginia passage into the West Continent--stoop to your lordships dominions, and lay open a Prospect into unlimited empires."⁸ Henry Woodward, the English explorer who obtained from the Lords Proprietors a commission for inland exploration, wrote in 1685 of the expected benefits of having "the Inlands of our Province of Carolina well discovered...and a passage over the Apalateans Mountaines found out."⁹ John Senex's early 18th century map, "A New Map for the English Empire in America," also shows the "Apalitean Mountains" as an uninterrupted mountain range extending from Pennsylvania to north Florida.¹⁰

⁷William P. Cumming, The Southeast in Early Maps with an Annotated Check List of Printed and Manuscript Regional and Local Maps of Southeastern North America (Princeton, NJ: Princeton University Press, 1958), 10; David S. Walls, "On the Naming of Appalachia," 56-58; John H. Hann, Apalachee, 5.

⁸Quoted in Horace Kephart, "Report on Appalachian Mountain Nomenclature to North Carolina Park Commission," Great Smoky Mountains National Park Archives, Vertical File "Place Names," (January 38, 1931), 1.

⁹ Quoted in *ibid.*, 3.

¹⁰ Raitz and Ulack, Appalachia, A Regional Geography, 10.

A close study of the available maps and documents of the period reveals that the Appalachia toponym, from the 16th until the early 18th century, is used to designate the physiographic mountain region comprising the Eastern Continental Divide.¹¹ The interior mountains west of the Blue Ridge chain lay largely unexplored by Europeans until the early 18th century. The mountains of the Cumberland and Allegheny Plateaus, used almost exclusively by the Cherokee and Shawnee as seasonal hunting grounds, were not collectively named, nor do maps of the period show mountains in the general vicinity west of the Blue Ridge.

By the middle of the 18th century, the term Appalachia and its various derivations is used less frequently. When it does appear, as in James Adair's "Map of the American Indian Nations," published in London in 1775, it refers only to the southern half of the mountain chain (Fig. 1.3).¹² By the end of the century, the mountainous area originally called the Appalachian mountains is increasingly referred to as Alleghenia or the Allegheny mountains. It is also at this time

¹¹Walls, "On the Naming of Appalachia," 66; Raitz and Ulack, Appalachia, A Regional Geography, 11, my emphasis. The geographer Arnold Guyot is credited with formally establishing the scientific and popular usage for the mountain range in 1861. See Guyot, "On the Appalachian Mountain System," American Journal of Science and Arts 31 (1861), 157-187.

¹²James Adair, "A Map of the American Indians Adjoining to the Mississippi, West & East Florida, Georgia, S. & N. Carolina, Virginia, etc." In Samuel Cole Williams, ed., The History of the American Indians (London: 1775; reprint, Johnson City, TN: The Watauga Press, 1930), frontispiece. Hereafter cited as Adair, History of the Indians.

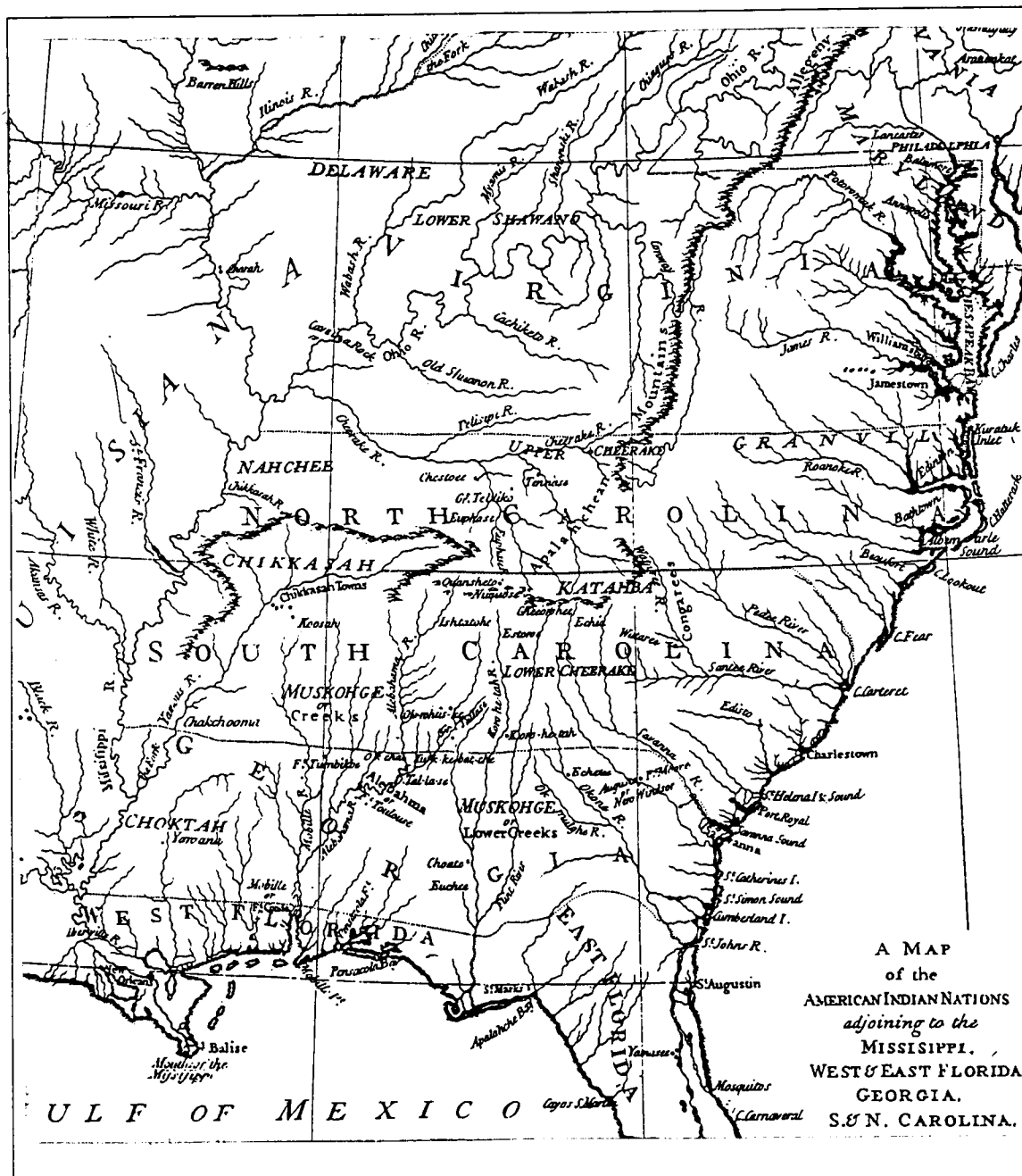


Figure 1.3. James Adair, "A Map of the American Indians Adjoining to the Mississippi, etc.,," 1775.

Source: Samuel Cole Williams, ed., The History of the Indians (London: 1775; reprint, Johnson City, TN: The Watauga Press, 1930), frontispiece.

that terms such as "Southwest Frontier" and "Trans-Allegheny" appear as definitions for the general region west of the Appalachian mountain chain.

The French and English explorers who began entering the region in the early 1700s in search of trading opportunities with the Cherokee were likely the first to substitute the term Allegheny for Appalachia. John Adair, who lived among the Cherokee during the 1730s, referred to "the Allegeny, or 'great blue ridge,' commonly called the Apalahche-mountains...above a hundred miles broad."¹³ William Bartram, in his travels through the Blue Ridge mountains of North Carolina, made reference to the "Cherokee or Alegany mountains."¹⁴ As each chronicler attempted to describe the imposing mountain terrain to the outside world, uncertainty arose about the correct name for the mountain region. The English traveler G.W. Featherstonhaugh, who explored the region in the early 1800s, appeared interested enough in discovering the proper origins of the name that he asked Lewis Ross, the brother of Cherokee chief John Ross, if the local Indians had ever used a specific name for the mountain region: "Being desirous of learning whether the Cherokees had any distinct name for the...Alleghany or Appalachian Mountains...[Ross] interrogated some very ancient Cherokee; but not one of them had ever heard

¹³Adair, History of the Indians, 239-240; Kephart, "Report on Appalchian Nomenclature to The North Carolina Park Commission," 1.

¹⁴Bartram, Travels of William Bartram, 60.

of their having a distinct name. The warpath which their ancestors used in crossing them to fight the Mangwee of the Five Nations [the Iroquois], had a particular name; but they knew of no other, neither did they know anything of the words Alleghany or Appalachy."¹⁵

By convention, Appalachia did not become the most frequently used term for designating the mountain area until the first decade of the twentieth century. The term Allegheny, "Southwest Frontier," or "trans-Allegheny" remained in common usage until after the Civil War. For almost the entire nineteenth century, a host of writers, including Andre Michaux (1805), Thaddeus Mason Harris (1802), Charles Lanham (1848), and James W. Taylor (1862) used to the term Allegheny when describing the region to interested outsiders. In his Excursion through the Slave States, published in 1844, Featherstonhaugh wrote that the mountain chain "which is called the Blue Ridge in the Northeastern Parts of Virginia, and which is the most advanced towards the Atlantic, is by many persons in this quarter called the Allegheny Ridge; and a ridge which runs behind, or to the west of this, is called the Blue Ridge."¹⁶ However one may feel about the descriptive validity of these accounts, they were the first to give shape and form to the southern mountain landscape. Prior to that

¹⁵Quoted in Kephart, "Report on Appalachian Nomenclature," 2.

¹⁶G.W. Featherstonhaugh, Excursion through the Slave States (London: Albermarle Street, 1844), I, 131.

time, the southern Appalachians were terra incognita to most Americans living on the eastern side of the eastern divide.

The individual most responsible for reintroducing the term Appalachia was the Swiss professor Arnold Henry Guyot, who explored the Southern mountains with the sole purpose of recording their altitudes. In a paper published in the American Journal of Science and Arts in 1861, Guyot established the first "scientific and popular usage for the entire mountain range."¹⁷ The paper, entitled "On the Appalachian Mountain System," divides the Appalachian chain into east and west divisions, separated by what Guyot calls the Great Appalachian Valley.¹⁸ Interestingly, on the legend of an accompanying map prepared earlier, he identifies the Appalachian range as the Allegheny Mountains, which shows Guyot's own ambivalence about which term to use (Fig. 1.4). Guyot's direct influence on popular opinion remains questionable since the term Appalachia for the mountain region was not rapidly readopted by the American populace. Traveling through the mountains in 1867, a young John Muir does not use the term Appalachia in his short but descriptive account of the region but refers instead to the Allegheny mountains of Tennessee and north Georgia.¹⁹ In 1883, Wilbur Zeigler, the

¹⁷Walls, "On the Naming of Appalachia," p. 66.

¹⁸Arnold Guyot, "On the Appalachian Mountain System," American Journal of Science and Arts 31 (1861), 157-187.

¹⁹John Muir, A Thousand-Mile Walk to the Gulf (Boston, MA: Houghton Mifflin Company, 1916) 17-46.

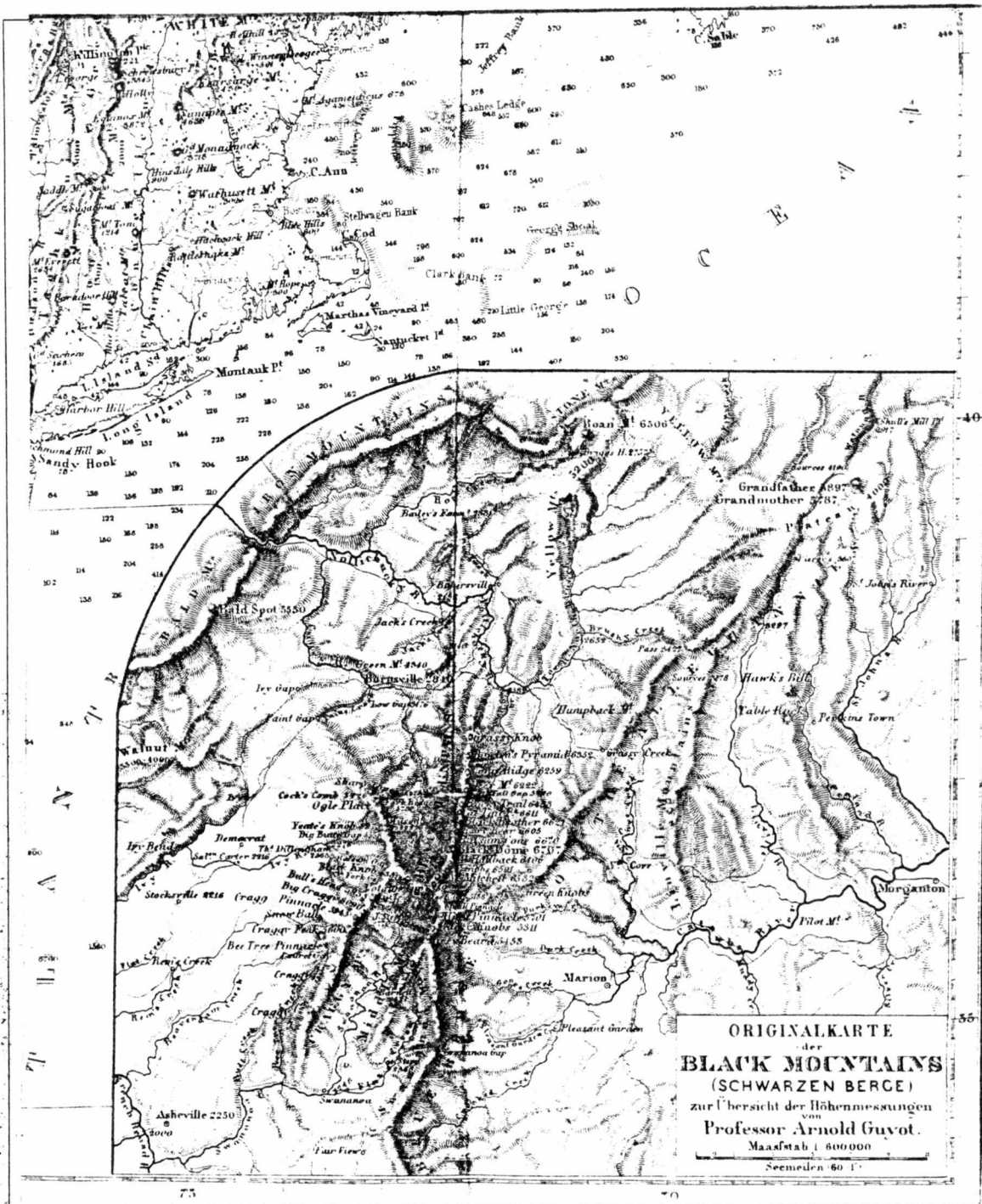


Figure 1.4. Arnold Guyot, Legend: "Black Mountains," 1861, showing "The Blue Ridge of the Alleghenies."

Source: Arnold Guyot, "'On the Appalachian Mountain System,'" American Journal of Science and Arts 31 (March 1861).

author of one of the earliest historical accounts of the western North Carolina mountains, identifies the area as "the Heart of the Alleghenies."²⁰ Likewise, the outdoor writer Horace Kephart claims that as late as 1900 the mountaineers of North Carolina used the term "the Alleghenies" to identify their collective mountain system.²¹

The return of Appalachia as the principle geographic term for the entire mountain region was linked to its persistent and continued use by physical geographers, who began using the term Allegheny to designate only smaller subregions within the northern half of the mountain range. In 1895 John Wesley Powell enlarged the boundaries of the Appalachian mountain region to include the Cumberland and Allegheny Plateau provinces to the west.²² For geographer Powell, Appalachia was a much larger physiographic region: it should include the towering mountain slopes of the Blue Ridge mountains, the narrow hollows and steep knobs of eastern Kentucky, the high mountain plateaus of east-central Tennessee, and the fertile river bottoms of the Tennessee Valley. Powell's specific use of Allegheny to designate the Plateau regions of Kentucky and Tennessee suggests that he still thought the term important

²⁰Raleigh, NC: A. Williams & Company, 1883.

²¹Horace Kephart, Our Southern Highlanders (Knoxville, TN: University of Tennessee Press, 1913), 26.

²²John Wesley Powell, Physiographic Regions of the United States, National Geographic Monographs, I, No. 3, May 1885 (New York: American Book Company, 1895).

but no longer favored it for defining the larger Appalachian region. In 1938 geographer Nevin M. Fenneman retained Powell's distinction between the high Appalachian peaks of the Blue Ridge and the hills and ridges of the Allegheny plateaus but divided the Allegheny province in half, into the Cumberland Plateau of Tennessee and Alabama and the Allegheny plateaus of Kentucky, West Virginia, and western Pennsylvania.²³ This convention remains in common usage today, although the Cumberland Plateau is more popularly conceived as the area comprising eastern Kentucky, central and east Tennessee, and extreme southwest West Virginia.²⁴

Despite Arnold Guyot's early influence, geographers of the region still have disagreements about what is or isn't the Appalachian mountain region. Rather than simplifying matters, improved mapping techniques and standardized geographic nomenclature have only obscured identification of the region. As Michel Foucault reminds us in Power/Knowledge, cartography is an arbitrary and subjective undertaking, and geographers are always influenced by the political and cultural prejudices

²³Fenneman, Physiography of the Eastern United States (New York: McGraw Hill, 1938).

²⁴Raitz and Ulack, Appalachia: A Regional Geography, 39-51. Harry Caudill, in his popular and influential Night Comes to the Cumberlands, depicts eastern Kentucky as the most representative area of the Cumberland Plateau region. Caudill's claim, which may be regarded as a power play for recognition of the social problems of his own region, has not been as widely accepted in the field of Appalachian studies. Caudill, Night Comes to the Cumberlands (New York: Little, Brown, & Company, 1962), 11-31, passim.

of their day.²⁵ After being discovered by sociologists, local color writers, and Christian missionaries in the 1880s, Appalachia soon became regarded as "a strange land inhabited by a peculiar people."²⁶ Writing in the American Journal of Sociology in 1898, University of Chicago sociologist George Vincent unapologetically referred to the mountain area as "a retarded frontier" and asked his students to "leave their books" in order to "deal firsthand" with a region arrested in what he called "a relatively early state of evolution."²⁷

The romantic and colorful accounts of the local color writers, published in national publications such as Harpers Magazine and the Atlantic Monthly, consistently portrayed the residents of the mountains as independent, if not stubborn,

²⁵Michel Foucault, Power/Knowledge: Selected Interviews and Other Writings, 1972-1977 (New York: Pantheon, 1980), 67-77. See also J.B. Harley, "Deconstructing the Map," Cartographica 26 (1989), 12-15.

²⁶Henry Shapiro, "America and the Idea of America: The Problem of the Persisting Frontier," in J.W. Williamson, ed., An Appalachian Symposium, 43. For a fuller discussion American perceptions of the mountain region see also Henry Shapiro, "Strange Land and Peculiar People: The Discovery of Appalachia, 1870-1920" (Ph.D. Diss., Rutgers University, 1966); and idem, Appalachia On Our Mind: The Southern Mountains and Mountaineers in the American Consciousness, 1870-1920 (Chapel Hill, NC: University of North Carolina Press, 1977).

²⁷George E. Vincent, "A Retarded Frontier," The American Journal of Sociology 4 (July 1889), 20; David Walls and Dwight Billings, "The Sociology of Southern Appalachia," Appalachian Journal 5 (Autumn 1977), 131.

preservers of American pioneer culture.²⁸ These accounts, along with those written by teachers and other missionaries traveling in the region at the time, gave the region its reputation as a place of extreme poverty, isolation, and social and cultural atavism. For those do-gooders who "discovered Appalachia" at the turn of the century, the mountain region was more than a physiographic area, it was also a social and cultural region where the primitive lifeways of pioneer ancestors were being preserved by a homogeneous population of self-sufficient farmers.

Although more than two hundred local color novels and stories were published about the region between 1875 and 1900, describing the people of the mountains "as quaint and isolated, living peculiar lives in the shadows of awe-inspiring peaks," the first time the Appalachians are designated a distinct social and cultural region came from William G. Frost, the former President of Berea College. In 1894, Frost identified "the Mountain Region of the South" as 194 counties in Maryland, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia and

²⁸In addition to Shapiro, see John Dwight Kern, Constance Fenimore Woolson, Literary Pioneer (Philadelphia, PA: University of Pennsylvania, 1934); Grant Knight, James Lane Allen and the Genteel Tradition (Chapel Hill, NC: University of North Carolina Press, 1935); Edd Winfield Parks, Charles Egbert Craddock (Mary Noilles Murfree) (Chapel Hill, NC: University of North Carolina Press, 1941); and Cecil D. Eby, Jr., "Porte Crayon": The Life of David Hunter Strother (Chapel Hill, NC: University of North Carolina Press, 1960).

Alabama.²⁹ In an influential Atlantic Monthly article published in March 1899, Frost defined the region as "the mountainous backyards of nine states," calling it, "in default of any other name...Appalachia America."³⁰ In this and later writings, Frost promoted the discovery of "a new pioneer region in the mountains of the central South." He went on to call for the formation of a social and political movement to improve the living conditions of mountain residents.

Horace Kephart, the popular author who is generally given credited for reintroducing the term Appalachia to a larger popular audience, described the region as a living museum of early American life. "In Far Appalachia," wrote Kephart in Our Southern Highlanders, a book first published in 1913, "it seemed that I might realize the past in the present, seeing with my own eyes what life must have been to my pioneer ancestors of a century or two ago."³¹ A detailed relief map, "The Southern Appalachian Region," was added to the 1922 edition of Our Southern Highlanders, as was the subtitle, "A Narrative of Adventure in the Southern Appalachians and a Study of Life among the Mountaineers."³² The map, which

²⁹David Walls, "On the Naming of Appalachia," 67.

³⁰William Frost, "Our Contemporary Ancestors in the Southern Mountains," Atlantic Monthly (March 1899), 311; Walls, "On the Naming of Appalachia," 66.

³¹Kephart, Our Southern Highlanders, 29-30.

³²For additional comments on the 1922 edition, see George Ellison's excellent introduction to the 1976 reprint of Our Southern Highlanders (Knoxville, TN: The University of

illustrates both the distribution and elevation of the mountains, broadly defined the region as the mountainous area extending from western Pennsylvania southward to north Georgia and westward to the Cumberland-Allegheny Plateau regions of Tennessee and Kentucky (Fig. 1.5). Although he was obviously influenced by Frost's earlier physical description of the region, Kephart was inconstant in his use of Appalachia, using it interchangeably with the terms Southern Mountains and Southern Highlands. Nevertheless, Kephart was certain that those living in the region represented a single type or class of individual. After doing a detailed analysis of Federal census reports of hundreds of mountain counties, Kephart was convinced that "the typical southern highlanders were not the relatively few townsmen and prosperous valley farmers of the Appalachian region, but the great multitude of little farmers living up the branches and on the steep hillsides, back from the main highways, and generally far from the railroads." Kephart concluded that he found "the southern mountaineers everywhere one people."³³

The first widely sanctioned definition of Appalachia came in the early 1920s, in John C. Campbell's highly influential book The Southern Highlander and His Homeland. Campbell defined the region as a nine-state, 254-county area,

Tennessee Press, 1976), xl.

³³Horace Kephart, "Horace Kephart By Himself," North Carolina Library Bulletin 5 (June 1922), 52.

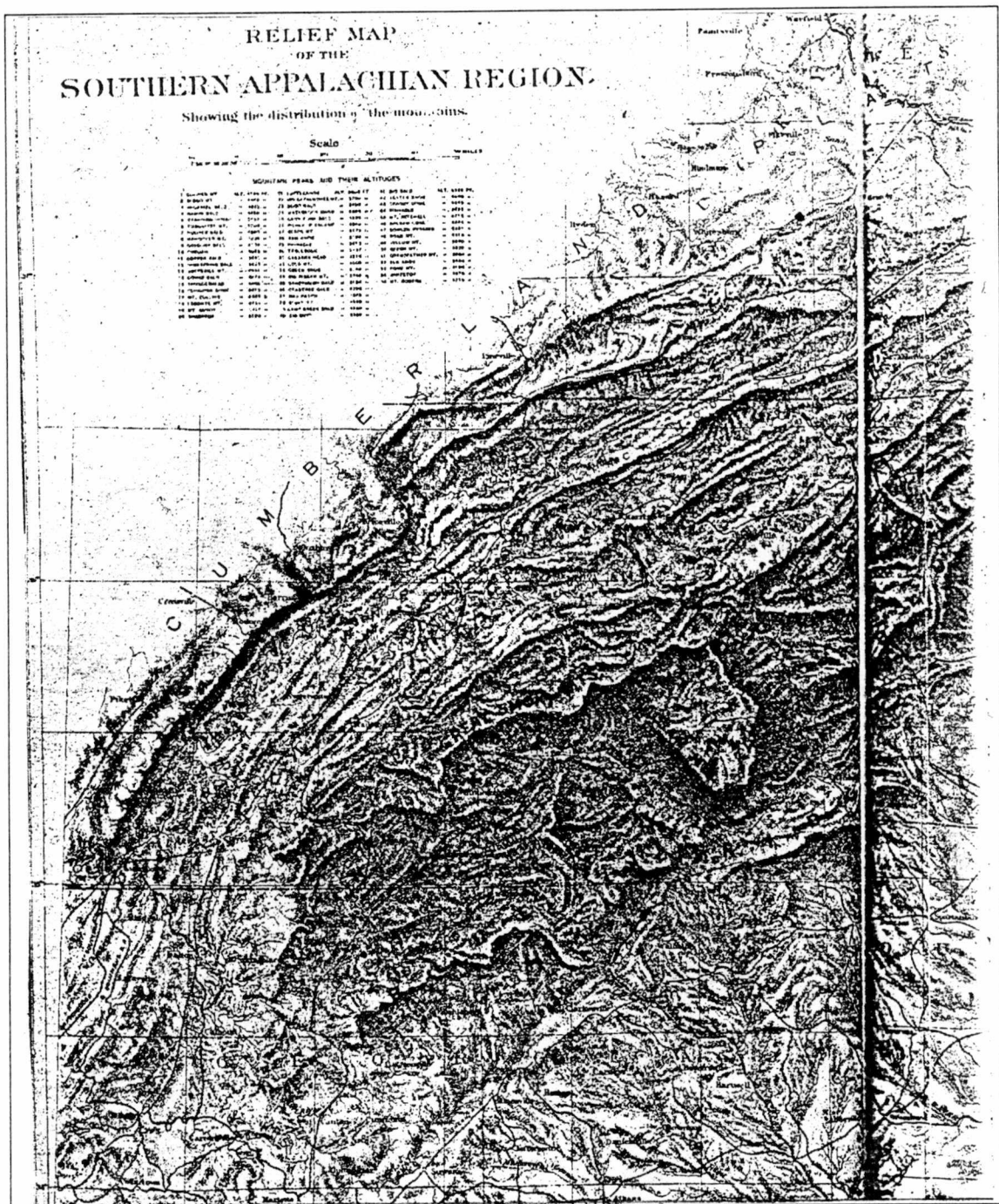


Figure 1.5. Horace Kephart, "Relief Map of the Southern Appalachian Region," 1922.

Source: Horace Kephart, "Our Southern Highlanders: A Narrative of Adventure in the Southern Appalachians and a Study of Life Among the Mountaineers," (New York: MacMillan, 1922; reprint, Knoxville, TN: University of Tennessee Press, 1980), frontispiece to revised 1922 edition.

comprising the peripheral corners of Alabama, Georgia, Tennessee, South Carolina, North Carolina, Virginia, Kentucky, West Virginia, and Maryland (Fig. 1.6).³⁴ Campbell did not use the term Appalachia, however, preferring instead the designation "Southern Highlands." Though he recognized the use of the phrase the Southern Appalachians, Campbell thought that it restricted the region to the Blue Ridge or Appalachian mountain system "lying south of the New River Divide in southern Virginia."³⁵ He also thought it necessary to use historic and political criteria as well as physiographic boundaries in defining the region. According to Campbell, "the lines by which the Southern Highlands are defined are not chosen arbitrarily. They correspond for the most part with boundaries of natural geographic divisions; on the east with the face of the Blue Ridge, which defines the western margin of the Piedmont Plateau, on the south with the upper limits of the Coastal Plain, and on the west with the western escarpment of the Allegheny-Cumberland Plateau. The northern line, in part purely political [the Mason-Dixon Line], was in its beginning a surveyor's line to determine a boundary dispute of long standing, growing out of claims of [William] Penn and Lord Baltimore."³⁶

³⁴John Campbell, The Southern Highlander and His Homeland. (Lexington, KY: University of Kentucky Press, 1969).

³⁵Campbell, The Southern Highlander and His Homeland, 12.

³⁶Campbell, Southern Highlander and His Homeland, 11-12.



Fig. 1.6. John C. Campbell, "The Southern Highland Region," 1921.

Source: John C. Campbell, The Southern Highlander and His Homeland (New York: Russell Sage Foundation; reprint, Lexington, KY: University of Kentucky Press, 1969), xxxiii-xxxiv.

Campbell's definition of the region became one of the most widely accepted of the twentieth century and is still used by scholars today.³⁷ His enlarged region included the three major topographic areas that comprise the Appalachian landscape (Mountain or Blue Ridge, Ridge and Valley, and Plateau) south of the Mason-Dixon line. The boundaries of Campbell's Appalachia also correspond closely to nearly every geographic definition of the region formulated since the 1920s.

The most serious challenge to Campbell's regional delineation did not surface until the early 1960s, when sociologist Thomas R. Ford reported on the social, economic, political, and cultural characteristics of the region in his The Southern Appalachian Region: A Survey. Ford reduced the size of Campbell's highland region considerably, into what sociologist Bruce Ergood aptly calls "a heartland of Appalachia."³⁸ Although Ford's region is smaller, his boundaries differ only slightly from Campbell's: he simply moved the eastern and western boundaries inward by one row of counties and shortened the southern end of the region by eliminating a dozen counties in northwest Alabama. Ford's

³⁷See, for example, Ronald D Eller, Miners, Millhands, and Mountaineers: Industrialization of the Appalachian South, 1880-1930 (Knoxville, TN: University of Tennessee Press, 1982), 5.

³⁸Bruce Ergood, "Toward a Definition of Appalachia," in Bruce Ergood and Bruce E. Kuhre, eds., Appalachia: Social Context Past and Present (Dubuque, IA: Kendall-Hunt Publishing Co., 1976), 34.

Appalachia is one of the smallest regional delimitations to date, as it includes 190 counties in seven states and encompasses only 80,000 square miles

The most notable challenge to Campbell's and Ford's Appalachia came in 1965 from the Appalachian Regional Commission (ARC) which drew regional boundaries based on both natural features and the socioeconomic characteristics found in the region. The Appalachia Regional Commission, created by the Johnson Administration's War on Poverty to promote economic development in the area, extended the region's boundaries well beyond those of Campbell's and created a much larger Appalachia with three smaller subregions--Northern, Central, and Southern Appalachia (Fig. 1.7). The ARC definition included 397 counties in portions of 13 states extending from northwest Mississippi to southeastern New York. As a widely publicized aspect to the War on Poverty, the ARC clearly brought public awareness to the region that did not exist prior to the 1960s.

Today, ARC's definition of Appalachia is often held by those Americans living outside the region, although in the last few years the national media has focused more attention on the coalfields of Central Appalachia in the eastern Kentucky foothills when doing stories about the social and economic ills of the region.³⁹ Despite the support given this

³⁹See, for example, Peter Applebome, "In Appalachia, Vast Change But New Troubles," New York Times (April 14) 1990: A1; Laurent Belsie, "Strike has Brought Coal Community Closer,"

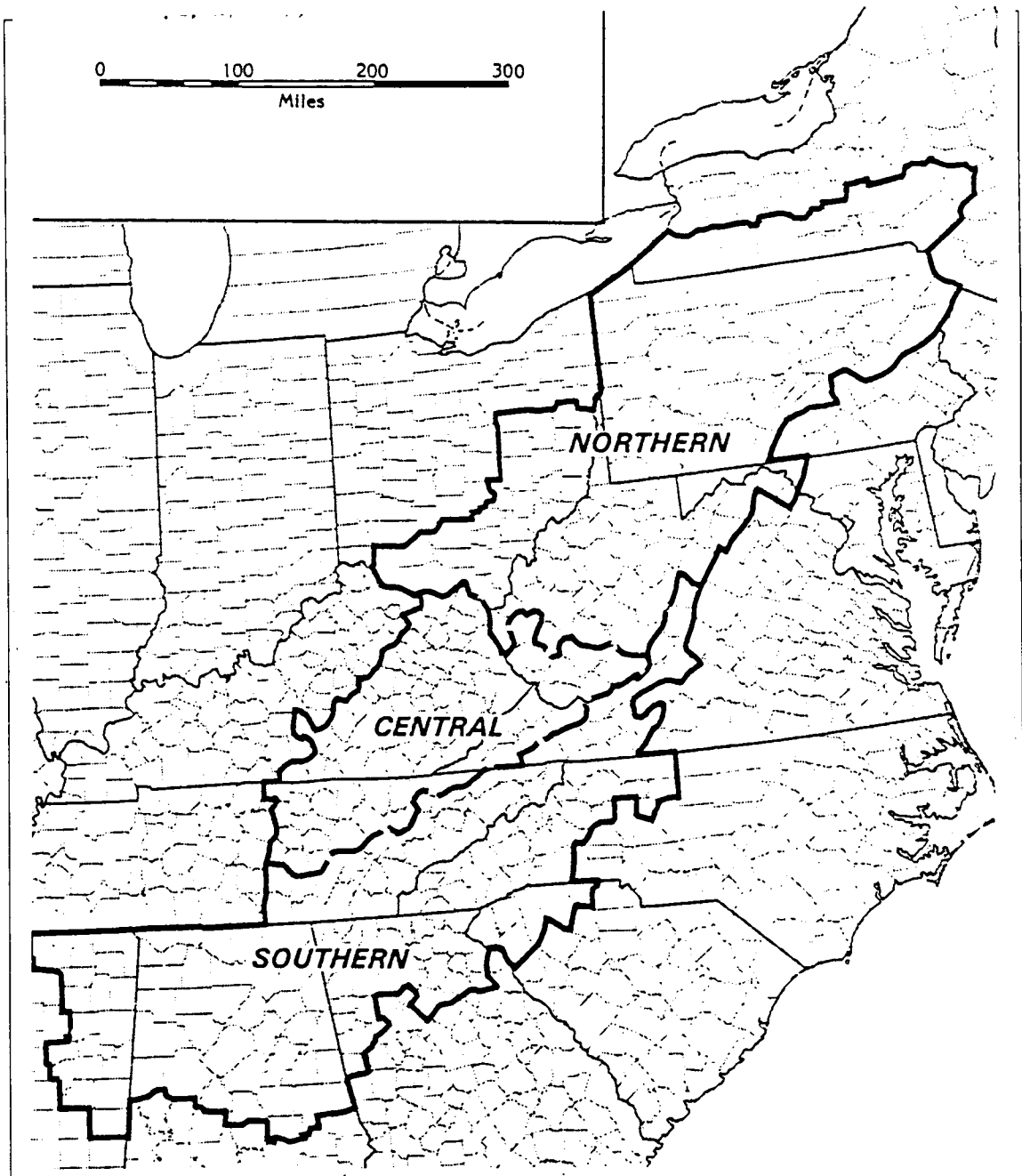


Figure 1.7. The A.R.C. Region.

Sources: Appalachian Regional Commission, Appalachia (August, 1968), 1; Karl B. Raitz and Richard Ulack, Appalachia; A Regional Geography (Boulder, CO: Westview Press, 1984), 25, fig. 1.4.

The Christian Science Monitor. (March 6) 1990: A7; Alice Cornett, "Will Appalachian Spring Go Down the Sewer?" The New York Times (September 26) 1988: A27.

view by the national media, Karl Raitz and Richard Ulack argue that the ARC definition will most likely remain, at least until the end of this century, the regional delineation of those cognizant "that an Appalachian region exists."⁴⁰ Raitz and Ulack's own definition extends the region well beyond the boundaries proposed by Fennemen and the ARC. Raitz and Ulack includes the Piedmont foothills of South Carolina, Georgia, and North Carolina.

Clearly the history of a geographic region must take into account the idea of that region as well as the motivations of those who have drawn and accepted the region's boundaries. As Allen Batteau has argued, Appalachia is largely a creature of the urban imagination, a mythical place where romantic wilderness and folk culture have remained suspended in the imagination of the American public.⁴¹ His observation is certainly supported by the fact that "Appalachia" or "Appalachian" has never become a strong symbol of self-identification for the majority of the region's people.⁴² If Appalachia is purely a subjective, externally imposed social construction, as Batteau and others have argued, how does one ultimately define the region?

The area I have selected for this study (Figure 1.8;

⁴⁰Raitz and Ulack, Appalachia: A Regional Geography, 26, their emphasis.

⁴¹Allen Batteau, The Invention of Appalachia (Tucson, AZ: The University of Arizona Press, 1990), 1, passim.

⁴²Walls, "The Naming of Appalachia," 71.

Appendix A) encompasses the core of the southern Appalachians that all former definitions of the region share. It is made up of 154 counties located in eight states and corresponds closest to the definition proposed by Ford. It also closely resembles the southern Appalachian region defined in the National Forest Service study Mountaineers and Rangers.⁴³ Except for counties found in eastern Kentucky and West Virginia, the area is drained almost exclusively by the Tennessee River system, which helps to unify the region ecologically. This designation is also faithful to the mountain region John C. Campbell and geographers such as John Wesley Powell referred to as the Southern Appalachians, the mountainous area south of the New River divide in southwest Virginia. I have also aligned my boundaries with the core of "cognitive" Appalachia, meaning that residents living in the area would be more likely to refer to the region where they live using the term Appalachia.⁴⁴ Topographically, this Appalachia is comprised of three mountainous landscapes. In the east rises the Blue Ridge mountains, the highest in the eastern United States. To the west, is the Ridge and

⁴³National Forest Service, Mountaineers and Rangers: A History of Federal Forest Management in the Southern Appalachians (Washington, D.C.: United States Department of Agriculture, FS-380, 1983), xii.

⁴⁴Richard Ulack and Karl Raitz, "Perceptions of Appalachia," Environment and Behavior 14 (November 1982), 742, 743, 744; idem, "Appalachia: A Comparison of the Cognitive and Appalachia REgional Commission Regions," Southwestern Geographer 21 (May 1981), 45.

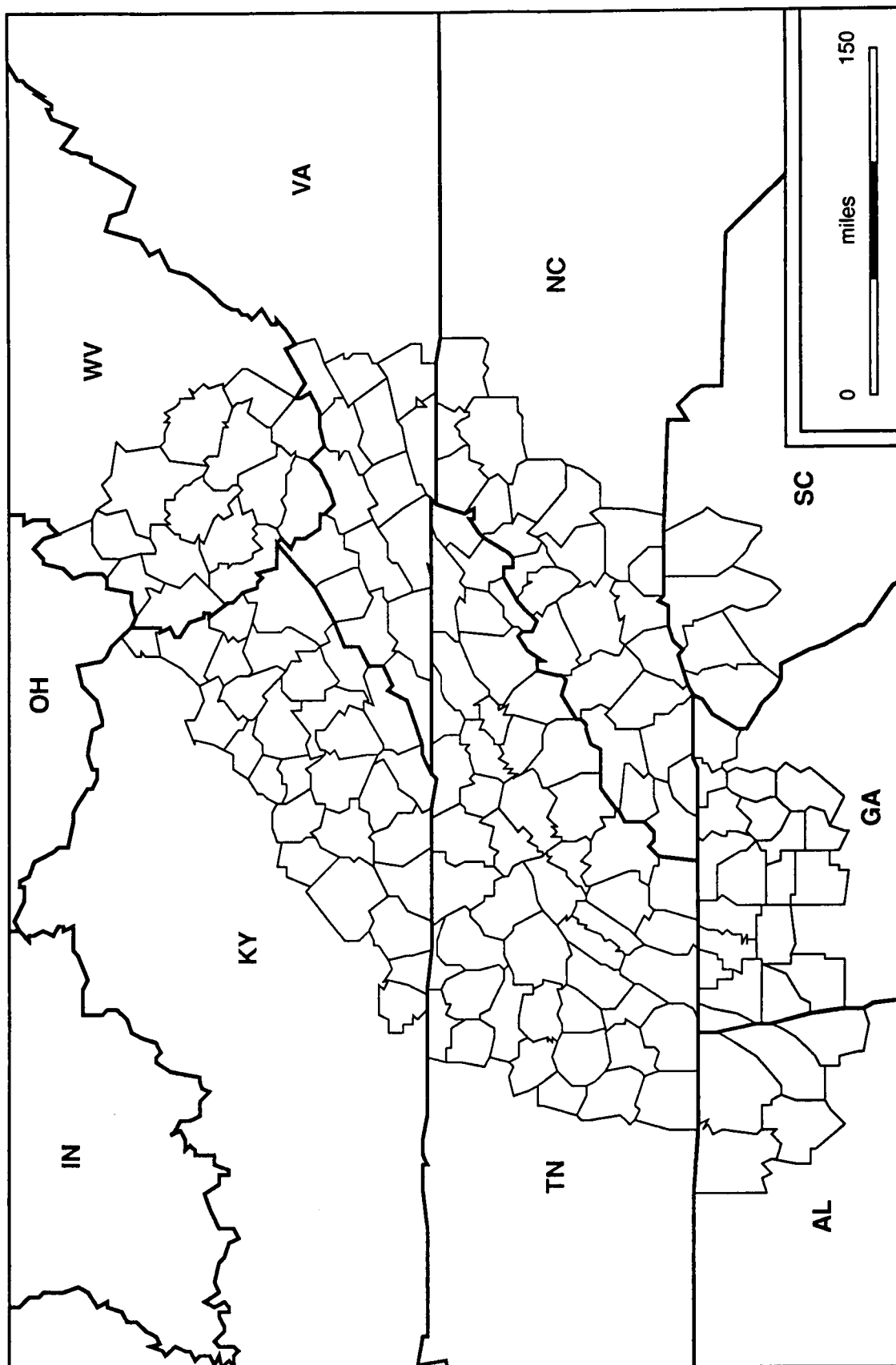


Figure 1.8. The Appalachian South, Where There Be Mountains study area.

Valley province, an area comprised largely of parallel ridges considerably lower than the lofty peaks of the Blue Ridge. Through the heart of this section flows the Tennessee River and its major tributaries. These rivers and their adjoining floodplains comprise the Great or Tennessee Valley, which divides the southern Appalachian region in half. Continuing westward is the **Cumberland Plateau**, a series of high mountain plateaus deeply dissected by numerous streams and rivers (fig. 1.9). These streams, which flow across the plateau in every cardinal direction, divide the mountain range into thousands of smaller plateaus or "knobs."⁴⁵

Blue Ridge

Of the three areas, the Blue Ridge mountains come first to mind when one thinks of the southern mountains. The southern section of this range begins just south of the headwaters of the Roanoke River near Roanoke, Virginia. At this point, the mountain chain begins to increase in width and rise considerably in elevation. Following the chain one hundred miles to the southwest near the Tennessee state line rises Mt. Rogers, elevation 5,719 ft, the highest point in

⁴⁵Karl Raitz and Richard Ulack, Appalachia, A Regional Geography: Land, People, and Development (Boulder, CO: Westview Press, 1984); 18, 50; Works Project Administration, Tennessee, A Guide to the State (New York, Hastings House, 1949), 507; Willard Rouse Jillison, "Geology of Eastern Kentucky Soils," Mountain Life and Work 4 (October 1928), 12.

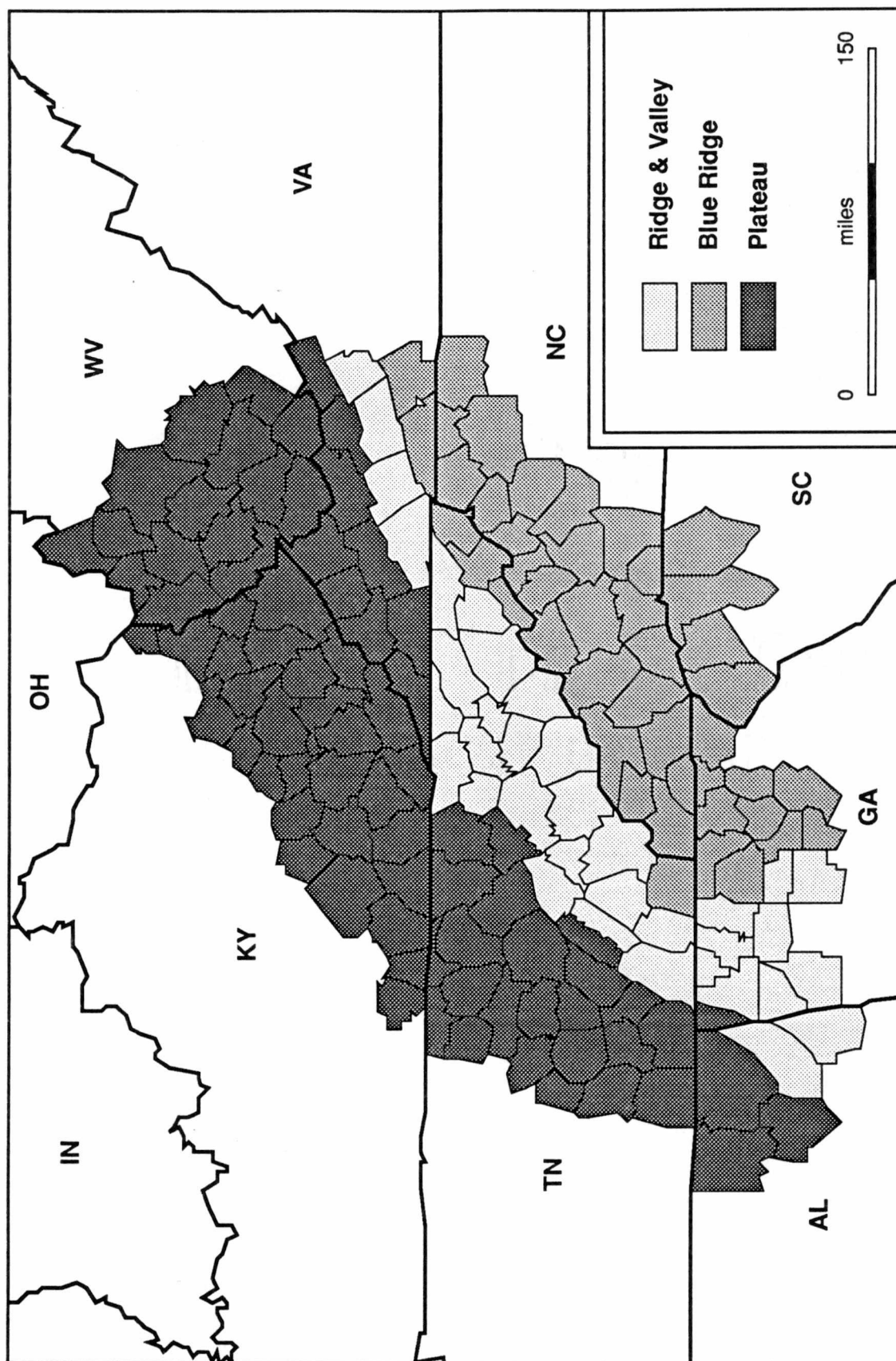


Figure 1.9. Physiographic subregions, the Appalachian South.

Virginia. The Blue Ridge mountains reach their highest elevation in western North Carolina near Asheville, North Carolina. Here Mt. Mitchell, the highest peak in the Blue Ridge and the highest in the eastern United States, rises to an altitude of 6,684 feet. Across the state line in the Great Smoky Mountains, is Clingmans Dome, elevation 6,642 feet, the second highest peak in the Blue Ridge and the highest peak in Tennessee. The southern boundary of the chain extends well into central north Georgia, near Gainesville. The highest peak in this extreme southern end is Brasstown Bald, the highest in Georgia, rising to an elevation of 4,768 feet.

The Blue Ridge province is indeed a land of high mountains. It has forty-six mountain peaks and forty-one miles of divide above the level of 6,000 feet and 288 mountain peaks and three hundred miles of divide above 5,000 feet.⁴⁶ Geologically, the Blue Ridge mountains are the oldest on the continent. The mountains were formed more than 200 million years ago, during what geologists call the Appalachian revolution, the result of the folding, faulting, and metamorphosis of Precambrian and Paleozoic rock beds.⁴⁷

⁴⁶Arthur Keith, "Topography and Geology of the Southern Appalachians," Mountain Life and Work 4 (October 1928), 22; John C. Campbell, The Southern Highlander & His Homeland, 13-14.

⁴⁷Arthur N. Strahler and Alan H. Strahler, Geography and Man's Environment (New York: John Wiley & Sons, 1977), 429-436; Raitz and Ulack, Appalachia, A Regional Geography, 40-41; Keith, "Topography and Geology," 26; George W. Fisher, et al.,

Because of this geological disturbance, the Pre-Cambrian sediments were not only thrust upward and outward but also transformed by the extreme heat and compression into crystalline rocks, including slate, quartz, garnet, feldspar and mica.⁴⁸ Older metamorphic rock was overthrust onto younger rock strata, and eventually the overlying rock eroded away, exposing the harder rock underneath. After millions of years, this erosion process created hundreds of flat, oval-shaped mountain valleys or "coves," such as Cades Cove in the Great Smoky Mountains National Park. These coves, roughly ten or twelve square miles in size and generally 1200-1800 feet above sea level, possess fertile soils that are well suited for agriculture.⁴⁹ The Blue Ridge province contains the highest mountains in the southern Appalachian region because it is largely underlain with these harder rock formations, making it able to withstand the effects of erosion and other geological

eds., Studies of Appalachian Geology: Central and Southern (New York: Interscience Publishers, 1970), 437-438.

⁴⁸Frederick A. Cook, Larry Brown, and Jack E. Oliver, "The Southern Appalachians and the Growth of Continents," Scientific American 243 (1980), 160-161; Philip B. King and Arthur Stupka, "The Great Smoky Mountains," Science Monthly 3 (1950), 31-43; Raitz and Ulack, Appalachia, A Regional Geography, 41; Keith, "Topography and Geology of the Southern Appalachians," 26.

⁴⁹C.H. Gordon, "Notes on the Geology of the Cove Areas of East Tennessee," Science 51 (May 1920), 492; Nevin M. Fenneman, Physiography of Eastern United States (New York: McGraw Hill, 1930), 175; Raitz and Ulack, Appalachia, A Regional Geography, 41; Durwood Dunn, Cades Cove: The Life and Death of a Southern Appalachian Community, 1818-1937 (Knoxville, TN: University of Tennessee Press, 1988), 10.

disturbances.

The Blue Ridge is comprised of two major soil types, inceptisols and ultisols. In general, ultisols are found only on the extreme eastern slopes of the Blue Ridge and are geologically speaking old soils, containing very little organic matter. Inceptisols, the younger of the two soils, contain moderate levels of plant nutrients and are found throughout the Blue Ridge mountains.⁵⁰ The most common inceptisols present in the Blue Ridge are in fact Dystrochrepts, an acidic, shallow soil group developed primarily on shale and sandstone beds. Alfisols, the southern Appalachian's best soil type for agriculture, are occasionally found on level floodplains near mountain streams or in mountain coves but are by far the rarest soils in the Blue Ridge province.

The climate of the Blue Ridge is significantly influenced by elevation, which averages 3,000 feet over the entire range. In the highest altitude areas, precipitation rises to 90 inches per year, with a substantial amount, an average of 12 inches, in the form of snow. On the leeward or eastern facing

⁵⁰All three major soil types of the Appalachian region are comprised of separate suborders. Because these and the other soil types of the region are the product of numerous factors influencing soil formation (e.g. geology, climate, topography, organisms present in the environment, and time) they may or may not be present throughout the region as pure types. They are, however, broken down into hundreds of series names on state and county level soil maps. In general, all soil types in the region can be classified as one of three major types.

slopes of the Blue Ridge rainfall sharply decreases, falling to an average of fifty inches as you leave the mountains. Temperatures also decrease with elevation. In the Great Smoky Mountains, for example, the decrease is about 2.3 degrees Fahrenheit per 1000 feet of elevation.⁵¹ The high altitudes also affect the length of the growing season. While the entire range, from north to south has an average growing season of 150 days, the number of frost-free days declines as you ascend upslope, to the mountain tops, where the growing season frequently falls below 120 days.⁵²

The large amounts of rainfall that the mountains receive annually is directly responsible for the many streams and rivers that drain the Blue Ridge. The backbone of the mountains is also the eastern Continental Divide, where the mountains are drained by both eastward and westward flowing streams. Eastern-flowing streams originating in the mountains and flowing to the Atlantic include the Roanoke and Dan in Virginia; the Yadkin, Catawba, and the Broad in North Carolina;

⁵¹Mount Guyot in the National Park is one of the coldest summits in the range with an average daily temperature of 42.6 degrees at 6,621 feet, compared with Mount LeConte, which is 42.8 degrees at 6,593 feet. Davis and Brown, Trail History Notebook (Gatlingurg, TN: Great Somky Mountains Natural Hsitory Association, 1992), 48; R. E. Shanks, "Climates of the Great Smoky Mountains," Ecology 35 (1954), 354-361; Raitz and Ulack, Appalachia, A Regional Geography, 56.

⁵²John L. Baldwin, Weather Atlas of the United States (Washington, D.C.: U.S. Department of Commerce, Environmental Science Services Administration, 1968), 31; Charles B. Hunt, The Natural Regions of the United States and Canada (San Francisco, CA: W.H. Freeman and Company, 1940), 297-299.

and the Oconee and Chattooga in north Georgia. Western flowing streams emptying into Gulf of Mexico include the New River, which originates in Ashe county, North Carolina; and the Holston, French Broad, Little Tennessee and Hiawassee Rivers in Tennessee. The only major southern flowing streams draining the Blue Ridge are the Conasauga and Coosawatee Rivers, which flow into a major branch of the Coosa River, the Oostanaula, north of Rome, Georgia.

The unique climate and physical geography of the Blue Ridge has created here one of the most diverse vegetation areas on the continent. Few regions in the North American temperate zone contain as diverse a flora and fauna as that found in the Blue Ridge mountains. Although botanists disagree on the exact figure, the greatest number of tree species on the North American continent are found here.⁵³ In the Great Smoky Mountains National Park alone there are more than 1300 kinds of flowering plants, almost 350 mosses and liverworts, 230 lichens, and more than 2,000 species of fungi."⁵⁴

⁵³Ann Sutton and Myron Sutton, Eastern Forests, Audubon Society Nature Guides (New York, NY: Alfred A. Knopf, 1985), 81; Charlton Ogburn, The Southern Appalachians: A Wilderness Quest (New York: William Morrow and Company, 1975), 151-172.

⁵⁴Arthur Stupka, Notes on the Birds of the Great Smoky Mountains National Park (Knoxville, TN: University of Tennessee Press, 1963), 11.

Ridge and Valley

The parallel ridges of the Ridge and Valley province differ greatly from the high altitude mountain balds of the Blue Ridge. First, they are of considerably lower elevation--only a few peaks reach 3,000 feet or more in elevation. Second, they are much longer in length, often spanning distances of fifty miles. Clinch Mountain, which rises just north of Knoxville, Tennessee, extends well into Virginia before ending abruptly at Brumley Mountain in southwest Virginia--eighty miles away. The ridges and valleys extend from below the New River in Pulaski County, Virginia to Cherokee County in northeast Alabama and make this province the narrowest of the three Appalachian provinces. The valley floor, a flat to gently rolling plain, extends southwest along the entire length, descending from an altitude of 2,500 feet in southwest Virginia to 500 feet in northern Alabama.⁵⁵ Over the millennia, water and wind have made sizeable notches or "gaps" in the ridges, the most well-known being Cumberland Gap in southwest Virginia. These gaps, along with the lower elevation, have made the Ridge and Valley province the most accessible area of the entire southern mountains.

The Ridge and Valley section shares, not surprisingly, some geologic history with the Blue Ridge. Both provinces are

⁵⁵John C. Campbell, The Southern Highlander and His Homeland, 13.

underlain with rock strata formed from sediments deposited during the Paleozoic era more than 225 million years ago. Like the Blue Ridge, the Ridge and Valley section experienced the same folding, faulting, and thrusting of its Precambrian and Paleozoic beds. The steep narrow ridges were formed when layers of sedimentary rock resisted the enormous pressure and were subsequently pitched upward. Where less resistant rocks forms such as limestone and shale existed, the terrain remained relatively flat. This process, which could be likened to pressing a stiff piece of aluminum-foil inward with your finger-tips, helps to explain the accordion-like topography of the Ridge and Valley province.⁵⁶

The major soil type of the Ridge and Valley are ultisols, though alfisols are not entirely uncommon along the Tennessee River floodplains. Ultisols are clay-like in texture and contain a high content of iron oxide, making them reddish in appearance. The parent materials of these soils are usually limestone, shale, and sandstone, which reduce acid levels and thus greatly increases their fertility.⁵⁷ Because a great deal of silting has occurred in the Tennessee River valley, topsoil levels remain at a much greater depth here,

⁵⁶Raitz and Ulack, Appalachia, A Regional Geography, 42. The subregion has also been compared to "a wrinkled rug." Cook, et al., "The Southern Appalachians," 160.

⁵⁷Charles B. Hunt, Natural Regions of the United States and Canada (San Francisco, CA: W.H. Freeman and Co., 1974), 257-258; Raitz and Ulack, Appalachia, A Regional Geography, 65.

hence its greatly improved agricultural capacity.

Along with its richer soils, the Ridge and Valley province has milder temperatures than the Blue Ridge, and a month longer summer growing season. The number of frost-free days in the Ridge and Valley vary from 180 days in the extreme northern part of the range to 210 days in central and southern areas. The annual rainfall level decreases considerably in the Ridge and Valley, though seldom falls below 44 inches. Snowfall occurs but is rarer here, with with an average annual accumulation of two to four inches. Humidity also is much greater in the Ridge and Valley section because warm moist air from the Gulf gets trapped in the lower valley interior between the Blue Ridge and Cumberland Plateau.⁵⁸

The Ridge and Valley section is drained by the Tennessee River and its major tributaries. The Tennessee owes its existence to two rivers: the Holston, originating in southwest Virginia, and the French Broad, originating in western North Carolina, near Asheville. The two rivers join four miles east of Knoxville to form the Tennessee River, which flows southwest, bisecting the entire Ridge and Valley province. From Knoxville, the river flows in a southwesterly direction toward Chattanooga and falls an average of 8 inches per mile,

⁵⁸John E. Oliver and John J. Hidore, Climatology: An Introduction (Columbus, OH: Charles E. Merrill, 1984), 185-190; John L. Baldwin, Weather Atlas of the United States (Washington, D.C.: U.S. Department of Commerce, Environmental Sciences Administration, U.S. Government Printing Office, 1968), 31.

as it increases in both depth and width. South of Knoxville, near Kingston, the Clinch River joins the Tennessee, at what was formerly known as Southwest Point, an important eighteenth century port and trading post. Fifty miles to the south, near Dayton, enters the Hiawassee River, which drains the Cherokee National Forest area of southeast Tennessee. Further downstream, below the city of Chattanooga, is the mouth of the Sequatchie River, the last major stream to enter the Tennessee before it leaves the Ridge and Valley province west of Guntersville, Alabama.

Cumberland Plateau

Beyond the valley floor lies the Cumberland Plateau, the western boundary of the Ridge and Valley province. The Cumberland escarpment, rising steeply from the valley floor, stretches from northern Alabama to West Virginia, and retains, for most of its length, an average elevation of nearly two thousand feet. The mountains of the Plateau reach their highest point in southeastern Kentucky and southwest Virginia, where a number of protruding ridges reach elevations of 4,000 feet or more. Black Mountain, for example, near the historic Cumberland Gap in southeastern Kentucky, rises to an height of 4,150 feet, the highest point in the state. In northeast Alabama and northwest Georgia the eastern edge of the Plateau is marked by Lookout Mountain, a steep ridge one hundred miles

in length. Continuing west, the mountains become a series of broken plateaus that fragment into smaller knobs along their western boundary. The western rim of the plateau is sometimes referred to as the "Knob Country," a name first given to the area by John Clemens, the father of author Samuel Clemens (Mark Twain). In the region's most dry and barren areas the knob country often resembles the high arid plains of the western United States.⁵⁹

Geologically, the Cumberland Plateau was less affected by Tectonic activity and thus its sedimentary strata, formed during the Paleozoic era, lies more horizontal to the earth's surface. Accordingly, the geological history of the Plateau is less complex than the other two provinces; the irregular topography of the region is largely the outcome of millions of years of differential erosion. The Plateau is underlain with sandstone and shale conglomerates, parts of which are heavily interbedded with coal deposits of what geologists call the Pottsville group. Not surprisingly, coal has been central to economic development of the Plateau region. The coal-fields in eastern Kentucky alone comprise an area of more than 10,000 square miles.⁶⁰

The soils of the Cumberland Plateau are less fertile than

⁵⁹Works Project Administration, Tennessee: A Guide to the State, 507. The terrain surrounding the Little River Canyon in northeast Alabama is a case in point.

⁶⁰Willard Rouse Jillson, "Geology of Eastern Kentucky Soils," Mountain Life and Work 4 (October 1928), 12-13; Campbell, The Southern Highlander, 238.

those of the Ridge and Valley; however, the clay-loam soils along the floodplains of the larger rivers like the Cumberland, are fairly productive. Most soils of the Plateau are Inceptisols, younger soils without alluvial materials other than sand or limestone. These residual soils contain little clay and are therefore only slightly retentive of moisture during periods of drought. In general, the soils of northern and eastern hillside slopes have greater depth than those that have western and southern exposures. Fertility is a perennial problem with most soils here, though the Cumberland Plateau does have areas of relatively level land, making large-scale agriculture possible.⁶¹

The climate of the Plateau is very similar to the Ridge and Valley with the number of frost free days ranging from 180 in northern and central areas to 210 days in the extreme southern end of the Plateau. However, in elevations above three thousand feet, the growing season occasionally drops to 150 days, which limits the types of crops that can grow on Plateau summits. In general, temperatures on the interior Plateau are considerably cooler than temperatures on the valley floor. This makes snowfall more common here. Rainfall ranges from an annual average of 44 inches in West Virginia and eastern Kentucky to an annual high of 52 inches in

⁶¹Jillson, "Geography of Eastern Kentucky Soils," 12-13.

northern Alabama.⁶²

The Cumberland, Kentucky, Licking, Big Sandy, Guyandotte, and Kanawha Rivers are the major rivers draining the Cumberland Plateau basin. The southern most river of the province, the Cumberland, originates in southeastern Kentucky but does not reach a considerable width until it merges with the Big South Fork of the Cumberland below Somerset, Kentucky, where it begins to flow south and west off the Plateau. The Kentucky River and its three major tributaries drain much of the coalfields of southeastern Kentucky, as does the Licking River, which runs parallel to the Kentucky River. The Big Sandy, entering the Ohio below Huntington, West Virginia, is formed by the Levisa Fork and Tug Fork Rivers, both of which flow north out of eastern Kentucky. The Guyandotte, originating in the southern part of West Virginia, also flows north before emptying into the Ohio above Huntington, West Virginia. The northern border of the Cumberland Plateau is the Kanawha River, which originates at the New River in central West Virginia. The Kanawha flows northwestward through Charleston, emptying into the slower moving Ohio at Point Pleasant. All of these rivers were dammed for hydroelectricity in the twentieth century, dramatically altering the depth, flow, and ecological composition of their waters.

⁶²United States Department of Interior, Geological Survey, The National Weather Atlas of the United States of America (Washington, DC: United States Government Printing Office, 1970), 97.

The rivers of the Cumberland Plateau, Ridge and Valley, and Blue Ridge mountains drain about 65,000 square miles of territory, an area representing the heart of the southern mountains. Portions of this Appalachian South have been, since the late eighteenth century, the political domain of the Cherokee Nation, seven southern states, the independent State of Franklin, the Tennessee Valley Authority, and the Appalachian Regional Commission. Prior to that time, the region was home to a number of Native American peoples, who, over a period of three centuries, relinquished political and economic sovereignty to the Spanish, French, and British, before finally ceding all remaining territory to the Anglo-Americans in the 1830s. The social, political, cultural, and environmental history of the region is a complicated and enigmatic one, as complex and precipitous as the Appalachian environment itself. At the same time--if environmental history has taught us anything--the ecology of a region is vitally important to a full understanding of the social and cultural history of a people. Over time, natural environments, particularly biologically related ecosystems, help to shape both consciousness and culture. Ecological niches provide the rudimentary matrix in which a given society persists. Natural environments act as important agents of social and cultural change.

Historically, scholars of the region have generally overlooked ecological agents of cultural change, focusing only

on the influence of mountain topography on native residents. Ellen Churchill Semple, writing at the turn of the century, for example, argued that the persistence of cultural traditions in the region were a result of the isolation created by the rugged mountain environment. Semple, an American disciple of the German "Anthropogeographer" Frederick Ratzel, was more interested in how territorial space influenced culture and politics and less concerned about the role that dynamic ecological forces, such as indigenous flora and fauna, played in the lives of the region's residents. Like other commentators writing about Appalachia before and since, Semple saw the region as territorially and culturally homogeneous, making little or no distinctions in Appalachian topography, ecology, or culture.⁶³

To avoid crude environmental determinism and still properly explore the impact of environmental forces on Appalachian regional culture, scholars must do several things simultaneously. First, they must choose a region of analysis that includes all the terrain types representative of the larger Appalachian landscape. Only by critically comparing the social development of the Ridge and Valley, Blue Ridge, and Cumberland Plateau provinces, can the variety of cultural and

⁶³Ellen Churchill Semple, Influences of Geographic Environment on the Basis of Ratzel's System of Anthropo-Geography (New York, NY: Henry Holt, 1911) and "The Anglo Saxons of the Kentucky Mountains: A Study in Anthropogeography," Geographical Journal (1901), 588-623; Jeremy Rifkin, Biosphere Politics, 121.

ecological practices that have prevailed in the region be adequately disclosed. Far too many scholars continue to make generalizations about the entire Appalachian region based on what are more correctly studies of Appalachian subregions, or in some cases, individual communities within Appalachian subregions.

Second, scholars of Appalachia should study the region over the longue duree in order to effectively document its ecological and social history. As I will argue in greater depth in chapter two, the Braudelien emphasis on chronicling social and cultural practices over extended time periods is a more effective way of illustrating which cultural practices are the product of particular environments and which ones belong uniquely to specific social groups or historical epochs.⁶⁴ Chestnut gathering remains relatively unchanged as a cultural practice through several centuries; whereas the eating of freshwater mussels was practiced almost exclusively by the Mississippians of the sixteenth century. In my view, only by beginning prior to European contact and proceeding at

⁶⁴In an essay on the agriculture origins of economic dependency in the region, Paul Salstrom tries to get at the problem of historical change by dividing Appalachia into three chronological divisions--Old, Intermediate, and New Appalachia. Though I disagree with the boundaries he has drawn, Salstrom is absolutely correct in stating that "the pace and geographical pattern of settlement are... crucial in understanding the history of Appalachia." See Salstrom, "The Agricultural Origins of Economic Dependency, 1840-1880," in Robert Mitchell, ed., Appalachian Frontiers: Settlement, Society & Development in the Preindustrial Era (Lexington, KY: University of Kentucky Press, 1991), 263.

least into the nineteenth century, can one effectively trace the reciprocal effects that occur between environmental and social forces. A difficult task to be sure, but one that needs, nevertheless, to be undertaken.

Chapter Two

NATURE, CULTURE, HISTORY

Human society is a part of a larger structured whole, so an individual cooperates with more than the members of his human group. Every aspect of nature, plants and rocks and animals, colors and cardinal directions...have a cooperative share in the maintenance of the universal order.

Dorothy Lee, Freedom and Culture

To see nature as active is to recognize its formative role over geologic and historical time. Only by according ecology a place in the narrative of history can nature and culture be seen as truly interactive.

Carolyn Merchant, Ecological Revolutions

In writing human history, most scholars overlook the role nature has played in shaping western culture. Their widespread arrogance in exaggerating differences between self and other organisms, between human history and the natural environment, has created enormous holes in our present understanding of the human condition.¹ As William Barrett forcefully states, those

¹Important exceptions include Clarence Glacken, Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of The Eighteenth Century (Berkeley, CA: University of California Press, 1967); John Passmore, Man's Responsibility Toward Nature: Ecological Problems and Western Tradition (New York NY: Scribner's, 1974); and J. Donald Hughes, Ecology in Ancient Civilizations Albuquerque, NM: University of New Mexico Press, 1975); Keith Thomas, Man and the Natural World: A History of the Modern Sensibility (New York: Pantheon, 1983); James Serpell, In the Company of

who study and write about our human species have done so as if "they were sealed in the privacy of their study, and did not live on a planet surrounded by the vast organic world of animals, plants, insects, and protozoa, with whom their own life is linked in a single history."² Because social life and the natural world are inextricably intertwined, an entire history remains to be written of humanity's association with the natural world.³ Human history is natural history.

In recent decades, a growing number of scholars have tried to restore the natural world to a more equal position in the story of the past. These individuals, representing a number of different though not entirely unrelated academic fields, have made their intellectual project the study of nature and natural history, its objective effects on people, and humanity's role in transforming the natural environment.

Animals: A Study of Human-Animals Relationships (Oxford: Basil Blackwell, 1986); Jeremy Rifkin, Biosphere Politics: A New Consciousness for a New Century (New York: Crown, 1991); Amos H. Hawley, Human Ecology: A Theory of Community Structure (New York, NY: The Ronald Press, 1950); Carl O. Sauer, Land and Life (Berkeley, CA: University of California Press, 1963).

²William Barrett, The Illusion of Technique: A Search for the Meaning of Life in a Technological Age (London: William Kimber, 1979), 335. Barrett is actually paraphrasing Henri Bergson, a twentieth century philosopher see human questions against the background of the evolution of life on this planet.

³For a more in-depth discussion of the anthropocentric bias found in contemporary academic scholarship see, for example, David Ehrenfeld, The Arrogance of Humanism (New York, NY: Oxford University Press, 1978); Bill Devall and George Sessions, Deep Ecology: Living as If Nature Matters (Layton, UT: Gibbs Smith, 1985); Bill Swanson, "History, Culture, Nature," The Trumpeter 8 (Fall 1991), 164-169.

The most visible of these scholars belong to a discipline now more commonly known as environmental history, which, as one leading practitioner forcefully states, "rejects the common assumption that human experience has been exempt from natural constraints, that people are a separate and uniquely special species, [and] that the ecological consequences of our past deeds can be ignored."⁴ Defined in the vernacular, adds Donald Worster, environmental history "deals with the role and place of nature in human life."⁵

Nature and History

William Cronon's pioneering study Changes in the Land is exemplary of the methodological approach used by most environmental historians writing today.⁶ In this analysis of the evolution of Native American subsistence patterns in colonial New England, Cronon demonstrates the inherent relatedness of ecological and social systems. For Cronon,

⁴Donald Worster, "Transformations of the Earth: Toward an Agroecological Perspective in History," Journal of American History 76 (March 1990), 1088.

⁵Worster, "Transformations of the Earth," 1089.

⁶A more specific discussion about the environmental history's theories of interpretation and methods of analysis see, Kendall E. Bailes, Environmental History: Critical Issues in Comparative Perspective (Lanham, MD: University Presses of America, 1985), particularly chapters 1 thru 5; Barbara Leibhardt, "Interpretation and Causal Analysis: Theories in Environmental History," Environmental Review 12 (Spring 1988), 23-36.

ecology and culture are inexorably intertwined. "An ecological history begins by assuming a dynamic and changing relationship between environment and culture," he writes.⁷ Timothy Silver, another environmental historian using Cronon's basic methodological approach, similarly demonstrates how the environment affected the settlement and development of the South Atlantic forests. In A New Face on the Countryside, Silver discusses Native American, Anglo-European, and African cultures as well as each culture's unique influence on the environment.⁸ Cronon and Silver's contributions are important ones, not only because they emphasize the role of the environment in shaping North American history, but also because they demonstrate the cultural diversity of the colonial frontier. Because the colonialization process required an exchange of subsistence practices among the inhabitants of a region, the result was multiculturalism. In the colonial frontier, no single group remained culturally homogenous.

Carolyn Merchant, who maintains that environmental history "reasserts the idea of nature as historical actor," forcefully shows how humans and the environment are interdependent agents of social change. Her important study,

⁷William Cronon, Changes in the Land: Indians Colonists, and the Ecology of New England (New York, NY: Hill & Wang, 1983), 13.

⁸Timothy Silver, A New Face on the Countryside: Indians, Colonists, and Slaves in South Atlantic Forests, 1500-1800. (New York, NY: Cambridge University Press, 1990).

Ecological Revolutions, employs social, economic, and ecological analyses in order to show how human consciousness, the local environment, and human communities evolve over time.⁹ Of critical importance in Merchant's analysis is the role that gender plays in environmental change. In subsistence economies women had a direct impact on nature through crop production, whereas men were more involved with environmentally destructive activities, such as hunting large animals, cutting down forests, and plowing fields.¹⁰ By documenting the different effects that men and women had on the environment, says Merchant, environmental history offers "a more balanced and complete picture of past human interactions with nature."¹¹

In an original and detailed account of Indian-white interactions in the Great Lakes region during the seventeenth and eighteenth centuries, Richard White argues that cultural

⁹Carolyn Merchant, Ecological Revolutions: Nature, Gender, and Science in New England (Chapel Hill, NC: University of North Carolina Press, 1990), 7.

¹⁰See, for example, Sandra Marbug, "Women and Environment: Subsistence Paradigms, 1850-1950," Environmental Review 8 (Spring 1984), 7-22; Vandana Shiva, Women, Ecology, and Development (London: Zed Books, 1988); Vandana Shiva, "Resources," in Wolfgang Sachs, editor, The Development Dictionary: A Guide to Knowledge as Power (London: Zed Books, 1992), 206-218; George P. Murdock, "Comparative Data on the Division of Labor by Sex," Social Forces 15 (May 1935), 551-553.

¹¹Carolyn Merchant, "Gender and History," The Journal of American History 76 (March 1990), 1121; idem, Major Problems in Environmental History: Documents and Essays (Lexington, MA: D.C. Heath, 1993).

and environmental change often occurs on a conceptual "middle ground." White's middle ground is the place where power, culture, and the environment dynamically interact to form new social systems and ultimately, new ecological environments.¹² White, whose methodological approach is more sociological in orientation, argues that environmental history a more critical account of the processes that maintain life and culture on the planet. He, like sociologist Anthony Giddens, is interested in the "reproduction of social practices," or how social systems replicate themselves in both time and space.¹³ By discovering social and cultural patterns in historical environments, White believes we can explain how social and economic forces influence environmental change--without relying solely on materialist or idealist explanations for that change.¹⁴

As White suggests, we can never fully uncover the complexity of the social order without understanding the environmental context in which it occurs. Arthur McEvoy, a legal historian who studied the California fisheries of the nineteenth and twentieth centuries, found that environmental

¹²Richard White, The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650-1815 (New York, NY: Cambridge University Press, 1991).

¹³Anthony Giddens, Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis. (Berkeley, CA: University of California Press, 1979).

¹⁴Richard White, "Environmental History, Ecology, and Meaning," The Journal of American History 76 (March 1990), 1116.

factors were central to the economic and cultural development of that region. McEvoy carefully documents the importance of salmon to the California natives, who were directly dependent upon the fish for their livelihood, as well as its importance to the modern commercial fishing industry, a multi-billion dollar enterprise.¹⁵ As William Cronon has noted, McEvoy's study is extremely important because it effectively demonstrates how a region's political economy, its natural ecology, and the environmental attitudes of its residents, are equally important determinants of environmental and cultural change.¹⁶

Although the writings of Worster, Cronon, Silver, White, Merchant, and McEvoy represent only a portion of the available literature in the field, these authors are most responsible for developing the new environmental history discipline.¹⁷ It should be noted, however, that a substantial body of work has

¹⁵Arthur F. McEvoy, The Fisherman's Problem: Ecology and Law in the California Fisheries, 1850-1980 (New York, NY: Cambridge University Press, 1986).

¹⁶William Cronon, "Modes of Prophecy and Production: Placing Nature in History," The Journal of American History 76 (March 1990), 1123, n. 4.

¹⁷See also, for example, Alfred Crosby, Ecological Imperialism: The Biological Expansions of Europe, 900-1900 (New York: Cambridge University Press, 1987); Roderick Nash, Wilderness and the American Mind, 3rd edition (New Haven, CT: Yale University Press, 1982); Joseph Petulla, American Environmentalism: Values, Tactics, Priorities (College Station: Texas University Press, 1977); J. Donald Hughes, Ecology in Ancient Civilizations; and Stephen Pyne, Fire in America: A Cultural History of Wildland and Rural Fire (Princeton, NJ: Princeton University Press, 1982).

been produced by non-historians trained as either biologists or botanists, or scholars who see plant and agriculture systems as central to understanding the process of social and cultural change.¹⁸ Much of this work was inspired by the Columbus quincentennial, which forced many to re-examine the effects of the Spanish conquest on Native American populations and the environment upon which they subsisted.¹⁹ One of the first scholars to critically discuss the environmental and social effects of the "Columbian exchange" was Alfred Crosby, who argues that continents are conquered as much by the introduction of plants and animals as by invading peoples and their military or economic might. The Spanish, for example, introduced deadly pathogens, such as smallpox and influenza,

¹⁸For the role that agricultural crops played in the development of western civilization see Henry Hobhouse, Seeds of Change: Five Plants that Transformed Mankind, (London: Sidwick and Jackson, 1985). For the importance of sugar to the development of slavery in the Caribbean and America, see Sidney Mintz, Sweetness and Power: The Place of Sugar in Modern History. (New York, NY: Penguin Books, 1986). For the relationship that existed between Native Americans and cultivated plants, see Gary Paul Nabhan, Enduring Seeds: Native American Agriculture and Wild Plant Conservation. (San Francisco, CA: North Point Press, 1989).

¹⁹See, for example, Thomas Hurst, ed., Columbian Consequences, Vol. II: Archaeological and Historical Perspectives on the Spanish Borderlands East (Washington, D.C.: Smithsonian Institution Press, 1990); Jerald T. Milanich and Susan Milbrath, First Encounters: Spanish Explorations in the Caribbean and the United States, 1492-1570 (Gainesville, FL: University of Florida Press, 1989); Barry Lopez, The Rediscovery of North America (Lexington, KY: University of Kentucky Press, 1992); William H. MacLeish, "1492 America: The Land Columbus Never Saw," Smithsonian 22 (November 1991), 34-51; Herman Viola, After Columbus: The Smithsonian Chronicle of the North American Indians (New York: Orion Books, 1990).

into North America as well as an array of plant species and breeds of livestock, which not only altered the landscape but helped to extinguish Native American subsistence techniques and practices.²⁰

Seeds of Change

The volume that perhaps best describes Crosby's concept of "ecological imperialism," a process beginning with Spanish arrival in the Americas, is the popular Seeds of Change, an anthology of essays edited by museum curators Herman Viola and Carolyn Margolis. The various authors of this work argue that food crops such as corn and potatoes can influence the very course of human civilization.²¹ Historically, the cultivation of food crops has brought individuals in closer contact with nature, directed their daily activities, and provided them with necessary sustenance. For this reason, Donald Worster identifies the study of food production, or what he calls "agroecology"--the reorganization of nature for agricultural purposes--as one of the most important areas for future

²⁰Alfred Crosby, The Columbian Exchange: The Biological and Cultural Consequences of 1492 (Westport, CT: Greenwood Publishing Company, 1972). See also, Carl Ortwin Sauer, The Early Spanish Main (Berkeley, CA: University of California Press, 1966); idem, Sixteenth Century North America: The Land and the People as Seen by the Europeans (Berkeley, CA: University of California Press, 1971).

²¹Herman Viola and Carolyn Margolis, editors. Seeds of Change: A Quincentennial Commemoration (Washington, D.C.: Smithsonian Institution Press, 1991).

research in the environmental history field.²²

Although Worster doesn't acknowledge their contribution to environmental history, agricultural historians have for quite some time been involved in agroecological pursuits. Their work obviously lacks the direct ecological emphasis of environmental history, but their findings are equally important in understanding how human communities are influenced by food crops and land-use practices.²³ Lyman Carrier's classic work, The Beginnings of Agriculture in America, offers extensive documentation, on a crop by crop basis, of the evolution of North American agriculture. According to Carrier, New World farming was largely influenced by the Native Americans, as Indians were the first to cultivate tobacco, beans, peppers, pumpkins, squash, and corn.²⁴ Lewis Gray's History of Agriculture in the Southern United States has a similar focus, but places agricultural development in the context of regional and world markets. Gray

²²Worster, "Transformations of the Earth," 1091-1106.

²³Relevant studies include, Philip McMichael, Settlers and the Agrarian Question (New York, NY: Cambridge University Press, 1984); Susan A. Mann, Capitalism and Agriculture (Chapel Hill, NC: University of North Carolina, 1989); Jack Kloppenburg, First the Seed (New York, NY: Cambridge University Press, 1988). Numerous articles found in The Journal of Agriculture History should also be consulted. For additional references to the broader rural sociology field, see Frederick Buttel, Olaf Larson & Gilbert Gillespie, The Sociology of Agriculture (New York, NY: Greenwood Press, 1990).

²⁴New York, NY: McGraw-Hill, 1923. Carrier went so far to say that United States agriculture "is at least one-third Native American," 41.

points out that tobacco, cotton, rice and indigo were grown in colonial America largely as European exports. Cultivated on large plantations, these crops had an enormous impact on the local ecology. Whether grown by Indians or cultivated on plantations, agricultural crops alter the environment. Agricultural historians, in detailing the history of land-use, provide invaluable insights into the scope and scale of environmental change.²⁵

Sociology and the Environment

As Frederick Buttel points out, the renewed interest in the ecological consequences of agriculture and the role that environmental factors play in agriculture has, in fact, spearheaded a new "sociology of agriculture."²⁶ Since the early 1980s, an increasing number of rural sociologists have

²⁵See, for example, Robert Rothberg and Theodore Rabb, eds. Hunger and History: The Impact of Changing Food Production and Consumption Patterns on Society (Cambridge: Cambridge University Press, 1985); On southern agriculture see Gray, History of Agriculture in the Southern United States to 1860, Vol. I (New York: Peter Smith, 1941); Avery Craven, Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1606-1860; James C. Bonner, A History of Georgia Agriculture (Athens, GA: University of Georgia Press, 1964); Rosser H. Taylor, "Fertilizers and Farming in Southeast, 1840-1950," The North Carolina Historical Review 30 (July 1953), 305-328; Julius Rubin, "The Limits of Agricultural Progress in the Nineteenth-Century South," Agricultural History 49 (April 1975), 362-374. On Indian agriculture, see Douglas Hurt, Indian Agriculture in America (Lawrence, KS: University Press of Kansas, 1987).

²⁶Frederick Buttel, et al., The Sociology of Agriculture, especially 127-170.

focused on the environment as an explanatory variable for understanding social and environmental change in rural communities.²⁷ This emphasis on ecological variables was championed largely by sociologist Riley Dunlap, who helped develop the larger field of environmental sociology.²⁸ Environmental sociology, like environmental history, has its intellectual roots in the decade of the 1970s, when popular environmental movements gathered momentum in the wake of the 1970 Earth Day celebration.

In a pioneering article published in the late 1970s, Riley Dunlap and William Catton outline the development of the field which, they believed, should bring the environment to the fore of mainstream sociology.²⁹ The authors describe in

²⁷See, for example, Riley R. Dunlap and Kenneth E. Martin, "Bringing Environment into the Study of Agriculture: Observations and Suggestions Regarding the Sociology of Agriculture," Rural Sociology 48 (Summer 1983), 201-218; Jere Giles, "Farm Size, Farm Structure, Energy and Climate: an Alternative Ecological Analysis of United States Agriculture," Rural Sociology 45 (Summer 1980), 332-339; Milton Coughenour, "Social Ecology and Agriculture," Rural Sociology 49 (Spring 1984): 1-22; Donald R. Field and William R. Burch, Jr., Rural Sociology and the Environment (New York, NY: Greenwood Press, 1990).

²⁸Dunlap argued that most sociologists tended to ignore physical and ecological factors in studies of agriculture and that the inclusion of such variables would increase the ability of sociologists to explain phenomenon. Riley Dunlap, "Environment, Ecology and Agriculture Revisted: Ancestor Worship and the Dangers of the Disciplinary Myopia," The Rural Sociologist 6 (July 1986): See also Buttle, The Sociology of Agriculture, 166-167.

²⁹Dunlap, Riley and William Catton, "Environmental Sociology." Annual Review of Sociology 5 (1979), 243-273. See also Dunlap, Riley, "Paradigmatic Change in Social Science: From Human Exemptionalism to an Ecological Paradigm." American

the article the historical and organizational emergence of environmental sociology and its most salient theoretical suppositions. According to Dunlap and Catton, the most important theoretical assumption that environmental sociology can offer is the recognition that "physical environments can influence (and in turn be influenced by) human societies and behavior."³⁰

Dunlap and Catton argue that mainstream sociology's bias against biological and geographical determinism has forced it to underrate, if not ignore, sociological investigations into the relationship of human beings and their natural environment. They postulate that American sociological theorists are antagonistic to environmental sensitivity, since they have historically assumed that human beings, because they are an exceptional species, are exempt from environmental influences and ecological constraints. They define traditional sociology's doctrine that human beings are an exceptional species as the "Human Exceptionalism Paradigm" (HEP), although they admit that a more accurate label would be the "Human Exemptionalism Paradigm." Environmental sociologists do not deny that homo sapiens is an exceptional species, but Dunlap and Catton do not believe that the exceptional characteristics of human beings, such as culture and language, do not exempt

Behavioral Scientist 24 (1980), 5-14.

³⁰Dunlap and Catton, "Environmental Sociology," 244, (their parentheses).

them from environmental constraints.³¹

In an article published in the American Behavioral Scientist, Catton and Dunlap define the Human Exemptionalism Paradigm as one that makes four critical assumptions about the nature of human nature: 1) humans have a cultural heritage in addition to, and distinct from, their genetic inheritance, and thus are quite unlike all other animal species; 2) social and cultural factors (including technology) are the major determinants of human affairs; 3) social and cultural environments are the crucial context for human affairs, and the biophysical environment is largely irrelevant; and 4) culture is cumulative; thus technological and social progress can continue indefinitely, making all social problems ultimately solvable.³²

Dunlap and Catton contrast HEP with what is now known as the "New Ecological Paradigm" (NEP) (Table 2.1). The NEP makes

³¹Dunlap and Catton, "Environmental Sociology," 250. Some sociologists might argue that because early American sociology (i.e. the Chicago School) used a number of ecological principles in its theoretical approach, it is an ecological in focus. However, the mergence of the biological and social sciences in the 1920s did not "ecologize" sociology. The use of a few environmental metaphors, as Milla Aissa Alihen argued as early as 1938, does not constitute an adequate discipline of human ecology. Alihen, Social Ecology: A Critical Analysis (New York: Cooper Square, 1964); Davis, Ecophilosophy: Guide to the Literature, 3.

³²William Catton and Riley Dunlap, "A New Ecological Paradigm for Post-Exuburent Sociology." American Behavioral Scientist 24 (1980), 16. See also Riley Dunlap, "Paradigmatic Change in Social Science: From Human Exemptionalism to an Ecological Paradigm," American Behavioral Scientist 24 (1980), 5-14.

	HUMAN EXEMPTIONALISM PARADIGM (HEP)
Assumptions about the nature of human beings	Humans have cultural heritage in addition to (and distinct from) their genetic inheritance, and are quite unlike all other animals.
Assumptions about social causation:	Social and cultural factors are the major determinants of human action.
Assumptions about the context of human society:	Social and cultural environments are the crucial context for human affairs; the biophysical environment has little agency.
Assumptions about constraints on human society:	Culture is cumulative, so technological and social progress continues indefinitely. Social problems are solvable.
	NEW ECOLOGICAL PARADIGM (NEP)
Assumptions about the nature of human beings:	Humans have exceptional characteristics, but remain one among many species in the global ecosystem.
Assumptions about social causation:	Human actions are influenced not only by culture and society, they are also directly influenced by the environment.
Assumptions about the context of human society:	Humans live in a finite biophysical environment which imposes potent constraints on nearly all human affairs.
Assumptions about constraints on human society:	Humans may appear to extend nature's carry capacity but ecological laws cannot ultimately be repealed.

Figure 2.1. A comparison of major assumptions in the HEP and NEP. Source: Adapted from Frederick Buttel, "New Directions in Environmental Sociology," American Review of Sociology 13 (1987), 470, Table 1.

the following assumptions about human nature and social organization: 1) humans have exceptional characteristics, but remain one among many species that are interdependently involved in the global ecosystem; 2) human affairs are influenced not only by social and cultural factors, but also by intricate linkages of cause, effect, and feed-back in the web of nature; thus purposeful human actions have many unintended consequences; 3) humans live in and are dependent upon a finite biophysical environment that imposes potent physical and biological restraints on human affairs; and 4) the inventiveness of humans may seem for a while to extend carrying capacity limits, however, ecological laws cannot be repealed."³³

Culture and Ecology

While environmental sociologists have only recently sought to reorient their discipline toward a more holistic ecological perspective, cultural and historical geographers have for a longer period made the environment a central concern of their scholarly enterprise. Influenced by the scholarship launched by Carl Ortwin Sauer in the 1920s, geographers have made important inroads toward understanding

³³Dunlap, Riley, "Paradigmatic Change in Social Science," 34. See also Frederick Buttel, "New Directions in Environmental Sociology," American Review of Sociology 13 (1987), 465-88.

how human groups and their environments interact to form "cultural landscapes," the tangible by-product of human-nature interactions over time. Sauer calls the interactive process by which cultures utilize, shape, and transform their natural surroundings, "landscape morphology," and he and his students use the concept to illustrate the various ways in which cultural perceptions influenced land-use decisions on the North American continent.³⁴

Demonstrating the approach pioneered by Sauer, Terry Jordan and Matti Kaups in The American Backwoods Frontier³⁵ create a theoretical and methodological framework from which to interpret environmental and cultural change, something environmental historians and sociologists have been hesitant to do in any substantive way.³⁶ The authors maintain that cultural diffusionist studies, environmental determinist theses, economic and sociological examinations, as well as cultural ecology, cannot offer the full depth or breath of

³⁴Carl O. Sauer, "The Morphology of Landscape," University of California Publications in Geography 2 (1925), 19-53; Preston E. James and Geoffrey J. Martin, All Possible Worlds: A History of Geographical Ideas (New York, NY: John Wiley and Sons, 1981), 321.

³⁵Baltimore, MD: John Hopkins University Press, 1989.

³⁶For discussions concerning environmental history's "weak" methodological focus see Richard White, "Environmental History, Ecology, and Meaning," The Journal of American History 76 (March 1990), 1111-1116; William Cronon, "Modes of Prophecy and Production: Placing Nature in History," The Journal of American History 76 (March 1990), 1122-1131; Donald Worster, "Seeing Beyond Culture," The Journal of American History 76 (March 1990), 1142-1147.

explanatory understanding as a method that combines elements from each approach. Accordingly, Jordan and Kaups offer what they call an "ethnic and ecological interpretation" of social development on the American frontier. Their methodological approach attempts to marry cultural diffusionism with "particularistic" cultural ecology, an explanatory model that focuses, they claim, on the unique interplay between culture groups and their distinct physical environments.³⁷

Particularistic cultural ecology, says Jordan and Kaups, "recognizes that more than one path of adaptation exists in a given environment and that the choice among them is a function of culture."³⁸ Culture, they argue, directs the appropriate adaptive strategy by helping individuals or social groups determine what resources are meaningful in a specific environmental setting. The Scotch-Irish or North British, for example, brought to the American frontier a proclivity for cattle herding, which they had considerable knowledge of, but knew, say the authors, little else about living in a vast wooded forest.³⁹ In order to survive in this unfamiliar

³⁷Jordan and Kaups, The American Backwoods Frontier, 32.

³⁸Ibid.

³⁹Jordan and Kaups, The American Backwoods Frontier, 121. The cattle herding heritage of the Scotch-Irish is discussed in Ronald H. Buchanan, "Field Systems of Ireland," in Alan R.H. Baker and Robin Butlin, eds., Studies of Field Systems in the British Isles (Cambridge, MA: Cambridge University Press, 1973); E. Estyn Evans, "The Scotch Irish: Their Cultural Adaptation and Heritage in the American Old West," In E.R.R. Green, ed., Essays in Scotch-Irish History (London: Routledge & Kegan Paul, 1969).

terrain, the Scotch-Irish had to turn to the Native Americans or Finns and Swedes for practical knowledge about hunting and gathering practices, growing crops, and constructing habitable dwellings. Thus, over time, the cultural diffusion process is determined by a culture's specific adaptive traits, such as cattle-herding, and partially by the skills that it borrows from other culture groups, such as log-cabin construction, in a place-specific environment that also determines the range of adaptive possibilities.⁴⁰

Within this dynamic framework, the culture complex of the American frontier could be seen, particularly in the long view, as the product of a heterogeneous blending of cultural traits, a cultural matrix determined to a large degree by the ecological specificity of the frontier environment. However, Jordan and Kaups' actually warn against making such a conclusion. The central thesis of their book is that the **"American backwoods culture had significant northern European roots."**⁴¹ More specifically, Jordan and Kaups see the Savo-Karelians, an eastern Finnish group that devised a well-developed, forest colonization cultural complex in the fifteenth and sixteenth centuries as "the most significant

⁴⁰Jordan and Kaups, American Backwoods Frontier, pp. 19-36. On pre-adaptation in the Upland South, see Milton Newton, "Cultural Preadaptation and the Upland South," Geoscience and Man 5 (June 10, 1974), 143-154.

⁴¹Jordan and Kaups, The American Backwoods Frontier, 36 (their emphasis).

shapers of the American backwoods way of life."⁴² In execution, Jordan and Kaups are not terribly interested in demonstrating significant cultural integration on the American frontier. They do, admittedly, support the more commonly held view that the eastern woodland Indians were "significant contributors to the backwoods pioneer adaptive system;" but argue consistently that the **principle** agents of cultural determination of frontier culture are the eastern Finns.⁴³

In order to prove this highly revisionist thesis, the author's deemphasize, or even deny, the existence of reciprocal cultural diffusion or syncretism on the frontier. Their argument for the primacy of Finnish influence is further supported, they believe, by the fact that the frontier environment is similar to the "hardscrabble" habitat of northern Europe, where the Savo-Karelians developed their highly adaptive subsistence culture. In celebrating the presence of Savo-Karelian culture in the American backwoods frontier, Jordan and Kaups do not, however, as they might have us believe, critically incorporate place-specific ecological influences into their analysis. To fully do so, they first would have to admit to the ecological heterogeneity of the frontier environment that does not, in its entirety, resemble the "hardscrabble" terrain of northern Europe.

There are of course significant ecological differences

⁴²Ibid.

⁴³Ibid.

between northern Europe and eastern North America. There are also notable differences between the environments of the Delaware Valley region that Jordan and Kaups study and the southern Appalachian region. Prior to European settlement the southern Appalachians were, in fact, a patchwork quilt of topographical environments, comprised of level wooded land, large and small forest clearings, high sandy plateaus, steep rocky ridges, upland forests, mountain balds, swampy glades, and fertile creek and river bottoms covered with thick, imposing canebrakes.⁴⁴ In many of these ecologically specific environments, cultural adaptations borrowed from the Finns or Swedes would be no more or less superior to those of other ethnic groups who settled the region in the eighteenth and nineteenth centuries. The authors rightly give credit to the woodland Indians for helping the American backwoods pioneer with crop selection and farming practices in many of these local environments, but they are relatively undiscerning when discussing specific Indian groups, agricultural systems, or subsistence techniques, other than to persistently argue that fundamental cultural borrowings on the frontier "were achieved by the Delaware Valley Finns and Swedes as an outgrowth of

⁴⁴Karl Raitz and Richard Ulack, Appalachia: A Regional Geography: Land People, and Development (Boulder, CO: Westview Press, 1984), 67-73; Nevin Fenneman, Physiography of Eastern United States (New York, NY: McGraw Hill, 1938); Ann Sutton and Myron Sutton, Eastern Forests (New York, NY: Alfred A. Knopf, 1985), 81-94.

their close association and harmony with the local Indians..."⁴⁵ In defending their fundamental thesis, Jordan and Kaups are more accurately advancing a conventional diffusionist model of cultural inheritance, that does not, in the main, see the environment as a primary agent in the process of social and cultural change.

As Jordan and Kaups themselves point out, it has become fashionable of late to overlook studies that support fusionist theories of cultural determination. In order to celebrate Old World ethnic continuity in the New World, a growing number of scholars attempt to demonstrate how various immigrant groups in colonial and frontier America transferred culture practices across generations and to other ethnic groups.⁴⁶ Jordan and

⁴⁵Jordan and Kaups, American Backwoods Frontier, 117.

⁴⁶For the transference of British Culture to America see, for example, Jack P. Greene, Pursuits of Happiness: The Social Development of Early Modern British Colonies and the Formation of American Culture (Chapel Hill, NC: University of North Carolina Press, 1988); David Hackett Fischer, Albion's Seed: Four British Folkways in America (New York: Oxford University Press, 1989). For the diffusion of African-American culture in the United States, see Sterling Stuckey, Slave Culture: Nationalist Theory and the Foundation of Black America (New York, NY: Oxford University Press, 1987); Roger D. Abrahams, Singing the Master: The Emergence of African American Culture in the Plantation South (New York, NY: Pantheon Books, 1992); Charles Joyner, Down by the Riverside: A South Carolina Slave Community (Urbana, IL: University of Illinois Press 1984). For Celtic influences, see Grady McWhiney, Cracker Culture: Celtic Ways in the Old South (Tuscaloosa, AL: University of Alabama Press, 1988). Arguments against cultural persistence in the new world include Ian K. Steele, The English Atlantic, 1675-1740: An Exploration of Communication and Community (New York, NY: Oxford University Press, 1987); R.A. Burchell, ed., The End of Anglo-America: Historical Essays in the Study of Cultural Divergence (Manchester: University of Manchester Press, 1991); James Axtell, The Invasion Within: The Contest

Kaup's study certainly belongs to this category of scholarship as does David Hackett Fischer's Albion's Seed, which argues for the persistence of four clearly distinct British folkways in North America.⁴⁷ Although I disagree with many of Jordan and Kaup's' (or for that matter, Fischer's) conclusions about which ethnic group is mostly responsible for the development of the frontier culture complex, I accept the use of cultural ecology as a tool for tracing the effects of culture and environment on human history. In the southern Appalachian mountains there are numerous examples of subsistence strategies driven by both culture and the local ecology of the mountain environment.

The practice of ginseng gathering, for example, is dependent on a single plant species that grows in a very specific upland forest environment. More than two centuries ago, ginseng was being gathered in the mountains, dried and shipped to China, where the plant was highly valued as a

of Cultures in Colonial North America (New York, NY: Oxford University Press, 1985).

⁴⁷The four British cultural groups that are the focus of Fischer's study are the East Anglian Puritans, the Cavaliers of South England, the Quakers of Britian's north midlands, and the Ulster Scots or Scotch-Irish from the British borderlands. For responses to Fisher by noted Appalachian scholars, see the lively roundtable discussion by Gordon McKinney, Edward Cowan, Rodger Cunningham, Altina Waller, and David Hacett Fischer, "Culture Wars: David Hackett Fischer's Albion's Seed," Appalachian Journal (Winter 1992), 161-200.

medicine and general panacea.⁴⁸ Many trace the American practice of "sang" digging--as native mountaineers call it--to Michaux, the French botanist who explored the mountainous region at the turn of the nineteenth century, and who is said to have taught early settlers how to recognize, collect, and locate markets for the plant.⁴⁹ Ginseng, which currently brought \$220 for a pound of the dried root in 1990,⁵⁰ was also used by the Cherokee for medicinal purposes, and they themselves dug the root in the eighteenth century for export to Asian markets.

⁴⁸M.G. Kains, Ginseng; Its Cultivation, Harvesting, Marketing and Market Value, with a Short Account of its History and Botany (New York, NY: Orange Judd Company, 1902), 1-5; Richard Heffern, The Complete Book of Ginseng (Millbrae, California: Celestial Arts, 1976), 21-38; Michael A. Weiner, Earth Food: Plant Remedies, Drugs, and Natural Foods of the North American Indians (New York, NY: Collier Books, 1979), 18-19.

⁴⁹Donald Culross Peattie, "Blue Ridge Wild Flowers," in Roderick Peattie, ed., The Great Smokies and the Blue Ridge (New York: Vanguard Press, 1943), 172-200; Wilma Dykeman and Jim Stokely, Highland Homeland: The People of the Great Smokies (Washington, D.C.: U.S. Department of the Interior, National Park History Series, 1978), 52-55.

⁵⁰In 1980 alone, some 48,000 pounds of wild ginseng was gathered in the mountains of Georgia, Kentucky, North Carolina, Tennessee, Virginia, and West Virginia, at a commercial value of more than \$13 million dollars (330 ginseng roots make up a dry pound of ginseng). Ronald Singer, "Federal Requirements for Exports of American Ginseng," in Proceedings of the Second National Ginseng Conference (Jefferson City, MO: Natural History Section, Missouri Department of Conservation, 1980), 5. During 1981-82, 5,658 pounds of ginseng were collected from the wild in North Carolina. At current prices this represents more than \$600,000 paid to collectors. Robert Sutter, "The Ginseng Monitoring Program in North Carolina," in Proceedings of the Fourth National Ginseng Conference (Lexington, KY: University of Kentucky College of Agriculture, 1982), 117.

A truly ethnic and ecological interpretation of ginseng gathering, I believe, should ask the following questions of this long-standing cultural practice: 1) Who was responsible for first introducing the practice to settlers in the region--the Chinese, Michaux, or the Native Americans? 2) How and when did the practice of digging the root become diffused throughout the southern mountains? 3) Do all ginseng gatherers use the plant themselves or believe in its medicinal powers? 4) What kinds of cultural or ecological knowledge is required in gathering and preserving the plant? 5) How did market forces influence its harvest and use? 6) And in what ways has the practice changed, given ginseng's increasing scarcity in the wild, over past centuries?

In answering these kinds of questions, I hope to demonstrate how specific environmental influences affect the development of a culture and region without resorting to ethnic survival theses like those promoted by Jordan and Kaups and other scholars writing culture-inertia histories of the frontier. Ginseng gathering, like most subsistence practices on the American frontier, owes its existence to several cultural traditions, though it is clearly dependent on a specific ecological environment that permits the plant's growth. Although culture--what geographer Milton Newton calls "the great variable"--cannot be ignored, I wish to avoid arguments for the superiority of one ethnic group in order to demonstrate how a "culture of choice" is better adapted to a

local environment. From another perspective, the natural environment is the leveling factor that discriminates equally against all culture groups.⁵¹

If a single group does deserve special attention, it would certainly be the Native Americans who, for centuries prior to pioneer settlement, co-existed in relative harmony with the North American landscape. Although Native Americans no doubt "altered the landscape to suit their needs, adapting techniques and technology...to the peculiarities of local climates and topography," their overall impact on the environment was, comparatively speaking, minimal.⁵² At the same time, as the first permanent inhabitants, the Native Americans developed unparalleled knowledge of the plants and animals of their environment.⁵³ Their importance results,

⁵¹This is the point Donald Worster is making in his defense of making environmental history "more than social or cultural history." See Worster, "Seeing Beyond Culture," 1144.

⁵²Silver, A New Face on the Countryside, 5. A more detailed discussion is found in Kirkpatrick Sale, The Conquest of Paradise, 301-304, 307-324. In recent years there has been a renewed interest in the Indian practice of fire burning, which is said to have dramatically altered the physical environment of North America. Stephen Pyne argues that much of the eastern United States was once an open savannah created by Indians. Timothy Silver argues that it is doubtful that the fires of the Indians were intense or frequent enough to do much damage to the larger woodland environment. Silver, A New Face on the Countryside, 61; Stephen Pyne, Fire in America: A Cultural History of Wildland and Rural Fire (Princeton, NJ: Princeton University Press, 1982, 75; idem, "Firestick History," The Journal of American History 76 (March 1990), 1116.

⁵³The ecological knowledge of Native Americans will never fully be known. Attempts at reconstructing their use of North American plant life, include Melvin Gilmore, Uses of Plants by

quite simply, because they were here before anyone else. One cannot understate Native American settlement precedence for measuring subsequent environmental and cultural change; a theoretical assumption supported by Wilbur Zelinsky's principle of first effective settlement: "the first group able to establish a viable, self-perpetuating society in an empty land [sic] are of crucial significance for the later social and cultural geography of the area."⁵⁴ For this and other reasons stated above, this study gives historical precedence to Native American cultures before examining the role that Europeans played in changing the frontier environment.

When an environment is colonized by different social groups, no single culture gains absolute hegemony. "In colonial North America," writes historian James Axtell, "the contest of cultures was far from one-sided"⁵⁵ John Mack Faragher takes a similar position when he asserts that

the Indians of the Missouri River Region (Lincoln, NB: University of Nebraska Press, 1977); Weiner, Earth Food: Plant Remedies, Drugs, and Natural Foods of the North American Indians (New York, NY: Collier, 1979; Gary Paul Nabhan, Enduring Seeds: Native American Agriculture and Wild Plant Conservation (San Francisco, CA: North Point Press, 1989); William H. Banks, "Ethnobotany of the Cherokee Indians," (Masters thesis, University of Tennessee, Knoxville, 1953); Stephen Chomko and G.W. Crawford, "Plant Husbandry in Prehistoric Eastern North America: New Evidences for its Development," American Antiquity 43 (1978), 405-408.

⁵⁴Wilbur Zelinsky, The Cultural Geography of the United States (Englewood Cliffs, NJ: Prentice Hall, 1973), 13; see also Fred Kniffen, "Folk Housing: Key to Diffusion." Annals of the Association of American Geographers 55 (1965), 549-577.

⁵⁵Axtell, The Invasion Within, 302.

"frontier history is the story of the contact of cultures, their competition and their continuing relations. It cannot be the story of any one side."⁵⁶ This is not to suggest that elements of a particular culture cannot or do not persist unchanged, nor that all cultures share an equal power base; however, in overemphasizing cultural continuity in American history, scholars falsely presume that culture is the product of homogenous, functionally integrated, social groups. In this view of culture, writes sociologist Ernest Gellner, there can be "no syncretism, no doctrinal pluralism...no dramatic conversion or doctrinal oscillation [and] no holding of alternative belief systems"⁵⁷

The myth of cultural continuity remains a strong one in anthropology, sociology, and social history. As Margaret Archer points out in her elegant study of culture and social theory, there is a common and erroneous tendency for all social theorists (grounded partly in their debt to German historicism) to see culture as a unified, integrated whole. The penchant for defining cultures as "coherent patterns," "cultural systems," or the product of a "single, symbolically

⁵⁶John Mack Faragher, Women and Men on the Overland Trail (New Haven, CT: Yale University Press, 1979), iv.

⁵⁷Gellner quoted in Margaret S. Archer, Culture and Agency: The Place of Culture in Social Theory (Cambridge: Cambridge University Press, 1988), 9.

consistent universe,"⁵⁸ results in a fairly naive view of culture that takes into account neither cultural ambiguities nor the important role that changing physical environments play in influencing both the rate and direction of cultural change.

Indeed, culture has been traditionally defined in opposition to nature. Even Arthur Kroeber, who argues that "cultures are rooted in nature, and can therefore never be understood except with reference to that piece of nature in which they occur," feels compelled to qualify his position by stating, in Durkheimian fashion, that "the immediate causes of cultural phenomena are other cultural phenomena."⁵⁹

However, if we assume that a dialectical relationship exists between the environment and society, then culture must always have an environmental component or is at least indirectly influenced by environmental forces. Regardless of the historical epoch, human beings never fully escape the

⁵⁸Ruth Benedict, Patterns of Culture, (New York, NY: Houghton Mifflin, 1934); Florian Znaniecki, Cultural Sciences: Their Origin and Development, (Urbana, IL: University of Illinois Press, 1952), 296-329; and Mary Douglas, quoted in Archer, Culture and Agency, 3.

⁵⁹A. L. Kroeber, Cultural and Natural Areas of Native North America (Berkeley, CA: University of California Press, 1963), 1, (his emphasis). Obviously, Kroeber is concerned that his work will be associated with the "old environmentalism" which, he says, "believed it could find the causes of culture in the environment." In using the term old environmentalism, Kroeber is referring to the nineteenth century school of thought (environmental determinism) that attributed the causes of human behavior to spatial or geographic factors and not, in the main, to influences found in dynamic and living ecosystems.

limitations imposed by the ecology of their physical environments. In the 1920s, when the chestnut blight decimated the chestnut tree in the southern Appalachians, the residents of the region lost not only a major source of wood for housing and fencing, but also an all important food source for themselves and their livestock. The natural environment always influences human behavior, but it manifests itself in different ways depending on the natural resources and the culture involved. Today, the southern mountains provide timber for homes, water for wells, trails for recreation, tourist dollars for residents, and game and fish for sportsmen.

There is, of course, a diversity of cultural approaches to resource use. An Alpine cattle herdsman will use and preserve the environment for different reasons than will a Quechuan potato grower of the Andes--though neither individual will likely do irreparable environmental damage to since both rely heavily on their physical surroundings for their immediate sustenance. Before contact with the Europeans, the Cherokees of the southern mountains practiced a land tenure system that gave all members of the community relatively equal access to the available natural resources. As Douglas Hurt describes it, "North American Indians usually did not think of private property as an absolute right or consider land as a commodity that could be bought, sold, or permanently alienated in some fashion....The community owned the uncultivated land, while the individual created a control or use claim by

cultivating a specific field or plot or land." The practice of communal property rights by the Cherokee not only helped the community maintain a more harmonious and egalitarian social order, it also helped them to preserve the ecological integrity of the local environment.⁶⁰

Appalachia, Environment, Culture

In southern Appalachia, the relationship between culture and environment has long been an enigmatic one. The Appalachian region, as shown in the previous chapter, has been characterized by either its mountainous geography or the ethnic heritage supposedly shared by the region's inhabitants. Attempts to find environmental influences on southern Appalachian culture have generally resulted in a crude geographic determinism in which the "isolation" or "severity" of the mountains is said to be the fundamental cause of the "primitive" or "frontier-like" behavior of the mountain people.

⁶⁰Douglas R. Hurt, Indian Agriculture in America (Lawrence, KS: University Press of Kansas, 1987), 74. In communal property, "the natural resource is held by an identifiable community of users who can exclude others and regulate use." The continued practice of communal property regimes throughout the modern world calls into question Garret Hardin's "tragedy of the commons" thesis, which unfortunately, has convinced most of the modern world that communal environmental management is not socially possible. F. Berkes, D. Feeney, B. J. McCay, J.M. Acheson, "The Benefits of the Commons," Nature 340 (13 July 1989), 91-93.

Ellen Churchill Semple, for example, writing at the turn of the century, argued that cultural persistence in eastern Kentucky was a direct result of the social isolation created by the rugged mountain environment. Writing three decades after Semple, J. Wesley Hatcher argues that it was not so much altitude as topographic relief that determined the cultural conditions of "Appalachian America."⁶¹ Hatcher gave more agency to specific soil types and physical land forms, which, he argued, varied greatly from place to place. Hatcher believes that residents of the region belonged to one of three social classes and ranked each class according to the topographic characteristics of the local environment.

The first class is found, writes Hatcher, in "the valleys of the creeks and rivers, where the soil is richest, exposure to the sun is fullest, vegetation rich, water supply abundant and sweet, and lines of communication relatively easy and many." The second class, Hatcher believes, are "pushed up the streams where the valleys are narrower, the hills and mountains are higher and steeper, the soil is poorer and thinner." The third group, are "shunted to the starvation points, where slopes are steepest, soil is poorest and thinnest, exposure to sun least favorable, water supply worst, easy accessibility impossible." It is this third group, he

⁶¹J. Wesley Hatcher, "Appalachian America," in W.T. Couch, Culture in the South (Chapel Hill, NC: The University of North Carolina Press, 1935), 374-402.

says, that most people think of when they think of mountaineers.⁶²

Hatcher does acknowledge important class distinctions present in the mountain region, but he falls short of demonstrating how the cultural activities of the area are affected by environmental factors. A closer look reveals that he does so only to prove the cultural superiority of one class over another. He maintains, for example, that "the more vigorous and alert [mountaineers] manage to get possession of the vantage points, while the less highly endowed were shunted off to the less desirable locations." Hatcher is really only telling us that the "genetic characteristics" or "social standing" of the mountain residents determine habitation patterns in the mountains.⁶³

To correct the environmental determinism of Semple, Hatcher, and others and to still explore the impact of the environment on Appalachian regional culture, several things must be done simultaneously. First, consideration must be given to the social development of all three terrain types representative of the Appalachian landscape. By critically comparing the development of the Ridge and Valley, Blue Ridge, and Cumberland Plateau provinces, a more complete picture can be obtained of the variety of cultural practices that prevailed in the region throughout its history. Far too many

⁶²Hatcher, "Appalachian American," 382, 386, 387.

⁶³Ibid., 382.

scholars continue to make generalizations about the entire Appalachian region based on what are more correctly studies of Appalachian subregions, or in some cases, individual communities within subregions. Second, comparisons should be made between cultural practices found in the southern mountains and those found outside the region, in other rural areas of the South. A few scholars are just beginning to recognize--and admit--that mountain culture historically shares much in common with rural culture elsewhere. If cultural practices are truly unique to the region, they should not readily occur outside the southern Appalachians.

Today, discussions concerning the origins and subsequent diffusion of culture in the southern mountains focus on ethnic, and not environmental, explanations. While there is significant disagreement on which ethnic group holds the key to the origins of frontier culture, most scholars argue that Appalachian subsistence techniques have their social and cultural roots in the Old World. In most of these discussions, the role of ecology in the development of Appalachian culture is de-emphasized or broached only to prove the adaptive superiority of one ethnic group or another. That nature influenced culture in the southern Appalachian mountains should be a historical given. The real task before us, then, is to discover the nature of the relationship.

The execution of the study requires knowledge from a variety of academic disciplines. In order to ascertain the

role that nature played in the social and cultural history of the region, one must become versed in plant and animal ecology, ethnobotany, anthropology, natural history, and physical geography. This seems fitting, since the science of ecology tells us that our world is comprised of more than isolated, unrelated parts. By analogy, an environmental social history makes use of different kinds of scholarly works in order to tell a story larger than is possible from the approach of a solitary discipline. Because the research process may take one afield from mainstream sociology, does not mean, however, that the result is not sociological in scope or focus. By uncovering relationships between humans and the natural environment they inhabit, the ecological approach merely reveals that human behavior is influenced by forces other than social ones.

To fully explicate the origins, diffusion, and persistence of culture in the Appalachian region, we must journey upon the land itself. We must cross its river bottoms, climb its mountain peaks, walk its high plateaus, dig into its ancient soil. We must hunt and fish with its indigenous peoples and settle and clear a virgin forest with immigrant pioneers. We begin our journey by examining the southern mountains as they were in 1500. The sixteenth century is an unknown Appalachia: a time when flourishing Mississippian chiefdoms dominated the mountain landscape.

Chapter Three

MISSISSIPPIA, 1500

In Appalachia, there are many walnuts, plums, mulberries and grapes. The Indians sow and harvest the maize, each one cultivating his own. The fruits are common to all, for they grow very abundantly in the open fields, without it being necessary to plant or cultivate them. Where there be mountains, there be chestnuts.

--The Gentleman of Elvas, 1540, True Relation of Hardships Suffered by Hernando DeSoto¹

When Spanish conquistador Hernando De Soto and his army of men first arrived in the Appalachian mountains in the spring of 1540, they saw what would to us be an unimaginable landscape. When crossing the mountains and valleys of North Carolina and Tennessee they saw a lush semi-tropical environment of open woodland meadows, dense impenetrable canebrakes, and vast climax forests. Upon first entering the Blue Ridge they encountered huge stands of American chestnut trees, a species that often comprised more than half of the mountain forest. In noting the abundance of the chestnuts there, a member of the De Soto expedition, "The Gentleman of Elvas," provided the first recorded reference to the tree.

¹Florida is the actual term used by the Spanish to refer to the entire southeastern United States, which, of course, includes the area DeSoto and his men explored in North Carolina, Tennessee, and Georgia.

"Where there be mountains," wrote Elvas, "there be chestnuts."²

At the time De Soto first set foot in the region, the American chestnut was the dominant species in the Appalachian forest. The chestnut reached its maximum size here, averaging four to six feet in diameter and standing more than ninety feet in height. A considerable number of specimens measured ten feet in diameter with heights of more than 100 feet. In 1897 Gifford Pinchot still documented individual trees thirteen feet across with crowns spreading more than 120 feet over the forest floor.³ In early summer the budding trees displayed long catkins of small fragrant flowers, making entire mountainsides a sea of white blossoms.⁴

Like the other famous Spanish conquistadors--Pizarro, Cortez, de Leon--De Soto was sent to explore the New World for treasure and to conquer the native people. In South and Central America and what is today the American southwest, the

²James Alexander Robertson, editor, True Relation of the Hardships Suffered by Governor Hernando De Soto During the Discovery of the Province of Florida...Now Newly Set Forth by a Gentleman of Elvas, 2 vols. (Deland, FL: Florida State Historical Society, 1933), II, 311 (hereafter cited as Elvas, True Relation).

³David Wheeler, "Where There Be Mountains, There be Chestnuts," Katuah Journal 21 (Fall 1988), 3.

⁴Harriet Simpson Arnow, Flowering of the Cumberland (Lexington, KY: The University Press of Kentucky, 1984), 265; Wheeler, "Where There be Chestnuts," 3. A chestnut tree grew behind the Thoreau house at Walden's Pond. "When in flower, said Thoreau, it "scented the whole neighborhood." Thoreau, Walden and Other Writings (New York: Bantam Books, 1962), 281.

conquistadors established a system of encomienda, which forced Indian villages to pay tribute to them in exchange for "military protection" and the "right" to practice Christianity. In 1540 Florida was the far reaches of the Spanish empire, and the Appalachian mountains, the far reaches of Florida. Gold and silver and not large trees and mountains were the treasure De Soto ultimately sought. The area De Soto explored would never be conquered by the Spanish, yet he and his followers would change the environment and the Mississippian people forever.

De Soto and his men, including the "Gentlemen of Elvas," provided documentation of the life of the Mississippian Indians and gave us a written record of the landscape as it appeared in 1500. The De Soto expedition entered the region from the east, arriving in western North Carolina during the month of May. After staying with various Mississippian tribes in the Blue Ridge, the Spanish entrada marched westward into the Tennessee Valley before entering the town of Chiaha on June 5. When passing over the Blue Ridge near Asheville, the Gentleman of Elvas commented that they were "crossing very rough and lofty mountains."⁵ From Chiaha, located on the French Broad river near present day Dandridge, Tennessee, the party traveled southward. De Soto took prisoner Indians who refused to pay tribute, or if none could be captured, "destroyed their large maize fields." In July he arrived in

⁵Robertson, True Relation, II: 100.

northwest Georgia, at Coosa, one of the largest Mississippian chiefdoms in the entire region. Staying more than a month, De Soto and his army left Coosa in August for the Mississippi River, thus ending his four month stay in southern Appalachia.

First Nature

When visited by De Soto, the Blue Ridge mountains contained virgin stands of American chestnut, Red oak, Chestnut oak, Tuliptrees, and Eastern hemlock; and in the higher elevations above 4,000 ft, mature stands of Fraser fir and Red spruce. Sugar maples, many six feet in diameter, were plentiful in the rich mountain coves. Because of the great range of altitude and the variety of microclimates in the Blue Ridge, an enormous variety of trees and herbaceous plants were found in the mountain environment. River cane (Arundinaria gigantea), a bamboo-like reed, was extremely abundant along lower altitude river bottoms, giving place names to dozens of creeks, branches, and localities in the Blue Ridge, including Cane Brake, a eighteenth century settlement in Transylvania, North Carolina.⁶ Writing in 1859, John Logan still reported that river cane in the South Carolina upcountry was found by

⁶T.W. Reynolds counted as many as sixty "reedy" or "caney" place names in north Georgia, West Virginia, Tennessee, and the Carolinas. About half of those "caney places," he reported, were in the state of North Carolina. Reynolds, The Southern Appalachian Region, 2 vol. (Highlands, NC: T.W. Reynolds, 1966), 2: 67-68.

the earliest settlers, growing "luxuriantly on the tops of the highest hills."⁷ Cane growth, he added, soon became the actual standard by which settlers valued upcountry crop lands: "If it grew no higher than five feet, or the height of a man's head, the soil was deemed ordinary; but a growth of twenty or thirty feet indicated the highest degree of fertility."⁸

Cranberries, like river cane, were common at the time De Soto visited the region. Cranberries were found in high altitude bogs created during the Ice Age, when sea levels rose and mountain valleys filled with rich soil deposits. Later, as glaciers moved southward (they never actually reached southern Appalachia) cranberries moved ahead of them, flourishing in the great beds of sphagnum moss still found in isolated areas of southwest Virginia, east Tennessee, and western North Carolina. Prior to European contact, Shady Valley, in Johnson

⁷Logan, A History of the Upper Country of South Carolina from the Earliest Period to the Close of the War of Independence (Charleston, SC: S.G. Courtney & Company, 1859), 9. The reader should be reminded that during the colonial era, the South Carolina upcountry included portions of what today is north Georgia, western North Carolina, and southeast Tennessee.

⁸Ibid., 10-11. Cane readily sprouts from protected underground shoots and eventually matures and declines if it is not continually cut or burned. Because cane benefitted from periodic burning of bottomlands by the Indians, cane growth in southern Appalachia reached a climax during the decades prior to European settlement. Afterwards, agriculture and cattle herding eliminated many of the expansive cane brakes of the region. For a discussion of its adaptation to burning by the Indians see, for example, Brad Alan Bays, "The Historical Geography of Cattle Herding Among the Cherokee Indians, 1761-1861" (Master's thesis, University of Tennessee, Knoxville, Tennessee, 1991), 42-43; Silver, A New Face on the Countryside, 22, 179-80.

County, Tennessee, contained as much as 10,000 acres of boreal cranberry bogs. Today, less than one-third of an acre of Shady Valley remains suitable habitat for native cranberries.⁹

"Balds," another important ecological feature of the Blue Ridge, were no doubt present at the time of first European contact, although their origin and history has been the subject of considerable controversy and debate among ecologists and mountain historians.¹⁰ There are two kinds of mountain balds: heath balds and grassy balds. Heath balds, the more common of the two, are treeless areas on high altitude summits where a variety of heath shrubs, such as rhododendron and mountain laurel, grow in dense profusion. Grassy balds, the other bald type, are open mountaintop fields covered with tundra-like oat-grasses. Although in this

⁹Fred Brown, "Bogs of East Tennessee," The Knoxville News-Sentinel (November 22, 1992), E1; Paul Delcourt and Hazel Delcourt, "Late-Quaternary Paleoecology of the Appalachian Ranges Natural Region," in H.R. Deselm, ed., Potential Natural Landmarks of the Appalachian Ranges Natural Region Ecological Report (United States Department of the Interior, National Park Service, University of Tennessee, September 1984), 25-30, 346-349; William Cole, Tales from a Country Ledger (Acton, MA: Tapestry, MA: 1990), 101-102.

¹⁰For the various theories concerning bald history and formation, particularly grassy balds, see William Gates, Observations on the Possible Origin of the Balds of the Southern Appalachians (Baton Rouge, LA: Louisiana State University Press, 1941); Alan F. Mark, "The Ecology of the Southern Appalachian Grass Balds," Ecological Monographs 28 (1958), 293-336. U.C. Gilbert, Jr., "Vegetation of the Grassy Balds of the Great Smoky Mountains National Park," (Master's thesis, University of Tennessee, Knoxville, 1954); Mary Ellen Bruhn, "Vegetational Succession on Three Grassy Balds of the Great Smoky Mountains," (Master's thesis, University of Tennessee, Knoxville, 1964).

century more than 400 grassy balds have been identified in the southern Appalachian region, it is entirely possible that fewer than a dozen were present in the mountains prior to European settlement.¹¹

One argument for the origin of grassy balds states that they are not natural ecological features, but the result of their extended use as pasture lands. In truth, both the Cherokees and early mountain settlers grazed cattle on these high altitude pastures in the nineteenth century. An opposing argument is that cattle were grazed on these clearings because the balds were already present, and that the mountaineers, "frugal as they were, would not have taken the trouble to make such an extended system of pastures."¹² Although the use and history of heath and grassy balds will be explored in greater depth in chapter six, there is convincing evidence that the majority of the southern Appalachian balds are largely the result of human interaction with the mountaintop environment.

Because a great deal of silting occurred in the Tennessee River valley, topsoil levels remained at a much greater depth than in the Blue Ridge, greatly improving agricultural capacity. For these and other related factors, the rich

¹¹Phil Gersmehl, "Factors Leading to Mountaintop Grazing in the Southern Appalachians," Southeastern Geographer 10 (April 1970), 72, n31; Ann Sutton and Myron Sutton, Eastern Forests (New York, NY: Alfred A. Knopf, 1985), 52-53.

¹²W.H. Camp, "The Grass Balds of the Great Smoky Mountains of Tennessee and North Carolina," Ohio Journal of Science 31 (1931), 158.

alluvial soils of the Ridge and Valley were the most fertile in all of southern Appalachia. It is these soils that grew the vast quantities of corn and beans that supported the large Mississippian populations. Even prior to fall harvest, the head cacique of the village of Chiaha in east Tennessee presented to De Soto and his men with twenty granaries "full of choice maize." Further south, at the chiefdom of Coosa, Elvas reported seeing great quantities of "maize and beans" among "planted fields which reached from one town to the other."¹³ These fertile soils later made possible the rapid settlement of the region during the eighteenth and nineteenth centuries.¹⁴ John William Gerard DeBrahm, who visited the area in 1756, wrote that its valleys of this province "are of the richest soil, equal to manure itself, impossible in appearance to ever wear out..."¹⁵

The Tennessee River of the sixteenth century was vastly different from the one we know today. Great quantities of fish

¹³Elvas, True Relation, 104, 116.

¹⁴For the influence of river bottom soils on Mississippian settlement patterns, see Bruce Smith, "Variation in Mississippian Settlement Patterns," in Bruce Smith, ed., Mississippian Settlement Patterns (New York: Academic Press, 1978), 483-84; Hudson, The Juan Pardo Expeditions: Exploration of the Carolinas and Tennessee, 1566-1568 (Washington, DC: Smithsonian Institution Press, 1990), 53-54. For the relationship of pioneer land use and soil types, see John Fraser Hart, "Land Rotation in Appalachia," Geographical Review 67 (1977), 148-166.

¹⁵Samuel Cole Williams, Early Travels in the Tennessee Country, 1540-1800 (Johnson City, TN: The Watauga Press, 1928), 193.

swam unimpeded in its waters and a countless variety of waterbirds came to its shores. Ducks, geese and even whistling swans--whose wings were once kept by the Cherokee Indians as a symbol of peace--could be seen there in large numbers.¹⁶ At that time, prior to the building of TVA dams, the average annual depth of the river was a mere 1.3 feet in the Ridge and Valley section of the river. During high-water season, from January to June, the average depth rose to only three feet, which made transportation on the river seasonal at best. In these shallow waters swam the American freshwater eel, paddlefish, and American sturgeon. Hundreds of different species of freshwater mussels clung to the river bottom, each acting as a living filter of silt and debris.¹⁷

The forest of the Ridge and Valley prior to European contact was composed largely of hardwood species, with chestnut, chestnut-oak, and red oak dominant on the ridges and white oak common in the lower valleys. In the southern end of the Ridge and Valley region, hardwoods forest often mixed with

¹⁶Swan Pond, Swan Pond Creek (Knox County, Tennessee), and Swan Creek (Lincoln and Lewis County, Kentucky) derive their names from this once resident waterfowl species.

¹⁷Eels and sturgeons were once common in the headwaters of the Tennessee River as were Paddlefish or "shovel-billed cats," as they are locally called. The presence of dams on the river block these and other fish from swimming to important spawning and feeding grounds. Dams also increased siltation, which further damaged shoaling grounds and destroyed habitat for numerous species of freshwater mussels. For the loss of shellfish and shellfish habitat in southern Appalachia, see William Stolzenburg, "The Mussels' Message," Nature Conservancy (November/December 1992), 17-23.

pine forests and, in drier areas, were overgrown with a dense understory of various heath shrubs.¹⁸ Along streams, swamp forests of willow or water oak were common as were marshes and miry sloughs. Stands of mature American sycamore were found on many river and creek bottoms, serving as habitat for the Carolina Parakeet, a now extinct species that flew in large flocks among southern Appalachia swamp forests.¹⁹

The most noticeable difference in the Ridge and Valley landscape before European intervention would be the thick and imposing canebrakes that covered much of the valley floor. These vast canebrakes gradually disappeared as the area was settled during the eighteenth and nineteenth centuries. An early chronicler of antebellum east Tennessee, J.W.M. Breazeale, recognized the change in the river valley landscape as early as 1842, writing that "the rich and fertile valleys where we now behold widespread farms, flowery gardens, verdant meadows and splendid mansions, were then [100 years ago] covered with tall and rank cane." Botanist Andre Michaux, who traveled through the province in 1796, commented that cane "grows abundantly in many places which have not been settled..." In the rich lands bordering on the rivers and

¹⁸Delcourt and Delcourt, "Late-Quaternary Paleoecology of the Appalachian Ranges," 65-66; E. Lucy Braun, Deciduous Forests of Eastern North America (New York: Hafner Press, 1974); Raitz and Ulack, Appalachia, A Regional Geography, 71.

¹⁹Mikko Saiku, "The Extinction of the Carolina Parakeet," Environmental History Review 14 (Fall 1990), 3; Van Doren, ed., Travels of William Bartram, 248; Arnow, Flowering of the Cumberland, 23.

between the mountains, he saw individual plants "as much as two and even three inches in diameter," with heights reaching "sometimes 25 to 30 feet." Along the banks of the Tennessee River, Major John Norton wrote in 1816 that he had found "extensive cane brakes; the canes of a larger size than any I had hitherto seen..."²⁰

The Cumberland Plateau, like the Ridge and Valley, has undergone considerable change since 1500. In this century, coal mining alone has destroyed more than 200,000 acres of Plateau terrain.²¹ If De Soto had traversed the area in 1540, he would have found a mixed mesophytic forest of large mature hardwoods: chestnut, beech, tuliptrees, hickory, oak, blackgum and sugar maples. These trees, growing largely in climax associations, often grew to diameters of six feet or more. Other valuable hardwoods such as walnut and cherry, dominated the forest until they became the first species taken by

²⁰ J.W.M. Breazeale, Life As it Is; or Matters and Things in General (Knoxville, TN: James Williams, 1842), 7; Andre Michaux, Early Western Travels, 94-95; Carl Klink and James Talman, eds., The Journal of Major John Norton, 1816, Publications of the Champlain Society 46 (Toronto: The Champlain Society, 1970), 33-38.

²¹This figure was extrapolated from Office of Surface Mining data, compiled from individual state offices. In most states, data is incomplete for mining activities prior to 1970; in others, actual land disturbance is not recorded. It would, however, be safe to say that at least 200,000 thousand acres of land was strip-mined in the southern Appalachia region.

frontier timbermen.²² In 1797, "on the hills, at the heads of rivers," Gilbert Imlay reported red cedars "four feet in diameter, and forty feet clear of limbs." The forests of the Plateau did have open clearings, "glades of rich land without timber" but these, adds Imlay, "are not frequent nor large." In the meadows grew wild-rye, buffalo grass, and pea vine.²³ The mature timber and small clearings of the Plateau provided an ideal habitat for both large and small mammals. In 1500, grey wolves, black bears, American elk, mountain lions, grey foxes, deer, beaver, and fox squirrels were numerous on the Cumberland Plateau.

River cane also grew on river and creek bottoms growing in dense canebrakes over the entire area. Pioneer residents of Kentucky reported seeing cane growing ten to twelve feet high--"as thick as hemp." The frontiersmen Daniel Boone saw Woods Buffalo, "more frequent than I have ever seen cattle in the settlements," browsing on the "leaves of cane." The evergreen cane was critical to the settlement of the region as it supplied the necessary food and shelter to wintering cattle and hogs, both important sources of pioneer livelihood.²⁴ In

²²Arnow, Flowering of the Cumberland, 297; Robert S. Lambert, "Logging the Great Smokies, 1880-1930," Tennessee Historical Quarterly (December 1961), 350-353; Gilbert Imlay, A Topographical Description of the Western Territory (London: 1797), 41n.

²³Ibid, 41n.

²⁴Everett Dick, The Dixie Frontier: A Social History of the Southern Frontier from the First Transmontane Beginnings to the Civil War (1948; reprint, New York: Capricorn Books,

fact, when European settlers spoke of Kentucky, they literally meant "the land of cane," since there was little or no bluegrass (Poa pratensis) in Kentucky until late in the eighteenth century. The pioneer word for Kentucky, "Kain-tuck," is, in reality, a mistaken, if not graphic folk etymology of the Shawnee word "Kain-tuck-ee," which literally refers to "the meadows," a small uninhabited hunting area in central Kentucky.²⁵ The importance and once abundance of cane on the Plateau is reflected in the place names of the region: Caney Fork, Cane Hollow, Caney Ridge, and Cane Creek.

Since at least the sixteenth century, social and cultural forces have been steadily changing the physical environment of southern Appalachia. To fully understand the nature and extent of this change, it is also necessary to examine the various social groups that have inhabited the region since the pre-Columbian era. This exploration begins with the first people to live among the mountains in permanent organized settlements, the Mississippian Indians.

1964), 4-5.; Bruce, Daniel Boone, 96-100.

²⁵Firestone, Bubbling Waters (New York: Robert McBride, 1939), 79-80; Arnow Seedtime on the Cumberland (New York: Macmillan, 1960), 20, 51, 98, 168, 247; idem, Flowering of the Cumberland (New York: MacMillan, 1963; reprint, Lexington, KY: University of Kentucky Press, 1984), 214-215, 241; Samuel Cole Williams, ed., Early Travels in the Tennessee Country, 505. For a more detailed ecological description of early Kentucky, along with a discussion of the various theories surrounding the introduction of bluegrass in the state, see R. Gerald Alvey, Kentucky Bluegrass Country (Jackson, MS: University Press of Mississippi, 1992), 4-5, 11-13.

The Mississippians

Mississippian culture arose sometime around A.D. 700 along the middle course of the Mississippi River and eventually spread eastward, arriving in southern Appalachia sometime around A.D. 900. Mississippian civilization emerged in southern Appalachia at the same time that Native Americans in what anthropologists call the Late Woodland culture began to adopt new subsistence technologies, such as the use of shell-tempered pottery. Mississippian Indians depended on the cultivation of maize and other agricultural crops, and nearly all built large platform mounds for use as ceremonial centers. The heart of Mississippian civilization was Cahokia, the largest and most densely populated city in North America during the pre-Columbian era. At the height of its development, Cahokia supported a population of 40,000 people, and covered nearly six square miles on the east bank of the Mississippi River across from what is today downtown St. Louis, Missouri.²⁶

Mississippian culture did not arrive in the Appalachian region overnight but developed over the course of several

²⁶Melvin Fowler, Cahokia: Ancient Capital of the Midwest (Addison-Wesley Modules in Anthropology 48, 1974), 25; Hudson, The Southeastern Indians (Knoxville, TN: University of Tennessee Press, 1976), 77; Maureen Korp, The Sacred Geography of the American Mound Builders (Lewiston, NY: The Edwin Mellen Press, 1990), 4, 27-28; George Milner, "The Late Prehistoric Cahokia Cultural System of the Mississippi River Valley: Foundations, Florescence, and Fragmentation." Journal of World Prehistory 4 (1990), 1-43.

centuries. Trade with Mississippian townships to the west and south and actual migration of these people to the area, probably influenced the development of Mississippian culture in Appalachia. Exactly what caused Mississippian culture to advance in the region is not known, but the general consensus is that it involved both migration into the region and the stimulation of already existing populations to adopt new cultural and social forms.²⁷

From 900 to 1200 A.D., Mississippian civilization in southern Appalachia developed into a network of state-like chiefdoms that reigned over most of the southern mountain region. What is generally called the Late Mississippian period began around A.D. 1200, with the introduction of eastern flint corn, a high yielding variety that replaced the lower yielding tropical varieties used by the Indians of the Late Woodland and Early Mississippian periods. The cultivation of the common bean (Phaseolus vulgaris) also appeared in southern Appalachia during this period, which further increased Mississippian dependence on the cultivation of

²⁷Hudson, The Pardo Expeditions, 52-60; Bruce Smith, "Research on the Origins of Mississippian Chiefdoms in Eastern North America," in Bruce Smith, ed., The Mississippian Emergence (Washington, D.C.: Smithsonian Institution Press, 1990), 1-7; Gerald F. Schroedl, C. Clifford Boyd, Jr., and R.P. Stephen Davis, Jr., "Explaining Mississippian Origins in East Tennessee," in Bruce Smith, editor, The Mississippian Emergence (Washington, D.C.: Smithsonian Institution Press, 1990), 175-195.

domesticated crops.²⁸ According to anthropologist Richard Helmkamp, it was the introduction of these new crops, along with rapidly increasing Indian populations, that forced the development of centralized, hierarchical forms of political authority and power that is characteristic of Mississippian society during this later period.²⁹ By 1300, Mississippian culture was at its apex in the southern Appalachians, reaching levels of ceremony and social and religious organization parallel to those found in Pre-Columbian Mesoamerica.

At the time of European contact, the Mississippians were well established along the region's major rivers and tributaries. Large populations also lived in the Blue Ridge mountains, in the culture area Alfred Kroeber designated the "Appalachian Summit" region.³⁰ Mississippians also expanded

²⁸Jefferson Chapman and Andrea Shea, "The Archaeobotanical Record: Early Archaic Period to Contact in the Lower Little Tennessee River Valley," Tennessee Anthropologist 6 (Spring 1981), 79; Hudson, Juan Pardo Expedition, 53. In east Tennessee, it has been estimated that as much as 86% of all plants consumed by the Late Mississippians were domesticated varieties. See Patricia Cridlebaugh, American Indian and Euro-American Impact Upon Holocene Vegetation in the Lower Little Tennessee River Valley, East Tennessee." (Ph.D. dissertation, Department of Anthropology, University of Tennessee, 1984), 48.

²⁹Richard Helkamp, "Biosocial Organization and Change in East Tennessee, Late Woodland and Mississippian" (Ph.D. diss., Department of Anthropology, Purdue University, LaFayette, Indiana, 1985), 158.

³⁰A. I. Kroeber, Cultural and Natural Areas of Native North America (Berkeley, CA: University of California Press, 1963), 95. For the distribution of Mississippian settlements in the Blue Ridge, see Roy Dickens, "Mississippian Settlement Patterns in the Appalachian Summit Area: The Pisgah and Qualla Phases," in Bruce Smith, editor, Mississippian Settlement

onto the Cumberland Plateau, along the broad valleys of the Cumberland, Big Sandy and Kanawha Rivers.³¹ The largest populations of Mississippians, however, were found along the slower moving streams draining the southernmost river valleys of the region. The Etowah township, a major Mississippian village located on the Etowah River near present day Cartersville, Georgia, maintained a population of more than 4,000 residents.³² Most Mississippian settlements in the mountain region were smaller, containing somewhere between 250 and 1000 individuals at their peak of population. Although it is difficult to precisely calculate Mississippian population for the southern Appalachians prior to European contact, it is quite possible no fewer than 100,000 residents lived within the boundaries of the mountain region.³³

Patterns (New York: Academic Press, 1978), 115-139.

³¹Purrington, "The Status and Future of Archaeology and Native American Studies in the Southern Appalachians," Appalachian Journal 5 (Autumn 1977), 47-48; T. M. N. Lewis and Madeline Kneberg, Tribes that Slumber (Knoxville, TN: University of Tennessee Press, 1958), 79-80.

³²Lewis H. Larson, "Functional Consideration of Warfare in the Southeast During the Mississippian Period," American Antiquity 37 (1972), 383-92; Marvin Smith, Archaeology of Aboriginal Culture Change in the Interior Southeast (Gainesville, FL: University Presses of Florida, 1987), 70.

³³This number is considerably lower than that projected by Dobyns, who calculates a population density of 2.53 individuals per square kilometer for the southeastern United States. Using his calculations--which are based largely on the availability of native flora and fauna in the coastal regions of Florida and Georgia--the population of southern Appalachia could be as high as 275,000 (habitable area=120,000 km² or 46,000 square miles). The latest historical and archaeological evidence tell us that large expanses of the southern mountains

Despite the fact that the Native peoples of southern Appalachia had a great deal in common during the sixteenth century, they were not altogether culturally homogenous. In 1300, archaeologists tell us, the people who lived on the upper Tennessee and French Broad rivers, possessed a culture formally known as "Dallas." Those Mississippians living in the Blue Ridge Mountains exhibited a culture known as "Pisgah," and the Ridge and Valley areas of southeast Tennessee and extreme north Georgia was the home of "Mouse Creek" culture, named for the watershed inhabited by these people at approximately the same period. A culture known as "Lamar" existed in northwest Georgia and northwest Alabama after A.D. 1400, and occupying the northern reaches of the Cumberland Plateau in Kentucky and West Virginia was the Fort Ancient peoples. According to archaeologists, what largely distinguishes these cultures is the type of pottery made by

remained uninhabited during the fifteenth and sixteenth centuries. And although food availability in the region was far greater than we could imagine today, upland habitats were not as productive as the coastal regions of Dobyns' study. Nevertheless, the 100,000 figure is high for most scholars of the sixteenth century Southeast. Marvin Smith estimates a population of only 6,000 for the Coosa River basin in northwest Georgia, a figure based on sound archeological evidence. Russell Thornton estimates Cherokee population prior to 1650 at 30,000, a figure that does takes into account population loss by disease. Ethnohistorical and archeological evidence amassed in the last decade would most likely place the pre-Columbian population below 100,000. Henry Dobyns, Their Number Become Thinned: Native American Population Dynamics in Eastern North America (Knoxville, TN: University of Tennessee Press, 1983), 42; Smith, Archaeology of Aboriginal Culture Change in the Interior Southeast, 70, Table 4.4; Russell Thornton, The Cherokees: A Population History (Lincoln, NB: University of Nebraska Press 1990), 56.

each group, a distinction based on a relatively minor detail of material culture. We do, however, have evidence that these groups also spoke different languages and varied somewhat in their degree of social organization.³⁴ Despite these differences, all culture groups in the region established the basic social and economic pattern characteristic of Mississippian society.

The Mississippians of southern Appalachia located their settlements on the floodplains of "meander-belt" river bottoms. Villages were established at these sites not only because of the availability of easily tilled alluvial soil, but also because of their proximity to an entire range of plant and animal life. These meander-belt river bottoms, as Eugene Odum has noted, were highly productive ecological niches. Immersed within the floodplain ecosystem, Mississippians were able to utilize a variety of protein-rich fish and waterfowl species.³⁵ The proximity to water also provided a route for dugout canoes, which they used to transport food and other goods to distant villages up and downstream. In sum, the environmental niche of the river floodplain provided convenient access to three of the Mississippian's most important natural resources: river cane,

³⁴Hudson, Juan Pardo Expeditions, 52-73

³⁵Odum, Fundamentals of Ecology (Philadelphia, PA: Saunders, 1975), 18; Bruce Smith, "Variation in Mississippian Settlement Patterns," in Mississippian Settlement Patterns, editor, Bruce D. Smith (New York, NY: Academic Press, 1978), 480-488.

used extensively for dwelling construction, tools, and basketry; water, used for ceremonial bathing, transportation, cooking, and drinking; and rich tillable soil, the medium in which they grew their three most important crops--maize, beans, and squash.³⁶

What probably impressed De Soto and his men the most about the Mississippian settlements was their large earthen platform mounds. Centrally located above the town's main plaza, these earthworks often exceeded thirty feet in height, even though most of the larger ones were built in successive stages, over a period of two or three centuries. The largest mound in the Appalachian south is 60 feet in height and located at Etowah, near Cartersville, Georgia. The Indians directed almost all their public activity toward the structure built atop these mounds, a sacred temple that also served as the residence of the principle ruler. The dimensions of the larger temples averaged 35 X 55 feet, and could, according to archaeologists, accommodate up to three hundred individuals without excessive crowding.³⁷ In front of the chiefly

³⁶Hudson, The Juan Pardo Expeditions, 53-59; Lewis and Kneberg, Tribes that Slumber, 80-89; Smith, "Variation in Mississippian Settlement Pattern," 480-488; George Stuart, "Etowah: A Southeast Village in 1491," National Geographic 180 (October 1991), 56-66.

³⁷Smith, Archaeology of Aboriginal Change, 89-94; Lewis and Kneberg, Tribes that Slumber, 85; Peter Nabokov, Native American Architecture, 93-99; Korp, The Sacred Geography of the American Mound Builders (Lewiston, NY: The Edwin Mellen Press, 1990), 26-27; Chester B. DePratter, Late Prehistoric Chiefdoms in the Southeastern United States (New York: Garland Publishing Company, 1991), 97-98, Table 6.

residence, earthen stairs led to a small platform outside the main entrance, where the principle ruler, who descended "from the solar deity via a line of past rulers," addressed the village or presided over public ceremonies. Because the sun played such an important role in the cosmology of the Mississippians, almost all temple mounds, and the structures atop them, had an eastward orientation toward the rising sun.³⁸

Surrounding the temple in various configurations were the houses of the townspeople, smaller structures carefully crafted using long slender saplings, cane lathing, and hardened tempered clay. Throughout the region, Mississippian craftsmen constructed rectangular or circular dwellings by first placing small saplings, several inches apart, firmly into the ground. They then stabilized this framework by weaving additional poles horizontally across the entire structure. The top half of each saplings was bent inward and woven into the roof of the house. The walls were covered with cane lathing and then covered with a tempered clay made of mud and crushed freshwater clamshells. The roofs were thatched with leaves of cane or covered with bark shingles. This general method of house building--wattle and daub construction--characterized all the villages in the Southeast

³⁸Korp, The Sacred Geography of the American Mound Builders, 26; Hudson, The Juan Pardo Expeditions, 55; Chester B. DePratter, Late Prehistoric and Early Chiefdoms in the Southeastern United States, 57-64.

during the Mississippian period.³⁹

The use of river cane, for both lathing and thatching, was essential to the structural integrity of the homes, providing much needed insulation and added protection from torrential rains. The Gentleman of Elvas, noticed the increasing use of cane (replacing palmetto) as his expedition moved northward away from Florida. In the central Georgia town of Toa, he observed that "The houses of this town are different from those behind. [These] are roofed with cane after the fashion of tiles. They are kept clean; some have their sides so made of clay that they look like tapia [tabby-like adobe]...Throughout the cold country [southern Appalachia] every Indian has a winter house, plastered inside and out, with a very small opening which is closed at dark and a fire being made within, it remains heated like an oven, so that clothing is not needed at night."⁴⁰

Surrounding their homes, the Indians built a high palisade, an imposing fence made of sharpened logs or stakes. The palisades served as obvious defense against potential intruders. The postholes of these palisades, excavated by

³⁹The prevalence of "wattle and daub" construction--more common in tropical and semi-tropical zones--suggests Meso-American influences on Mississippian architecture, an idea that certainly requires closer examination and study. For construction techniques, see Hudson, Southeastern Indians, 213-219; Peter Nabokov, Native American Architecture, 105-108; Lewis and Kneberg, Tribes that Slumber, 83-85; Hudson, The Juan Pardo Expedition, 55-58.

⁴⁰Quotation in Peter Nabokov, Native American Architecture, 93-94.

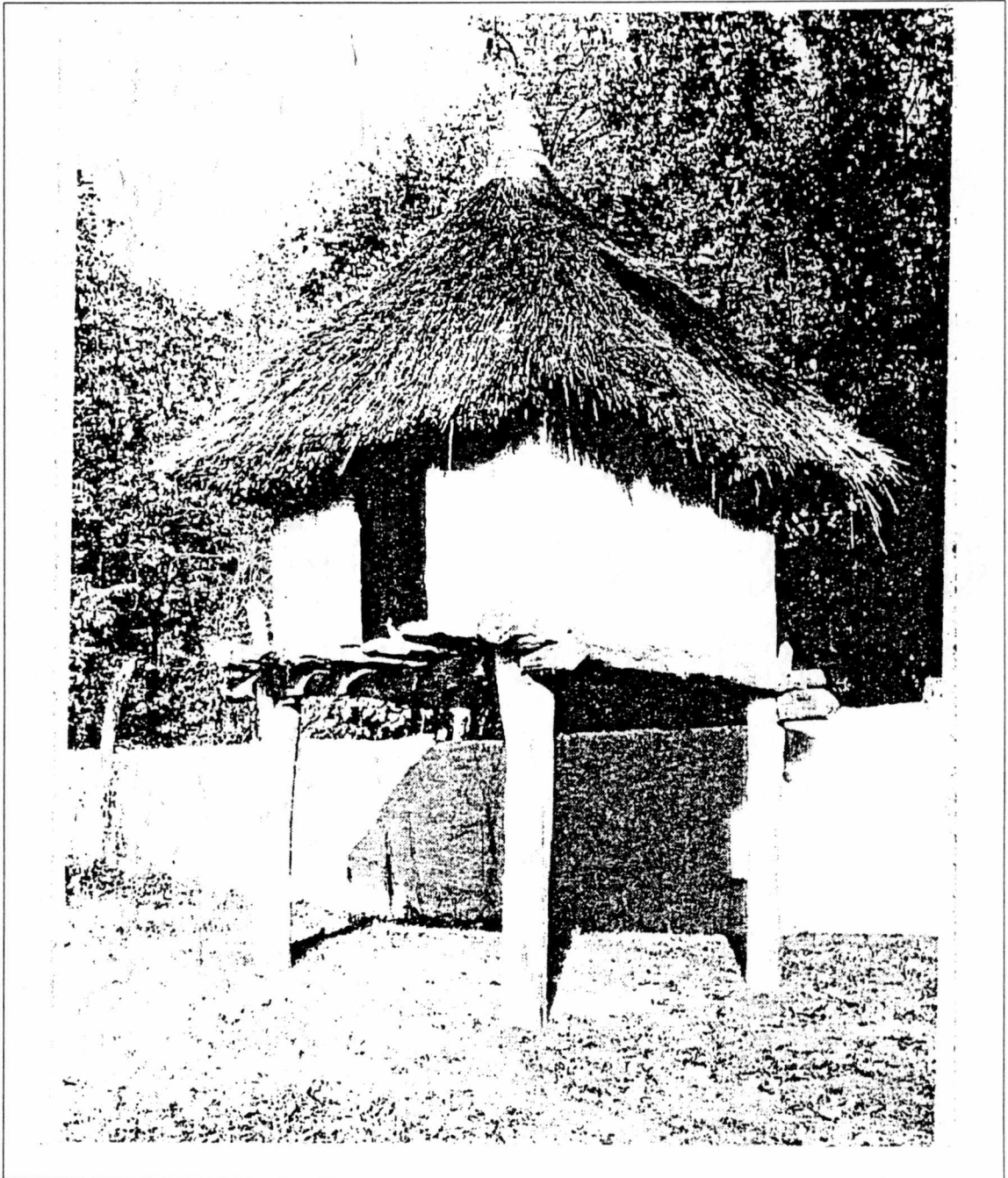


Figure 3.1. Reconstructed Mississippian corncrib.

Source: Charles Hudson, The Juan Pardo Expeditions: Explorations of the Carolinas and Tennessee, 1566-1568 (Washington, D.C.: Smithsonian Institution Press, 1990), 146 (photograph by Hudson, taken at the Chucalissa Mississippian site, Memphis, Tennessee).

archaeologists, outline the size and general layout of each village. The palisade surrounding the large Mississippian town of Etowah stretched for more than a half-mile along the edge of the Etowah river. Most palisades in the southern Appalachians enclosed an area of only about 10 acres, however. Some palisades--like those at Toqua in southeast Tennessee--had rectangular bastions around their entire course.⁴¹

Outside the palisades, Mississippians kept small garden plots and larger fields for growing maize and beans. Granaries, or elevated corn cribs for storing maize and other important staples (Figure 3.1) were located on either side of the palisade. The Gentlemen of Elvas described these corn cribs or "barbacoas," as "a house with wooden sides, like a room raised aloft on four posts, and has a floor of cane."⁴² John Lawson's narrative of his journey through the Carolina backcountry in the spring of 1700, described these type granaries in colorful detail, documenting both their appearance and method of construction:

"They make themselves Cribs after a very curious Manner, wherein they secure their corn from Vermin; which are more frequent in these warm Climates, than Countries more distant from the Sun. These pretty fabricks are commonly supported with eight Feet or Posts, about seven feet high from the Ground, well daub'd within and without upon Laths, with Loom or Clay, which makes them tight, and fit

⁴¹For variation in palisade size and construction, see Smith, Archaeology of Aboriginal Culture Change, 94-97.

⁴²Elvas, True Relation, 52; Hudson, The Juan Pardo Expedition, 110; Nobakov, Native American Architecture, 94.

to keep out the smallest Insect, there being a small Door at the gable end, which is made of the same Composition, and to remov'd at Pleasure, being no bigger, than that a slender Man may creep in at, cementing the Door up with the same Earth, when they take corn out of the Crib, and are going from Home, always finding their Granaries in the same Posture they left them; Theft to each other being altogether unpractis'd, never receiving Spoils but from Foreigners."⁴³

According to the various chroniclers of DeSoto's travels, the largest barbacoas were most often located inside the palisades, near the residence of the ruler, in which they would "bring together the tribute of their people...maize, skins of deer, and blankets of the country."⁴⁴ The existence of these tribute barbacoas probably signifies a highly ranked form of social organization, in which allegiance was paid to one or more chiefs "recognized through deference, payments in the form of tribute or labor, and/or military service."⁴⁵ Juan de la Bandera, the Spanish chronicler of the Juan Pardo Expeditions through Tennessee and the Carolinas in 1566-1568, identified three levels of political authority among the Mississippians. First was the orata, the headman or chief of a single community and, residing there, took the name of that

⁴³Quotation in Hugh T. Lefler, ed., A New Voyage to Carolina (Chapel Hill, NC: University of North Carolina, 1967), 23-24.; Hudson, The Juan Pardo Expedition, 110.

⁴⁴Elvas, True Relation, 52; Hudson, The Juan Pardo Expedition, 110; Nabakov, Native American Architecture, 94.

⁴⁵Hudson, The Pardo Expedition, 54; DePratter, Late Prehistoric Chiefdoms in the Southeastern United States, 105-119.

village. The next position in the social hierarchy was mico, a title, Charles Hudson reminds us, "continued to be used by Muskogean-speaking Indians into the nineteenth century..."⁴⁶ According to Bandera, a mico was a "great lord." Pardo met only three formally proclaimed micos in his travels through Georgia, Tennessee and the Carolinas: Joara Mico, who ruled the town of Joara; Olamico, the chief of Chiaha; and Guatri Mico, a female mico ruling the town of Guatri, which was located along the Yadkin River in the vicinity of Salisbury, North Carolina. The highest rank was grand chief (cacique grand), a title bestowed to only one individual during the Spanish exploration of the region in the sixteenth century, the chief of the northwest Georgia town of Coosa.

By most accounts, Mississippian chiefdoms were organized hierarchically and ruled by a paramount chief located at a regional town center, and lower chiefs or micos located a minor towns and outlying hamlets. Historical evidence suggests that at the turn of the sixteenth century, only three or four chiefdoms maintained political authority over the southern Appalachian region. The grand chief of Coosa controlled the lower Tennessee Valley, although he probably extended his political authority as far north as the town of Chiaha, located at Zimmerman's Island, on the French Broad River near Dandridge, Tennessee. Although his power was

⁴⁶Ibid., 62. See also Joel W. Martin, Sacred Revolt: The Muskogee's Struggle for A New World (Boston, MA: Beacon Press, 1991), 31.

considerably less than the chief at Coosa, the mico of Chiaha controlled much of the upper Tennessee Valley, possibly even towns along the headwaters of the Clinch and Powell Rivers in southwest Virginia.⁴⁷ Xuala (aka Joara) located near Marion, North Carolina, was the major town on the western side of the Blue Ridge Mountains and was also the site of Fort San Juan, a fort built by the Spanish during the middle of the sixteenth century. So that the region could be more fully secured, the fort was garrisoned for a short time by thirty of Pardo's men supplied with 150 pounds of harquebus powder, 133 pounds of harquebus matchcord, 135 pounds of lead, four crossbows, three shovels, two mattacks, picks and assorted other items. According to Pardo's notary and companion Juan Bandera, the village of Xuala was ruled by a powerful mico, who had more than eighteen villages under his political authority, many located among the Blue Ridge mountains.⁴⁸

The political structure of sixteenth-century southern Appalachia ensured social and economic interaction among villages if only for the sole purpose of paying tribute to higher authorities. Of course, failure to pay this tribute

⁴⁷For the role that political organization played in Mississippian society and culture see Peter Peregrine, "Prehistoric Chiefdoms on the American Midcontinent: A World-System Based on Prestige Goods," in Christopher Chase-Dunn and Thomas D. Hall, editors, Core/Periphery Relations in Precapitalist Worlds (Boulder, CO: Westview Press, 1991), 200-205. For the nature of political organization in southern Appalachia, see Hudson, The Juan Pardo Expedition, 61-67.

⁴⁸Hudson, The Juan Pardo Expedition, 88, 148.

could lead to warfare among villages, as has been historically documented by Charles Hudson and other scholars of the Mississippian Southeast.⁴⁹ In 1560 fifty soldiers from the Spanish colony of Tristan De Luna joined with the chief of Coosa in an attack of Napochies, a township located near Chattanooga on the Tennessee River. The Napochies rebelled against the chief of Coosa, refusing to pay their customary tribute of game, fruits, nuts, and chestnuts. After the warriors of Coosa and their Spanish allies defeated the Napochies, they promised to again pay tribute to Coosa, restoring their status as a subject people.⁵⁰

The presence of an economic system in which tribute was paid to a central regional township indicates that Mississippian chiefdoms operated much like primitive states. Those who refused to pay tribute to the paramount chief suffered dearly, sometimes in lost life. At the local level, however, minor chiefs (micos and oratas) did not dominate the lives of the common people to the same extent and probably possessed "no more than rudimentary means of sanctioning or repressing their people..."⁵¹ The local chiefs acted also as

⁴⁹Charles Hudson, Marvin T. Smith, Chester B. DePratter, and Emilia Kelley, "The Tristan De Luna Expedition, 1559-1561," Southeastern Archaeology 8 (Summer 1989), 31-45.

⁵⁰Charles Hudson, "A Spanish-Coosa Alliance in Sixteenth-Century North Georgia," Georgia Historical Quarterly 62 (1988), 599-626.

⁵¹Hudson, Juan Pardo, 60; Timothy K. Earle, "Chiefdoms in Archaeological and Ethnohistorical Perspective," Annual Review of Anthropology 12 (1987), 289; Elman R. Service, Origins of

priests, possessing the necessary religious authority to perform the sacred rites and rituals of the Mississippian religion.

The Mississippians religion included highly valued material goods used by members of the society to pay for social services and debts, brideswealth, punitive fines, initiation and funeral fees. According to scholar Peter Peregrine, the political power of the chief derived from his control over the manufacture and trade of these so-called "prestige-goods." In most instances, Mississippians made prestige goods out of materials found locally, by artisans employed by the paramount chief. The shell gorget, commonly found in ceremonial contexts, is one example of this type of religious artifact. Competition among elites created a demand for exotic prestige-goods that could not be made or found locally, and this stimulated trade networks well outside the Appalachian region. Mississippians of the southern mountains had economic ties to areas as far away as Mexico, the Rocky Mountains, the Great Lakes, and the Atlantic and Gulf Coasts.⁵²

the State and Civilization (New York: W.W. Norton, 1975), 15-16. See also DePratter, Late Prehistoric and Early Historic Chiefdoms in the Southeastern United States, 122-132.

⁵²Peregrine, "Prehistoric Chiefdoms on the American Midcontinent," 194. For trade networks, see James Griffin, "Eastern North American Archaeology: A Summary." Science 156 (1967), 175-91; Patricia Galloway, The Southeastern Ceremonial Complex (Lincoln, NB: University of Nebraska Press, 1989), 5-15.

Native Ecology

The environment of southern Appalachia not only directed the daily activities of the Mississippian, it also helped to shape their religious beliefs and practices. A more challenging task, then, is to determine the precise role that this environment played in shaping their life and culture. Fortunately, researchers now have a better understanding of the various subsistence practices employed by the earliest inhabitants of the region. Recent archaeological and historical evidence has given us new and important evidence concerning the use of the environment by these Native peoples. It would not be oversimplification to state that their culture was one fully immersed in the ecology of the surrounding environment.

To be sure the Mississippians were not the first native group to play a major role in shaping the landscape of southern Appalachia. Paleoecological evidence confirms human disturbance in the region over the last 10,000 years.⁵³ Mississippians did, however, intensify the rate of change. As villages increased in size and social complexity, the additional clearing of land for settlement and cultivation became necessary in order to keep pace with the demands of a

⁵³Jefferson Chapman, Paul A. Delcourt, Patricia Cridlebaugh, and Hazel Delcourt, "Man-Land Interaction: 10,000 Years of American Indian Impact on Native Ecosystems in the Lower Tennessee River Valley, East Tennessee," Southeastern Archaeology 1 (Summer 1982): 115-121.

growing population. Threat of warfare from rival villages or chiefdoms also required the construction of palisades, protective walls designed to stop the approach of attacking invaders. In fact, one of the Mississippians' major contributions to environmental change was the clearing of forests for palisade construction (Table 3.1). At Toqua, a town located on the Little Tennessee River in southeast Tennessee, palisade walls extended around the entire length of the village, a distance of more than 5,000 feet. Because archeological excavations at Toqua tell us that the palisade poles were set at intervals ranging from six to twelve inches, approximately 7,000 trees had to be cut to make the structure. At Toqua, a total of three different palisades were constructed during the Mississippian occupation there, which

Table 3.1. Select Mississippian sites in the southern Appalachian region.

Village Site	Palisade Length	Location
Etowah	3,000 x 500	GA
Toqua	500 x 350	TN
King	480 x 460	GA
Upper Hampton	1,400 x 340	TN
Rymer	700 x 300	TN
Citico	370 x 300	TN
Warren Wilson	400 x 300	NC

Sources: Marvin T. Smith, Archaeology of Aboriginal Culture Change in the Interior Southeast (Gainesville, FL: University Presses of Florida, 1987), 96-97, Tables 5.3, 5.4; Roy S. Dickens, Cherokee Prehistory: The Pisgah Phase in The Appalachian Summit Region (Knoxville, TN: University of Tennessee Press, 1976), 22, Figure 3.

means at least 20,000 trees were removed from the surrounding forest.⁵⁴

In addition to cutting trees for palisade walls, it is also possible to estimate--again by counting the total number of postholes--that the Mississippians used as many as 10,127 trees to construct the 133 roofed dwellings found within the village walls at Toqua. This number excludes the hundreds of excavated post holes that have no known function. And even though poles used for house construction were notably smaller than those used for palisade walls--averaging between four and five inches in diameter--an average sized Mississippian village required the removal of more than 30,000 trees.⁵⁵

The Mississippians also used fire to control the growth of underbrush, a land-use practice that provided additional habitat for desirable species such as white-tailed deer, wild turkey, ruffed grouse, and bobwhite quail. Blueberries, huckleberries, blackberries, raspberries, and strawberries, all edible plants, thrived in burnt over areas. They probably

⁵⁴Patricia Cridlebaugh, "American Indian and Euro-American Impact Upon Holocene Vegetation in the Lower Tennessee River Valley, East Tennessee," 105. As Cridlebaugh notes, this is an extremely conservative estimate since these figures do not take into account poles cut for replacement or posts used for the construction of bastions and reinforcing supports. Poplar and pine--soft and straight timber--were likely the most preferred trees for palisade construction.

⁵⁵The post dimensions apply specifically to structures excavated at Hiawassee Island but should apply to most dwellings found throughout the southern Appalachian region. Thomas M.N. Lewis and Madeline Kneberg, Tribes that Slumber, 83; Cridlebaugh, American Indian and Euro-American Impact Upon Holocene Vegetation, 105.

set fires as an hunting technique too, for the purpose of directing game toward waiting hunters, though there is little historical evidence to support the practice in sixteenth century Appalachia. Because the human use of fire is important for answering questions about the "original" ecological condition of eastern North American, the nature and extent of fire use among Native Americans has been a controversial topic--and one that ecologists and environmental historians will no doubt continue to debate.⁵⁶

There is a considerable evidence for the cultural use of fire east of the Appalachian mountains during the sixteenth and seventeenth centuries, so the assumption can be made that at least some of the accounts from the early colonial period "are applicable to the practices of Indians living west of the Appalachian mountains."⁵⁷ In 1632 Thomas Morton described fire burning among New England Indians as a long standing custom, "continued from the beginnunge." He added that the "Salvages are accustomed to set fire of the Country in all places where

⁵⁶For the American Indian practice of setting fires, see Gordon M. Day, "The Indian as an Ecological Factor in the North-eastern Forest." Ecology 34 (April, 1953), 329-46; Hu Maxwell, "The Use and Abuse of Forests by Virginia Indians," William and Mary College Quarterly 19 (October 1910), 73-103; Emily W.B. Russell, "Indian-Set Fires in the Forests of the Northeastern United States," Ecology 64 (1983), 78-88. For the ecological effects of fire-burning in the southeastern forests, see Silver, A New Face on the Countryside, 19-22, 59-64, 181-82.

⁵⁷Emily Russell, "Indian-Set Fires," pp. 80-86; Quotation in Criddlebaugh, "American Indian and Euro-American Impact," 124.

they come; and to burn it, twize a yeare vixe at the Spring and the fall of the leafe."⁵⁸ Twenty years later, Andriaen Van der Donck wrote a similar but more detailed description of Indian-set fires along the Hudson River valley in New York. He outlined their principle reasons for doing so, and tells us that the Dutch colonists had also taken up the practice. "The Indians," he wrote,

"have a yearly custom [which some of our Christians have also adopted] of burning the woods, plains and meadows in the fall of the year, when the leaves have fallen, and when the grass and vegetable substances are dry. Those places which are then passed over are fired in the spring in April. This...is done for several reasons: First to render hunting easier, as the bush and vegetable growth renders the walking difficult for the hunter...Secondly, to thin out and clear the woods of all dead substances and grass, which grow better the ensuing spring. Thirdly, to circumscribe and enclose the game within the lines of the fire, when it is more easily taken..."⁵⁹

However instructive, the accounts of Morton and Van der Donck do not prove with certainty the use of Indian-set fires in southern Appalachia for the sixteenth century. The earliest ethnohistorical record of fire-burning by natives in the mountain region is recorded in 1752 by a Moravian missionary,

⁵⁸Quotation in Peter Force, ed., Tracts and Other Papers...to the Year 1776 (Washington, D.C.: Peter Force, 1838), 37; Russell, "Indian-Set Fires," 82; Cridlebaugh, "American Indian and Euro-American Impact," 123.

⁵⁹Andrian Van der Donck, "A Description of the New Netherlands." Collections of the New York Historical Society 1 (1841) [Reprinted in 1968. T.F. O'Donnell, editor. Syracuse University Press, Syracuse, New York, 1968], 20-21.

who states that "the forest could be much improved with care, for it has been ruined by the Indians, who are accustomed to set fire to large tracts to drive the deer to a given spot, and that keeps the young trees from growing."⁶⁰ Four years later, John G.W. De Brahm noted in passing how the Cherokee Indians replenished the soils of the river valley by "phlogiston" [burning]. Four decades later, the Brethren Abraham Steiner and Christian Frederick de Schweinitz reported seeing fires burning at Great Tellico in southeast Tennessee. As they approached the town on horseback, Steiner and Schweinitz saw Cherokee women and children, "setting fire to the grass in the woods..."⁶¹ The pair also noted the existence of a large open meadow at Great Tellico, a "beautiful plain, entirely clear of woods," that was likely the result of past fire-burnings by earlier Cherokee and/or their immediate "cultural ancestors," the Mississippians.⁶² Perhaps the

⁶⁰Adalaide L. Fries, ed., Records of the Moravians in North Carolina (Raleigh: State Department of Archives and History, 1968), I: 49. For another account of the same expedition, see the diary of the Bishop Spangenburg, Colonial Records of North Carolina, V, 6.

⁶¹De Brahm quotation in Williams, Early Travels in the Tennessee Country, 193. Steiner and de Schweinitz quoted in Ibid, 478. The date for the latter observation was November 13, 1799.

⁶²Ibid. I use the term cultural ancestor guardedly, fully aware of the arguments against continuity between Mississippian and Cherokee culture. This issue is discussed in greater detail in the chapter four. For a succinct summary of the debate, see Gerald F. Schroedl and Kurt C. Russ, "An Introduction to the Archaeology of Chota and Tanasee," in Overhill Cherokee Archaeology at Chota-Tennessee, University of Tennessee Department of Anthropology Report Investigations

strongest proof for the practice of fire-burning during the Mississippian era comes from evidence recently uncovered by ethnobotanists who have analyzed pollen and other botanical remains at archeological sites near Mississippian villages. Patricia Cridlebaugh, in her study of human influences on vegetation change in southeast Tennessee, provides ample evidence for the existence of large, fire-induced clearings in the upland region of the sixteenth century. Her data clearly shows a progressive increase in the distribution of ragweed and other disturbance-favored species from the early Woodland period (1000 B.C.--A.D.700) onward, challenging a common assumption that plants common to open fields increased only with European settlement.⁶³ What percentage of those clearings were the product of natural, accidental, or purposely set fires will most likely never be known. What is relatively certain from the existing evidence is that land was periodically burned by the Mississippians and that the total area of cleared land steadily increased with their subsequent occupation.⁶⁴ The expansive stands of giant river cane seen

38, Tennessee Valley Authority Publications in Anthropology 42, Knoxville, Tennessee, 1984, 5-7.

⁶³Cridlebaugh, "American Indian and Euro-American Impact," 143.

⁶⁴Intentional woods burning in the southern Appalachians during the sixteenth century was most likely a highly localized practice with occasional fires deforesting large, unintended areas. For an excellent discussion concerning intentionally-set Indian fires in the colonial Southeast, see Timothy Silver, A New Face on the Countryside, 54-64.

by early travelers are additional evidence that fire was used by the Mississippians before European contact. Because cane propagates itself via protected underground shoots, the burning of mature stalks simply encourages the plant to spread. Aided by the release of nitrogen and other essential nutrients from accumulating ashes, river cane soon dominate riparian bottomlands, growing to incredible heights. Without periodic burning, river cane simply matures and dies.⁶⁵

Sowing Culture

One of the main reasons for fire-burning was to clear the land for cultivation. Periodic burning fertilized the soil, increasing nitrogen levels and improving crop yields. John Brickell, the author of the Natural History of North Carolina, observed that Indians in the Carolinas "never Dung their Land, but set fire to the Weeds, which makes very good manure."⁶⁶ The Indians first planted the fields nearest the village in April or May after the ground had warmed and the fear of frost had passed. Later in the summer they planted the larger outfields, "when the wild fruit is so ripe, as to draw off the

⁶⁵Ralph H. Hughes, "Fire Ecology of Canebrakes," Proceedings of the Tall Timbers Fire Ecology Conference 5 (1966), 149-157; Timothy Silver, A New Face on the Countryside, 22; Victor E. Shelford, The Ecology of North America (Urbana, IL: University of Illinois Press, 1963), 102, 118.

⁶⁶John Brickell, The Natural History of North Carolina (1737; reprint, Murfreesboro, N.C.: Johnson, 1968), 273.

birds from picking up the grain." The initial preparation of the soil required the work of both men and women, who used cultivation techniques similar to those used by the coastal Indians of North Carolina. A record of the annual planting custom made by Thomas Harriot in 1588 reports seeing "men with their wooden instruments, made almost in forme of mattacks or hoes with long handles: the women with short peckers or parers, because they use them sitting, of a foot long and about five inches in breadth...break[ing] the upper part of the ground to raise up the weeds, grasse, and olde stubbes of corne stalkes with theyre roots...which after a day or two drying in the Sunne, being scrapt up into many small heaps, to save them the labour of carrying them away, they burne into ashes...And this is all the husbanding of theyre ground that they use."⁶⁷

Planting was a communal if not a religious event involving the participation of the entire village. Ethnographer John Swanton observed that among the Muskogean of the Creek Confederacy, the care of the fields was under the charge of an elected overseer, who "called the men to the square by going through the village blowing upon a conch shell and then marched in order to the field as if they were going into battle, headed by that overseer." The women, whose

⁶⁷Adair, History of the Indians, 436. Harriot quotation from David Quinn and Alison Quinn, editors, The First Colonists (Raleigh: North Carolina Department of Cultural Resources, 1982), 56.

participation was central to the successful completion of the planting, "followed in detached parties bearing the provisions of the day."⁶⁸ According to Harriot, the planting started

"in one corner of the plot, and with a pecker they make a hole, wherein they put four graines with that care they touch not one another (about an inch asunder) and cover them with moulde again: and so through out the whole plot, making such holes and using them after such manner; but with this regard that they be made in ranks, every rank differing from the other a fathom or a yard, and the holes also in every rank as much. By this means there is a yard square ground between every hole; where according to discretion here and there, they set as many beans and peas: in divers places also the seeds of Macocquer [pumpkins and squashes], melden [an herb], and plantis solis [sunflowers]."⁶⁹

After planting, women and children took care of the fields until harvest. In Virginia, John Smith saw women and children hilling soil around the roots of corn, "when the corne is growne midle high." Women and children were also responsible for protecting the fields from birds and other harmful vermin. According to Mississippian anthropologist Bruce Smith, temporary shelters were scattered in close proximity to outlying garden plots, "providing short-term shelter for families tending crops." Adair also noted that the

⁶⁸John R. Swanton, Social Organization and Social Uses of the Indians of the Creek Confederacy (Washington, D.C.: Government Printing Office. 42nd Report of the Bureau of American Ethnology, 1928), 443. See also Adair, History of the Indians, 436.

⁶⁹Quotation from Quinn and Quinn, The First Colonists, 57; Adair, History of the Indians, 438.

Indians erected high scaffolds in unattended fields upon which sat an elderly women, whose duty upon seeing a crow was "to frighten them away with their screeches."⁷⁰

Weeding the fields was less a concern to the Mississippians as their crops matured. Adair noted that several North American Indian groups, "owing to their laziness and unskillfulness in planting," often let "weeds outgrow the corn."⁷¹ Adair's view is highly ethnocentric, since he obviously didn't understand the importance of "weeds" to the ecology of the Native American field system. Not only did weeds help fix nitrogen in the soil, they also aided in maintaining "a favorable balance of predatory and pest insect species."⁷² So-called weeds, including Maygrass, Knotweed, Pigweed, Sumpweed, and Goosefoot were encouraged and tolerated as supplemental food sources. Archeological evidence suggests that these and other "non-cultivated" species made up a

⁷⁰Quotation in Edward Arber, editor, Travels and Works of Captain John Smith, President of Virginia and Admiral of New England, 1580-1631 (Edinburgh: John Grant, 2 volumes, 1910), II, 952; Bruce Smith, "Variation in Mississippian Settlement Patterns," 492; Adair, History of the Indians, 438. This could well be the first North American reference to scare-crows.

⁷¹Adair, History of the Indians, 438; Thomas Hatley, "Cherokee Women Farmers," 40.

⁷²Thomas Hatley, "Cherokee Women Farmers Hold Their Ground," in Robert D. Mitchell, editor, Appalachian Frontiers: Settlement, Society, & Development in the Preindustrial Era (Lexington, KY: University of Kentucky Press, 1991), 40.

considerable portion of the Mississippian diet.⁷³

For Mississippians the horticultural "trinity" was corn, beans, and yellow squashes. They grew several types of corn, including the northern flint variety with had eight to ten rows of large round kernels, and a smaller variety resembling popcorn. Corn came in white, yellow, red and blue and each variety was planted for a different reason--some for grinding into meal, others strictly for roasting--and matured at different times of the year. It is not known if the Mississippians consciously attempted to maintain pure strains of the various types [corn is wind pollinated: to genetically do so would require isolating varieties by 300 yards or more]. The earliest estimates of these early Indian varieties place yields at around 45 bushels per acre.⁷⁴

As noted earlier, the common bean (Phaseolus vulgaris) was introduced into southern Appalachia during the early Mississippian period. Mississippian traders brought this product of the Mesoamerican highlands to the region some time around the fourteenth century. Proof of the elaborate trade networks, the bean originated in the Central American

⁷³Cridlebaugh, "American Indian and Euro-American Impact," 46-47. By the time the Spanish reached the southeast, it appears that domesticated varieties of Sumpweed were extinct, and that it existed only in its wild state. For the history of goosefoot cultivation in the southeast, see Bruce D. Smith, "The Role of Chenopodium as a Domesticated in Pre-Maize Garden Systems of the Eastern United States," Southeastern Archaeology 4 (Summer 1985), 51-72.

⁷⁴Lyman Carrier, The Beginnings of Agriculture in America (New York: McGraw-Hill, 1923), 45-46.

highlands.⁷⁵ Within a span of a hundred years this high-yielding, easily stored source of protein became one of the most important crops in the region. In July of 1540, the Gentleman of Elvas reported seeing in the fields of Coosa, "a great quantity of maize and beans."⁷⁶ The common bean was small, kidney shaped, and usually black or dark maroon in color. The Worchester Bean, an extremely rare variety grown by "heirloom" gardeners [and known to be of Native American origin], closely resembles the common bean of the Mississippian era.⁷⁷ Mississippians almost always planted these beans in cornfields and encouraged them to climb among the tall stalks of corn.

The third most important crop cultivated by the Mississippians were squashes. Squashes took several forms, the most common being the ordinary field pumpkin, a much smaller [and paler] variety than what is commonly grown for commercial markets today. A wild gourd [Curcubita pepo L.]--which first

⁷⁵Cridlebaugh, "American Indian and Euro-American Impact," 47; Alfred Crosby, The Columbian Exchange: Biological and Cultural Consequences of 1492 (Westport, CT: Greenwood Press, 1972), 107, 170-172; Charles B. Heiser, Jr., Seed To Civilization: The Story of Man's Food (W.H. Freeman and Company, 1973), 125-126. The common bean was domesticated in Mexico and Peru prior to 5000 B.C. and is generally referred to as the kidney or Indian bean in historical records.

⁷⁶Elvas, True Relation, II: 116.

⁷⁷For a more detailed description of this bean, see, Jeff McCormack, Southern Exposure Seed Exchange, 1993 Garden Catalog (North Garden, VA: Southern Exposure Seed Exchange, 1993), 11. For more information about growing these and other "heirloom" seeds, contact the Exchange at P.O. Box 158, North Garden, Virginia 22959.

appeared in North America around 1,000 B.C.--was also grown. This native gourd was the progenitor of the domesticated summer squash, which it closely resembled by the late sixteenth century.⁷⁸ The Mississippians used bottle gourds as water vessels, dippers, ladles, cups, bowls, rattles, masks, and storage containers. After the fall harvest, they sliced pumpkins and squash into thin sections, and then strung them on long cords to dry in the sun.

Another important crop to the Mississippians was the sunflower (Helianthus annus), one of the few plants domesticated exclusively in North America. In modern times, the common sunflower appears in three forms: "wild," "weed," and "cultigen," the later being the popularly known variety today. The sunflower grown by the Mississippians more closely resembled the first two forms, having seeds about half the size of today's commercially grown sunflowers. Thomas Harriot spoke of these native plants he observed on Roanoke Island in 1585: "There is also another great herb, in the form of a marigold, about six foot in height, the head of the flower is a span [nine inches] in breadth. Some take it to be planta solis: Of the seeds hereof they make both a kinde of bread and broth."⁷⁹ The showy flower heads quickly attracted the

⁷⁸From the exhibit, "When World Collide: European Explorations in the Interior Southeast," October 10, 1992-February 14, 1993, McClung Museum, University of Tennessee, Knoxville, Tennessee.

⁷⁹Quotation in Lyman Carrier, The Beginnings of Agriculture in America, 60.

attention of the English, who related mythical tales about the alleged ability of the flowerhead to face the sun at all hours of the day.

Semi-domesticated crops were also important to the diet of the Mississippians. Many indigenous foods grew in old fields or along the disturbed edges of the upland Appalachian forests. When in season, passion flower, morning glory roots, and the fruits of the honey locust, persimmon, chickasaw plum, red mulberry, wild cherry, and the scuppernong or muscadine grape were taken in great quantities. Mississippians were also involved in what agriculturalists refer to today as "permaculture," the selective cultivation of fruit-bearing trees and shrubs. For this reason Mississippian agriculture was more than the tending of a handful of crops: it was a cultivation system embedded in a dynamic local ecology.

At Conasaga, a Mississippian town located in the vicinity of Hot Springs, North Carolina, the Gentleman of Elvas noted an abundant supply of native mulberries, walnuts, and plums as well as the large trees on which these native fruits grew. As DeSoto and his army approached, "Twenty Indians came out to meet him [DeSoto] carrying his baskets of mulberries which grow in abundance....from Cofitachequi [near Camden, South Carolina] thither and also on into other provinces, as well as walnuts and plums. The trees grow wild in the fields without being planted or manured and are as large and as vigorous as

if they were cultivated in gardens"⁸⁰ In 1775, at a former Mississippian township along the Savannah River in eastern Georgia, William Bartram observed a plantation of fruit and nut-bearing trees believed to be "cultivated by the ancients." Drawing attention to their semi-domesticated state, Bartram adds: "Though these are natives of the forest, yet they thrive better, and are more fruitful, in cultivated plantations, and the fruit is in great estimation with the present generation of Indians."⁸¹

The shell-bark hickory was one tree Bartram saw growing in almost orchard-like conditions along the upper Savannah River. According to Bartram, the Muskogeans in the area collected and stored great quantities of nuts from these trees. "I have seen above an hundred pounds of these nuts belonging to one family," wrote Bartram. To prepare them, he wrote, "They pound them to pieces, and then cast them into boiling water, which, after passing through fine strainers, preserves the most oily part of the liquid: this they call by a name which signifies hiccory milk; it is sweet and rich as fresh cream, and it is an ingredient in most of their cookery, especially hominy and corn cakes." Likewise, the

⁸⁰Elvas, True Relation, 103.

⁸¹"The ancients" refers to the Mississippians. Van Doren, ed., The Travels of William Bartram, 57. Mulberries, as Thomas Hatley has pointed out, were extremely important to southeastern Indian culture. The area comprising present-day Knoxville, Tennessee, was so abundant with the trees that the Cherokee referred to it as Mulberry Grove. Hatley, "Cherokee Women Farmers," 290, n. 16.

Mississippians prepared nutmeats of all kinds, including black walnuts, butternuts, chinkapins, and chestnuts.⁸²

Dogs, Turkeys, Elk

In addition to plant domestication, the Mississippians were also involved in various forms of animal husbandry. It is well-known, for example, that they kept small dogs as pets and/or hunting animals. According to Elvas, when De Soto arrived in Gausali, a Mississippian village in the Blue Ridge mountains of western north Carolina, "the Indians there made him service of three hundred dogs." Elvas states that the Indians did not eat dogs, but they must have known that the Spanish did. Their willingness to part with the animals seems beyond belief, unless of course De Soto coerced them to do so.

The small dogs kept by the Mississippians were probably used as pets and hunting animals, and they could well be the ancestors of modern breeds such as the Rat Terrier and the Treeing Feist, a small dog currently bred for treeing squirrels. The Small North American Indian Dog, documented in the archeological record, resembles both breeds. During the sixteenth century, Europeans brought these animals back home where they likely influenced the development of dogs in the

⁸²Mark Van Doren, ed., Travels of William Bartram, 57. According to Charles Hudson, it took a hundred pounds of hickory nuts to produce one gallon of oil. Hudson, The Southeastern Indians, 301.

Old World. During the 1600 and 1700s, European breeds arriving in the New World also may have mixed with Native American breeds. The intermixing of Indian and European dogs most likely occurred randomly, however, as both dog and human adapted to life on the frontier.⁸³

Mississippians were also likely involved in pen-raising wild or semi-domestic breeds of turkey. Turkeys were kept in a domesticated state in both Mesoamerica and the American Southwest as early as B.C. 300.⁸⁴ A. W. Schorger found that in fifteenth century Mexico, the birds were raised as chickens in Spain. In 1430, the Aztec poet-king of Texcoco, Netzahualcoyotl, required an offering of more than one hundred turkeys per day.⁸⁵ When DeSoto visited the province of

⁸³Elvas, True Relation, 102; Donald Davis and Jeffrey Stotik, "Feist or Fiction?: The Squirrel Dog of the Southern Mountains." Journal of Popular Culture 26 (Winter 1992), 195; Claude Shumate, "Monthly Column of the American Treeing Feist Association." Full Cry (December 1987), 56-57. For specific descriptions of the various North American Indian dogs, see Edward Ash, Dogs: Their History and Development, Vol. 1 (New York, NY: Benjamin Blom, 1972), 29-33. A more general description of the dogs raised by the Southeastern Indians that also uses archeological evidence is William Pford III, Dogs of the American Indians (Fairfax, VA: Denlinger's, 1987), 64-65, 128-36.

⁸⁴As Gary Nabhan points out, the domesticated turkey of the desert Southwest was bred primarily as a source of feather cloth. When Coronado visited the Upper Southwest in 1540, he was told that the Zuni did not eat turkeys, but kept them for feathers. He and his party were impressed by the elaborate feather quilts made by the Zuni, and by the feathered prayersticks offered to water spirits. Nabhan, Enduring Seeds, 166.

⁸⁵A. W. Schorger, The Wild Turkey (Norman, OK: University of Oklahoma Press, 1966), 10-11; Henry Mosby and Charles Handley, The Wild Turkey in Virginia: Its Status, Life History

Chalague in the South Carolina upcountry, he received tribute of seven hundred turkeys: "In one town they performed a service for him [DeSoto] presenting him seven hundred of them, and likewise in others they brought those they had and could get."⁸⁶ If this number is accurate and not bald exaggeration, turkeys must have been kept in enclosed pens, since such a large number of birds could certainly not be supplied on demand. Scattered reports of European explorers in Texas, Alabama, and Arkansas confirm that the eastern wild turkey was sometimes kept by the Indians. According to ethnobotanist Gary Nabhan, the young poults were probably captured in the wild and kept in enclosed pens near Mississippian villages until fully grown.⁸⁷

The wild turkey was certainly more plentiful during the pre-Columbian era. One historian has estimated their population in the United States at around ten million birds.⁸⁸ Several hundred thousand or more of these magnificent birds roamed the southern Appalachian forest searching for beech masts, chestnuts, and acorns. George Ranck reported that in 1775, turkeys were so numerous along the Rockcastle River in Kentucky "that it might be said they appeared but one flock,

and Management (Richmond, VA: The Commission of Game and Inland Fisheries of Virginia, 1943), 5-8.

⁸⁶Elvas, True Relation, 100.

⁸⁷Nabhan, Enduring Seeds, 164.

⁸⁸A.W. Schorger, The Wild Turkey, 60.

universally scattered in the woods."⁸⁹ In 1808 Thomas Ashe wrote that in pioneer Kentucky only a poor sportsman could shoot fewer than a dozen in a day. He himself, in July 1806, saw forty wild turkeys near the mouth of the Big Sandy River. About the same time, Hildreth reported flocks of hundreds of birds along the Kanawha River in West Virginia. In the fall of 1790, the abundance of beech masts in the bottomlands there made the turkey so abundant that they could be sold for no more than six cents apiece.⁹⁰

The turkey was not the only animal flesh consumed in large quantities by the Mississippians. According to archeological evidence, they also hunted black bear, white-tailed deer and the American elk. The eastern subspecies of the American elk was the giant of the Appalachian forest; the largest bull stags stood five feet at the shoulder and weighed more than 1,000 pounds.⁹¹ At maturity, the antlers of this formidable animal spread five feet from tip to tip with single antlers growing as long as 64 inches. Around the time of first European contact, the elk roamed throughout the mountains of southern Appalachia, thriving among the higher peaks and

⁸⁹George W. Ranck, Boonesborough (Louisville, KY: Filson Club Publication 16, 1901), 164; Schorger, The Wild Turkey, 5), Nabhan, Enduring Seeds, 164.

⁹⁰Thomas Ashe, Travels in America, Performed in 1806 (London: 1808), 134, 173; S.P. Hildreth, "Wild Turkeys in the Kanawha Valley," American Journal of Science 29 (1836), 85.

⁹¹Murie, The Elk of North America (Harrisburg, PA: The Stackpole Company, 1951), 69.

summits of the range. In 1670 John Lederer wrote that when his party came to "the promontaries or spurs of the Appalachian Mountains," they began to see vast herds of "red and fallow deer," referring to white-tailed deer and the American elk.⁹²

In 1753, James Burke, one of the original settlers of the Draper's meadows in southwest Virginia, wounded an elk and followed it through Henshaw Gap into a rich fertile valley now known as Burkes Gardens. Hale also mentioned elk following well-worn paths to mineral licks along the banks of the New River. Not surprisingly, Hale also mentions the many place names derived from the large numbers of elk formerly residing in Virginia: Elk Creek, Elk Garden, Elko, Elk Hill, Elkton and Elkwood.⁹³ John Lawson, who once referred to elk as the "Monster of the Venison sort," noted their presence in the North Carolina mountains around 1700. "The Stags of Carolina," wrote Lawson, "are lodged in the mountains." Elk were found in western North Carolina as late as 1750. According to William Bartram, a few elk were still found in the mountains of northeast Georgia and east Tennessee. In recounting his travels for the year 1773 Bartram wrote: "there are but few

⁹²Quotation in Murie, Elk of North America, 39-40.

⁹³John James Audubon and Robert Bachman, The Quadrupeds of North America (New York: 1846), I: 93; W.J. Hays, "Notes on the Range of Some of the Animals in America at the Time of the Arrival of the White Men," American Naturalist 5 (1871), 387-392; Walter Adams Johnson, "Elk--the last of the Big-Game Herds," Country Life in America 8 (1905), 506-11.

elks and those only in the Appalachian mountains."⁹⁴

A migratory animal, elk required a large extended range that included both wooded forests and open pastures. During the winter months, when browse was scarce, elk probably ventured close to Mississippian towns, where they were certain to find large expanses of overgrown fields and grassy meadows. Although the exact numbers of elk in the Appalachian mountains will never be known, they undoubtedly had an important impact on the early ecology and culture of the region. Some of the grassy balds on the summits of the Blue Ridge mountains were likely affected by the presence of elk, if not maintained, in part, by them.⁹⁵

Fish, Mussels, Pearls

Besides hunting large mammals in the near and distant forests, Mississippians also fished the local streams and rivers. Freshwater fish, mussels, turtles, and migratory waterfowl were important to their subsistence base and in some areas of the region may have composed close to half of their entire protein intake. The catfish, one of the more common species of the southeast region, has the highest caloric

⁹⁴Mark Van Doren, Travels of William Bartram, 62.

⁹⁵To my knowledge no one has critically discussed the possible role that elk herds played in the formation of balds. Although deer are not generally reported at higher elevations, elk are very fond of high altitude habitats and actually seek them out.

content of any freshwater fish except possibly salmon.⁹⁶ Fish were caught using a variety of ingeniously designed traps, the largest and most productive being the V-shaped weir dam that was built across streams and rivers. The size and shape of the dam forced moving fish downstream toward the narrow end of the weir, where strategically placed cane traps kept the fish from moving back upstream.

The American freshwater eel, a fish that may weigh as much as seven pounds and grow to 40 inches in length, was no doubt a frequent visitor to the fish traps of the Mississippians. Before the construction of hydroelectric dams, there were fewer obstacles to block the migratory route of this fish to saltwater spawning grounds. Prior to the twentieth century, eels were fairly common as far upstream as the Caney Fork on the Cumberland Plateau, the Clinch and Powell Rivers, and the numerous mountains streams of the Blue Ridge.⁹⁷

The Mississippians also made use of the abundant freshwater mussel. They preferred Unios or Quahogs, large mollusks that commonly reach six inches or more in length.

⁹⁶Smith, "Variation in Mississippian Settlement Patterns," 485; Hudson, The Southeastern Indians, 284.

⁹⁷Tennessee Wildlife, "Fish of Tennessee," Tennessee Wildlife 1 (August 1937), 14; A.J. McClane, McClane's Field Guide to Freshwater Fishes of North America (New York, NY: Holt, Rinehart and Winston, 1965), 189-90. Another interesting species that was effected by dam construction is the Quillback, a native carpsucker that browses for plant and animal organisms along rocky river bottoms.

Writing in 1722, Daniel Coxe, whose father had long been a trader in America, wrote that the Indians broiled them over a fire "until they are fit to eat."⁹⁸ The heating process opened the tightly closed shells, revealing a lump of flesh not unlike commercial clams in both taste and appearance. Large mounds of shell-middens can still be observed around the sites of former Mississippian villages, the only visible evidence of a once dominant subsistence practice.

Freshwater mussels were not only important food sources, they also yielded pearls of varying degrees of smoothness and lustre. In 1722, Coxe mentioned two places of "great pearl fishery" in the interior United States, one being Arkansas, the other the waters of the "Chiaha" [Tennessee] and "Coza" [Coosa] Rivers.⁹⁹ At Chiaha, DeSoto received from the chief a string "of beautiful and well-matched pearls as large as filberts" (figure 3.2). When he asked to see how the pearls were extracted from the mollusks, the chief ordered four boats to fish the river. After a night of fishing, the Indians placed the mussels over a bed of coals to cook. After the very first shells were opened, they found ten or twelve pearls "the size of a pea." De Soto observed that opening the shells in

⁹⁸Coxe, A Description of the English Province of Carolana, by the Spaniards call'd Florida, and by the French La Louisiane, as also of the Great and Famous River Meschacebe or Mississippi (London: 1722), 82-83.

⁹⁹Ibid. See also George Frederick Kunze and Charles Hugh Stevenson, The Book of the Pearl: The History, Art, Science, and Industry of the Queen of Gems (New York: The Century Company, 1908), 258-259.

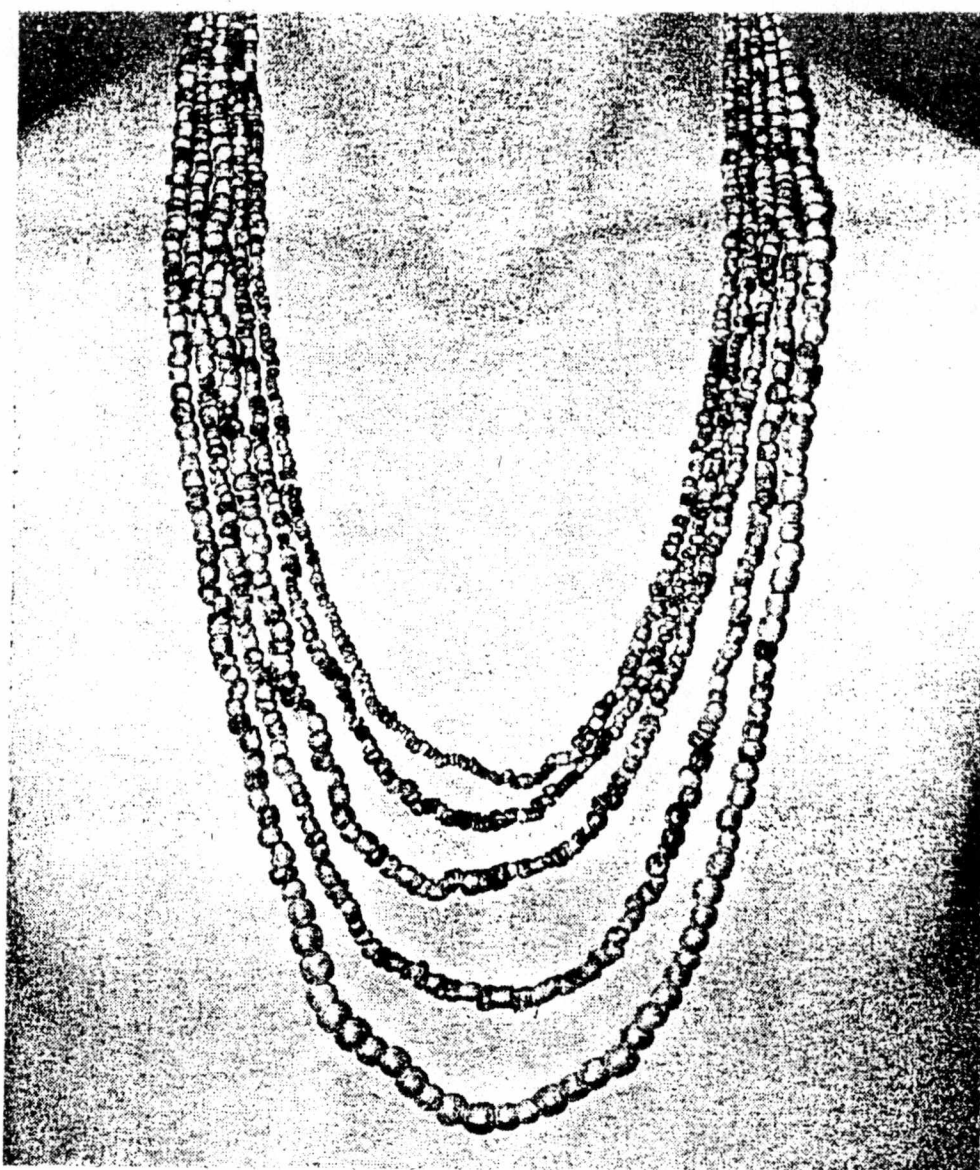


Figure 3.2. Mississippian freshwater pearls, excavated in Hamilton County, Tennessee (photography courtesy of Frank H McClung Museum, University of Tennessee, Knoxville).

this manner damaged their lustre, which made their value considerably less to the Spanish.¹⁰⁰ However, Mississippians did harvest pearls of higher quality as they were kept by the village chiefs. At Cofitachequi, DeSoto saw as much as 150 pounds of freshwater pearls stored inside the village temple. When the chieftainess of Cofitachequi escaped from DeSoto in the mountains of North Carolina, she carried with her a small box of canes known as "petaca," that was filled with unbored pearls thought very valuable by the Spaniards. Twenty-five years later, Juan Pardo was given gifts of pearls by the Mississippians of east Tennessee to show their deference to the Spanish governor.¹⁰¹

For the Mississippians, the freshwater mussels had a number of important uses. Not only were they a readily available source of protein, they were also the source of an important socioreligious commodity or prestige good--the pearl. The Indians skillfully carved the opulent "mother-of-pearl" shell of the freshwater mussel into decorative gorgets, ear and body ornaments, and cylindrical beads for necklaces. Each artifact had real and symbolic meaning for the Mississippian people. The survival of Mississippian culture,

¹⁰⁰Bernard Shipp, The History of Hernando De Soto and Florida from 1512 to 1568, (Philadelphia: 1881), 372; Kunz and Stevenson, The Book of the Pearl, 255; Hudson, Juan Pardo Expedition, 156-157.

¹⁰¹Elvas, True Relation, 101; Kunz and Stevenson, The Book of the Pearl, 254; Hudson, Juan Pardo Expeditions, 156-57, 190.

at least as was practiced in the early sixteenth century, was partially linked to the presence and availability of the freshwater clam. Ironically, the mussel's social and cultural importance may have actually precipitated its overuse and eventual depletion which, in turn, increased Mississippian dependence on other subsistence staples such as flint corn and beans.¹⁰²

As important as shellfish and other specific animals were to the maintenance of their life and culture, it is important to remember that the entire range of plant and animal life was utilized by the Mississippians. The fish of the rivers, the flora and fauna of the river bottom terrain, and the birds of the air had an important place in daily subsistence activities. In the sixteenth century, Mississippia yielded its fruitful bounty in what J.T. Fraser would describe as "ecologic time."¹⁰³ Nature refused to give up all her gifts at once, so the Mississippian chose to organize their lives

¹⁰²This line of reasoning involves the John Anderson "if it ain't broke, don't fix it" theory of cultural and technological change. In other words, radical social change happens only when the present system no longer works for the society. The French proverb Les Gens Heureux N'ont Pas D'Histoire [Happy people don't make history] makes the same point in a different vernacular. The Mississippians would not have abandoned mussel gathering and adopted a new agriculture system [the growing of flint corn and beans], if the former subsistence strategy had been a truly productive one. For an excellent defense of this theory of social and cultural change, see Jeremy Rifkin, Entropy: A New World View (New York: Bantam, 1981), 63-69.

¹⁰³J.T. Fraser, Of Time, Passion, and Knowledge, (New York: G. Braziller, 1975), 48-55.

accordingly to her seasonal rhythms. Early spring became the time for preparing and garden plots and larger outfields. In late spring, large numbers of wild mulberries and strawberries were gathered. Mid-summer signaled the ripening of black berries, the ceremonial harvest of green corn, the gathering of beans, squash, and the seeds of the semi-domesticated sunflower, sumpweed, and chenopodium. Early fall was reserved for the gathering of late corn, the storing of hickory nuts and walnuts, and the picking of blueberries and huckleberries. In September, sizable quantities of muscadines and wild grapes were collected near or outside the village environs. After the first frost, large quantities of chestnuts and persimmons were carried out of the surrounding forest in baskets. Late fall intensified the hunting of game and the gathering of fire wood for winter use. Each season brought a new harvest, a new task to be performed by the community. Each task, in turn, was sanctified by religious beliefs and practices. The Mississippians patterned their lives by the biological and physical rhythms of the southern Appalachian environment.

Because the plants and animals of the harvest were central to the Mississippian's dynamic nature cosmology and thus imbued with special mythical powers, their overuse was largely minimized if not socially discouraged. Indeed very little from nature was carelessly discarded by the Mississippian. The excess fat of the Black Bear was melted into butter or grease, the sinews of deer and elk became

bowstrings, surplus river cane was turned into intricately woven baskets, and clamshells were carved into sacred religious objects. In fact, nature would not have even been considered a "resource" to be "exploited." Mississippians could not wholly conceive of themselves as separate from nature, so both humans and the natural world ultimately benefitted, they believed, from its respectful treatment.

The sixteenth century set the dominant pattern of development for the southern Appalachian region--a pattern best characterized as one that rewards resource extraction and pardons the social and economic domination of indigenous peoples. Despite their resourcefulness in adapting to seasonal changes in their environment, the Mississippians were unable to survive the drastic changes that transformed the region over the course of the sixteenth and seventeenth centuries. As the large Mississippian townships declined, so did Mississippian culture and ethnic identity. The entradas of DeSoto, De Luna, and Juan Pardo all introduced deadly diseases such as small pox and influenza into the Appalachian region, causing thousands of deaths among the native population. The Spanish conquest of the New World not only brought death and suffering to southern Appalachia, forcing many to seek new homelands outside the region, it was also responsible for the creation of a new cultural landscape. The Spanish intensified trade with the Americas and the Old World, precipitating the introduction of a host of new agricultural

products into the region. Within the context of this great social transformation, native populations were quick to adopt new subsistence strategies, and in doing so changed forever their land, lives, and culture.

Chapter Four

APALACHEE: FIRST ENCOUNTERS

Living in North America and trying to develop a philosophy of place--a recognition of the spiritual and psychological dimensions of geography--inevitably brings us back to our beginnings here, to the Spanish incursion.

Barry Lopez

The Rediscovery of North America

In world history, the sixteenth century belonged to the Spanish. After the "discovery" of the New World by Columbus in 1492, Spain quickly expanded its empire into Mexico, Central America, Peru, and finally, North America. The Spanish empire sought no less than to conquer the New World and its native peoples. As each colony was established, the wealth of the Inca, Aztec, and other native societies was shipped across the Atlantic ocean to Spain. Financially subsidized by lucrative royal contracts, the conquistadors, men like Hernan Cortes, Francisco Pizarro, and Hernando DeSoto, searched the interior lands of the New World for gold, silver, and other treasures. In their pursuit of fortune and fame, the conquistadors led large-scale expeditions into the countryside of the Americas, imposing their will upon the native inhabitants and killing

those who refused to pay tribute to the Spanish crown.¹

Spanish influence on the Mississippian way of life began very early in the sixteenth century. Because they were the first to encourage trade in European goods, the Spanish added a variety of new elements to Mississippian culture. Artifacts, such as iron tools and broadcloth fabrics, were distributed among the Mississippians by De Soto in 1540. In 1560 the De Luna expedition, comprised of starving colonial settlers, likely traded "anything and everything" to local Indians for food. In 1568, Juan Pardo was known to have given out more than 61 chisels, 77 wedges, 72 hatchets, 30 knives, and numerous pieces of fabric to southeastern natives, with the majority of these items going to the Mississippians of the southern Appalachians. Archaeological evidence suggests that an entire range of Spanish goods was distributed among the native population during the sixteenth century, including glass beads, brass bells, wrought-iron chisels, and iron

¹For the role that the Spanish empire played in conquering Mexico, see Michael C. Meyer and William L. Sherman, The Course of Mexican History (New York: Oxford University Press, 1987), especially 95-150. For the Caribbean and the United States, see Jerald T. Milanich and Susan Milbrath, eds., First Encounters: Spanish Explorations in the Caribbean and the United States, 1492-1570 (Gainesville, FL: University of Florida Press, 1989); Barry Lopez, The Rediscovery of North America (Lexington, KY: University of Kentucky Press, 1990). For the legacy of Columbus in North America see Kirkpatrick Sale, The Conquest of Paradise: Christopher Columbus and the Columbian Legacy (New York: Plume, 1991).

hoes.²

At first, new cultural items barely influenced the material life of the native people. In the sixteenth century, Spanish artifacts were largely status display items, which meant they had no real use value to the rank-and-file member of Indian society. Many of these trade goods--glass beads, brass bells, iron axes, wedges and chisels--were initially hoarded by high-ranking village elites. By the early 1600s, however, Spanish influence on cultural activities in the area increased substantially, particularly in the southern end of the region where direct and indirect trade with Spanish Florida had been established. Also, the collapse of chiefdoms meant the loss of the tribute system, so such goods were less likely to be found in the hands of elite rulers. By the early 1600s, the daily activities of the average Mississippian were being altered by cultural artifacts introduced by the Spanish.

Intercultural trade in the Appalachian South during the first half of the seventeenth century was largely the result of the growing importance of Spanish missions and trading outposts in northern Florida. The Spanish built missions both inland and on coastal waters from the Apalachicola River to St. Augustine, the culture core of the Spanish in the

²Smith in First Encounters; Charles Hudson, Marvin T. Smith, Chester B. DePratter, and Emilia Kelley, "The Tristan De Luna Expedition, 1559-1561," Southeastern Archaeology 8 (Summer 1989), 40-42; Hudson, Pardo, 135-139; Smith, Archaeology of Aboriginal Change, 23-53; Waselkov, "Seventeenth-Century Trade in the Colonial Southeast," 120-127.

southeastern United States. After the founding of St. Augustine in 1565, the Spaniards immediately took up the aborted French trade that resulted from the destruction of the French colony of Fort Caroline.³ Except for a brief two-year period between 1566 to 1568, when a series of five Spanish forts stretched northward into the Appalachian mountains, most sixteenth century trade was with the natives of the Atlantic coast. The missions that were established west of St. Augustine during the early seventeenth century served as important Spanish trading centers for the Spanish, at first among Indians of the Gulf coast and later with Indians in the southeast interior.⁴

Along with trade, the Spanish brought deadly micro-organisms. The consensus among scholars is that the Spanish introduced epidemic disease among the Indians of the Atlantic and Gulf coasts as early as the second decade of the sixteenth century.⁵ Fatal epidemics spread northward after Ponce de

³Charles E. Bennett, Laudonniere and Fort Caroline: History and Documents (Gainesville: University of Florida Press, 1964), 70, 120, 135; Amy Turner Bushnell, The King's Coffin: Proprietors of the Spanish Florida Treasury, 1565-1702 (Gainesville, FL: University Presses of Florida, 1981), 9.

⁴John Hann, "Demographic Patterns and Changes in Mid-Seventeenth Century Timucua and Apalachee," Florida Historical Quarterly 64 (Fall 1986), 382; Hudson, Pardo, 144-156; Waselkov, "Seventeenth-Century Trade," 117; Hann, Apalachee: the Land Between the Rivers (Gainesville, FL: University Presses of Florida), 24-69.

⁵Marvin Smith, Archaeology of Aboriginal Culture Change in the Interior Southeast (Gainesville, FL: University Presses of Florida, 1988), 55. See also Charles Hudson, "An Unknown South: Spanish Explorers and Southeastern Chiefdoms," in in

Leon and two hundred colonists attempted to settle Florida in 1521 and were attacked by Indians who subsequently contracted one or more of the diseases carried by the Spanish colonists. Lucas Vazquez de Ayllon's attempt to colonize the Atlantic coast south of Charleston in 1526 likewise resulted in the introduction of disease among the Southeastern Indians. Because of their highly contagious nature, European diseases, especially smallpox and influenza, spread rapidly among native populations and within decades reached the Mississippians of the southern Appalachians.⁶

From the accounts of the DeSoto expedition, it is clear that epidemic diseases had an important impact on Mississippian society prior to his arrival. How far inland these diseases spread is somewhat uncertain, however. Historical evidence suggests that communicable diseases had reached well into the South Carolina upcountry before De Soto arrived. Garcilaso de la Vega reported seeing numbers of dead bodies and depopulated townships along DeSoto's route through the South Carolina piedmont. As they approached the southern Appalachians, the Gentleman of Elvas commented that maize was extremely scarce and that the Indians in the area were "very

Visions and Revisions: Ethnohistoric Perspectives on Southern Cultures, George Sabot and William Schneider, eds., (Athens, GA: University of Georgia, 1987).

⁶Smith, Archaeology of Aboriginal Culture Change, 55-60; Hudson, Southeastern Indians, 103-110. For an excellent discussion of the general effects of Old World diseases in the Americas, see Alfred Crosby, The Columbian Exchange (Westport, CT: Greenwood Press, 1872), 35-63.

weak."⁷ The people of the more isolated townships deeper in the southern mountains appeared to have escaped the full blow of these earliest epidemics. But their good fortune came to an end when DeSoto and his army penetrated the mountain region in the summer of 1540.

The Desoto expedition brought Indians of the southern mountains into direct contact with Europeans for the first time. Not only were the Spanish a strange people in physical appearance, they also rode upon large animals, used weapons of enormous noise and power, and spoke an unrecognizable tongue. The sudden presence of Spaniards among their townships must have thrown into question the very core of their belief system: it is doubtful that the Mississippians could have imagined that such humans and animals existed. The headman of Tasqui, a small town probably located along the Little Tennessee River in southeast Tennessee was so humbled by the experience that he spoke the following words upon meeting the Spanish governor: "Excellent lord...I do not wish to bear the consequence of how small I am in your presence by expecting that my poor services will be pleasing and acceptable for where the strength fails...On this account I dare to beg your Lordship only to consider and observe in this land in which you command, how I may serve you." The exact words of the Tasqui cacique were undoubtedly colored by Elvas, who over-exaggerated the subservient character of the Mississippians.

⁷Elvas, True Relation, II, 99-100.

Nevertheless, it is evident by the responses of other caciques in the region that DeSoto was indeed given Lordship status.⁸

The greatest power of the Spanish, however, lay not in their physical stature or technological superiority. The Spanish soldiers carried dangerous pathogens within their physical bodies: smallpox, measles, and influenza. Simple contact with an ill Spaniard meant almost certain death. As a German missionary aptly put it in 1699, "the Indians die so easily that the bare look and smell of a Spaniard causes them to give up their ghost."⁹ Unfortunately for the Indians, the Spanish were not in good health when they traversed across the mountain country. In the portion of Elvas' narrative that details events in the southern Appalachians, there is recurrent mention of De Soto's christians being "sick with fever."¹⁰

Because they infected the natives with epidemic diseases, the Spanish played a key role in the decline and eventual death of Mississippian culture. According to one source, for every twenty Native Americans present in the southern U.S. at the time of Desoto's entrada, only one survived. Hudson places

⁸Elvas, True Relation, II: 103-104, 107-108, 115-116, 122-123. For a further description of Tasqui see, Chester B. DePratter, Charles M. Hudson, and Marvin T. Smith, "The Hernando De Soto Expedition: From Chiaha to Mabila," in R. Reid Badger and Lawrence A. Clayton, editors, Alabama and the Borderlands (Birmingham, AL: University of Alabama Press, 1985), 116.

⁹Quoted in Alfred Crosby, The Columbian Exchange, 37.

¹⁰Elvas, True Relation, II, 101, 112.

the mortality rate in the interior southeast slightly lower, although his figure is still an astonishing ninety percent. Alfred Crosby reminds us that for populations with no natural immunity, diseases such as smallpox have at least a thirty percent mortality rate, and those who do survive such diseases are extremely weakened and prone to die later by other illnesses. In 1709 John Lawson remarked that smallpox destroyed entire towns on the North Carolina coast, estimating that only one-sixth of the former Indian population remained after a fifty year period. By the end of the sixteenth century a dramatic demographic collapse had occurred in the southern Appalachia region.¹¹

Depopulation brought tremendous change to the lives of the Mississippians. Those lucky enough to survive were forced to relocate to other towns less affected by the epidemics. Survivors banded with survivors from other chiefdoms in the region forming new and less culturally homogenous social groups. Cosmological and religious beliefs became watered down or lost entirely to memory. Large population losses also meant fewer artisans and craftsmen to create important prestige goods. Even if skilled artisans lived, there might not have been a chief to feed them from their surplus granaries. In

¹¹Dobyns, Their Number Become Thinned, 8-32; Smith, Archaeology of Aboriginal Culture Change, 55-58; George Milner, "Epidemic Disease in the Postcontact Southeast: A Reappraisal," Midcontinental Journal of Archaeology 5 (1980), 46. J. Leitch Wright, Jr., The Only Land they Knew: The Tragic Story of the American Indians in the South (New York: The Free Press, 1981), 23-25.

fact, there might not have been a surplus at all. Without surpluses or skilled craftsmen, "the sumptuary goods symbolic of chiefly power were no longer being used..."¹²

The heavy loss of life also had a profound influence on the social and political organization of the Mississippians. As a result of rapid depopulation, the once centralized chiefdoms broke down into smaller, less centralized, social entities. When colonists from the Tristan de Luna expedition entered the once powerful chiefdom of Coosa in 1560, just twenty years after De Soto, they saw only small villages in decline. The members of the De Luna expedition were so bewildered by what they encountered that they mistakenly concluded "that they had not reached the same country that De Soto had explored."¹³ As mentioned in the preceding chapter, De Luna also reported that some of the outlying towns of the Coosa chiefdom refused to pay tribute, suggesting that the centralized authority of the cheifdom had declined.

Another central feature of Mississippian culture surrendered to the Spanish intrusion was the raised temple

¹²Smith, Archaeology of Aboriginal Culture Change, 101-102, 108-112; Smith, "Indian Response to European Contact: The Coosa Example," in Jerald T. Milanich and Susan Milbrath, editors, First Encounters: Spanish Explorations in the Caribbean and the United States, 1492-1570 (Gainesville, FL: University of Florida Press, 1989), 144-145. The epidemics, in effect, created a void in Mississippian culture that could never again be filled. Our knowledge of the local customs, religion, and art of the Mississippians is therefore a mere fragment of what existed prior to the time of DeSoto's entry into the region.

¹³Hudson, et al., "The Tristan De Luna Expedition," 41-42.

mound, the central architectural focus of the village commons. In the Mississippian belief system, the chief was the primary religious medium of the society and the temple mound its most sacred space. All important rituals and ceremonies were performed there. By the end of the sixteenth century this central space no longer held the same religious and social importance--if any at all.¹⁴ By the eighteenth century, the temple mounds were cultural artifacts, their former origin and use the cause of much conjecture on the part of both Europeans and Native Americans alike. William Bartram in 1776 observed that the Cherokee "are as ignorant as we are, by what people or for what purpose these artificial hills were raised." Apparently the Cherokee told him that they "found them in much the same condition as they now appear, when their forefathers arrived from the West and possessed themselves of the country..."¹⁵

After Spanish contact, the mound-center/satellite-village settlement arrangement so characteristic of

¹⁴Smith, "European Responses to European Contact," 143-144. DePratter, Late Prehistoric and Early historic Chiefdoms in the Southeastern United States, 116-119. for the origin and evolution of temple mounds, see James L. Rudolph, "Earthlodges and Platform Mounds: Changing Public Architecture in the Southeastern United States," Southeastern Archaeology 3 (Summer 1984), 33-37.

¹⁵Van Doren, editor, Travels of William Bartram, 297. It should be noted that ethnologist James Mooney, around 1900 did record what appears to be a fairly accurate description of the ancient mound building practice. This would suggests that at least some of the Cherokee shaman knew of the former tradition. See Mooney, Myths of the Cherokee, 395-396.

Mississippian chiefdoms gave way to a more de-centralized distribution of villages and townships. In his study of the evolution of Mississippian settlement patterns in western North Carolina, Roy Dickens found that by the early seventeenth century, Mississippian villages in the Blue Ridge mountains were no longer clustered around a single large mound but spread out along the floodplains of the larger mountain streams.¹⁶ A census of the Cherokee taken in 1721, which enumerated more than fifty Cherokee villages throughout southern Appalachia, found that most townships were comprised of fewer than three hundred individuals, with an equal number of men, women, and children in each town. Henry Timberlake's detailed map of 1762, a "Draught of the Cherokee Country," confirms that this basic settlement pattern for the eighteenth century in the river valleys of East Tennessee (Fig. 4.1).¹⁷ A similar settlement dispersion also occurred on the northern end of the Cumberland Plateau, after the social collapse of the Fort Ancient, a Mississippian people who inhabited the Big

¹⁶Roy Dickens, "Mississippian Settlement Patterns in the Appalachian Summit Area: the Pisgah and Qualla Phases," in Bruce Smith, ed., Mississippian Settlement Patterns (New York: Academic Press, 1978), 134-135.

¹⁷Berthold Fernow, The Ohio Valley in Colonial Days (New York: Burt Franklin, 1890 [1971 reprint]), Appendix E, 273-275; Gary Goodwin, Cherokees in Transition, 108-109. The mean population of the fifty-three towns enumerated in 1721 was 197, but the population of the average Cherokee village was closer to three hundred residents.

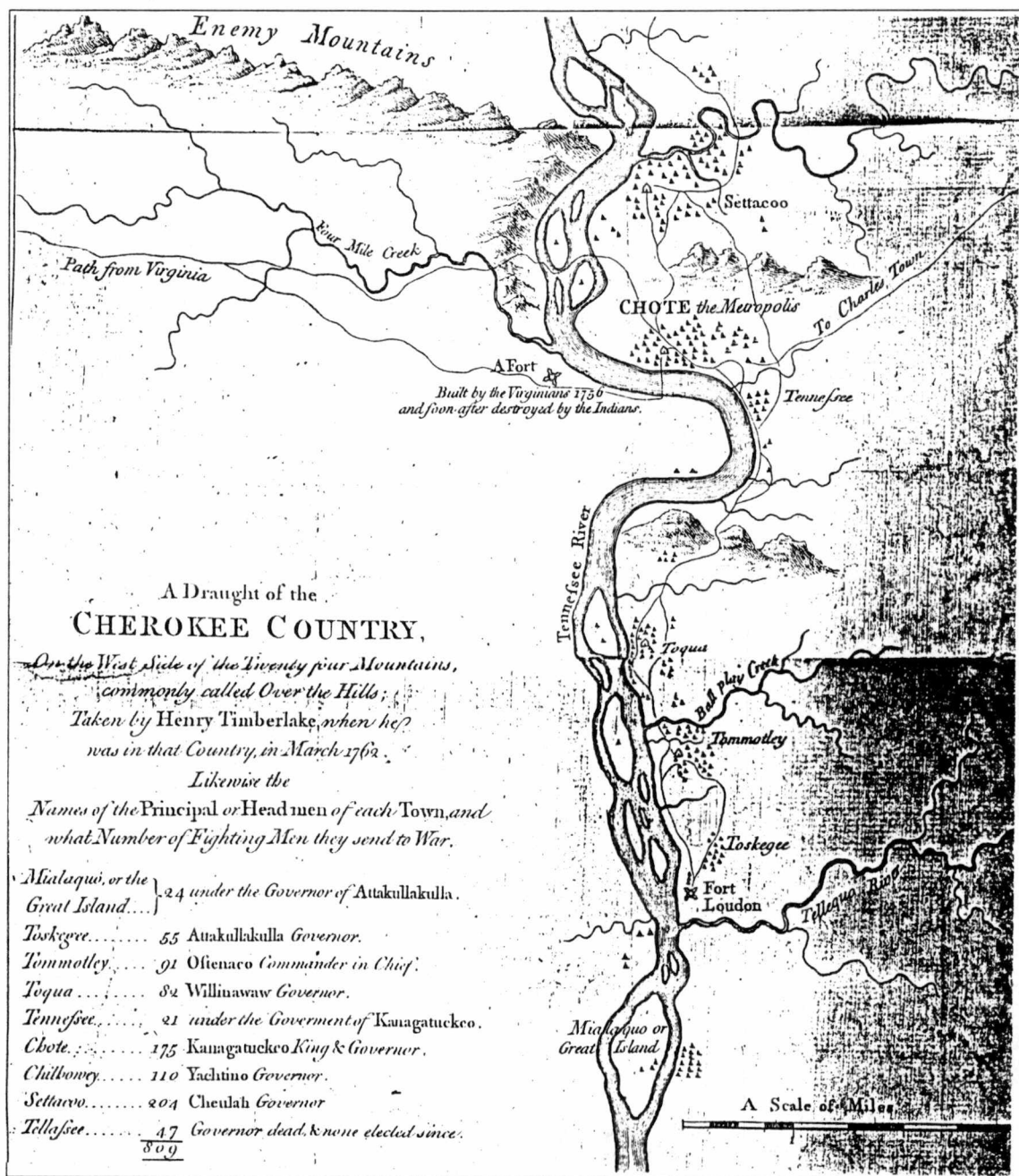


Figure 4.1. Henry Timberlake map, "Draught of the Cherokee Country, 1765 (photograph courtesy of Hogskins Library University of Tennessee, Knoxville).

Sandy and Kanawha valleys.¹⁸

Cherokee Origins

The disruptions caused by the Spanish in sixteenth century Appalachia ultimately influenced the social and cultural formation of the Cherokee Indians, the Native Americans most associated with the southern mountain region. Within a century after Spanish contact, the Mississippian culture group known as "Pisgah" was fully transformed into a culture group known as "Qualla"--the ancestral peoples of the modern Cherokee (Qualla is also the name for the Cherokee reservation in Cherokee, North Carolina). For most of the seventeenth century, the Qualla Cherokee continued many of the cultural practices of their Mississippian ancestors, including wattle-and-daub building construction. The early Qualla Cherokee probably included survivors from the Spanish conquest as well as Mississippian culture groups from the surrounding Blue Ridge mountains and South Carolina piedmont.¹⁹ Sometime

¹⁸Purrington, "The Status and Future of Archeology and Native American Studies in the Southern Appalachians," Appalachian Journal 5 (Autumn 1977), 48. Most scholars agree that the Fort Ancient peoples "devolved" into the Shawnee Indians of historical record.

¹⁹Roy S. Dickens, a major authority on Cherokee prehistory, places the Qualla transformation at around 1500. If he is correct this would mean that cultural evolution was occurring prior to Spanish contact. Charles Hudson says that the cultural transformation may have begun "a half century or so later." Even if Dickens' estimation is accurate, the Spanish were responsible for accelerating culture change.

during the early seventeenth century, bands of these Indians began migrating westward across the Blue Ridge and by 1700 they located permanent Cherokee settlements among vacated Mississippian villages along the Tennessee and Little Tennessee rivers. These native people, generally referred to by historians and archaeologists as the Overhill Cherokee, were central to the settlement and development of the American frontier.²⁰

Before the Cherokee were removed to southeast Tennessee, the region was home to the Dallas and Mouse Creek peoples, two Mississippian groups who migrated southward sometime during the seventeenth century in order to join forces with fragmenting Indian groups in north Georgia and Alabama.²¹ By

Dickens, "Mississippian Settlement Patterns in the Appalachian Summit Area: The Pisgah and Qualla Phases," in Bruce Smith, editor, Mississippian Settlement Patterns (New York: Academic Press, 1978), 119. Hudson, Pardo, 86; See also Dickens, Cherokee Prehistory: The Pisgah Phase in the Appalachian Summit Region (Knoxville, TN: University of Tennessee Press, 1976), 13-14, 206, 210.

²⁰For Cherokee migrations, see Hudson, Pardo, 186, figure 43. For historical accounts of the Overhill Cherokee, see Williams, Travels, pp. 115-143, 177-200, Mooney Myths, 29-65, For Overhill ethnohistory and archaeology, see Schroedl and Russ, "An Introduction to the Ethnohistory and Archaeology of Chota and Tanasee," in Gerald Schroedl, editor, Overhill Cherokee Archaeology at Chota-Tanasee, University of Tennessee Department of Anthropology Report Investigations 38 (Knoxville, University of Tennessee Department of Anthropology, 1986), 1-42.

²¹Smith, Archaeology of Aboriginal Culture Change, 78, 83-84. For more on Dallas culture, based largely on archaeological evidence, see Thomas Lewis and Madeline Kneberg, Tribes that Slumber: Indians of the Tennessee Region, 91-123; John G. Sabol, "Trade and Development of Local Status and Rank in Dallas Society," Tennessee Anthropologist 3

banding together, these newly formed communities could better withstand the effects of disease and defend themselves against invading Iroquois tribes from the north. Over time, southern migrations and cultural coalescence also resulted in the development of the Creek Confederacy. By the eighteenth century, the Creeks, like the Cherokee, still possessed many remnants of Mississippian culture. In fact, a great deal of what we know about Mississippian life comes from information gleaned from ethnological and historical accounts of Creek life.²²

The sixteenth century created the social conditions for the decline and eventual demise of Mississippian culture. This type of culture change, a process that has been referred to by anthropologists as "deculturation," is one way of describing what happened to the Mississippian way of life in southern Appalachia.²³ Unlike "acculturation," which is often defined as "a type of culture change where one group becomes more like

(Spring 1978), 14-29.

²²For example, the Creeks, well into the eighteenth century, continued to lay out their towns according to a pattern reminiscent of the Mississippian plan. At the center of the Creek village was a plaza upon which was situated a public townhouse. Surrounding this central commons were the houses of the townspeople. For the Creek town plan, see William Bartram, "Observations on the Creek and Cherokee Indians," Transactions of the American Ethnological Society III (1853), 55; Hudson, Southeastern Indians, 213-14. On the formation of the Creek Confederacy, see especially Smith, Archaeology of Culture Change, 129-142.

²³Julian Steward and Louis Faron, Native Peoples of South America (New York: McGraw Hill, 1959), 176; Marvin Smith, Archaeology of Aboriginal Change, 128.

another group during a period of prolonged contact," deculturation means that after Spanish contact important cultural elements were, in effect, subtracted from the native peoples of the region.²⁴ By the early 1600s, after chiefdoms collapsed, populations declined, and settlement patterns were disrupted, the Indians of the southeast interior were left in a state of cultural impoverishment. Socially and culturally weakened, the natives were in a position to more readily accept and utilize elements of Spanish culture that began entering the region during the later half of the sixteenth century.

After 1639, the trade between the Spaniards and the Indians of the northern Florida begin occurring on a grander scale. Trade became largely concentrated around the Gulf Coast after Spanish "packet" boats began sailing between Havana and the Apalachee port of San Marcos which was created, in effect,

²⁴George Theodorson and Achilles G. Theodorson, A Modern Dictionary of Sociology (New York: Barnes & Noble, 1969), 3. The classic formulation of acculturation is "...those phenomena which result when groups of individuals having different cultures come into continuous first hand contact..." Robert Redfield, Ralph Linton, and Melville Herskovits, "Memorandum for the Study of Acculturation," American Anthropologist 38 (1936), 149. Alfred Kroeber saw acculturation as "those changes produced in a culture by the influence of another which result in an increased similarity of the two," quoted in George Foster, Culture and Conquest (Chicago: Quadrangle Books, 1960), 7. Acculturation as defined by Redfield, Kroeber and others certainly occurred in the region during the sixteenth century, but the effects of the Spanish on the Mississippians were more subtractive than additive. For an excellent discussion of the deculturation process in the interior southeast, see Smith, Archaeology of Culture Change, 5-10, 113-128.

by colonial interests wanting to evade royal taxes levied on exports from St. Augustine. According to historical records, deerskins, wild turkeys, maize, and beans obtained from the Indians were shipped annually from this Gulf Coast port.²⁵ At the missions, the Spanish obtained pearls, the skins of deer and elk, bison hides, blankets and other native goods from the Indians in exchange for such items as knives, axes, scissors, hoes, glass beads, brass bells, trinkets, blankets, and cloth. At about this same time, a growing number of Indians from the southeast interior began bringing items directly to the Spanish or continued the earlier practice of trading with native Apalachee middle-men who, in turn, sold these goods to the Spanish for export to the Caribbean and the Old World.²⁶

By the middle of the seventeenth century, the Indians from the southern Appalachia region were actively participating in the Spanish trade network. In 1673, Gabriel Arthur, an English explorer who was held captive by the Tamahitans, a group of Indians who were living near the former site of the Mississippian village of Coosa, near Rome, Georgia, reported that "Eight dayes jorny down this river lives a white people which have long beardes and whiskers and weares clothing." While staying with the Indians there,

²⁵Hann, Apalachee, 243; Waselkov, "Seventeenth-Century Trade in the Colonial Southeast," Southeastern Archaeology 8 (1989), 118.

²⁶Waselkov, "Seventeenth Century Trade," 117-120; Hudson Pardo, 153-156; Hann, Apalachee, 147-148.

Arthur learned that "not many years since ye Tomahittans sent twenty men laden with beavor to ye white people..." Although Arthur relates in his account the unfortunate fate of these Indians: "they killed twenty of them and put ye other tenn in irons," this incident did not seem to stop the Tamahitas from later entering the mission territory. In October 1673, Arthur himself joined a fifty member party "that went to rob the Spaniard" in the province of Apalachee. The raid ended only after the Tamahitas had killed a Spanish friar and an African slave. Immediately the group returned to the Tomahitan town with a bounty consisting of assorted neck bracelets, a Spanish musket, sword, pistol and powder.²⁷

The early Spanish missions not only ensured the continued spread of disease among the southeast interior Indians, they also had an important impact on the native belief system. As John Hann has found, as early as the beginning of the seventeenth century, "many native groups in the Florida and Georgia hinterland began to express interest in giving obedience to Spain's monarch and in being christianized."²⁸ While there is little historical evidence that Indians as far north as the southern Appalachians converted to Christianity

²⁷Clarence W. Alvord and Lee Bidgood, The First Explorations of the Trans-Allegheny Region by the Virginians, 1650-1674 (Cleveland, OH: Arthur H. Clark Company, 1912), 213, 219-220; Alan Vance Briceland, Westward From Virginia: The Exploration of the Virginia-Carolina Frontier, 1650-1710 (Charlottesville, VA: University Press of Virginia, 1987), 163.

²⁸Hann, Apalachee: Land Between the Rivers, 9.

at such an early date, there is reason to believe that their belief system was influenced by contact with the Spanish during the sixteenth or seventeenth century.²⁹ A number of the Indians who migrated to the Gulf Coast during this period were former residents of the southern Appalachian region, and a few were even incorporated into the mission system. Because of frequent Indian migration to and from the area, it is conceivable that those Indians who did return to their former homelands would have taken back with them Christian ideas.³⁰

New World, New Crops

One of the most important contributions the Spanish made to the culture change in the New World was the introduction of Old World subsistence crops and agriculture practices. When the Spanish settled the north Florida and south Georgia coasts in the early 1560s, new European plants and animals were introduced among the farms of the newly established Franciscan

²⁹In 1567 a Catholic priest who accompanied Pardo on his expedition through the southern Appalachians was stationed at the Mississippian town of Guatri near present day Salisbury, North Carolina. Hudson notes that soldiers were also placed "at remote outposts to serve as lay catechists" so it is likely that Indians in the nearby Blue Ridge mountains were evangelized by the Spanish at this early date. Hudson, Juan Pardo Expeditions, 153.

³⁰Of course, not all native groups were equally impressed by the Catholicism of the Spanish. Around 1640 the Chisca journeyed from the southern Appalachians to St. Augustine in order to "render obedience to the Spanish monarch." However, the Chisca eventually became antagonistic to the Spanish cause and even enticed Christianized Indians in the area to revolt against them. See also Hann, Apalachee, 16, 182-183.

missions. By the late 1560s a mutual agricultural exchange was taking place between North America and Iberia. The Caribbean Islands played a central role in this intercultural exchange: the Spanish took crops cultivated in the Caribbean islands by native groups and brought them to North America. Because the Spanish colonists not surprisingly preferred familiar and accepted foods, they brought many Old World crops including peaches, oranges, grapes, figs, wheat, watermelons, muskmelons, barley, chickpeas, garlic, pears, medlars, pomegranates, and European greens to this New World. Other cultigens, such as yams, sorghum, okra, and castor beans, were brought to North America during the Spanish era primarily to serve as foods for African slaves.³¹

During the later half of the sixteenth century, peaches, sweet potatoes, cowpeas, and watermelons were among those crops introduced by the Spanish to the southeastern United States. Livestock also were involved in the cultural exchange. Iberian cattle, hogs, horses, mules, donkeys, burros, sheep,

³¹Hann, Apalachee, 239. It is beyond the scope of this essay to discuss the introduction of all Old World cultigens in great detail. Crops such as sorghum (Sorghum bicolor), okra, and castor beans may not have been introduced into North America directly by the Spanish. Nevertheless, both of these crops are associated with the slave trade and generally followed the Africans into North America. Even though the Spanish relied heavily on native Americans for physical labor during the sixteenth century, Indians were also directly involved in slave trafficking and themselves owned slaves. For the importance of the slave trade in New World crop introductions, see Mark Wagner, "The Introduction and Early Use of African Plants in the New World," Tennessee Anthropologist VI (Fall, 1981), 112-123.

goats, and chickens were brought in large numbers to the Spanish missions. Plants cultivated in the New World also were taken back to Europe. Tomatoes, sweet and "Irish" potatoes, tobacco, maize, beans, and peppers were among the plants introduced to the Old World.³²

To the New World, the Spanish colonists brought peaches. Archaeologists have recovered peach pits dating from the sixteenth-century at the town of Santa Elena on the south Georgia coast. The earliest written record of peach trees growing in North America is 1602, at a Franciscan mission in St. Augustine. The Indians of the southeast interior began growing peaches almost immediately after they were first introduced to the fruit. Archaeological evidence suggests that by the early seventeenth century, the Indians of southern Appalachia grew a Spanish variety of peach.³³ According to

³²Elizabeth S. Wing, "Evidences for the Impact of Traditional Spanish Animal Uses in Parts of the New World," in Juliet Clutton-Brock, ed., The Walking Larder: Patterns of Domestication, Pastoralism, and Predation (London: Unwin Hyman, 1989), 72-79; Crosby, The Columbian Exchange, 64-74; Carrier, The Beginnings of Agriculture in America, 41; Sauer, Sixteenth Century North America, 286-288; Henry Hobhouse, Seeds of Change: Five Plants That Transformed Mankind (London: Sidgwick & Jackson, 1985), 192-232; Gray, History of Agriculture in the Southern United States to 1860, I, 9-13.

³³J. Mark Willams, "The Joe Bell Site: Seventeenth-Century Lifeways on the Oconee River," (Ph.D. diss., Department of Anthropology, University of Georgia, 1984, 425-427, 434, 456; Vernon J. Knight, Jr., Tukabatchee: Archaeological Investigations at an Historic Creek Town, Elmore County, Alabama, 1984 (Report of Investigations 45. Office of Archaeological Research, University of Alabama, 1985), 79; Hann, Apalachee, 133; Smith, Archaeology, 125; Sauer, Seventeenth Century North America, 242.

John Hann, when the English colonists arrived in Jamestown in 1607, "the Indians of that region had already acquired them via trade routes extending back to Spanish Florida." Around 1700, when John Lawson arrived in the Carolinas, the Spanish peach was being dried, cooked, and used as medicine by the natives. In fact, the peach was so central to the culture of the Indians that he and the other English colonists erroneously thought the Old World fruit was indigenous to North America and referred to it as the "Indian Peach."³⁴

How and when the Indians brought peaches to the southern Appalachians is not known. Peach pits have been uncovered at early seventeenth century archaeological sites in north Georgia, southeast Tennessee, and western North Carolina.³⁵ At the Joe Bell archaeological site located in north-central Georgia near Athens, archaeologist Mark Williams found that peach pits were the second most common food remains.³⁶ These peaches, which date from the second quarter of the seventeenth century, may have been brought to the region by direct trade

³⁴Hann, Apalachee, 133; Hudson, Southeastern Indians, 80; Merrell, The Indians' New World, 16; Gray, History of Agriculture, I, 5.

³⁵Elisabeth S. Sheldon, "Introduction of the Peach to the Southeastern United States," Paper presented at the Annual Meeting of the Society for Economic Botany, St. Louis, 1978; Marvin Smith, Archaeology of Aboriginal Culture Change, 125; J. Mark Williams, "The Joe Bell Site: Seventeenth-Century Lifeways on the Oconee River," 425-427.

³⁶Williams, The Joe Bell Site: Seventeenth-Century Lifeways on the Oconee River, Ph.D. dissertation, University of Georgia, 1984, 425-427, 434; Hann, Apalachee, 133.

with the Guale missions on the Georgia coast or by Spanish missionaries who visited the Indian town of Ocute in 1596. If they hadn't already done so, it is very likely that the Indians of Ocute, who lived south of the study area on the Oconee River, would have traded the seeds and/or plants to their northern neighbors. The DeLuna expedition to Coosa in 1560 also may have taken peaches to the region, although there is little archaeological evidence to support the claim that peaches were growing in northwest Georgia until the seventeenth century.³⁷

However peaches were obtained by the natives of the region, they were quickly adopted as an important subsistence crop. The peach had a significant bearing on the cultural ecology of the Indians not only because the trees provided larger yields but also because they ripened at a different time of year than indigenous fruit trees such as wild plums or persimmons. The high-yielding peach also required the subsequent adoption of certain pruning and horticultural skills, including the art of grafting, which was the most efficient way of propagating the tree. The rapid adoption of the peach during the early seventeenth century does suggest, however, that the Spanish fruit was not entirely foreign to the native population. The Indians had some rudimentary knowledge of fruit-tree cultivation, since they routinely

³⁷Marvin T. Smith, "Indian Responses to European Contact," 148-149.

harvested wild plums in what could be called a quasi-orchard context.³⁸

Within a century after its introduction into the region, the peach became an important part of Cherokee culture. Not only was the fruit readily eaten, the leaves, bark, and seeds of the peach were used as a remedy for skin diseases, fever, nausea, and internal parasites.³⁹ By the eighteenth century, the Cherokee grew peaches in such large orchards that the trees dominated the surrounding village landscape. In 1799, after arriving at the Tellico Blockhouse in southeast Tennessee, Abraham Steiner and Frederick de Schweinitz commented on the view of the peach orchards in the Cherokee towns of Chota and Toqua: "One can see several miles up the Tennessee, with its charming islands covered with countless peach trees."⁴⁰ Peaches were so plentiful in the region during

³⁸Thomas Hatley, "Cherokee Women Farmers," 39; Elvas, True Relation, 103, 311. In western North Carolina, Bartram also observed a "grove of Cassine yapon," which the Cherokee used to make their sacred Black Drink. According to Bartram, the Indians call it their "beloved tree" and were "very careful to keep it pruned and cultivated." The Yaupon tree (Ilex vomitoria), was used extensively by nearly all southeastern tribes, from the early historic period on. Van Doren, Travels of William Bartram, 291; Charles Hudson, ed., Black Drink: A Native American Tea (Athens, GA: University of Georgia Press, 1979), passim.

³⁹Paul Hamel and Mary Chiltoskey, Cherokee Plants (Sylva, NC: Herald Publishing Co., 1975), 47-48; Daniel E. Moerman, Medicinal Plants of Native America. Research Reports in Ethnobotany, Contribution 2. (Ann Arbor: The University of Michigan, The Museum of Anthropology, 1986), 373.

⁴⁰Williams, ed., Early Travels in the Tennessee Country, 464.

the Federal period that both the Cherokee and early settlers fed bushels of them to their hogs and distilled the fermenting fruit into a profitable brandy. According to government records, among the personal property of Joseph Vann, the wealthy north Georgia Cherokee planter, was a peach distillery and 1,133 peach trees.⁴¹

The sweet potato (Ipomoea batatus), like the peach, is another important subsistence crop introduced by the Spanish. In this case, however, it came not from Spain but from the West Indies. In 1492 Christopher Columbus found Indians growing sweet potatoes in Cuba, where he saw "a great deal of tilled land some sowed with these roots." Cultural geographer Carl O. Sauer claimed that the sweet potato was the second most important crop of the Caribbean natives. In speaking of their importance to the natives, Columbus went so far to say that the root was "their life." The Spanish prized the sweet potato for its sweetness and quickly took it into their gardens and kitchens in both the Old and New World.⁴² Commerce between the Caribbean and the Gulf coast certainly hastened the introduction of the tuber to North America. The first

⁴¹Georgia Department of Natural Resources, "The Vann House," Atlanta: The Parks, Recreation and Historic Sites Division of the Georgia Department of Natural Resources, n.d. For peach growing in late eighteenth century Kentucky see, for example, Thwaites, ed., Early Western Travels, 242. Bonner, History of Georgia Agriculture (Athens, GA: University of Georgia Press, 1964), 150-151.

⁴²Sauer, The Early Spanish Main, 54; Carrier, Beginnings of Agriculture in America, 60-63; Herndon, "Indian Agriculture," 295-296.

sweet potatoes were probably brought to the Atlantic and Gulf coasts around the time the first Spanish missions were established, and in fact, until the late nineteenth century the sweet potato was commonly referred to as the "Spanish Potato."⁴³

Both sweet potatoes and yams (Dioscorea genus) were important crops of the Caribbean sugar plantations, although the yam is distinctly an Old World crop originally brought to the New World as a key provision on slave ships. High in essential vitamins and carbohydrates, both plants produce enormous yields on soils too poor for most other crops.⁴⁴ The sweet potato may have entered the southern Appalachians in the same manner as the peach, although reliable archaeological evidence is lacking. In 1568 Juan Bandera of the Pardo expedition mentions being served batatas--the Spanish term for sweet potato--at the Indian town of Aboyaca, located near the present day town of Orangeburg, South Carolina. The Spanish again received batatas, about thirty miles south of Aboyaca, on the main route to Santa Elena, one of only two places the

⁴³Fearing Burr, Jr., The Field and Garden Vegetables of America (Boston: 1865; reprint, The American Botanist, Booksellers, 1988), 91-94.

⁴⁴Earl Hamilton, "What the New World Gave the Old," in Fredi Chiappelli, editor, First Images in America: the Impact of the New World on the Old (Berkeley, CA: University of California Press, 1976), II: 856; Mark Wagner, "The Introduction and Early Use of African Plants in the New World," 113-114; Joe Gray Taylor, Eating, Drinking, and Visiting in the South: An Informal History (Baton Rouge, LA: Louisiana State University Press, 1982), 38.

crop is mentioned by Bandera on the entire expedition. Even though he described these batatas as "local roots," it is highly possible that they were sweet potatoes and not morning glory tubers or wild artichokes, native roots commonly consumed by the natives.⁴⁵ The proximity of the Indians to the coast makes it an even more likely possibility. Agricultural historian Lewis Gray maintains that while there is no reputable account of the Virginia Indians growing sweet potatoes at the Jamestown settlement, the tubers were probably cultivated by the Indians of northern Florida and coastal South Carolina by the early seventeenth century.⁴⁶

Natives of southern Appalachia could have acquired sweet potatoes from intercultural trade with coastal populations during the seventeenth century. If they had done so, particularly on a small scale, there would be little archaeological evidence since the soft skins of the tuber rapidly decay. According to Cherokee anthropologist Brett Riggs, the very first sweet potatoes in the region most likely arrived with the first British traders to the Cherokee upcountry, who brought with them most of the tried and proven agricultural practices of the coastal plantations.⁴⁷ Whatever

⁴⁵Hudson, The Pardo Expeditions, 44, 289.

⁴⁶Gray, History of Agriculture, I: 4. See also Herndon, "Indian Agriculture in the Southern Colonies," North Carolina Historical Review, 44 (1967): 287-288.

⁴⁷Brett Riggs, personal communication. On the influence of British traders on Cherokee subsistence patterns, see Adair, History of the Indians, 442-447; Mooney, Myths of the

the exact route or speed of sweet potato introduction into the southern Appalachians, the Cherokee did grow the "Spanish potato" soon after Anglo-European contact. By the late 1740s the sweet potato was fast becoming a major crop of the Cherokee Indians. In 1776, when Revolutionary War Colonel William Christian and his two thousand men decimated the towns of the Cherokee on the Little Tennessee river, they destroyed 50,000 bushels of corn and 10,000 bushels of sweet potatoes.⁴⁸ In Myths of the Cherokee, James Mooney quotes one "old informant" who told him that before the Removal, the Cherokee virtually "lived on them."⁴⁹

Sweet potatoes became extremely important to the early Cherokee. They grew the root crop in separate fields, away from other crops and generally harvested in late September before the first frost. According to archaeological evidence, the Cherokee stored them in shallow pits lined with corn stalks or broom sedge and then covered them with straw to cure. The underground pits allowed proper ventilation while simultaneously preventing unwanted damage from frost.⁵⁰

Cherokee, 213-214; Arthur E. Bogan, Lori LaValley and Gerald F. Schroedl, "Faunal Remains," in Gerald F. Schroedl, editor, Overhill Cherokee Archaeology, 489-492. For sweet potato cultivation during the colonial era, see James Bonner, A History of Georgia Agriculture, 1732-1860 (Athens, GA: University of Georgia Press, 1962), 21.

⁴⁸Brett Riggs, personal conversation, March 10, 1993. See also Mooney, Myths of the Cherokee, 50-51.

⁴⁹Mooney, Myths of the Cherokee, 214.

⁵⁰Brett Riggs, personal communication, March 10, 1993.

Because of the plant's enormous yields, the adoption of sweet potatoes had an overall positive effect on the lives of Cherokees, especially considering the disease, war, and social pressures suffered by them during the eighteenth century.⁵¹ Of course the Spanish sweet potato continued to be grown by the early settlers of the region, and became, in many frontier communities, the most important vegetable crop. By the middle of the nineteenth century, the sweet potato was synonymous with southern eating, making up a significant portion of the southerner's diet. On the eve of the Civil War, the region boasted a number of varieties, including the Kentucky early red, Spanish Carolina, purple-skinned, and the brimstone.⁵²

Another crop whose introduction must be attributed to sixteenth trade century Spanish trade is the field or cowpea (Vigna Unguiculata). The cowpea, another Old World crop used as an important provision on slave ships sailing from Africa, received its name because it was historically fed to livestock. According to agricultural historian Lyman Carrier, the Spanish brought cowpeas to the New World shortly after 1500. Archaeologists found cowpeas among mid-seventeenth

⁵¹Hatley, "Cherokee Women Farmers," 41.

⁵²Burr, The Field and Garden Vegetables of America, 93-94; Hilliard, Hog Meat and Hoecake: Food Supply in the Old South, 1840-1860 (Carbondale, IL: Southern Illinois Press, 1972), 50, 175; Dick, Dixie Frontier: A Social History of the Southern Frontier from the First Transmontane Beginnings to the Civil War (New York: Capricorn Books, 1964), 290-91; Bernard Romans, A Concise Natural History of East and West Florida (New Orleans: Pelican, 1961), 86; Joe Gray Taylor, Eating, Drinking and Visiting in the South, 37-38.

century Spanish artifacts in the lower Tallapoosa Valley of central Alabama, which indicates they came with the priests who founded the missions of Spanish Florida.⁵³ The French botanist Le Page Du Pratz, who observed them growing in western Mississippi and Louisiana in the early 1700s, referred to them as "Apalachean beans" because, he says, "we receive them from a nation of the natives of that name. They probably had them from the English of Carolina, whither they had been brought from Guinea....They are like the other beans, but much smaller, and of a brown color, having a black ring around the eye, by which thay are joined to the shell."⁵⁴

Du Pratz was correct in identifying the cowpea with both the Apalacheans of northern Florida and the country of the plant's origination, Africa. He was probably wrong in saying that the British first brought the plant to the natives, although they could have certainly reintroduced the pea among after the collapse of the Spanish missions in the early eighteenth century. Because the cowpea was also central to slave culture it is doubtful that they would have needed a reintroduction. Moreover, as Thomas Jefferson observed, the

⁵³Carrier, Beginnings of Agriculture, 247; Wagner, "The Introduction and Early Use of African Plants in the New World," 114; Waselkov, "Seventeenth-Century Trade in the Colonial Southeast," 127.

⁵⁴Antoine Le Page Du Pratz, The History of Louisiana (London: T. Becket, 1774), 204; N.M. Surrey, The Commerce of Louisiana During the French Regime, 1699-1763 (Studies in the Social Sciences 167, New York: Columbia University, 1916), 271, 379; Carrier, The Beginnings of American Agriculture, 231.

cowpea was "very productive, excellent food for man and beast, awaits without loss our leisure for gathering, and shades the ground very closely through the hottest months of the year."⁵⁵ Many Indians preferred cowpeas over beans because they could be picked green or after they dried on the vine and dried peas could be preserved for months; peas that were harvested during the summer could be eaten the following spring.

After its introduction by the Spanish, the cowpea apparently spread northward along the coast, in much the same manner as the sweet potato, arriving on the periphery of the southern Appalachians sometime around 1700. Cowpeas have been recovered from eighteenth century Cherokee village sites, where the Indians grew the plant as a supplemental vegetable crop or as fodder for cattle.⁵⁶ A major problem in accurately tracing the introduction of peas and beans into the region is the descriptions in the historical record. The words "pease," "pulses," "beans," and "calavances" are used almost interchangeably by the botanists, colonists, and early explorers who attempted to describe the various crops to potential immigrants in the Old World. From archaeological evidence, however, it appears that prior to 1600, perhaps no more than two or three species of beans were cultivated in the

⁵⁵Quoted in Carrier, Beginnings of Agriculture, 250.

⁵⁶Waslekov, "Seventeenth Century Trade," 127; Kurt Russ and Jefferson Chapman, Archaeological Investigations at the Eighteenth Century Overhill Cherokee Town of Mialquo (Publications in Anthropology 36. Tennessee Valley Authority, 1983), 98.

southern Appalachian region. After that time, Spanish missionaries and British traders introduced new bean varieties into the interior southeast.⁵⁷

The watermelon (Cucumis lanatus) is yet another Old World plant introduced into North America by the Spaniards during the sixteenth century. Lewis Gray claims that watermelons were growing in the settlements of Spanish Florida by 1579. The initial introduction of the watermelon was likely several decades earlier.⁵⁸ In 1562, Jean Ribault found the Indians of Florida growing "beans, gourdes, cowecumbers, citrons (watermelons), peasen, and many other fruites...." Colonial records reveal that members of the Raleigh expeditions to North Carolina in 1584 were served raw watermelon. Captain John White, sent to Roanoke Island in 1587, saw among the overgrown fields of the abandoned fort, "Melons of divers sortes, and Deere within them, feeding on those melons." Watermelons, like peaches, became so widely dispersed among Native American groups that the first English settlers to the continent regarded them as an indigenous American plant. In 1748 in New York state, Peter Kalm noted in that "the Indians plant great quantities of watermelon at present, but whether

⁵⁷Of course new bean varieties could have entered the region as the result of direct trade with other Indians outside the area. For the introduction and dispersal of beans in North America see Carrier, Beginnings of Agriculture, 49, 247; Crosby, The Columbian Exchange, 172; Heiser, Seed to Civilization, 125-126; Nabhan, Enduring Seeds, xviii-xxiii.

⁵⁸Gray, History of Agriculture in the Southern United States, 12; Sauer, Seventeenth Century North America, 241.

they have done it of old is not easily determined, for an old Oneida Indian (of one of the six Iroquois nations) assured me that the Red Man did not know watermelons before the Europeans came into the country and showed them to the Indians."⁵⁹ Despite popular opinion to the contrary, watermelons of the size and form we know today were not native to North America. Their presence in the region is largely due to the Spanish conquest of the New World.

The Spanish melon most likely reached southern Appalachia sometime during the early seventeenth century, although neither the Mississippians nor the Cherokee cultivated them in large quantities. The Cherokees did nevertheless grow them, which makes it an important marker in determining the influence of Spanish trade on cultural change in the region. Watermelons, peaches, sweet potatoes, and cowpeas, as well as a host of other agricultural crops, including castor beans and okra, played a major role in shaping the subsistence patterns of frontier Appalachia (Table 4.1). We know that prior to the founding of Spanish Florida, none of these crops were consumed by the inhabitants of the southern mountains. Whether introduced directly by the Spanish, or indirectly by the first

⁵⁹Carrier, Beginnings of Agriculture, 69, 70-78; Melvin Gilmore, Uses of Plants by the Indians of the Missouri River Region (Lincoln, NB: University of Nebraska Press, 1991), 75-77; Mark Wagner, "The Introduction and Early Use of African Plants in the New World," Tennessee Anthropologist VI (Fall 1981), 118; Adolph B. Bensen, editor, The America of 1750; Peter Kalm's Travels in North America (New York: Dover, 1964), II: 515.

European traders (who obtained them at coastal settlements) these plants changed the diets of both the natives and early white settlers.

New plants not only added new foodstuffs to native diets, they also made the cultivation and harvest of wild and semi-domesticated cultigens such as chenopodium and sunflowers less desirable. New crops had relatively little impact on the local ecology, however, as most of these plants were cultivated in the same fields as traditionally grown crops. Cowpeas, newly adopted bean varieties, and melons could be planted among cornfields with little or no alteration in traditional cultivation techniques. The impact of these various plants on the ecology of southern Appalachia was minimal. Peach orchards caused the most visible change to the surrounding village landscape.

In order to determine the full extent of environmental change during the seventeenth century, one must consider a number of forces at work on the mountain ecology. The population losses suffered by the Mississippians undoubtedly had an important positive impact on animal populations. The seventeenth century is, incidently, the period of the first major buffalo migrations to the region. Without major predators and with larger expanses of land now uninhabited, the large animals could enter the region relatively unharmed. The abandoned villages and old fields that resulted from the Spanish epidemics quite possibly created enough openings in

Table 4.1. Crops introduced into the southern Appalachians as a result of Spanish trade in the New World.

Cultigen	Area or country of origin	Approximate date of introduction into region
peach	Mediterranean	1600
watermelon	Iberia	1620-1650
cowpea	west Africa	1650-1700
sweet potato	Caribbean Islands	1600-1700
okra	Africa	1770?
sorghum	Africa	1750-1800
yam	west Africa	1740?
castor or mole bean	Africa	1770?

Sources: Mark Wagner, "The Introduction and Early Use of African Plants in the New World," Tennessee Anthropologist 6 (Fall 1981), 112-123; Herman Viola and Carolyn Margolis, editors, Seeds of Change: Five Hundred Years Since Columbus (Washington, DC: Smithsonian Institution Press, 1991); Lyman Carrier, Beginnings of Agriculture in America (New York: McGraw-Hill, 1923); Marvin Smith, Archaeology of Culture Change in the Interior Southeast (Gainesville, FL: University of Florida Press, 1987); Alfred Crosby, The Columbian Exchange: The Biological and Cultural Consequences of 1492 (Westport, CT: Greenwood Press, 1972); J. Mark Williams, "The Joe Bell Site: Seventeenth -Century Lifeways on the Oconee River," (Ph.D. diss., Department of Anthropology, University of Georgia, 1984); Carl O. Sauer, The Early Spanish Main (Berkeley, CA: University of California Press, 1966); John H. Hann, Apalachee: The Land Between the Rivers (Gainesville FL: University Presses of Florida, 1988); Charles Hudson, The Juan Pardo Expeditions: Explorations of the Carolinas and Tennessee, 1566-1568 (Washington, DC: Smithsonian Institution Press, 1990); Jerald T. Milanich and Susan Milbrath, editors, First Encounters: Spanish Explorations in the Caribbean and the United States, 1492-1570 (Gainesville, FL: University of Florida Press, 1989).

the upland forest "to allow bison to migrate through them."⁶⁰

First Trade

During the early seventeenth century, the fur trade moved into the southern mountain region. The market for furs and skins was established during the seventeenth century. The trade in skins was first initiated by the Spanish, who sought deer, bison, elk, and beaver skins for the burgeoning Dutch and Mexican leather industries.⁶¹ The fact that Indians were trading furs at this time challenges conventional wisdom about the beginning of the deerskin trade in the southern Appalachia. The general consensus among scholars was that prior to 1670, "there was no regular trade in furs or deerskins with the interior of the Southeast." Indeed, most historians believe that Cherokee trade in furs did not begin until 1690, and that commerce with the Cherokee is insignificant until well after the turn of the century. This view has been challenged by historical and archaeological evidence accumulated in the last few decades. According to

⁶⁰Silver, A New Face on the Countryside, 51. John Hann notes that the first reports of buffalo in northwest Florida occur in the 1680s, "a decade or so after the destruction of the Apalachee and Timucuan missions." Hann, Apalachee, 186.

⁶¹David Weber, The Taos Trappers: The Fur Trade in the Far Southwest, 1540-1846 (Norman, OK: University of Oklahoma Press, 1971), 12-31; Gray, Agriculture in the Southern United States, 109; Waslekov, "Seventeenth Century Trade in the Colonial Southeast," 11.

archaeologist Gregory Waselkov, "the traditionally held view of American historians is incorrect regarding the origins of the southeastern deerskin trade. Trade did not begin with the founding of Charlestown in 1670. It started nearly over a half-century earlier, and even then probably drew on still older prehistoric exchange networks."⁶²

As previously mentioned, the primary source for this commerce was the Spanish, who frequently shipped deer, bison, and cattle skins from New Spain to Cuba. In Cuba large quantities of hides and skins were purchased by the Dutch whose ships called regularly at the port of Havana. Hides not purchased by the Dutch, including "cueros al pelo"--deerskins with the hair left on--were shipped westward across the Caribbean to Mexico. The exact number and sources for these skins is lacking, but the presence of numerous Spanish artifacts throughout the area indicates that the Indians of southern Appalachia became actively involved in the skin trade. This evidence can also be corroborated with existing historical documents. Gabriel Arthur's 1673 observation that "not many years since ye Tomahittans [Yuchis] sent twenty men laden with beavor to ye white people," is a clear sign that trade was occurring with the Spanish before contact with the English traders. Frontier historian Verner Crane noted that in 1680 the Chichimecos, Yuchis, and Cherokees attacked the Guale

⁶²Waselkov, "Seventeenth-Century Trade in the Colonial Southeast," 129.

missions of Georgia, despite the fact that they had previously traded, he says, "in good friendship" with the Spaniards.⁶³ Still more evidence is a 1681 map drawn by Jean Baptiste Franquelin that shows a path running directly from the Tennessee Valley to the coast of Florida. According to John Swanton, the path was "the route by which the Caskinamos and Shawnees came to the Spaniards to trade."⁶⁴

The native participation in Spanish trade implies that ecological degradation occurred at a much earlier date. If twenty Tomahittas were laden with beaver, and each man packed twenty skins--a conservative estimate--a total of 400 skins were taken south on a single trip to the Spanish missions. Beaver, deer, and elk populations were no doubt affected by the Spanish commerce with the natives, although certainly not to the degree that occurred after the arrival of the British in the eighteenth century. While the over-hunting of beaver for the skin trade may have, in the long term, allowed clearings created by the dam-building beaver to return to forest, this doesn't appear to have happened. From paleoethnobotanical records, it seems that deforestation of the countryside continued for this period, increasing

⁶³Verner Crane, The Southern Frontier, 1670-1732 (New York: W.W. Norton, 1981), 17.

⁶⁴John Swanton, "The Kaskinamo Indians and Their Neighbors," American Anthropologist 32 (1930), 406-407; William P. Cumming, The Southeast in Early Maps (Princeton, NJ: Princeton University Press, 1958), plates 45, 48, 59.

gradually throughout the seventeenth century.⁶⁵

Buffalo

One probable reason for the increase in grasslands and forest clearings was the migration of the American Buffalo to the region. The buffalo were no doubt lured to areas such as beaver ponds, which would have been a likely source for both water and food. Ultimately, the migration of the buffalo to the southern mountains resulted in even larger expanses of open grasslands, which helps to explain the extensive "fields, meadows and lawns" encountered by William Bartram during his eighteenth century travels among the Blue Ridge.⁶⁶ Buffalo are

⁶⁵Cridlebaugh, "American Indian and Euro-American Impact," 104-106. Pollen samples analyzed from the sixteenth and seventeenth centuries show a rise in the distribution of ragweed, a species indicative of old fields and forest clearings. According to Cridlebaugh, the increase in ragweed demonstrates continued land clearance and growth in Indian agricultural activities. Interestingly, Cridlebaugh does not mention beaver, elk, or buffalo as other possible ecological influences on the forest clearing process.

⁶⁶Mark Van Doren, ed., Travels of William Bartram, 276, 280-283, 288. A few scholars have argued that these open fields were caused by Indians who are said to have burned these areas for agriculture purposes or in order to create game lures. Woodland meadows such as those observed by Bartram and others could not have been created solely by such fires, however. The Cherokee did ignite the woods to clear the forest floor of litter in order to gather chestnuts, but this practice probably did not create large treeless areas in the upland forest. Indian burning, if and when it occurred, was largely concentrated in mountain river valleys around village sites. For Cherokee fire burning see, Mooney, Myths, 317, 322, 470; Charles Lanman, Letters from the Allegheny Mountains, (New York: G.P. Putnam, 1849), 195; Gersmehl, "A Geographic Approach to A Vegetation Problem," 77-79, 82.

exceptional browsers and their hoofs have a considerable impact on the growth of small plants and shrubs. What exactly brought the buffalo to the area remains a mystery. According to reputable sources, the Bison first arrived from the west, where swelling populations may have encouraged herds to seek food elsewhere.⁶⁷ In any event, the very first buffalo herds--small wandering bands of a dozen or so individuals--likely entered the region around 1600, before Indian populations began stabilizing.

Unfortunately, most of the historical accounts of buffalo herds date from the late eighteenth century, so it is virtually impossible to determine just when and where the buffalo first arrived in the Appalachian South. The problem is further compounded because herds could travel hundreds of miles in a single year. Yet, in 1540 the Indians of a small Mississippian village in the Blue Ridge mountains presented DeSoto with a buffalo hide "as soft as the skin of a kid, with hair like that of the soft wool of sheep."⁶⁸ Whether the hide was obtained locally or through trade with other Indians is impossible to determine. Bison remains uncovered from a single

⁶⁷Erhard Rostland, "The Geographic Range of Historic Bison in the Southeast," Annals of the Association of American Geographers 50 (1960), 395-407; Frank Gilbert Roe, The North American Buffalo: A Critical Study of the Species in its Wild State (Toronto: University of Toronto Press, 1970), 228-256. Roe does a good job of debunking the myth that the Buffalo of the mountains was a subspecies of Bison--the so-called woodland or woods Buffalo.

⁶⁸Elvas, True Relation, II, 113.

specimen at the Garden Creek site in western North Carolina date only to the seventeenth century.⁶⁹ In 1673, at the Tomahitan village in northwest Georgia, Gabriel Arthur observed many bison horns scattered around the town's garbage heaps, though again, they could have been obtained on hunting expeditions outside the region. John Hann writes that buffalo herds were not regularly observed in northern Florida until the late 1680s, which makes it unlikely that herds from the Gulf coast migrated into the mountains.⁷⁰ Observers regularly report seeing buffalo in the lower Mississippi Valley from about 1685 onward, which is also when the first very large herds entered the southern Appalachian region.⁷¹

Bison herds were scattered throughout the region by the beginning of the eighteenth century. Wildlife historian William Hornaday, who wrote one of the earliest studies of buffalo extinction in the east, mentions that as early as 1701 buffalo were caught and domesticated by Huguenot settlers on the James River, near Richmond, Virginia. John Lawson also "thought it worthwhile to record" that two Buffalo were killed

⁶⁹Dickens, Cherokee Prehistory, 203.

⁷⁰Alvord and Bidgood, The First Explorations of the Trans-Allegheny Region, 213; Hann, Apalachee, 186.

⁷¹Roe, The North American Buffalo, 238; Hornaday, "Extermination of the American Bison," 380-381; David Dary, The Buffalo Book: The Full Saga of the American Animal (Chicago, IL: Sage Books, 1974), 9-12.

near the North Carolina coast in 1709.⁷² In 1733, James Olglethorpe included "deer, elks, bears, wolves, and buffaloes" among the animals of Georgia and South Carolina, where large herds were commonly observed during the colonial era. Most of the documented sightings in Tennessee and Kentucky were made after the middle of the eighteenth century by Daniel Boone and other long hunters legendary for their skill in pursuing these big-game animals. In 1770 Boone declared that around the Red River, "the buffaloes were more frequent than I have ever seen cattle in the settlements...sometimes we saw hundreds in a drove, and the numbers about the salt springs were amazing."⁷³

Because of their relatively late arrival into southern Appalachia, the Buffalo never received the mythical status that the Plains Indians bestowed upon the animal. James Mooney even remarked that the buffalo is "strangely absent from Cherokee folklore." The early Cherokee did, however, eat the flesh of the buffalo, dressed its skins for blankets and bed coverings, wove its hair into belts, and carved its horns into spoons and other useful implements.⁷⁴ In partial disagreement with Mooney, Samuel Cole Williams claimed that buffalo hides

⁷²Quoted in Audubon and Bachman, American Quadrapeds, II, 54-55. See also Roe, The North American Buffalo, 246.

⁷³Brent Altsheler, "The Long Hunters and James Knox," Filson Club Quarterly V (1888), 173-174; Dick, The Dixie Frontier, 4; Roe, The North American Buffalo, 236.

⁷⁴Mooney, Myths, 263, 293, 410, 412, 443.

were a "symbol of protection to the early Cherokee; hence it was given as a pledge," which may help to explain the buffalo skin presented to Hernando De Soto by Mississippians in 1540.⁷⁵

Bison herds in the southern mountains probably never reached large numbers during the seventeenth century, the largest totaling less than 200 individuals. The most sizable herds in the eastern U.S. were observed during the eighteenth century and these just outside the region in north-central Kentucky near the Red and Licking rivers. In 1760, Henry Timberlake encountered a stampeding herd of eighteen buffaloes in east Tennessee and was almost trampled before several were killed by gunfire. Four years later, Daniel Boone claimed to have seen large herds of bison "between the spurs of the Cumberland Mountains" in east Tennessee, but some have questioned the validity of his account. By the end of the eighteenth century nearly all of the buffalo were driven from the southern Appalachian region, driven out by long hunters and the first settlers. The last known specimen to have survived in the mountains was killed in 1815 at Buffalo Gap, near Asheville, North Carolina.

Although the buffalo ranged over the southern mountains in relatively smaller herds than those found on the Great Plains, the ecological change brought about by their grazing activities was extensive. The buffalo inhabited the region for

⁷⁵Adair, History of the Indians, 446-446, n. 256. See also Mooney, Myths of the Cherokee, 23.

more than a century, creating wallows, trails, and grassy meadows among the upland forest and fertile river valleys. The Old Sugarlands Road, the only major path over the Great Smoky Mountains until State Highway 71 was constructed in the late 1920s, was created largely by herds of migrating buffalo. In 1780, Colonel John Donelson, upon seeing the area surrounding the "French" mineral springs on the Cumberland River in Tennessee, felt compelled to comment on changes in the forest landscape that had been caused by bison herds. "The open space around and near the sulphur springs, wrote Donelson, "instead of being an 'old field,' as has been supposed by Mr. Mausker at his visit here in 1769, was thus freed from trees and underbrush by the innumerable herds of buffalo and elk that came to these waters..."⁷⁶ An English visitor to a salt lick in Kentucky observed "fifty acres of land trodden by Buffaloes," that had "not a blade of grass upon it." He also added that "springs of this sort have large roads made to them, as large as most public roads in a populous country..."⁷⁷

The extinction of buffalo in the southern mountains falls largely on the shoulders of longhunters and the first settlers who killed them for food and tallow. Many would often take only the tongue of the buffalo--a frontier delicacy--and leave

⁷⁶Quoted in Roe, The North American Buffalo, 237. See also Allen, American Bisons, 114; Garretson, American Bison, 22-23.

⁷⁷Quoted in Roe, The North American Buffalo, 234. Original quote in Cresswell's Journal, 85, 86.

the remainder of the carcass to rot. Their presence in the region nevertheless lasted for many years, as buffalo trails often became the roadbeds of settlement trails and transportation routes. As one mournful historian of the region expressed it: "Down to the outbreak of the Revolution herds of buffaloes grazed in the grassy prairie regions. And if the last of them disappeared beyond the mountains by 1775, their deep-worn trails leading to favored licks and ranges persisted for many years afterwards, as was the case with the piles of bones of the slaughtered animals..."⁷⁸

In southern Appalachia, the American buffalo was an agent of both cultural and environmental change. With the arrival of large herds in the region sometime during the seventeenth century, the bison provided the Cherokee with food and clothing; and hides for the Spanish, and later British, skin trades. Throughout the eighteenth century, the Buffalo played an important role in clearing larger and larger areas of the upland forest, a process started by the Mississippians and continued by the Cherokee as settlements dispersed throughout the region. The extermination of the buffalo slowed this gradual process of forest clearing, if only for a very short period. As buffalo were exterminated or driven out, domesticated cattle were introduced into the mountain south by

⁷⁸Bagot, "The South Carolina Up-Country at the End of the Eighteenth Century," American Historical Review 28 (19??), 682; Roe, The North American Buffalo, 245. Joel Asaph Allen, The American Bison, Living and Extinct (New York: Arno Press, 1974), 117.

European traders. The newly introduced cattle ranged freely in the mountains, often among grassy pastures that were initially cleared by bison.

Despite many cultural uses, the Cherokee considered the buffalo a nuisance because it destroyed cropland. This partly explains the Cherokee's initial dislike for European cattle--"white man's buffalo"--and their slow acceptance of it as a food source. The Cherokee believed that when an animal was eaten, its characteristics entered the body and mind of the eater: "He who feed on venison is, according to their physical system, swifter and more sagacious than the man who lives on the clumsy bear or helpless dunghill fowls, the slow-footed tame cattle, or the heavily wallowing swine." A diet that relied too heavily on "slow-footed" animals was to be avoided.⁷⁹

Cattle, Hogs, Horses

Like buffalo, the first range cattle--many of them descendants of the Iberian cattle stocked in the Caribbean and Florida during the seventeenth century--were perceived as game animals by the Cherokee. The Cherokee had an aversion to beef as a food source, and could not tolerate the destruction of their crops by these wandering herds. Cattle also provided a

⁷⁹Adair, History of the American Indians, 138-139; Mooney, Myths, 472.

source of leather, giving the pragmatic Indians an additional incentive for killing the beasts. The first incidents of cattle killing were largely isolated ones but gradually increased as more and more traders brought cattle to the region. By 1730, enough conflict had arisen among Indians and frontier traders over open-range cattle to prompt British authorities to draft an "article of friendship and commerce" to help remedy the situation:

"The Great King and the Cherokee Indians being thus fastened together by the Chain of Friendship...[The King] desires that the Indians and the English live together as the Children of one Family...so he now gives the Cherokee Indians the Privilege of living where they please; and he has ordered the Gov't. to forbid the English building houses or planting corn near our Indian town, for fear that your young people sho'd kill the Cattle and young Lambs & so quarrel with the English and Hurt them; and hereupon we give one Piece of Red Cloth."⁸⁰

For several decades after cattle arrived, most encounters between Cherokees and cattle were not very positive ones. Gradually, cattle gained more acceptance, particular among those who had adopted the practice of fencing in their gardens and corn fields. As James Adair noted, "some of the natives are grown fond of horned cattle, both in the Cheerake and Muskohge countries, but most decline them, because the

⁸⁰Williams, ed., Early Travels in the Tennessee Country, 139-140; Brad Alan Bays, "The Historical Geography of Cattle Herding" (Master's thesis, University of Tennessee, Knoxville, 1991), 75.

fields are not regularly fenced."⁸¹ Prior to 1750, the Cherokee could find plenty of traditional game such as deer, buffalo, and turkey, and so most Cherokees considered the cultivation of corn and beans more important than raising beef. By the late 1760s, however, after Colonel Grant and his Carolina volunteers destroyed the Lower and Middle Towns--decimating hundreds of acres of cornfields and peach orchards--more and more Cherokee began adopting the practice of cattle herding. In 1776, when General Rutherford's troops destroyed thirty-six Cherokee towns along the Oconaluftee, Tuckasegee, Hiawassee, and Little Tennessee Rivers, they drove Cherokee cattle into cornfields in order to destroy the ripening corn and then later "killed or carried off" the remaining stock. The military defeat, famine, and social chaos experienced by the Cherokee further accelerated the rate of cattle adoption so that by the 1790s, cattle herding was a preferred activity, particularly among those Cherokee living among the Lower Towns of the Tennessee Valley.⁸²

The cattle-herding practices of the Cherokees resembled the Spanish cattle herding tradition that had developed south

⁸¹Adair, History of the Indians, 242; Goodwin, Cherokees in Transition: A Study of Changing Culture and Environment Prior to 1775 (University of Chicago, Department of Geography Research Paper No. 181, 1977), 135; Gray, History of Agriculture, I, 201-202. For a more detailed analysis of the problems created by cattle herding in colonial New England, see William Cronon, Changes in the Land, 129-131. On problems between colonist, Indians and cattle on the Atlantic coast, see Silver, A New Face on the Countryside, 172, 173, 175-179.

⁸²Mooney, Myths of the Cherokee, 49.

of the region in north Florida and south Georgia. In fact, the Cherokee name for cattle--wa'ka--is a corruption of the Spanish term vaca, which means cow. As cultural geographer Brad Alan Bays explains it, "The Spanish instituted an Iberian pattern of open range ranching in northern Florida during the second half of the seventeenth century. In the early eighteenth century this activity was adopted by Florida Indians. These, in turn, passed their experience to other tribes, including the Cherokee."⁸³

The Spanish originally brought cattle from Hispanola to St. Augustine during the sixteenth century, and cattle from these original herds gradually spread westward across the Gulf coast. Although their numbers there were never very large there until 1650, these cattle were extremely important to the economy of Spanish Florida, providing tallow for burning, leather for export to Mexico and Europe, hides for wrapping bundles of tobacco, and draft oxen for plows. After 1675, cattle herding was done on a much larger scale as ranching became a civilian activity outside of the control of Catholic missionaries.⁸⁴ According to several authorities, the only

⁸³Bays, "The Historical Geography of Cattle Herding," 55; C.W. Arnade, "Cattle Raising in Spanish Florida, 1513-1763," Saint Augustine Historical Society Publication Number 21 (1965), 3-11. For the spread of Spanish ranching traditions in the New World, see Deb Bennett and Robert S. Hoffman, "Ranching in the New World," in Herman J. Viola and Carolyn Margolis, eds., Seeds of Change, 90-11.

⁸⁴Hann, Apalachee, 133, 137; Hann, "Demographic Patterns and Changes in Mid-Seventeenth Century Timucua and Apalachee," Florida Historical Quarterly 64 (1986), 383; Arnade, "Cattle

significant white presence in north central Florida during the second half of the seventeenth century was found at the Spanish haciendas, where several thousand head of cattle could be found roaming freely on the open range.⁸⁵ Transplanted directly from the Old World, the Spanish ranching in Florida procured large numbers of animals and then left them in the countryside to fend for themselves. The herds surrounding the hacienda were managed largely from horseback, a Moorish tradition rooted deeply in Iberian pastoralism. As early as 1670, Indians in North Florida began raising livestock in the same manner. Cattle herding gradually spread northward so that by the middle of the 1700s, the Creeks located in Georgia and Alabama were ranching cattle on the open range. During most of the eighteenth century, the Spanish/Creek herding complex involved the use of herdsman, who used horses during roundups and cattle drives. In 1799, the Moravians Abraham Steiner and Frederick De Schweinitz, observed a Spanish/Creek cattle drive at its conclusion near the Tellico Blockhouse in east Tennessee: "Early in the morning of the 10th we saw a number of Creek Indians, who had been driving cattle thither for the garrison. The cattle had been made to swim the river and were immediately shot...[The Creeks] were mostly young, with silver

Raising in Spanish Florida, 1513-1763," 3-5; Waselkov, "Seventeenth Century Trade," 117.

⁸⁵Charles Arnade, "Cattle Ranching in Spanish Florida, 1513-1763," 116-23; Bays, "The Historical Geography of Cattle Herding Among the Cherokee Indians," 58; Bennett and Hoffman, "Ranching in the New World," 93-98.

rings in their noses and slits in their ears. They wore short striped shorts, a strip of blue cloth about their loins, long, leatheren stockings laced at the side and Indian half-boots...The Creeks bring much cattle into this region, some of it very fine."⁸⁶ The Cherokees most influenced by the Spanish herding tradition were those who had migrated from South Carolina after the Revolutionary War and settled in northeast Alabama, southeast Tennessee and northwest Georgia. These "Lower Cherokees" were in closest proximity to the Creek Indians who had adopted cattle herding earlier in the century. The Ridge and Valley region held abundant canebrakes and open, level land, an environment that, according to Brad Bays, allowed the cattle "to multiply prodigiously."⁸⁷

By the early 1800s, large scale cattle herding was a common practice among Cherokee in the lower Tennessee Valley. The Cherokees living in the Blue Ridge and Upper Tennessee Valley adopted large scale, open-range herding much slower, keeping smaller herds in the surrounding woodlands. and generally kept much smaller herds.⁸⁸ In the more mountainous areas of southern Appalachia, cattle herding was largely associated with women, who oversaw the practice as an extension of their agricultural duties. William Bartram

⁸⁶Williams, Early Travels in the Tennessee Country, 464.

⁸⁷Bays, "The Historical Geography of Cattle Herding," 86.

⁸⁸Bays, "The Historical Geography of Cattle Herding," 86, 98.

observed an Indian trader whose Cherokee wife had learned to make cheese and butter as early as 1775. Small-scale cattle herding did not become popular among traditional Cherokee women until after 1776, when Nancy Ward, a Cherokee matriarch, is said to have learned to make butter and cheese from Mrs. Bean, a white prisoner from the Watauga settlements whom she supposedly saved from burning at the stake. Afterwards, Nancy Ward kept her own small herd and eventually introduced dairying to other Cherokee women, who quickly adopted the practice.⁸⁹

The late adoption of cattle by the Cherokee was partly due to the early presence of hogs in the region, an animal also first introduced to the Americas by the Spanish. In 1539, De Soto brought into Florida thirteen sows and by the time he entered the southern Appalachians, one year later, he had more than three hundred swine. These hogs were the offspring of domestic pigs Columbus brought to Cuba in 1493, which may be the progenitors of all the pigs that eventually populated the Spanish West Indies during the sixteenth and seventeenth centuries.⁹⁰ Apparently, a few hogs from DeSoto's swine herd escaped in the southern mountains, but most probably were

⁸⁹John P. Brown, Old Frontiers: The Story of the Cherokee Indians from the Earliest Times to the Date of their Removal to the West, 1838 (Kingsport, TN: Southern Publishers, 1938), 153-54; Mooney, Myths of the Cherokee and Sacred Formulas, 48, 204; Bays, "The Historic Geography of Cattle Herding," 104.

⁹⁰John L. Mayer and I. Lehr Brisbin, Wild Pigs in the United States, (Athens, GA: University of Georgia, 1991), 8-9.

killed by wolves, mountain lions, or the Indians themselves. Hogs that survived such a fate would have multiplied quickly, however, which has caused some to believe that some feral hog populations in the southeast originated from the original Spanish introductions of these animals.⁹¹ Hogs constituted the principle livestock of Spanish Florida, so even if De Soto's hogs did not survive, the Indians of southern Appalachia could have seen them during the seventeenth century. Because raids on seventeenth-century Spanish settlements were fairly common, hogs could have been obtained in this manner. As early as 1651 there is documented evidence that Virginia Indians were stealing hogs and killing cattle from coastal settlements. In 1674 the English explorer Gabriel Arthur went with a Tamahitan hunting party from north Georgia down the Coosa and Alabama Rivers to Mobile Bay where they reportedly killed "swine, sturgin, and beavers."⁹²

The Cherokee did not, however, actually raise hogs for food until sometime after 1700, when the first animals were brought into the settlements by British traders. Eventually, the Cherokee seemed to prefer hogs over cattle, even though

⁹¹John J. Mayer and I. Lehr Brisbin, Wild Pigs of the United States: Their History, Comparative Morphology, and Current Status (Athens, GA: University of Georgia Press, 1991), 9; Bennett and Hoffman, "Ranching in the New World," 101-103; Goodwin, Cherokees in Transition, 135.

⁹²Alvord and Bidgood, First Explorations of the Trans-Allegheny Region, 223; Briceland, Westward From Virginia, 167-168. The feral pig is not to be confused with the Russian Wild Boar, a twentieth century introduction to southern Appalachia.

initially it appears that the older generations of Indians did not think the hog a desirable food source. But hogs could be penned during the growing season and then allowed to forage during the fall and winter months. As James Adair observed, the women would "confine the swine in convenient pens, from the time the provisions are planted to the time they are gathered in..."⁹³ An abundant supply of chestnuts, acorns, hickory nuts, and fallen peaches insured an abundant fall food supply, which meant less territory was needed for the free-ranging hogs. Moreover, pork could be preserved by smoking, which made its storage more convenient than beef, which had to be pickled in brine. In short, hogs were easier to manage. By the middle of the eighteenth century the hog had become the most important domesticated animal of the Cherokee.⁹⁴

Within decades of their introduction, free-ranging cattle and hogs of the Cherokee and British traders began competing with white-tailed deer and turkey populations for mast and browse. The growing scarcity of food, along with over hunting promoted by the deerskin trade, meant that deer got increasingly scarce by the 1760s. One student of Cherokee culture claims that as early as 1761 "pigs were beginning

⁹³Adair, History of the Indians, 436.

⁹⁴Goodwin, Cherokees in Transition, 136; Bays, "Historical Geography of Cattle Herding," 78. Because they were fed large quantities of chestnuts, pigs raised by the Cherokee were esteemed more than those raised in white settlements. See also Mooney, Myths of the Cherokee, 82.

to displace deer in the southern ecosystem."⁹⁵ Slowly, deer became extremely rare; hunting parties went farther and farther from the village to secure game. Longer hunts also required the use of horses, another Spanish animal adopted early by the Cherokee and used extensively after 1750.

The horse, like other introduced livestock, has Iberian origins. The first horses were brought to the region by De Soto, and there is evidence that these animals or their offspring were secured by the Chickasaws. The Chickasaws kept large droves of horses during the eighteenth century, and they themselves developed a breed of horse now known as the "Chickasaw." In 1811 one commentator wrote the horses were originally furnished by De Soto, and that by 1750, they had become a valuable article for commerce.⁹⁶ Of course, these Iberian horses may have been obtained later from the Spanish missions of the Gulf and Atlantic Coasts. In 1776 William Bartram also observed horses among the Seminole Indians in Florida, which were "said to descend originally from the Andalusian breed, brought by the Spaniards when they first

⁹⁵Bays, "The Historical Geography of Cattle Herding," 83. See also Goodwin, Cherokees in Transition, 141-144.

⁹⁶Quoted in Adair, History of the Indians, 340 n.176. See also Mary Parker Harly, Georgia Indian Trade in the Trustee Period, 1733-1852 (Master's Thesis, University of Georgia, Athens, Georgia, 1935), 53; Bennett and Hoffman, "Ranching in the New World," 108-109. Others doubt that De Soto's horses left any progeny and that the horse gained popularity only after the founding of the Spanish missions. See, for example, Thorton Chard, "Did the Spanish Horses Landed in Florida and Carolina Leave Progeny?," American Anthropologist 42 (1940), 90-106.

established a colony of East Florida." According to Bartram, the Upper Creeks also possessed Andalusian breeds of horses brought over by the Spaniards.⁹⁷ Not all native groups in the region appeared as familiar with horses as the Chickasaws, Seminoles, and Creeks, however. When Gabriel Arthur visited the Tamahitans in 1673, the natives appeared awestruck by the appearance of his small herd of pack horses. In Arthur's own words: "they were very kindly entertained by them, even to addoration in their cerrimonies and courtesies...a stake was sett up in ye towne to fasten ye horse to, and [were given] an aboundance of corne and all manner of pulse with fish, flesh and bears oyle for ye horse to feed upon..."⁹⁸

The Cherokee probably saw horses prior to the eighteenth century, even though they didn't adopt the animal before that time. The first horses used by the Cherokee likely served as pack animals or for local transportation. As the demands for furs increased, so did the demand for good horses.⁹⁹ The Cherokee probably obtained them directly in trade with the Chickasaw or indirectly from white traders who purchased them

⁹⁷Van Doren, ed., Travels of William Bartram, 185, 186; Jared Vincent Harper, "The Adoption and Use of the Horse Among Southeastern Indians," Tennessee Anthropologist 5 (Spring 1980), 27-28.

⁹⁸Alvord and Bidgood, First Explorations of the Trans-Allegheny Region, 212-213.

⁹⁹Jared Vincent Harper, "The Adoption and Use of the Horse Among Southeastern Indians," 29, 31; Robert Newman, "The Acceptance of European Domestic Animals By the Eighteenth Century Cherokee," 105; Goodwin, Cherokees in Transition, 133.

as middle men. In 1761 Henry Timberlake observed "numerous breeds of horses" among the Overhill towns of east Tennessee which implies that the Cherokee already had multiple uses for the different types of animals.¹⁰⁰ By the last decade of the eighteenth century the "Chickasaw" had become one of the most popular horse breeds of the upper South and was held in high regard by Native Americans and settlers alike. A Chickasaw sire by the name "Piomingo" (for the Chickasaw chief of that name) was advertised in the Knoxville Gazette in 1792. These "Spanish barbs," as they were sometimes called, were extremely valuable animals, prized for their use in hunting, warfare, or as pack animals.¹⁰¹ Like cattle and hogs, horses were responsible for altering the frontier landscape, if not directly from their grazing activities, then indirectly by increasing the intensity and success of the fur trade. On horseback, the natives could go on much longer hunting expeditions and then return with a greater number of skins. The deer population, in turn, suffered greatly, especially as food supplies dwindled due to the growing number of hogs and cattle.

Before other European settlers even arrived, buffalo,

¹⁰⁰Timberlake, Memoirs of Timberlake, 72.

¹⁰¹Adair, History of the Indians, 242, 340-341, n. 176. For horse use in eighteenth century east Tennessee, see Lucy Gump, "Patterns and Possessions of Living in Washington County the Twenty Years Before Tennessee Statehood, 1771-1796," (Master's thesis, East Tennessee State University, Johnson City, Tennessee, 1987), 91-98.

cattle, hogs, and horses had made significant changes in the upland forest. Even though a majority of the southern Appalachian landscape remained a contiguous stand of "virgin" timber until the nineteenth century, the number of open meadows and forest clearings increased steadily from 1500 to 1800. Centuries of Indian occupation, extensive canebrakes, large expanses of level land, and numerous mineral springs made the Tennessee Valley a prime area for grazing livestock. These ecological factors as well as the social and political unrest that occurred during the eighteenth century encouraged the adoption of hog and cattle raising by the Cherokee, which further increased the size and number of forest clearings. The close proximity of the lower Tennessee Valley to coastal Georgia and Florida also precipitated the diffusion of Spanish agriculture into the region, which explains the early use of peaches, sweet potatoes, cowpeas, and other European foods by the Native Americans. The introduction of these crops had a minor influence on the Appalachian landscape at large, yet village gardens and outfields underwent considerable transformation after Spanish contact. After the devastation wrought by disease, Native Americans dispersed linearly along river valleys and begin relying on corn and other high yielding species such as sweet potatoes and peaches.

The Spanish influence is intriguing for another reason. Despite all the impact Spanish contact had on southern Appalachia, certain parts of the region remained outside

contact with Spanish Florida until well after 1700. Gabriel Arthur, upon visiting the Shawnee along the Big Sandy River in 1673, remarked that they did not know "the use of guns" nor had any iron instruments among them. Arthur did mention trade between the Shawnee and the Tomhittans, so they knew about iron tools, guns, and other cultural artifacts that were regularly entering the region from Spanish Florida.¹⁰² The Mississippian predecessors of the Shawnee, the Fort Ancients, also likely suffered from introduced epidemic diseases, which helps to explain the disintegration of their more centralized settlements on the Cumberland Plateau during the seventeenth century. When elements of Spanish culture did first enter the upper Cumberland Plateau, it was probably through trade with neighboring Indians to the south and east.

With the destruction of the Spanish missions by the English in the early 1700s, the influence of the Spanish in the southern Appalachians began to subside. English and French traders quickly pushed their way inland across the mountains and by 1715 had totally captured the Old Northwest trade in furs and skins. Market forces quickly shifted from the Gulf Coast to the Atlantic ports of Williamsburg and Charleston where buffalo hides, deerskins, and Indian slaves

¹⁰²Smith, Archaeology of Aboriginal Culture Change, 41-43; Waselkov, "Seventeenth Century Trade in the Colonial Southeast," 120-121. In 1673 James Needham and Gabriel Arthur reported that "ye Tomahitans have a bout sixty guns, not such locks as oures bee, the steeles are long and channelld where ye flint strikes." Alvord and Bidgood, First Explorations of the Trans-Allegheny Region, 214.

were regularly shipped to European and Caribbean ports. The push of English and French traders into the mountain region exposed the Native Americans to a new range of trade goods, including clothing, guns, gunpowder, knives, glass beads, and assorted iron tools and implements. Political allegiances formed between the British and the Cherokee, making the Native Americans important players in world trade. Within decades, hundreds of thousands of animal skins from the region were annually shipped across the Atlantic in order to clothe Europeans. The southern mountains, and those who lived among them, would be forever changed.

Chapter Five

KITUWHA: CHEROKEE MOUNTAINS

Their towns are still scattered wide of each other, because the land will not admit any other settlement: it is a rare thing to see a level tract of land of four hundred acres. [The Cherokee] are also strongly attached to rivers--all retaining the opinion of the ancients that rivers are necessary to constitute a paradise.

James Adair, 1775
History of the Indians

The original great tie between the Indians and Europeans was mutual conveniency. This alone could have first induced the Indians to receive white people differing so much from themselves into the country...A modern Indian cannot subsist without Europeans; and would handle a flint ax or any other rude utensil used by his ancestors very awkwardly; so what was only conveniency at first is now become necessity...

John Stuart, 1762
Indian superintendent to the Cherokees.

Before the arrival of the first European settlers, the Appalachian South was the homeland of the Cherokee Indians. At the turn of the eighteenth century, the Cherokees lived in permanent settlements throughout the region except their principle hunting ground, the Cumberland Plateau. Before European occupation, the territorial boundaries of the Cherokees stretched from the mountains of north Georgia to West Virginia and from western North Carolina to Middle

Tennessee.¹ The Cherokees also claimed much of the land that today comprises the state of Kentucky, although they shared those charitable hunting grounds with the Chickasaws, Creeks, Iroquois, and Shawnee. By most estimates, the Cherokee settlements and hunting grounds included no more than 60,000 square miles of territory.²

By 1700 about 4,000 families or approximately 30,000 individuals resided in this vast territory.³ At that time the towns of the Cherokee were located on both sides of the Appalachian Divide and were concentrated in four main geographic areas. What historians and anthropologists refer to as the "Lower Towns" were located along the Chattooga, Tugaloo and Keeowee rivers near the border of Georgia and South Carolina. To the north, in western North Carolina, were the "Middle Towns," a group of villages scattered along the upper tributaries of the Little Tennessee River. The "Valley Towns" were located to the south and west of the Middle Towns, along

¹William G. McLoughlin, Cherokee Renaissance in the New Republic, (Princeton, NJ: Princeton University Press, 1986), 8; Mooney, Myths, plates II, III; Gary Goodwin, Cherokees in Transition: A Study of Changing Culture and Environment Prior to 1775 (Chicago, IL: University of Chicago Department of Geography Research Paper No. 181, 1977), 45, figure 6.

²Goodwin places the core area of Cherokee settlement at 40,000 square miles, which covered most of the southern Appalachian mountain system. See Goodwin, Cherokees in Transition, 6-16.

³Russell Thorton, The Cherokees: A Population History (Lincoln, NB: University of Nebraska Press, 1990), 17; Goodwin, Cherokees in Transition, 16-17, 46, 111, Table 16; Mooney, Myths of the Cherokee, 11.

the upper Has and Knightly rivers. The "Overhill Towns," all in what is today Tennessee, were found west of the Great Smoky Mountains (hence the name Overhill) along the narrow floodplain of the Tellico, Little Tennessee, and Hiwassee rivers. Kituwha, a middle town located near present day Bryson City, North Carolina, was the "mother town" of the Cherokees, and its tribal leaders supposedly reigned over all Cherokee towns and divisions.⁴

In each settlement area, the location of the villages was greatly influenced by the topographical features of the mountain landscape. In the Middle and Lower towns where large level bottomlands were more readily available, the Cherokee built villages around a larger central township. Keeowee, a major Cherokee town located in Pickens County, South Carolina, was a village of this type. In the Overhill area, where river valleys were more narrow, they chose a linear settlement pattern, with longer distances between individual townships.⁵ Despite these variations, all Cherokee settlements were

⁴John R. Finger, The Eastern Band of the Cherokee, 1819-1900 (Knoxville, TN: University of Tennessee Press, 1984), 3; Lawrence French and Jim Hornbuckle, "Contact, Conflict, and Influence," in Lawrence French and Jim Hornbuckle, eds., The Cherokee Perspective: Written By Cherokees (Boone, NC: Appalachian Consortium Press, 1981, 16.

⁵Goodwin, Cherokees in Transition, 42, 45, fig. 6; McLoughlin, Cherokee Renaissance, 9. Another possible reason for the difference in settlement patterns could be the stronger influence of Mississippian culture on the Lower and Middle towns. The Overhill towns were newly settled villages and would have been less inclined to retain the older, more centralized, settlement clusters.

oriented toward rivers, because freshwater fish and waterfowl played such central roles in the life and culture of the Cherokees.

Excluding hunting grounds, the land encompassing the Cherokee settlements covered an area of approximately 40,000 square miles. This area of settlement was also the cultural hearth of the Cherokees, encompassing the mountainous sections of Georgia, Tennessee, South Carolina, and North Carolina (Fig. 5.1). The area's ecological diversity provided numerous animals for the chase and insured a bountiful harvest from forest and field. The Cherokee, like their Mississippian ancestors, knew the mountain environment well; in spring, they collected dozens of herbs from the forest floor; in summer, they picked strawberries, blackberries, and blueberries; and in autumn they gathered hickory nuts, walnuts, acorns, and chestnuts. Hunters acquired meat to be smoked or dried and stored for winter. The men caught fish, crayfish, and freshwater mussels from nearby rivers, and women raised communal gardens of beans, melons, and squash. Corn was the primary staple: by the early 1700s, the Cherokee grew at least three different varieties of maize.⁶ They also depended on river cane, which women wove intricate baskets to gather and store the harvest. Dwellings were built using wattle-and-daub construction, so river cane remained an extremely important

⁶Adair, History of the Indians, 437; McLoughlin, Cherokee Renascence, 9.

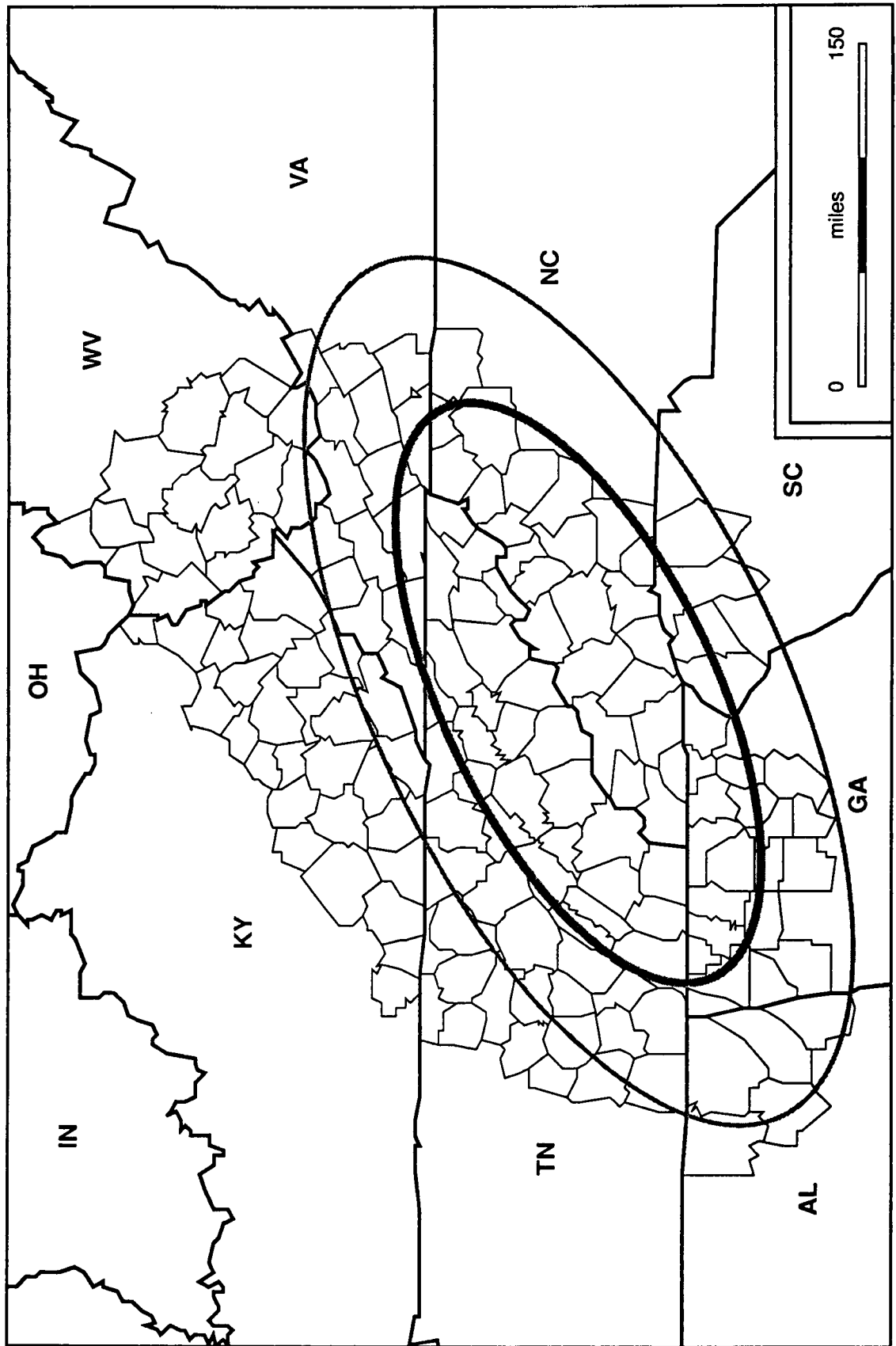


Figure 5.1. Cherokee Culture Hearth.

plant to the Cherokee during the early eighteenth century.

The southern Appalachians played a significant role in shaping the subsistence economy of the Cherokees. The woodlands of the mountains were an ideal ecosystem for grazing deer, elk, and buffalo as well as rabbits, squirrel, turkey, and beaver. These animals were important food sources and provided pelts for clothing, blankets, and other leather goods. Black bear, a common mammal of the mountain environment, was second only to white-tailed deer in the Cherokee diet.⁷ The Cherokee also hunted groundhogs, rabbits, frogs, birds, and turtles, all of which acquired a place in Cherokee mythology. "Each animal had its appointed station and duty," writes Cherokee ethnologist James Mooney. The frog was the marshal and leader in the town council, for example, while the rabbit was the messenger to carry all public announcements. The groundhog was emulated in the Green-corn dance, and, according to Mooney, "The bear figures as having been originally being a man, with human form and nature." Because of their sacred powers, animals taken in the hunt were routinely asked for forgiveness. As one Cherokee myth stated it, "No hunter who has regard for his health ever fails to ask pardon of the Deer for killing it."⁸

⁷Arthur Bogan, Lori LaValley, Gerald Schroedl, "Faunal Remains," in Gerald Schroedl, editor, Overhill Cherokee Archaeology at Chota-Tanasee, 480.

⁸Quotation in Joel Martin, Sacred Revolt: The Muskogee's Struggle for a New World (Boston: Beacon Press, 1991), 20. The quotation is actually a paraphrase of Mooney, Myths of the

Although they did not build homes on the highest mountaintops, the southern Appalachians were indeed home to the Cherokees. Even whites during the eighteenth century, called the hills of the Blue Ridge "the Cherokee mountains."⁹ The Cherokee frequently traveled mountain paths to trade, hunt, or conduct warfare, and the mountains themselves were incorporated into their worldview. Clingman's Dome, for example, in the Great Smoky Mountains, was where "the bears held council" in several important Cherokee myths. Cherokee cosmology symbolically included the flora and fauna of the mountains and the stories themselves often take place among the highest peaks. In many respects the mountains were not only their home, it was their religious and spiritual center.¹⁰

Cherokee, 250-251. For the other myths, see Mooney, 231, 252, 279.

⁹Adair, History of the Indians, 239; Mark Van Doren, Travels of William Bartram, 60; John Logan, A History of the Upper Country of South Carolina, From Earliest Periods to the Close of the War of Independence (Charleston, SC: S.G. Courtney & Co., 1859), I: 4.

¹⁰On Indian trails in southern Appalachia, see William Myer, Indian Trails of the Southeast (Nashville, TN: Blue and Gray Press, 1971), 1-81, 99-117; Marion Hemperley, Historic Indian Trails of Georgia (Athens, GA: The Garden Club of Georgia, 1989), 1-6, 8-10, 22-24; Norburn, "The Influence of Physiographic Features of Western North Carolina on the Settlement and Development of the Region," 66-69.

Trading in Culture

Because of Cherokee occupation, the Appalachian region remained an obstacle to permanent frontier settlement until well into the eighteenth century. But neither the lofty mountain peaks nor the Cherokees could stop the white traders and trappers who entered the region from the newly founded colonial settlements on the east coast. Europeans from the Carolinas and Virginia sought trade with the Cherokee as early as the 1670s, exchanging iron tools, knives, glass beads, cloth, and axes for skins and pelts. By 1716, regular trade was occurring between the Cherokee and the Europeans on the coast; so much so, in fact, that South Carolina had to appoint a Superintendent of Indian Trade to oversee trading activities.¹¹ Historical documents reveal that by 1740 as many as 150 traders were buying furs from the Cherokee. By the middle of the eighteenth century, the Cherokee were fast becoming dependent on European goods. As early as 1745 one Cherokee, Chief Skiagunsta, wrote to the governor of South Carolina that "My people cannot live independently of the English....The clothes we wear we cannot make ourselves. They are made for us. We use their ammunition with which to kill

¹¹Alvord, First Explorations of the Trans-Allegheny Region, 210-226; Hudson, The South Eastern Indians, 163; McLoughlin, Cherokee Renascence in the New Republic, 16-17; Newman, "Euro-American Artifacts," in Schroedl, editor, Overhill Archaeology (Knoxville: TN: University of Tennessee Department of Anthropology Report of Investigations 38, 1986), 415-417.

deer. We cannot make our own guns. Every necessary of life we must have from white people."¹²

The fur trade initiated by the British and French at the beginning of the eighteenth century signaled a new era of social and economic relations in the southern Appalachians. Even though Indians of the mountains had traded skins to the Spanish in previous decades, the British and French greatly intensified the practice. With the founding of Charleston in 1670, the Cherokees thus achieved ready access to new European goods.¹³ Moreover, unlike the Spanish fur trade, English traders traded directly with the Cherokee, often living among them for extended periods and regularly marrying Cherokee women to gain direct entrance into Cherokee society. These resident traders not only introduced new tools and weapons to the Cherokee, they also brought with them a variety of new plants and animals that, in turn, helped to alter the face of mountain environment.¹⁴

¹²Quoted in David Corkran, Cherokee Frontier, 1740-1762 (Norman, OK: University of Oklahoma Press, 1962), 14.

¹³For the declining influence of the Spanish in the southeastern Indian trade, see Herbert E. Bolton, "Spanish Resistance to the Carolina Traders in Western Georgia," Georgia Historical Quarterly 9 (June 1925), 115-130; Kenneth Coleman, editor, A History of Georgia (Athens, GA: University of Georgia Press, 1991), 9-15; J. Leitch Wright, Jr., The Only Land they Knew: The Tragic Story of American Indians in the Old South (New York: The Free Press, 1981), 102-198.

¹⁴Douglas Wilms, "Cherokee Land Use in Georgia Before Removal," in William Anderson, ed., Cherokee Removal: Before and After (Athens, GA: University of Georgia Press, 1991), 2-3.

The impact of the fur trade on the culture and environment of the Cherokee was significant. Because of it, the Appalachian frontier underwent considerable environmental and cultural change even before the very first permanent Anglo-American settlers arrived. For this reason, the development of the southern frontier cannot be fully understood without first describing the changes brought about by the fur trades and the subsequent destruction of Cherokee settlements by British and Colonial forces. At the close of the American Revolution, the Cherokee ceded 50,000 square miles of their original territory--including their principle hunting grounds in Kentucky--to the white man. Loss of essential game and hunting lands as well as the introduction of cattle, hogs, horses, and a variety European plants into the region by English traders, had a profound effect on the Appalachian environment. The first half of the eighteenth century was an important period of cultural transition for the Cherokee and it was, I will argue, critical to the course and development of southern Appalachia.

Even though the Cherokee began trading with the British and French as early as the 1670s, trading activities did not become an important feature of their lives until at least the second decade of the eighteenth century. The first white men to settle in the region and live among the Cherokee were European men, who traded peltry for guns, knives, hatchets, broadcloth, steel traps, and iron hoes. Most of these traders

were Scotch-Irish, but some were French or English. Two of the first traders to arrive in the southern Appalachians were Robert Hix and David Crawley, who were said to have visited western North Carolina in 1707. Eleazor Wiggan or "Old Rabbit," the first trader to visit the Overhill Cherokee of East Tennessee, brought his wares to the town of Tanasee along the Little Tennessee River in 1711.¹⁵ Initial contacts with the Cherokee must have been somewhat disappointing to these entrepreneurs, however, since they were still a people largely devoted to farming. A government letter of reconnaissance dated 1708 describes them as being "but ordinary hunters and less warriors."¹⁶

The Cherokee were fascinated by manufactured goods, and their desire for guns and metal tools encouraged additional traders to settle in the region. Hunting for deer and trapping for beaver soon became a preoccupation of Cherokee men, who believed that European guns might give them an advantage over neighboring tribes. In the beginning, traders were "kindly

¹⁵Mary W. Rothrock, "Carolina Traders Among the Overhill Cherokee," East Tennessee Historical Society's Publications, 6 (1929), 17; Williams, editor, Early Travels in the Tennessee Country, 123; Williams, Dawn of Tennessee Valley and Tennessee History (Johnson City, Watauga Press, 1937), 70, 89; Gerald Schroedl and Kurt Russ, "An Introduction to the Ethnohistory and Archaeology of Chota and Tanasee," 8.

¹⁶Neil W. Franklin, "Virginia and the Cherokee Indian Trade, 1673-1752," East Tennessee Historical Society's Publications 4 (January 1932), 9; Crane, Southern Frontier, 155; Quotation from a letter dated 1708 in Rothrock, "Carolina Traders Among the Cherokees," 10; Mooney, Myths of the Cherokees, 32.

treated and watchfully guarded" by the Cherokee and were even occasionally allowed to live within the confines of the village.¹⁷ In addition to guns and iron tools, the traders brought glass beads and a various other items the Cherokees desired, including fish hooks, eye glasses, steel needles and scissors. Because of their social and economic ties to the coastal settlements, the traders did not depend on the Cherokee for subsistence. With them to the backcountry came cattle, hogs, poultry, tea, sugar, salt, liquor, and a number of herbs and spices. In the gardens and orchards surrounding their settlements, traders planted fruits and vegetables familar to their families. Within decades of first entry into the region, they introduced apples, pears, Irish potatoes, grapes, onions, turnips, cabbage, okra, and sorghum into the Cherokee country. Although many of the new plants were originally from the Spanish Caribbean--crops such as sweet potatoes, sorghum, and okra--most were of English origin or had at least been cultivated in northern Europe for a century

¹⁷Adair, History of the Indians, 443. Within the very first decades of contact with the English, Cherokees were not likely slaves to imported goods and most likely did not, in the words of historian James Merrell, "relentlessly pursue European commodities once he first donned a matchcoat, raised a musket to his shoulder, or drew a metal knife to his sheath." Prior to the beginning of the eighteenth century, the Cherokee's tools and clothing served them well: the desire for European commodities would have largely been an acquired one, understood only within the social, economic, environmental, transformation that resulted from the fur trade. James R. Merrell, The Indians' New World: Catawbas and Their Neighbors from European Contact Through the Year of Removal (Chapel Hill, NC: Institute for Early American History and Culture, University of North Carolina Press, 1989), 33.

or more.¹⁸

The Cherokee did not immediately adopt the use of the English traders' new foodstuffs. Nor were the traders particularly interested in transferring his culture to the Cherokee. For the first few decades of the eighteenth century, the primary task at hand was obtaining skins. Having depleted the deer and beaver populations of the northeast, Europeans found in the southern mountains an incredible new source for leather and furs.¹⁹ Deerskins stripped of their hair produced a chamois-like leather that could be fashioned into gloves or bookbindings. Beaver skins, of lesser value than buckskin, were used exclusively in the hat making trade. The beaver hat, due largely to its interminable availability in the New World, remained fashionable in Europe from the seventeenth to the nineteenth century.²⁰

¹⁸As mention in chapter three, sweet potatoes may have preceded the English trader into southern Appalachia. Even if they did not, it is still important to remember that the English trader would have encouraged the use of this Caribbean plant.

¹⁹For the social and environmental impact of the fur trade in New England, see Carolyn Merchant, Ecological Revolutions: Nature, Gender, and Science in New England (Chapel Hill, NC: The University of North Carolina Press, 1989), 29-68; Cronon, Changes in the Land, 82-107. For the southern Piedmont, Merrell, The Indians' New World: Catawbas and Their Neighbors from European Contact through the Ear of Removal (Chapel Hill, NC: University of North Carolina Press, 1991), 34-35, 52-56; Silver, A New Face on the Countryside, 88-97.

²⁰In 1755, a single buckskin was worth \$2.50, whereas beaver skins brought "four shillings, three pence half penny." B. R. Carroll, Historical Collections of South Carolina: Embracing Many Rare and Valuable Pamphlets Relating to the History of that State (New York: Harper and Bros., 1836), II:

The European demand for peltry can be illustrated by the number of dressed and undressed animal skins shipped to England from Charleston, South Carolina, for the years 1700-1715 (Table 5.1). During that fifteen year period more than 900,000 deer, beaver, elk, fox, otter, and raccoon skins found there way to the British leatherworks industry. As the fur trade grew larger, other southern ports became involved in the exporting of skins and furs. From 1755 to 1772, more than 2.5 million pounds of deerskins, taken from approximately one

Table 5.1. Quantity and types of skins shipped to England from Charleston, South Carolina, 1700-1715.

Animal	Number
Elk	41
Black Fox	283
Wild Cat	848
Moose	1,365
Otter	2,035
Raccoon	3,615
Fox	8,159
Beaver	9,841
Undressed Deerskins	164,267
Dressed Deerskins	718,719
Total	909,173

Sources: Adapted from Gary Goodwin, Cherokees in Transition: A Study of Changing Culture and Environment Prior to 1775 (University of Chicago, Department of Geography, 1977), 96, table 12; William G. McLoughlin, Cherokee Renascence in the New Republic (Princeton, NJ: Princeton University Press, 1986), 5, Table 1; Verner Crane, The Southern Frontier, 1670-1732, 328-329, Table I.

million deer, were shipped from the port of Savannah.²¹

In colonial days, fur transactions relied on credit, which financially placed traders in a tenuous position. Having received advance goods from dealers in Charleston or Williamsburg, the traders could not afford a poor hunting season. As historian Mary Rothrock explains it: "The London merchant credited the Charles Town merchant, who in turn credited the trader for his season's stock of goods. When the trader sold to the Indians it was with the understanding that he was to be paid with the skins and furs to be obtained in the coming winter's hunt."²² Eventually this was less a problem for the trader since the Cherokee became highly skilled at obtaining large quantities of deer and beaver pelts. By 1725 explains Rothrock, "remote and small indeed was the Cherokee village...[that] could not boast of traders, white men of English, Spanish, or French, or even all three nationalities."²³ Even by 1717 fur traders and the Cherokees escalated their business so much that the colony formed the South Carolina Board of Indian Commissioners to regulate it. The regulations of trade drafted by the Board and agreed upon by the principle chief of the Lower Towns, still complied with

²¹Gray, History of Agriculture in the Southern United States to 1860, 102, Table 2. The original source for this data comes from the records of William Brown, Comptroller and Searcher for his majesty's Customs in the Port of Savannah.

²²Rothrock, "Carolina Traders Among the Overhill Cherokees," 9-10.

²³Ibid., 8.

a commercial treaty that encouraged "a regular exchange of goods and peltries between Charleston and the [Cherokee] Nation." The Board granted Theophilus Hastings, the chief Carolina agent for the Cherokees, the use of five assistants from the South Carolina government to oversee Indian trade in the Cherokee territory. Each assisting agent was assigned one of five areas, which consisted of the districts "Terrequa, Quanessee, Choty, Tougeloe, and One to the Northward."²⁴ A schedule of values was agreed upon by all parties involved (Table 5.2). A gun was valued at thirty-five skins; one yard of strouds cloth, eight skins; one hatchet, three skins; a broad hoe, five skins; a calico petticoat, fourteen skins; an axe, five skins, and thirty bullets, one skin. Demand was so great for salt, gunpowder, tea-kettles, and looking glasses that the Board "fixed no price upon them, leaving the traders to exact as much as the savages were willing to pay for them."²⁵ A skilled hunter might kill from fifty deer in one season, indicating both the availability of deer in the mountains and the hunter's desire to obtain European articles of trade. One of the earliest purchases of Cherokee peltry recorded by the Board was received at Tugaloo, an important trading post located in the north Georgia mountains. On June 11, 1717, the Commissioners received there

²⁴Goodwin, Cherokees in Transition, 97-98; Logan, A History of the Upper Country of South Carolina, 241.

²⁵Logan, A History of the Upper Country of South Carolina, 241, 255.

"nine hundred and one dressed deer-skins, fifty-six raw, thirty beaver skins, and twenty-one slaves..."²⁶

A year after the Cherokee trade agreement was made with South Carolina, merchants representing the Virginia Indian Company began arriving in the southern Appalachians. Formed in

Table. 5.2. Exchange values between European goods and Deer skins.

Deer Skins		Deer Skins	
Guns	35	Twelve Flints	1
Stroud (yard)	8	Broadcloth Coat	30
White Diffield Blanket	16	Half Thicks Coat	20
Half Thicks (Yard)	3	Ax	5
Hatchet	3	Pistol	20
Narrow Hoe	3	Sword	10
Broad Hoe	5	Shirt	5
Thirty Bullets	1	Steel	1
Knife	1	Petticoat	14
Scissors	1	Two String Beads	1

Sources: John H. Logan, A History of the Upper Country of South Carolina, From the Earliest Periods to the Close of the War of Independence (Charleston, S.C: S.G. Courtney & Co., 1859), I: 254-255; Mary U. Rothrock, "Carolina Traders Among the Overhill Cherokees, 1690-1760," East Tennessee Historical Society's Publications 1 (1929): 14; Gary Goodwin, Cherokees in Transition: A Study of Changing Culture and Environment Prior to 1775 (Chicago: University of Chicago Department of Geography, 1977), 96, Table 13; William G. McLoughlin, Cherokee Renaissance in the New Republic (Princeton, NJ: Princeton University Press 1986), 6, Table 2.

1714 "to resuscitate the Cherokee trade," the Virginia Indian Company was initially prepared to bring a cargo of no less

²⁶Ibid., 384.

than "200 horseloads of goods under a guard of 40 men" into the Cherokee country.²⁷ In direct competition with South Carolina, the Virginia Indian Company sent a company caravan deep into the mountains, where it remained for the summer and autumn of 1718. At the end of that year, traders brought back more than "seventy horses loaded with peltry." Because of its "monopolistic character," the Virginia Indian Company aroused powerful opposition in both England and the colonies and was immediately declared defunct by the British government. Despite the official ban, trade with Virginia and the Cherokee continued, so much so, in fact, that the amount of peltry exported from Virginia doubled after 1718. This increased trade exacerbated tensions between the Old Dominion and South Carolina, even though the latter continued to receive the lion's share of Cherokee skins.²⁸ The fact that both could maintain a lucrative business shows how plentiful deer and beaver remained in the southern mountains.

Deer Kills

The greatest trading in the southern Appalachians took place between the years 1739 and 1761. In 1748, Charleston is

²⁷Franklin, "Virginia and the Cherokee Indian Trade," 13. According to Franklin, trade with the Cherokee had been at a low ebb for several years due to both competition Carolina and the Tuscarora War.

²⁸Franklin, "Virginia and the Cherokee Indian Trade," 14; Crane, Southern Frontier, 176-177.

said to have exported to England 160,000 deerskins at an estimated value of 1.25 million dollars.²⁹ In 1751 Gipson estimated that 100,000 pounds of deer skins were obtained by Cherokee hunters. In 1755, Cornelious Doherty believed if the winter season was favorable for hunting, he would be able to obtain 3,500 deerskins from his district alone. This would place the figure for the whole Cherokee Nation at approximately 25,000 skins.³⁰ Assuming that this rate held relatively constant between 1739 and 1761, it is conceivable that the Cherokee slaughtered well over a half-million deer in this period alone.³¹

²⁹Crane, Southern Frontier, 112. Lawrence Gipson, The British Empire before the American Revolution, (New York, NY: Alfred Knopf, 1939), 54. According to B.R. Carroll, the value of beaver and deerskin export from Charleston for the year 1747-48 were one and a quarter million dollars. B.R. Carroll, Historical Collections of South Carolina, 237.

³⁰Logan, History of the Upper Country of South Carolina, 383-384; Rothrock, "Carolina Traders Among the Overhill Cherokee," 10. According to Goodwin, there were approximately 2,000 Cherokee hunters involved in the fur trade during the middle part of the 18th century. Goodwin, Cherokees in Transition, 98.

³¹Gary Goodwin places the figure for the same period much higher, at 1.25 million deer, but that number appears to be highly inflated. John Stuart, who kept yearly customs books for the Board of Trade, recorded a total 5,239,350 pounds of deerskins leaving the port of Charleston from the years 1739 to 1761. Depending on their size and age (older skins weighed slightly less since weight was lost in the curing process), buckskins could weigh from one to four pounds. However, the total deer kill for the Southern mountains for those years could have been anywhere between one and five million deer. Verner Crane stated that skins exported to Great Britain "probably average about one and a half pounds," but offers no explanation for his claim. Crane's estimate places the total kill in the southeast at or near 3.5 million animals. Lawrence Gipson assumed that a buckskin weighed, on the average, four

There is no sure way to determine how many animals were slaughtered in the southern Appalachians for the eighteenth century fur trade. The Creeks, who sold their pelts in New Orleans and St. Augustine, hunted regularly in portions of northwest Georgia and northeast Alabama. The Shawnee, who shared hunting territory with the Cherokee, usually traded their skins with the Ohio Valley Company to the north. And sometimes the Cherokee themselves avoided Carolina or Virginia based traders (where most export records were kept). By 1750, the long hunter was also taking his share of game. To further complicate matters, after 1736 a considerable portion of Cherokee trade with Charleston and Savannah was diverted to Augusta, Georgia, where as many as two thousand pack-horse loads of peltry were purchased annually.³² Since the Georgia Gazette, the first newspaper in Georgia and a major source of information on the fur trade wasn't published until 1763, the full extent of the fur trade in the southern mountains may never be known.

As uncertain as the deer kill in eighteenth century

pounds, which would put the total deer kill at only slightly more than a million. Remembering that the number animals dressed by the Cherokee was only a fraction of the entire kill, it is perhaps safer to use the Doherty estimation of 25,000 animals per year for the Cherokee until further evidence is compiled. Goodwin, Cherokees in Transition, 98; Verner Crane, The Southern Frontier, 331, Table IV; Gipson, The British Empire Before the American Revolution, 54.

³²Logan, A History of the Upper Country of South Carolina, 319; Kenneth Coleman, ed., A History of Georgia, 51.

Appalachia may be, we do know that the fur trade reached its apogee in the mountains during the 1750s. By this time, many of the smaller villages became entirely dependent on European goods and others resented that they were being neglected by those traders who dealt only with the largest townships. To help remedy the situation, South Carolina in 1751 divided the Nation into thirteen hunting districts, each of which "should contain about two hundred gun men and three towns be in charge of one reputable trader."³³ The Board's attempts to control trading activities were largely unsuccessful, however. In many instances, traders cheated Indians by ignoring ordinances that required the use of uniform weights and measures when receiving and distributing goods. An unjust trader might use a 30-inch yardstick to measure broad-cloth. James Adair, who called such traders "idle, white savages," also lamented that the Cherokees were too easily defrauded by the "enchanting force of liquor." Unfortunately, the government's separate hunting districts did little to keep dishonest traders out of Cherokee territory. In 1751 a mere sixteen traders made regular visits to the Cherokee Nation. By 1756, just four years later, more than 150 traders worked with the Cherokee.³⁴

³³Rothrock, "Carolina Traders Among the Overhill Cherokee," 16-17; Goodwin, Cherokees in Transition, 99.

³⁴James Adair, History of the Indians, 444-445; Robert Meriwether, The Expansion of South Carolina, 1729-1765 (Kingsport, TN: Southern Publications, 1940), 191. For additional reports about the dishonest atrocities of traders, see Logan, A History of the Upper Country of South Carolina, 281-285.

After more than three decades of intense hunting and trapping, game in the mountain region became increasingly hard to find. By 1760, buffalo and elk, the largest and most valuable animals of the southern Appalachians, began to disappear from the mountain forests. Deer and bear populations also suffered greatly, not only due to indiscriminant hunting practices such as the killing of both does and bucks, but also because the increasing number of open-range hogs and cattle competed with these animals for mast³⁵. At the same time, wolves and mountain lions, the principle predators of deer and elk, still roamed the mountains. The only refuge for many of these animals became the area surrounding the Great Smoky Mountains in western North Carolina and the upper reaches of the Cumberland Plateau in eastern Kentucky and West Virginia. Outside these more remote areas, the environment underwent a radical transformation.

Leave it to Beavers

One of the most dramatic changes in the forests and streams of the mountains resulted from the decline and eventual loss of beaver populations. For the period 1699-1715, roughly the first two decades of the fur trade, nearly 40,000

³⁵Logan, History of the Upper Country of South Carolina, 151-166; Goodwin, Cherokees in Transition, 133-136; Bays, "Historical Geography of Cattle Herding," 72-78, passim; Adair, History of the American Indians, 241, 436, 445.

beaver skins were exported to England from Virginia and Carolina ports. In 1711 alone eight thousand beaver pelts were sent from Virginia.³⁶ On July 14, 1716, Cherokee burdeners brought 416 beaver skins to Carolina traders. A year later, Theophilus Hastings, a Cherokee agent stationed in the north Georgia town of Tugaloo, reportedly sent "four hundred and seventy three beaver skins" to the port of Charleston.³⁷ Beavers not only provided skins for British hat makers, they also supplied large amounts of castoreum, a musky oil used by Europeans to manufacture perfumes and medicines. Castoreum, extracted from the glands of beaver carcasses and sold abroad on the international market, was also applied to steel traps as a lure to attract the wary animal.³⁸ The Cherokees first acquired steel traps from white traders during the early part of the eighteenth century. Without them, it was extremely difficult to catch these extremely large rodents that, at maturity, weigh as much as sixty pounds.

As more and more steel traps were obtained by the Cherokee, the trade in beaver skins became more lucrative. Not surprisingly, the impact of the traps on beaver populations

³⁶Crane, The Southern Frontier, 328, Table I.

³⁷Goodwin, Cherokees in Transition, 95; Logan, History of the Upper Country, 263.

³⁸Robin F. Wells, "Castoreum and Steel Traps in Eastern North America," American Anthropologist 74 (1972), 479-80, 482; Christian F. Feest, "More on Castoreum and Traps in Eastern North America," American Anthropologist 77 (1975), 603; Timothy Silver, A New Face on the Countryside, 99.

was immediately felt. By 1740 beavers were becoming scarce in many parts of southern Appalachia.³⁹ In 1747 the entire export of beaver skins from Charleston to England was a mere two hundred pounds, or approximately six hundred pelts.⁴⁰ John Logan, an early historian of the Carolina backcountry, agreed that the rapid destruction of the animal was due to "the improved methods of hunting and trapping introduced by the whites," and estimated the beaver to be "wholly extinct before the end of the eighteenth century." William Bartram saw only "a few beavers" on his visit to the region in 1776 and these, he said, "abound most in the north of Georgia...near the mountains." Even though the beaver hat went out of fashion by 1900, the industrious beaver could scarcely be found anywhere east of the Mississippi River.⁴¹

As important as the destruction of the beaver was the loss of beaver habitat. For centuries, engineering beavers created meadows along streams by cutting small trees while building dams. They used hundreds of small saplings for the

³⁹Silver, A New Face on the Countryside, 99.

⁴⁰Logan, A History of the Upper Country, 385. The 600 figure assumes that each beaver pelt weighed around 5 ounces, a fairly conservative estimate for skins in the curing process.

⁴¹Logan, A History of the Upper Country, 49, 50; Mark Van Doren, ed., Travels of William Bartram, 232; Peter Matthiessen, Wildlife in America (New York: Viking, 1959), 81. Today, thanks to restocking programs, beavers are steadily making a comeback in many parts of southern Appalachia. Presently, several are building a dam on the author's property in northwest Georgia.

construction of these dams and even consumed the bark of larger trees. Their tree cutting activity created acres and acres of marshy meadows and shallow slews in the southern Appalachian forest; this ecosystem also supported a diverse population of freshwater fish, ducks, herons, song and gamebirds, and countless reptiles and amphibians. Beaver ponds and their network of channels and dams helped to prevent flooding, equalizing stream flows during spring freshets and summer droughts.⁴² In addition, open habitat provided feeding places for deer, bison, and elk, as meadow grasses and other plant species flourished in the moist, alluvial soils of the creek and river bottoms.

Roots of Dependency

Plants, like animals, also were greatly affected by the Cherokee's entry into the world marketplace. American ginseng (Panax quinquefolium), a valuable commodity on the global market during the eighteenth century, grew extremely well in the deciduous forests of the southern Appalachians. The Cherokee were already familiar with the plant since they, like the Chinese who purchased the root, believed it had important medicinal qualities. Ginseng was used by the Cherokee for headaches, "weakness of the womb and nervous infections," or

⁴²Merchant, Ecological Revolutions, 36-37.

as a general tonic.⁴³ Snakeroot (polygala senega L.), another common plant of the southern mountains, was also likely gathered by the Cherokee. Snakeroot, used by all southeastern Indians as a remedy for snakebite, was purchased by English and French apothecaries. Both ginseng and snakeroot became an important trade item for the Cherokee. The Moravians of North Carolina, who settled on the eastern border of the Appalachian frontier, reported that Indians helped gather more than a hundred pounds of the plant, which they later shipped overseas to European merchants.⁴⁴

American ginseng was by far the most important plant of the mountain forest. Unlike the fur trade, the trade in the root got off to a slow start. In the mid-1740s ginseng did not bring a very high price in the markets of Charleston or Williamsburg, partly because the Indians did not dry the root according to Chinese standards. A trader living on the upper Yadkin settlements of North Carolina sadly told James Adair that he "could not get from any of the South Carolina merchants, one shilling sterling a pound, though his people brought it from the Alegany, and Apalache mountains, two-

⁴³Mooney, Myths, 425; Paul Hamel and Mary Chiltoskey, Cherokee Plants (Sylva, N.C.: Herald Publishing Company, 1975), 36; Daniel E. Moerman, Medicinal Plants of Native America (Ann Arbor, MI: University of Michigan Museum of Anthropology Technical Reports, Number 19, 1986), 322.

⁴⁴Adelaide L. Fries, ed., The Records of the Moravians in North Carolina (Raleigh, NC: State Department of Archives and History, 1968), II: 571; Silver, A New Face on the Countryside, 83. On the use of Snakeroot, see Adair, History of the Indians, 247-248, 389.

hundred miles to Charles-Town." Adair, convinced of its importance to the region, wondered if some "public-spirited gentleman," might inform the region's inhabitants about "how to preserve the ginseng, so as the give it a proper colour; for could we once effect that, it must become a valuable branch of trade."⁴⁵

Ginseng did not become a significant commodity in the southern Appalachians until the 1750s, after the Chinese lost faith in Canadian suppliers. Jesuits living in Canada discovered the root in 1716, and they were the first North Americans to supply the Chinese with the root. Soon afterwards tons of North American ginseng was being shipped to China, which led to its over-harvesting by the Indians. As Peter Kalm noted of the Iroquois in 1749.

"The trade which is carried on with here is brisk; for they gather great quantities of it, and send them to France, from whence they are brought to China, and sold there to great advantage...The Indians of this town were likewise so taken up by this business that the French farmers were not able during that time to hire a single Indian...to help in the harvest. Many people feared lest but continuing for several successive years to collect these plants without leaving one or two in each place to propagate their species..."

So great was the demand for the root, adds Kalm, that it "obliged the Indians, this summer, to go far within the

⁴⁵Adelaide L. Fries, The Records of the Moravians in North Carolina, 571. On snakeroot as a Cherokee antidote for snakebite, see Adair, History of the Indians, 389.

English boundaries to collect these roots."⁴⁶

The growing demand and resulting scarcity of ginseng in the northeast forced traders to look elsewhere for the root. In 1752 the Chinese discovered that an enormous amount of the root from Canada had been dug out of season (the highest grade ginseng is dug in the fall) and improperly dried in ovens. In a single season the Canadian export in ginseng dropped from about \$100,00 to \$6,500 dollars before ceasing entirely in 1755.⁴⁷ The Chinese turned to southern markets in order to fill the void, and the Cherokee immediately took advantage of the situation. Apparently the traders or the Cherokee themselves received some instruction about proper methods of gathering the root, as "English merchants were soon shipping ginseng acquired from Cherokees halfway around the world..." In 1761 Henry Timberlake saw it among the Overhill Cherokee who sold large quantities to local traders, as well as used it in their native medical practice.⁴⁸ By the end of the century, however, ginseng was so scarce in the Blue Ridge that John Drayton, the governor of South Carolina, commented, "Ginseng

⁴⁶John Pinkerton, Voyages and Travels in all Parts of the World (London: Longman, Hurst, Ress, Orme & Brown, 1812), 13: 639-41; Peter Kalm, Travels in North America, II: 436-437.

⁴⁷M.G. Kains, Ginseng; Its Cultivation, Harvesting, Marketing and Market Value, with a Short Account of its History and Botany (New York: Orange and Judd, 1914), 5.

⁴⁸Timothy Silver, A New Face on the Countryside, 83-84, 101; Timberlake, Lieutenant Henry Timberlake's Memoirs, 1756-1765 (Johnson City, TN: The Watuaga Press, 1927), 70-71 (hereafter cited as Memoirs of Timberlake); Mooney, Myths of the Cherokees, 425.

had been so much sought by the Cherokee Indians for trade, that at this time it is by no means so plenty as it used to be in this state."⁴⁹

Razing Cane

An amateur botanist, Drayton carefully observed the impact of frontier settlement and trade on the mountain landscape. The most noticeable environmental change he recorded was in the region's canebrakes, where Anglo-traders and later the Cherokee themselves ranged cattle and hogs. River cane was extremely valuable as a livestock food source, since very few native grasses could survive in the densely shaded understory of the upland forest. James Adair also observed places in the Cherokee country where the perennial reed was no longer growing abundantly as early as the 1750s. "On the level parts of the water-side, between the hills," wrote Adair, "there are plenty of reeds, [but] formerly, such places abounded with great brakes of winter canes." An evergreen plant, river cane made excellent fodder for livestock. In winter months, traders used canebrakes to

⁴⁹South Carolina, at that time, included portions of North Carolina, Tennessee, and Georgia. Margaret Babcock Meriwether, ed., The Carolinian Florist of Governor John Drayton of South Carolina, 1766-1822 (South Caroliniana Library, University of South Carolina, 1943), 109. Apparently, the Cherokees did not limit their trade to the white man, as they sold the root to Florida natives dwelling near the sea coast, "where [it] never grows spontaneously." Van Doren, ed., Travels of William Bartram, 267.

sustain their horses, cattle, and hogs. Adair once observed a herd of "one hundred and fifty horses" in a single Blue Ridge canebrake.⁵⁰ On the Cumberland Plateau, where large canebrakes remained until the beginning of the nineteenth century, "the thickets were at once larders where people got their bear-hams and venison, pens for their pigs, sheds and mangers for their cattle...Kine [cattle] and swine ate the young stalks and leaves greedily, and there was no such beef, pork, milk and butter as that which came out of the brakes."⁵¹

Initially, river cane was not terribly affected by grazing cattle and hogs, because the roots of the hardy plant spread rapidly even after the parent stalk is eaten or destroyed. Eventually, however, the plant succumbed to intensive grazing, particularly when the animals were annually returned to the same canebrake. This was the case on the Cumberland Plateau where, according to one Kentucky writer, "five years of foraging in a thicket ended it." A similar observation was made by the Moravians in North Carolina, where, near the eastern border of the Blue Ridge mountains,

⁵⁰Of cane and its uses, Adair also wrote that its foliage was "always green, and hearty food for horses and cattle." Adair, History of the Indians, 241.

⁵¹Clark Firestone, Bubbling Waters, 81. For additional evidence about the importance of cane to the settlement of the Cumberland Plateau, see Harriet Arnow, Seedtime on the Cumberland, 101, 127, 237, 247, 401; Arnow, Flowering of the Cumberland, 239, 214, 241.

cane grew scarce after "eleven years of continous grazing."⁵² Of course the loss of river cane hastened the decline of other species, including deer, which used the dense canebrakes for protection against predators, and the Swamp rabbit or "cane-cutter" (Sylvilangus aquaticus), which relied on the slender reed as a principal food source.⁵³

After the Cherokee of the Lower Settlements widely adopted cattle herding, large canebrakes became harder to find in many parts of the Blue Ridge mountains. By the end of the century, after whites had pushed farther into the region, Govenor Drayton reported that upper country canebrakes were "so closely cut down, by the continuous browsing of cattle, as to have nearly extirpated them."⁵⁴ Because the Overhill Cherokees had less to do with cattle raising, river cane still grew along many of the river bottoms of the Tennessee Valley in the early part of the nineteenth century. Martin Schneider, who visited the region in 1783, observed several Cherokees pasturing horses in the canebrakes that bordered the

⁵²Clark Firestone, Bubbling Waters, 81; Silver, New Face on the Countryside, 180; Fries, Records of the Moravians, II: 564.

⁵³The Swamp rabbit remains a threatened species in southern Appalachia, a good indication of how few canebrakes exist in the region today. Although large populations are still found along the Mississippi River, there are only a handful of counties in north Georgia and east Tennessee where one can still find the Swamp rabbit.

⁵⁴John Drayton, A View of South Carolina; As Respects Her Natural and Civil Concerns (Spartanburg, S.C.: Reprint, 1972), 62; Silver, A New Face on the Countryside, 180.

Little Tennessee River. "If a Indian has a Horse," wrote Schneider, "he ties it in the Wood from one Place to the other, where the Reed is growing in great Plenty & is good Fodder for them."⁵⁵ Not surprisingly, as Overhill Cherokee began to adopt the practice of cattle herding, they too preferred the canebrake as pasture. In 1799, "Frederici," an itinerant Dunker who lived near the Overhill Cherokee, knew of Indians who had fenced "a great place covered with cane as pasture for their cattle."⁵⁶ As late as 1816, Major John Norton reported seeing lush stands of the reed in the extreme southern end of the Tennessee Valley, "where the Cane, yet abounding, enables [the Cherokee] to raise cattle with less labour than were it has been eaten up."⁵⁷

Changed Land, Changed Lives

The destruction of cane was not the only change brought by the earliest traders. With them came the "white man's fly," or honeybee, which introduced the native residents to honey and the beeswax trade, but also changed the pollination

⁵⁵Bays, "The Historical Geography of Cattle Herding," 105; Williams, ed., Early Travels in the Tennessee Country, 261.

⁵⁶Williams, ed., Early Travels in the Tennessee Country, 484.

⁵⁷Klink and Talman, eds., The Journal of Major John Norton, 1816 (Toronto: The Champlain Society, 1979), 72, 33-38; Bays, "The Historical Geography of Cattle Herding," 102.

patterns, and thus plant associations, of mountain flora.⁵⁸

According to reputable accounts, the honeybee was introduced to the North America sometime during the late seventeenth century. By the time of the American Revolution, William Bartram found honeybees numerous "from Nova Scotia to East Florida," but was thoroughly puzzled by their absence in West Florida. During his tour of the Cherokee country in 1796, Benjamin Hawkins reported that the Cherokee "had bees and honey and did a considerable trade in beeswax." European plants such as apple trees were also dependent on the pollination by honeybees in order to consistently bear fruit. Certainly the honeybee helped native plants, including Indian corn, to produce more prolifically.⁵⁹

The introduction of herds of livestock resulted in the clearing of much of the forest ground cover. Within decades of first European settlement, wild pea-vines, hog-peanuts and the wild strawberry were eliminated from vast areas of the forest floor. The pea-vine, which grew "as high as a horse's back," was rarely seen in great profusion after the American

⁵⁸Quotation is from Thomas Jefferson, Notes on the State of Virginia, ed. William Peden (Chapel Hill, N.C.: University of North Carolina Press, 1958), 72. The effect of the honeybee on native plant associations remains largely unexplored. For reports of the introduction and migration of honeybees in North America, see Lyman Carrier, The Beginnings of Agriculture in America (New York: McGraw-Hill, 1923), 258; Alfred Crosby, Ecological Imperialism, 187-190.

⁵⁹Mark Van Dorem, ed., Travels of William Bartram, 330; Mooney, Myths of the Cherokee, 82.

Revolution. The hog-peanut, a low twining vine that produces a small root eaten by hogs, was also eliminated from the forest floor from advancing herds. Wild strawberries, which had once carpeted the Blue Ridge mountains, became scarce. Strawberry fields such as those witnessed by William Bartram, "in painted beds of many acres surface," were reduced to small scattered patches or even individual plants.⁶⁰ Indeed, the ecological effects that resulted from the introduction of cattle, hogs, and horses were great enough to older an older generation of Cherokee.

The changing composition of the mountain ecosystem had a profound effect on Cherokee culture as well. Prior to the fur trade, the Cherokees relied on the flesh of deer, elk, buffalo, bear, and even beaver as dietary staples. Skins of these animals provided essential clothing, as buckskin leather was the basic article of dress for the Cherokees prior to the fur trades. Formerly, the most common attire was "a bit of skin about their middles, mockasons, a mantle of buffalo skin for the winter, and a lighter one of [turkey] feathers for the summer."⁶¹ As these animals became more valuable in the peltry trades and scarcer in the surrounding forests, the Cherokee began to adopt European clothing. No longer dressed in animal skins or feathers, the Cherokee began to prefer smooth cotton

⁶⁰John Logan, A History of the Upper Country, 25; Mark Van Doren, ed., Travels of William Bartram, 280.

⁶¹Williams, editor, Memoirs of Henry Timberlake, 77.

broadcloths in various colors or calicos. To make this clothing, Cherokee women gradually began to use steel needles, scissors, and cotton thread "rather than bone needles, sinew, and buckskin."⁶² By 1800 the dress of Cherokee men began to resembled that of a southern gentleman squire. No longer a self-sufficing natives, many Cherokee were now literally dependent on the European trader for putting clothes on their back.

But dress was just one example of cultural change and the Cherokees' growing dependency on European trade. The loss of river cane permanently altered the lives of the Cherokee, who relied upon it for their homes, baskets, beds, arrow shafts, blowguns, and even fishing spears.⁶³ As cane became increasingly hard to find, Cherokees resorted to finding new materials or European items as replacements for traditional ones--iron axes for stone celts, metal fish hooks for cane fishing spears. Knowledge of how to use and construct traditional items was forgotten. Wattle-and-daub huts gave way to log houses, guns replaced the locust bow and cane-shaft arrow, and steel traps supplanted the snare and deadfall. As their environment changed, the Cherokee found it increasingly impossible to return to their old way of life. In 1767 one Cherokee sadly remarked that "the deer, buffalo, and the

⁶²McLoughlin, Cherokee Renacence, 5.

⁶³On fishing techniques using cane spears, see Williams, editor, Memoirs of Henry Timberlake, 69; Adair, History of the Indians, 432-434.

turkeys are almost gone...the white people eat hogs, cattle and other things which they have here, but our food is farther off." Adopting the ways of the European became necessary for survival.⁶⁴

Prior to contact, Cherokee culture remained congruent with the ecology of the southern mountains. Agriculture, hunting, and food gathering practices changed throughout the period of Indian occupation, but these changes were generally guided by a framework of cultural values embedded in the local environment. For the Cherokee, cultural stability depended to a large extent upon adaptation and attunement to the forces of the natural world. As early as 1740, with the onset of seemingly irreversible environmental change, Cherokee acculturation was well under way. By the end of the eighteenth century the Cherokees had largely made the transformation from a hunting, gathering, and farming society to one almost entirely dependent on European goods and alliances.⁶⁵ Not only were they offered new material goods, but the very environment around them had grown unfamiliar. After losing their former relationship to the mountain environment, a relationship held together by strong religious and mythological beliefs, the Cherokee were ready for even

⁶⁴Quoted in Louis De Vorsey, The Indian Boundary in the Southern Colonies, 1763-1775 (Chaple Hill, NC: University of North Carolina Press, 1966), 102.

⁶⁵Goodwin, Cherokee in Transition, 147-151; McLoughlin, Cherokee Renaissance in the New Republic, 33-91, passim.

fuller participation in the market economy.

Cherokee Appalachia

From 1800 until removal in 1838, the environment of southern Appalachia remained an integral part of Cherokee culture. At that time, however, the most of their landuse practices involved the use of domesticated plants and animals, the outcome of their near total adoption of European agriculture. Not all that was native was forgotten or lost, however. Just as they acquired European practices, Cherokees also shared their knowledge of the mountain environment with the trapper, trader, and later, first mountain settlers. Even after removal, the remaining Cherokees of the Qualla Boundary and Snowbird mountains in North Carolina stayed in close communication with white mountain communities. Without a doubt their close contact "involved exchanges in ecological knowledge between the two groups," and helped to shape frontier culture.⁶⁶

Upon their first arrival to the region, European settlers adopted Cherokee ways: some out of sheer necessity, others simply recognized their practical utility. In the Blue Ridge ginseng was gathered from the eighteenth century on by

⁶⁶John Witthoft, "Cherokee Indian Use of Potherbs," Journal of Cherokee Studies, 2 (Spring 1977), 250; Sharlotte Neely, Snowbird Cherokees: People of Persistence (Athens, GA: University of Georgia Press, 1991), 15-35.

settlers who must have learned of the plant's medicinal properties from Cherokees. The Cherokee believed the plant to be a sentient being: on digging it, they dropped a single seed of the plant in the ground as repayment "to the plant spirit." Even though most white settlers used it sparingly because of its high market value, ginseng was "reputed to cure anything from cough to a boil to an internal disorder." In the north Georgia mountains, settlers generally boiled two or three roots in a pint of water before giving to children as a cure for colic.⁶⁷

The Cherokee practice of eating beaver flesh also was adopted by the first white traders, trappers, and long hunters until cattle arrived in the region. Those who regularly trapped the large rodent, however, did not entirely abandon the practice. The "old traders," observed Adair in 1775, "remember when they first began the custom of eating beavers: and to this day none of them eat them, except those who kill them."⁶⁸ Among native plants, the Cherokees gathered "ramps" (wild leeks--allium tricoccum) from late fall to early spring, and their abundance in the mountains helped to convince whites of their value as an important food source. Like the Cherokee,

⁶⁷Wilma Dykeman, Highland Homeland, 52-55; Eliot Wiggington, ed., The Foxfire Book, 235. Durwood Dunn found "no evidence that they [Cades Cove mountaineers] ever used the herb in any home remedy or were even cognizant of its reputed properties." Considering the secrecy surrounding this plant, his finding is not surprising. Dunn, Cades Cove, 32.

⁶⁸Adair, History of the Indians, 139.

the settlers transplanted ramps near their homes to flourish in a semi-cultivated state.⁶⁹ Pokeweed (phytolacca americana), once referred to as "Cherokee sallet," became another green regularly eaten by frontiersmen. The young shoots of the cone flower or sochan (Rudbeckia laciniata L.) were eaten by the Cherokee as well as used for a variety of medicinal purposes. "Sochan," a corruption of the Cherokee word for the plant, was consumed by mountain settlers, as were a number of other native salad greens.⁷⁰

European settlers continued to grow Cherokee crops throughout the frontier period; in fact, these crops can still be found in many gardens of the region today. Bottle gourds (Lagenaria siceraria), for example, a plant grow commonly by the Cherokee, served as valuable storage containers for the early settlers. Whereas the Cherokees used them for holding water, garden seeds, or bear's grease, the Anglo-American used them to store lard, sugar, or butter. The Cherokee also hung them horizontally on long poles to attract Purple martins, a native bird that not only eats annoying mosquitoes, but also drives crows from nearby corn fields. Frontier settlers, upon seeing the effectiveness of these birdhouses, soon erected

⁶⁹Witthoft, "Cherokee Indian Use of Potherbs," 251; Hudson, The Southeastern Indians, 308.

⁷⁰Paul Hamel and Mary Chiltoskey, Cherokee Plants: A 400 Year History (Sylva, NC: Herald Publishing Company, 1975), 50; Witthoft, "Cherokee Indian Use of Potherbs," 251; Mooney, Myths of the Cherokee, 425; Moerman, Medicinal Plants of Native America, 337.

them in their own gardens.⁷¹

The Cherokee method of drying pumpkins by hanging them on long strings was borrowed by European settlers. Before canning methods were developed, drying vegetables in this manner was the only way of preserving them. "Shuck-beans" and "leather-britches," two regional names for beans hung and dried in this manner, were eaten in the southern Appalachians until well into the twentieth century. It is even possible that the frontier art of maple-sugaring, a once common practice where large groves of sugar maples were found, was learned from the Cherokee. In History of the Indians, Adair does comment that "several Indians produce sugar out of the sweet maple-tree, by making an incision, draining the juice, and boiling it to a proper consistence," but this statement does not refer specifically to the Cherokee nor rule out the possibility that the first settlers were already familiar with the practice.⁷² Maple sugaring was taught to the French as early as 1684 by the Indians in Canada, and the practice spread from New England to the upper Shenandoah Valley before the end the eighteenth century.⁷³ Even though settlers migrating down the

⁷¹Frank G. Speck, Gourds of the Southeastern Indians (Boston, MA: The New England Gourd Society, 1941), 40-41; Hudson, The Southeastern Indians, 294-295, 298-299.

⁷²Adair, History of the Indians, 447.

⁷³A.F. Chamberlain, "Maple Sugar and the Indians," American Anthropologist 4 (October 1891), 381-383; M. Barbeau, "Maple Sugar: Its Native Origin," Transactions of the Royal Society of Canada 40 (1946), 75-86; Peter C. Mancall, Valley of Opportunity: Economic Culture Along the Susquehanna, 1700-

Great Valley of Virginia may have already known how to make maple sugar, those arriving in the region from the Atlantic coast or southern Piedmont may not have acquired the skill. They either adopted the practice from other settlers or from watching the Cherokees.

One of the most enduring contributions to Appalachian culture from the Cherokees was apple cultivation. Although apple trees were introduced to the region by British fur traders, the Cherokee made them central to regional horticulture after 1750. The suburbs of seventeenth-century London were famous for apple cultivation and as many as two-hundred varieties could be collected from a single orchard. The Cherokees' early adoption of the fruit is not surprising since the trees could be grown and harvested in much the same manner as the peach. The mountain environment was ideal for apple orchards, because of plentiful rainfall and the presence of "thermal belts," a dewless and frostless zone on mountain slopes caused by an unusual meteorological phenomenon known as temperature inversion.⁷⁴ Although it is not widely known, the Cherokee were directly responsible for keeping apple growing alive in the southeast, as the practice among Anglo-Americans

1800 (Ithaca, NY: Cornell University Press, 1991), 195-198.

⁷⁴J.W. Chickering, "Thermal Belts in North Carolina," Science (June 1883), I:147; Norburn, The Influence of the Physiographic Features of Western North Carolina on the Settlement and Development of the Region (Ph.D. diss., University of North Carolina, Chapel Hill, 1932), 54-56.

was, by the 1830s, in a steady decline.⁷⁵ Apple trees, as Harriet Arnow points out, were virtually non-existent in the southern mountains until the early part of the nineteenth century. The trees mature slowly (eight years or more) and early settlers in southern Appalachia moved often so they generally did not bother to plant them. Peach trees on the other hand, bare fruit within two years of transplanting which explains their popularity on the southern frontier.⁷⁶

By the early 1850s, cultivation of the fruit was so poor in the southern mountains that one Georgian complained that "We have only one peach...the Indian Peach; and one apple, the Horse Apple."⁷⁷ Urban areas in the mountain region were supplied largely with apples from northern growers, who did not think that the fruit could even be grown as a market crop in the South. In response to this skepticism, a handful of southern horticulturalists sought new cultivation methods as well as made improvements in crop selection. To promote apple growing in mountain communities, Jarvis Van Buren founded the Georgia Pomological Society in the 1850s, an organization which sought to locate, name and classify desirable varieties.⁷⁸ Most of the varieties grafted and catalogued by

⁷⁵Bonner, A History of Georgia Agriculture, 1732-1860 (Athens, GA: University of Georgia Press, 1964), 155.

⁷⁶Arnow, Seedtime on the Cumberland, 411.

⁷⁷Ibid., 156.

⁷⁸Ibid., 156-157.

Van Buren were found growing in north Georgia, southeast Tennessee and western North Carolina, in Cherokee apple orchards left behind after their removal. While collecting these mountain apples, Van Buren renamed some according to his own liking, others he gave names of obvious Cherokee origin. One example is the "Nantahalee," a Cherokee word meaning "Maiden's Bosom." Another was called the "Junaluskee," after Chief Junaluska, a Cherokee who refused to sell the land on which this apple tree was growing but later sold the tree (and presumably the land) for fifty dollars. Other apples of certain Cherokee origin include the Mountaine Belle, from Habersham County (Georgia); the Yahoola, found in Lumpkin County (Georgia); the Buckingham, a variety taken from Cass County (Georgia); the Toccoa, from an orchard near Toccoa Falls (Georgia); and the Tillaquah, an apple found growing in Franklin, North Carolina. Other varieties originating from north Georgia include the Green Mountain Pippen, Nicajack, Julien, Golden Rustic, Vandiver, and the Oconee Greening.⁷⁹ With his impressive list of prolific varieties taken from Cherokee orchards, Van Buren was able to convince others of the profitability of apple growing. Soon apple cultivation, centered largely in Hall and Habersham counties in north Georgia, became a profitable mountain industry. By the early 1860s, the South had completely lost its dependence on New York, New Jersey, and Pennsylvania for apples, due largely to

⁷⁹Ibid., 157.

the efforts of Van Buren--and native Cherokee farmers.

Place names in the Appalachian South also have Cherokee origins, as any resident of the region well knows. Historian David Hackett Fisher suggests that the largest proportion of Appalachian place names are "drawn from the geography of Britian" by the Scotch-Irish and English who settled in the region during the eighteenth century.⁸⁰ While these toponyms do exist in the southern mountains (e.g. Cumberland County, Tennessee, London, Kentucky) as large a number can be attributed to the Cherokee. Most of the mountains, creeks, and rivers of the region are derived from the names of former Cherokee settlements. The Hiwassee, Tuckasegee, Oconee, Chattooga, Tallula, Toccoa, Nantahala, Tellico, Tuskaseegee, rivers, as well as Chickamauga and Watauga Creek, to name only a few, are good examples. Cheoah Point, Chilhowee Mountain, Cowee Mountains, Stecoh Bald, Soco Gap, Snowbird Mountains are Cherokee place names. A good number of place names were anglicized after white settlement, but they still are Cherokee in origin. Fightingtown Creek--a translation of "Unulstiyo"--derives its name from a myth that claims two giant frogs once battled there using the stems of a plant. Sugar Creek, also in north Georgia, is a translation of "Kulse Tsi, or sweetplace--the former site of a large grove of honey locust trees. The

⁸⁰Fischer, Albion's Seed, 640. By analyzing place names one is able to trace the influence of various culture groups in the settlement of a region. The presence of numerous Cherokee place names reinforces the importance of the Cherokees to the development southern Appalachia.

Cherokee sport known as Ball Play, played on large level fields throughout the region, lent its name to a number of roads and towns, including Ball Play, Georgia. Catoosa, a Cherokee word meaning hill or mountain, is the source for Catoosa County, Georgia and the 100,000 acre Catoosa Wildlife Management area in east Tennessee. From Wautaga County, North Carolina to the Oostanaula River in northwest Georgia, the southern mountain region abounds with Cherokee place names.

Despite their influence on mountain life and culture, by 1800 a majority of Cherokees utilized the Appalachian countryside in the same way as the frontier settlers. The surrounding landscape was valued more for its ability to grow corn, wheat, or cotton, or to provide pasture for domestic livestock. The Cherokee were making general use of the wheel, loom, and plow before 1801. They wore Anglo-style clothing and lived in log cabins, and many were becoming Christianized.⁸¹ In 1799 missionaries Abraham Steiner and Frederick De Schweinitz wrote that the Cherokee had

"greatly increased in culture and civilization in the last few years; that in the course of the last summer 300 plows and as many pairs of cotton carding-combs had been sent to this nation and they have begun to devote themselves to agriculture and the raising of cotton; had several times brought cotton for sale and they had themselves begun to spin and weave."⁸²

⁸¹Mooney, Myths of the Cherokee, 214. Based on report in Hawkins manuscripts, Treat Commission of 1801. See also Douglas Wilms, "Cherokee Land Use in Georgia," 23-24.

⁸²Williams, ed., Early Travels in the Tennessee Country, 459.

By 1809, "the civilized arts" prevailed to the degree that a government census found in the Cherokee Nation 19,165 "black" cattle, 6,519 horses, 19,778 swine, 1,037 sheep, 429 looms, 1,572 spinning wheels, thirty wagons, 567 plows, 13 grist mills, and 3 sawmills. In 1826, fifteen years later, there were no less than 22,000 cattle, 7,600 horses, 46,000 swine, 2,500 sheep, 762 looms, 2,488 spinning wheels, 172 wagons, 2,942 plows, 10 sawmills, 31 grist mills, 62 blacksmith shops, 8 cotton gins, 18 schools, 18 ferries, and numerous public roads in the Cherokee territory.⁸³ Taken together, these figures paint of vivid portrait of the change that had taken place in the cultural landscape of the Cherokee. To be sure, small groups of Cherokee consciously resisted white cultural encroachment and kept alive the old ways. For others engaged in a life fully committed to agriculture, wild nature was of little reward.⁸⁴

⁸³Gilbert E. Govan and James W. Livingwood, The Chattanooga Country, 1540-1962: From Tomahawks to TVA (Chapel Hill, NC: University of North Carolina Press, 1963), 68. The Cherokee Census of 1809 is found in the Moravian Archives, Winston-Salem, North Carolina. For the other census and a discussion of both, see The Cherokee Phoenix (June 18, 1828); McLoughlin, Cherokee Renascence in the New Republic, 294-301, Table 7; Douglas Wilms, "Cherokee Land Use in Georgia," in William L. Anderson, ed., Cherokee Removal: Before and After (Athens, GA: University of Georgia Press, 1991), 6-9, Table 1.

⁸⁴Not all Cherokees fully adopted the white man's system of agriculture and religion. The most conservative Cherokees fled into the Blue Ridge mountains and held on to many cultural traditions until the twentieth century. The majority, however, saw Anglo-agriculture as their only means of survival.

Losing Ground

In retrospect, the Cherokee had little choice but to adopt the ways of the white man. Disease, war, and famine had taken an enormous toll on the Cherokee, which hardly placed them in a bargaining position with European or colonial governments. Needless to say, the Cherokee were ill-equipped to deal with the enormous environmental and social forces that confronted them during the eighteenth century. The small pox epidemic of 1738, brought to South Carolina by slave ships, hit the Cherokee with such force that "nearly half the tribe was swept away within a year."⁸⁵ Like the Mississippians two centuries before, the Cherokee had little or no immunity to the disease, and their remedy for the illness--bathing in cold water--may have made the disease worse. The scene at the height of the epidemic must have been ghastly, as "a great many killed themselves....some shot themselves, others cut their throats, some stabbed themselves with knives, and others, sharp pointed canes; many threw themselves with sullen madness into the fire, and there slowly expired, as if they had been utterly divested of the native power of feeling pain." In the face of so much unexplainable death, many Cherokee soon lost faith in their medicine men and traditional curing methods. Because the medicine man's methods also relied

⁸⁵Mooney, Myths of the Cherokee, 36; Adair, History of the Indians, 244.

upon the use of native herbs and roots and various animal potions, the Cherokee had yet another reason not to place value on the native flora and fauna around them.⁸⁶

The loss of life and crops due to warfare is critical to understanding why Cherokees adopted the ways of the white man. Two major military campaigns against the Cherokee less than two decades apart decimated their population and further opened the area for settlement, which was the partial intent of this genocide. Soldiers who participated in the campaigns saw firsthand the rich bounty of the region, and many later settled on the very lands they had burned and de-populated. The first of these assaults were carried out by the British, who maliciously murdered "twelve to forty" Cherokees in a dispute over stolen British horses. As a result of the deaths, the Cherokees soon became "much attached to the French," who encouraged warriors to raid backcountry settlements in neighboring South Carolina. In retaliation for these raids, a number of influential Cherokee chiefs were captured by the British and held hostage at Fort Prince George, on the Keowee River in the South Carolina upcountry. After a number attempts at their rescue failed, the Cherokee hostages were

⁸⁶Quotation from Adair, History of the Indians 245. See also McLoughlin, Cherokee Renaissance in the New Republic, 17-18; Mooney, Historical Sketch of the Cherokee (Chicago: Aldine Publishing Company, 1975), 26; op cit., Myths of the Cherokee, 86-88; Goodwin, Cherokees in Transition, 106-107. For a list and description of plants commonly utilized by the Cherokee and other Native American Indians, see Moerman, Medicinal Plants of Native America; John Witthoft, "Cherokee Indian Use of Potherbs," 250-255.

assassinated. All out war began.⁸⁷ One Cherokee faction retaliated by attacking frontier settlements in western South Carolina while others laid seige to Fort Loudon, a British garrison located on the Little Tennessee River in east Tennessee. In June 1760, a South Carolina militia led by Colonel Montgomery destroyed every one of the Lower Cherokee towns, "burning them to the ground, cutting down their cornfields, and orchards, killing and taking more than one hundred of their men, and driving the whole population into the mountains before him." In August of that year, the British surrendered Fort Loudon to the Cherokee, who after capture, killed Captain Demere', the British commander of the Fort, and took prisoner most of his men.⁸⁸

In June 1761, after much regrouping, a full-scale assault was launched against the Cherokee of the Middle and Overhill settlements. On June 10, Colonel James Grant and 2,000 Carolina volunteers returned to Fort Prince George, where they defeated the Cherokees in a fierce, bloody battle. Afterwards,

⁸⁷Timberlake, The Memoirs of Henry Timberlake, 96; Williams, Dawn of Tennessee Valley and Tennessee History, 235-236; Mooney, Myths of the Cherokee, 41; Ramsey, Annals of Tennessee (Charleston, SC: Walker and Jones, 1853; reprint, Knoxville, TN: East Tennessee Historical Society, 1967), 54.

⁸⁸Quotation in Mooney, Myths of the Cherokee, 43; Alberta Brewer and Carson Brewer, Valley So Wild (Knoxville, TN: East Tennessee Historical Society, 1975), 37-39; Samuel Cole Williams, Dawn of the Tennessee Valley and Tennessee history (Johnson City, TN: Watauga Press, 1937), 225-256; Schroedl and Russ, "An Introduction to the Ethnohistory and Archaeology of Chota and Tanasee," 12; W. Stitt Robinson, The Southern Colonial Frontier, 1607-1763 (Albuquerque, NM: University of New Mexico Press, 1979), 220-221.

Grant and his troops quickly pushed his way to the Middle settlements, burning houses and cornfields as they went. The soldiers were taken by the mountain landscape and took note of the Cherokee's extensive fields and planting grounds. Upon arrival at a deserted Indian town in north Georgia, one member of the expedition, Captain Christopher French, observed it to be "one of the finest Spotts I ever saw." The expansive beauty of the Cherokee cornfields and orchards did not deter the plunder, it only intensified it. At a Cherokee village in western North Carolina, French and his men were ordered to level the village and croplands, so they "pull'd up all the corn, cut down the fruit trees, & burn'd the Houses, in number about fifty."⁸⁹ By the end of July, Grant's regiment had destroyed all fifteen of the Middle towns and had driven most of the Cherokees into the surrounding mountains.⁹⁰

The decimation of cornfields, granaries, and orchards at the height of harvest was so devastating to the Cherokee that they were reduced to eating their own horses.⁹¹ Many died of starvation, others acquired diseases due to their weakened state. No longer able to adequately defend themselves, the

⁸⁹Captain Christopher French, "Journal of an Expedition to South Carolina," Journal of Cherokee Studies 2 (Summer 1977), 283, 285.

⁹⁰David H. Corkran, The Cherokee Frontier: Conflict and Survival, 1740-1762 (Norman, OK: University of Oklahoma Press, 1962), 225; Wayne King, "A Powder Horn Commemorating the Expedition Against the Cherokees," Journal of Cherokee Studies 1 (1976), 23-40; Goodwin, Cherokees in Transition, 105-106.

⁹¹Adair, History of the Indians, 242.

Cherokees sued for peace in 1761. After the official peace treaty between France and England was signed in 1763, the British controlled Appalachian territory. New alliances were forged between the British government and the Cherokee, resulting in the formation of the Proclamation Line, a boundary drawn roughly along the eastern border of the Blue Ridge mountains. The Proclamation Line established the eastern boundary of Indian territory and was designed to prevent the settling or selling of lands to the west. The line had little effect as those who had already settled in the region refused to leave. Another treaty was drawn, making the new boundary from the mouth of Kanawha River in West Virginia to the Holston River in Tennessee. Although this treaty did not ultimately prevent white intruders from entering deeper into the Appalachian region, it did help to slow frontier expansion and re-establish trade with the British, which gave the Cherokees an opportunity to rebuild their conquered villages.⁹²

This period of social stability for the Cherokee was short-lived, however. A little more than a decade after the French and Indian War, on the eve of the American Revolution, the British sought Cherokee assistance in subduing the rebellious Americans. The Cherokee complied no doubt to protect themselves from against those settlers who had been illegally

⁹²Louis De Vorse, Jr., The Indian Boundaries in the Southern Colonies, 1763-1775 (Chapel Hill, University of North Carolina Press, 1966), 34-40, passim.

filtering into Cherokee territory. Once again the Cherokees were at war. The Watauga and Holston settlements in upper east Tennessee, occupied around 1769, were among the first targets of the Cherokee. Carolina and Georgia settlements were also attacked, resulting in the death of women and children, and forcing the hand of the Revolutionary forces. In the summer of 1776, six thousand armed men, comprised of four military regiments from Virginia, North Carolina, South Carolina and Georgia, were sent into the Cherokee territory. The results were catastrophic.⁹³

In August General Griffith Rutherford of North Carolina began the assault, destroying every town--thirty-six in all--located upon the Oconaluftee and Tuckasegee rivers in North Carolina and the upper Little Tennessee and Hiwassee rivers in southeast Tennessee. In each village the ripe or ripening corn was destroyed, dwellings burned, the livestock killed or driven off, stores of dressed deerskins and other tradegoods stolen, and peach and apple orchards vandalized or cut down.⁹⁴ At one village on the Hiwassee River, soldiers were ordered to burn "upwards ninety houses and large quantities of corn," and

⁹³Theodore Roosevelt, The Winning of the West, I (6 vols. New York: G.P. Putnam's Sons, 1889), 294-302, passim; J. G. M. Ramsey, The Annals of Tennessee to the Eighteenth Century (1967), 164-171; Captain Christopher French, "Journal of An Expedition to South Carolina," Journal of Cherokee Studies (Summer 1977), 275-301.

⁹⁴Mooney, Myths of the Cherokee, 49, 205; William E. Myer, Indian Trails of the Southeast, 39; French, "Journal of An Expedition to South Carolina," 283-289.

to down and burn the remaining vegetables. One soldier remarked that it "was no small undertaking, they being so plentifully supplied." At the smallest Cherokee settlement, no less than two hundred acres of corn were decimated, not to mention hundreds of bushels of sweet potatoes, beans, and numerous peach trees. These assaults on the native landscape--acts of "total war"-- were repeated by other revolutionary regiments, including the South Carolina militia who plundered and burned the Lower towns along the head of the Savannah River. At Seneca alone, six thousand bushels of corn and other vital foodstuffs, were destroyed by Carolina forces.⁹⁵ The Georgia militia, comprised of two hundred men, completely leveled two towns near the heads of the Tugaloo and Chattahooche rivers, and entering from the north, the Virginia army, destroyed five Overhill towns and outlying fields. In total, the American forces leveled and burned more than fifty towns, killing hundreds of people, laying waste to thousands of acres of cropland, and destroying numerous fruit orchards. Echota, the capital and sacred "peace town" of the Cherokee, was spared by Colonel Williamson, but only four years later, it too, along with nine other Overhill towns, were be destroyed by Colonels John Sevier and Arthur Campbell of

⁹⁵Quotation in Mooney, Myths of the Cherokee, 52. See also Roosevelt, Winning of the West, 296-303; Ramsey, Annals of Tennessee, 163-164; Mooney, Myths of the Cherokee, 50-51; Schroedl and Kurt C. Russ, "An Introduction to the Ethnohistory and Archaeology of Chota and Tanasee," 13.

Tennessee.⁹⁶

With the widespread destruction of homes and croplands, it was not long before the Cherokee were forced to agree to a truce.⁹⁷ Peace negotiations materialized, and within months, details of a treaty were worked out between the two parties. The Lower Cherokee formally surrendered on May 20, 1777, and the treaty, the first ever in the newly formed States, relinquished more than 2,000 acres of territory--including their most ancient homelands--to South Carolina. A month later, the Middle and Overhill Cherokee finalized the Treaty of Long Island, which ceded 6,000 acres east of the Blue Ridge. These two treaties, along with Henderson's Purchase of 1775, which ceded all lands between the Kentucky and Cumberland rivers (27,000 square miles), opened up the vast majority of the southern Appalachian region to frontier settlement.

Cut off from their hunting lands, the Cherokees were placed in an extremely precarious position. From 1721 to 1775, they had ceded more 60,000 square miles of territory, which, soon after the Revolutionary War, began rapidly filling up

⁹⁶Duane H. King, "Long Island of the Holston: Sacred Cherokee Ground," Journal of Cherokee Studies 1 (1976), 113-127; John P. Brown, Old Frontiers: The Story of the Cherokee Indians from Earliest Times to the Date of their Removal to the West, 1838 (Kingsport, TN: Southern, 1938), 157-159; Mooney, Myths of the Cherokee, 51;

⁹⁷Samuel C. Williams, "Colonel Joseph William's Battalion in Christian's Campaign," Tennessee Historical Magazine 9 (1925-26), 109; Roosevelt, Winning of the West, I, 303-305; Ramsey, Annals of Tennessee, (1853) 165-170.

with settlers. In direct competition with the Cherokee for game, the settlers hunted the remaining deer and trapped the region for furs. After another 12,000 acres were ceded to the whites shortly after the Revolution, the total amount available for hunting and settlement was limited only to the lower Tennessee Valley and portions of the Blue Ridge mountains. In response to the situation, Chief Dragging Canoe led the band of Cherokees known as the Chickamaugas in a short reprisal, but they too were defeated by American forces.⁹⁸ Finally in 1791, after the Treaty of Holston, the area that today comprises the Great Smoky Mountains was surrendered to North Carolina and Tennessee. In the Oconoluftee and Deep Creek sections of the what is now a national park, white settlers soon built homes and planted in the very same fields that the Indians once cultivated; several of them had actually accompanied Rutherford on his grisly campaign through the Cherokee settlements.⁹⁹ After the death of Chief Dragging Canoe in 1794, the Cherokee hope of winning back territory was sadly extinguished.

As the strong presence of the Cherokee receded, the dawning of a new frontier was at hand in the southern Appalachians. The establishment of permanent settlements by

⁹⁸Dale Van Every, Ark of empire: The American Frontier, 1784-1803 (New York: William Morrow, 1964), 254-258; Mooney, Myths of the Cherokee, 63.

⁹⁹William E. Myer, Indian Trails of the Southeast, (Nashville: Blue & Grey Press, 1971), 39; Mooney, Myths of the Cherokee, 49, 205.

Anglo-Americans initiated a new era of environmental change. Even though a great number of important animal and plants were seriously depleted by 1770, visible changes in the physical environment had not occurred over the entire area. While the forests and river valleys nearest Cherokee settlements were susceptible to grazing cattle and hogs, and had changed considerably, many of the upland forests of the mountain region had suffered little impact since the arrival of De Soto. The pioneer settler sought to carve an entirely new civilization out of this well-timbered "wilderness," and in doing so created a "second nature" of log cabins, out-buildings, water-mills, stone fences, and open grazing areas.¹⁰⁰ European settlers not only brought the ax, cross-cut saw, the plow, and oxen, they also brought with them still more exotic plants that would soon dominate the entire mountain landscape. The isolated fur trader and the Revolutionary War soldier did much to clear the way, but the primary goal of the pioneers was to create a pastoral setting of their own design and making. And so the pioneer settlers changed the landscape like none before them, but their lives too were shaped by the mountain environment.

¹⁰⁰On the creation of "middle landscapes" on the American frontier, see Leo Marx, The Machine in the Garden: Technology and the Pastoral Ideal in America (New York: Oxford University Press, 1964), 130; Annette Kolodny, The Land Before Her: Fantasy and Experience of the American Frontiers, 1630-1860 (Chapel Hill, NC: University of North Carolina Press 1984), 53.

Chapter Six

SOUTHWEST FRONTIER

[T]he woodlands, carpeted with grass, and the wild pea-vine, growing as high as a horse's back, and the wild flowers of every hue, were the constant admiration of the traveler and adventurous pioneer....The trees were generally larger, and stood so wide apart that a deer or buffalo could be easily seen from a long distance....peavines and grasses occupied the place of the bushes and young forest growth that render the woods of the present time so gloomy and intricate.

John Logan,
A History of the Upper Country of South
Carolina, 1859

The Appalachian frontier was not settled in a fortnight. It was an incremental process that was, for many, infused with Indian massacres, conflicts over land claims, failed crops, inclement weather, and the trials and tribulations of an unforgiving environment. In South Carolina, Georgia, Virginia, and Pennsylvania, they soon discovered that coastal lands were, by and large, in a state of agricultural decline. Land prices were also higher in the older, more established communities, and this, along with their greater population density, made them far less desirable for farming. As early as 1698, French explorer Pierre Le Moyne saw the coastal settlement's potential for overcrowding. "The spaces between these mountains and the sea are occupied," he wrote, "by

settlers whose children will be obliged to cross these mountains to find room for themselves."¹ Across the Appalachian divide, to the south and west of these settlements, lay an abundance of good, relatively inexpensive land made even more attractive by the propaganda of government land companies and private speculators. For those who had completed military service, colonial governments offered an additional incentive to move to the region, in the form of bounty lands, a kind of pension for French and Indian War veterans. Amounts of these land grants varied from five thousand acres for field officers to fifty acres for privates. The British Crown's London Company also allocated land by "Head Rights," which after 1760 awarded each settler fifty acres and fifty additional acres to each family member, providing the total did not exceed 640 acres.² And so the Appalachian wilderness became home to thousands of European immigrants.

Settlement began as early as 1745, when Colonel James

¹Quoted in Samuel Cole Williams, Dawn of Tennessee Valley and Tennessee History (Johnson City, TN: Watuaga Press, 1937), 24; See also Arnow, Seedtime on the Cumberland, 110, 185.

²F.B. Kegley, Kegley's Virginia Frontiers: The Beginning of the Southwest: The Roanoke of Colonial Days, 1740-1783 (Roanoke, VA: The Stone Press, 1938), 268; Harriette Simpson Arnow, Seedtime on the Cumberland, 1960), 179; James W. Hagy, "Castle's Woods: Frontier Virginia Settlement, 1769-1799" (Master's thesis, East Tennessee State University, Department of History, Johnson City, 1966), 3; John Soloman Otto, Southern Frontiers, 1607-1860: The Agricultural Evolution of the Colonial and Antebellum South (New York: Greenwood Press, 1989), 51-52; Raitz and Ulack, Appalachia: A Regional Geography, 92.

Patton made one of the first purchases in the Tennessee Valley, securing one hundred and twenty thousand acres from the governor of Virginia. Using his James River settlement as a base of operation, Patton and his associates went deep into Indian territory, reaching below the headwaters of the Tennessee River in less than a year. Apparently, Patton's brother-in-law, John Buchanan, was surveying tracts along the "Indian" or Holston River, in Southwest Virginia, as early as March 14, 1746.³

As plats were surveyed and recorded, they were then sold to prospective settlers (see Appendix B). One of the very first to arrive was Stephen Holston, for whom the Holston River is named. Holston, of Swedish or German ancestry, built his home along the Middle Fork of the Holston sometime before 1748.⁴ Like many other settlers of the region at that time, he

³Louis De Vorsey, The Indian Boundary in the Southern Colonies, 1763-1775 (Chapel Hill, NC: University of North Carolina Press, 1966), 34, 49n., 57; Frederick DeMarcus Booth, III, "The Watauga Settlements of the Appalachian Frontier" (Master's thesis, East Tennessee State University, Johnson City, 1978), 32-33, 34; L.P. Summers, History of Southwest Virginia, 1746-1786: Washington County, 1777-1870 (Richmond, VA: J.L. Hill Printing Company, 1903), 44; Stanley J. Folmsbee, Robert E. Corlew, and Enoch L. Mitchell, History of Tennessee (4 Vols., New York: Lewis Historical Publishing Co., 1960), I: 96-97. Before settlement, early explorers commonly referred to the Holston as the Indian River. The French, on the other hand called it the Cherokee River, and the Cherokee knew it as the Hogohegee.

⁴Samuel Cole Williams, "Stephen Holston and Holston River," East Tennessee Historical Society Publications 8 (1936), 26-27. Burke's Garden was settled by James Burke in 1753, although it is often considered the first in the southern Appalachian region.

held his land under what was then called "corn rights," which meant that he acquired land ownership simply by growing corn on a portion of the land. According to frontier historian Lewis Summers, each settler, by law, retained title "to a hundred acres of land for every acre planted by him in corn." This may have been a somewhat difficult task for Holston, who quickly sold his claim to James Davis, a Welshman who occupied the land shortly thereafter.⁵ Following on the heels of Patton was Dr. Thomas Walker, an English representative of the Loyal Land Company, who acquired 800,000 acres of backcountry land from the Burgesses of Virginia. Although the southern boundary of Walker's enormous grant did not technically extend into North Carolina, Walker ventured as far south as the Long Island on the Holston River, where, in 1750, he surveyed several parcels. In 1753, John Buchanan was granted land at an area known as Sapling Grove, which became the present city of Bristol, Tennessee. Despite the fact that the land titles of Patton, Buchanan, and Walker were legally in question, and their proper jurisdiction still under debate by colonial governments, lands in the Great Valley south of Roanoke

⁵Summers, History of Southwest Virginia, 53; Dick, The Dixie Frontier, 8. Davis' 1,300 acre tract was surveyed by John Buchanan in March 1748, which meant that Davis planned to cultivate at least 13 acres in corn. According to Summers, descendants of Davis occupied portions of this original tract well into the twentieth century. Squatters also were common on the frontier, which along with erratic surveying practices, made the acquisition of these lands a legal quagmire.

continued to be surveyed, sold, and settled.⁶

The French and Indian War, which unofficially began in 1754 (England did not declare war until 1756), helped to stall, for a time at least, the settlement process. At the height of the War, the French and their Indian allies staged major assaults on the frontier settlements, forcing pioneers to seek safety at stockaded forts or, if none could be found, abandon the region entirely. Dozens perished in the attacks and a number fled to the piedmont settlements of North and South Carolina. Several of the Holston and New River settlements in upper East Tennessee were completely destroyed or abandoned. John Stuart's "A Map of the Cherokee Country," drafted in 1761, is ample proof of settlement destruction. On the map, imprinted over the Holston homestead of pioneer Samuel Stalnaker, are the words "Destroyed by the Shawanese Indians." Upstream, above the Stalnaker settlement, is the caption "Abandoned Plantations."⁷

To control the western boundaries of the colonies, the British passed the Proclamation of 1763, prohibiting

⁶Folmsbee, et al., History of Tennessee (4 vols., New York, NY: Lewis Historical Publishing, 1960), I: 97; Booth, The Watauga Settlements of the Appalachian Frontier, 33; Summers, History of Southwest Virginia, 1746-1786, 46-54.

⁷De Vorse, The Indian Boundary in the Southern Colonies, 57, 73; Cumming, The Southeast in Early Maps, 231. The "Stalnaker's place," as it was then called, was found on maps as early as 1755. "Plantation" is a general term used for all eighteenth century farms. See also Franklin, "Virginia and the Cherokee Indian Trade," 19. John Stuart's original map is currently housed in the British museum, Additional MSS. 14,036, folio 5.

settlement west of the crest of the Appalachians. By 1767, negotiations were under way with the Cherokee for opening more land in the Great Valley of the Appalachians. The Treaty of Hard Labor, signed in 1768, established a settlement boundary that ran between Tryon Mountain, North Carolina to the mouth of the Kanawha River. In accordance to the treaty, settlement by whites was only legally permitted east of the line. Not surprisingly, the new boundary did not appeal to speculators and settlers, who continued to venture far into Cherokee lands. Another round of negotiations followed suit, resulting in the Treaty of Lochaber, which in 1770, finally allowed permanent settlement along the Clinch, Powell, and Lower Holston Rivers.⁸

The Great Valleys of Virginia and Tennessee were not the only areas of the southern Appalachians feeling the pressure of European settlement before the Revolutionary War. Indians boundaries were also contested along the South and North Carolina borders. By 1766 numerous settlers already lived along the headwaters of the Savannah River in the South Carolina upcountry, some well beyond the boundary line established by Indian treaties. "About the Saludy [River]," complained the deputy Indian Superintendent Alexander Cameron, "there are several houses within four miles of the line, and

⁸William C. Pendleton, History of Tazewell County and Southwest Virginia (Richmond, VA: W.C. Hill Printing Company, 1920), 227, 228-229; Williams, Dawn of Tennessee Valley and Tennessee History, 298; James Truslow Adams, Atlas of American History (New York: Charles Scribner's Sons, 1943), plate 61.

one house, within one mile of it. On the North Carolina side of Reedy River, there are four or five families settled.."⁹ The situation in North Carolina was apparently no better. In 1766, the Cherokee showed grave concern over the encroachment of their Blue Ridge hunting grounds: "The number of families that have come from North Carolina and Virginia and settled upon a great deal of our best lands and within an easy days march of some of our towns, are circumstances very alarming to us...we were promised quiet possession of our lands and redress for our grievances."¹⁰ Even though new treaties with the Cherokees were signed and new boundary lines drawn, these were repeatedly violated. By 1770, there was no going back, the permanent settlement of southern Appalachia had begun.

One of the first permanent settlements in the region was Castle's Woods.¹¹ Founded in Russell County, Virginia, in 1769, Castle's Woods was named after the first settler of the area, Jacob Castle. As was typical of first settlers, Castle did not stay at the settlement. A "long hunter," who like the Indian, wore buckskin leggings, moccasins, and leather hunting shirts, Castle wanted to obtain skins for the fur trade, or like Daniel Boone, to locate territory for future frontier settlements. Most long hunters, however, traveled in groups

⁹Quoted in De Vorsey, The Indian Boundary in the Southern Colonies, 132.

¹⁰Quoted in Ibid., 95.

¹¹A distinction shared with Abingdon, Virginia.

and took several pack horses with them to return valuable deerskins and other commodities of the forest. These were traded at the shops of local store keepers or taken to the Moravian missionaries in Salem, North Carolina, where, in turn, they would be transported to Charleston. In 1764 five wagon loads of furs, weighing a total of 9,400 pounds, were taken by the Moravians to the bustling Atlantic port.¹²

Long hunters cleared the overland routes leading into the Southwest frontier, and fur traders extended their hunting expeditions into areas not frequented by Indians. Around 1740 a group of these men crossed the Blue Ridge along the Roanoke River, before reaching the "Warriors Path," a major Indian trail connecting the Shenandoah and Tennessee Valleys. The discovery and development of this new route--the "Great Valley Road"--helped ensure the rapid settlement of the region, since it connected the port of Philadelphia to the Yadkin River in western North Carolina. Prior to that time, travel into the area from the north was heavily restricted. The only major road into the mountains was the "Carolina Road," a route requiring passage from the east, through the mountains of western North Carolina. The Wilderness Trail cleared by Daniel Boone in 1775 further opened up the southern Appalachians to settlement by creating for the first time a major route between Virginia and Kentucky. By cutting an approachable path

¹²Arnow, Seedtime on the Cumberland, 155; Adelaide L. Fries, ed., Records of the Moravians in North Carolina, I, 301.

through the Cumberland Gap, Boone made the lands of the Cumberland Plateau (and beyond) much more accessible to settlement. The creation of the Great Valley and Wilderness Roads gave direction to migration by establishing the flow of settlement from the north to the southwest. "It was easier," as Samuel Cole Williams put it, "to follow the great longitudinal valley to the southwest than to cross the mountain ranges."¹³

Along the trails of the Indian and long hunter, came the first pioneers. Seeking a new life in a new land, these men, women, and children were awed by the vastness and beauty of the mountain landscape. Humbling as it must have been to peer across the great mountain divides for the first time, the settlers must have been overwhelmed by the lack of the "civilized" improvements. As they saw it the landscape was ultimately a wilderness to be tamed. Daniel Boone, the quintessential backwoodsman, admitted in later years that he had been "a creature of Providence, ordained by Heaven as a pioneer in the wilderness, to advance the civilization [and] extension of his country."¹⁴ To ensure that civilization would

¹³Williams, History of the Lost State of Franklin, 268. See also Campbell, Our Southern Highlander, 22-27; Norburn, "The Influence of the Physiographic Features of Western North Carolina on the Settlement and Development of the Region," 1-38.

¹⁴Boone quotation in Jared Sparks, ed., Lives of Daniel Boone and Benjamin Lincoln, The Library of American Biography, Second Series (Boston: 1847), XIII: 186-189; Henry Nash Smith, Virgin Land: The American West as Symbol and Myth (New York: Vintage, 1957), 61.

endure on the frontier, settlers gravitated toward openings in the forest, usually to old fields created by Indians, or to former beaver meadows along creeks or rivers. If openings could not be found, they were created, because civilization as the European understood it, demanded large expanses of unobstructed land. For them, primeval forests and imposing canebrakes were uninhabitable landscapes and did not necessarily lend themselves a pastoral way of life.

Anglo Arrivals

By 1788 more than 25,000 individuals, all with a keen eye on making improvements in the mountain wilderness, had settled over the upper reaches of Tennessee Valley. Thousands more lived on the Cumberland Plateau and the eastern foothills of the Blue Ridge, bringing the region's total population at or near 40,000. In 1790, just two years later, the population doubled as there were nearly 80,000 residents scattered across the southern Appalachian region in settlements along the Holston, Yadkin, Cumberland and Kanawha rivers.¹⁵ Most of

¹⁵These figures are close approximations given the available sources. The 25,000 figure is for the State of Franklin (Sullivan, Washington, Wayne, Greene, Caswell, Spencer, Sevier, and Blount county) given by Brissot de Warville, a French traveler. Major Elholm, at the Greenville convention of 1787, estimated the population of Franklin at 30,000. By 1790, using government census records, it is evident that the population of those counties had risen to 28,649 and 35,691. In Kentucky the population increased from 50,000 in 1787 to 73,677 in 1790. Even considering the fact that a majority of settlers resided in the Blue Grass, a

these individuals were of English ancestry, but Scotch-Irish, Germans, Irish, and even Scandinavians contributed to the ethnic mix. African-Americans were by also represented, as the rich soils of the Tennessee Valley made slave labor economically possible. Williams estimates that in 1790 their numbers totaled more than 1,500 in the State of Franklin alone.¹⁶ Despite frequent claims to the contrary, the Scotch-Irish were not the largest ethnic group to settle in the southern Appalachians. In 1790 they constituted less than 20 percent of the population (Table 6.1).¹⁷

considerable number of Kentucky residents must have occupied the Cumberland Plateau. For population estimates on the southern frontier, see Samuel Cole Williams, History of the Lost State of Franklin (Johnson City, TN: The Watauga Press, 1924), 268-269; Evarts B. Greene and Virginia Harrington, American Population before the Census of 1790 (New York: 1932), 192-194; Herman R. Friis, "A Series of Population Maps of the Colonies and the United States, 1625-1790," Geographical Review 30 (1940), map for 1790, facing 464; Malcolm J. Rohrbough, The Trans-Appalachian Frontier, People, Societies, and Institutions, 1775-1850 (New York: Oxford University Press, 1978), 25, Table 1. In 1792, Gilbert Imlay put the population of the Holston, Clinch, and Powell River settlements at 70,000. Imlay, A Topographical Description of the Western Territory, 49. See also John B. Knox, The People of Tennessee: A Study of Population Trends (Knoxville, TN: The University of Tennessee, 1949), 2-10.

¹⁶Williams, The History of the Lost State of Franklin, 269, 4n; Rossiter estimated the total number of slaves in the Southwest Territory in 1790 at 3,417, but by 1800 the number had increased to 13,584. This number would be lower in the study area, since The Southwest Territory would also include the Shenandoah Valley of Virginia and Blue Grass regions of Kentucky. Rossiter, A Century of Population Growth, 1790-1900, 132, 133.

¹⁷David Hackett Fischer sees the Scotch-Irish as one of several borders peoples originating from northern Ireland and lowland Scotland. In his analysis of the 1790 census, he collapses both English and Scotch-Irish surnames into one

Table 6.1. Percentage of Scotch-Irish in selected Appalachian and comparison states.

State	Hanson and Barker	Purvis
GA	11.5	12.2
SC	9.4	18.9
TN	7.0	17.8
KY	7.0	16.5
NC	n.a.	15.8
VA	n.a.	11.7
PA	11.0	15.8
ME	8.0	17.4

Sources: Thomas Purvis, Marcus Lee Hansen and Howard F. Parker, "Report of the Committee on Linguistic and National Stocks in the Population of the United States," in Annual Report of the American Historical Association for the Year 1931, I, (Washington, D.C.: American Council for Learned Societies, 1931), 118; Thomas Purvis, "The European Ancestry of the United States Population, 1790," William and Mary Quarterly 38 (1980), 179-199; Kenneth Keller, "What About the Scotch-Irish?," in Robert Mitchell, ed., Appalachian Frontiers: Settlement, Society & Development in the Preindustrial Period (Lexington, KY: University of Kentucky Press, 1991), 73.

category in order to arrive at the total number of backcountry settlers from the British "borderlands." These adjusted figures, he believes, proves the dominance of British culture in the Appalachian backcountry. According to Fischer, "90 percent of the backsettlers were either English, Irish, or Scottish; and an actual majority came from Ulster, the Scottish lowlands, and the north of England," Albion's Seed, 635. John C. Campbell, who also merged the two groups in a surname study of Revolutionary War pension lists, also found the percentages in favor of British dominance: "Of the 497 names on our list from North Carolina, the English and Scotch-Irish appeared to have formed each about one-third; of the 228 from Tennessee the same proportion held; of the 360 from Kentucky, the English constituted four-tenths, and the Scotch-Irish three-tenths," Campbell, The Southern Highlander and His Homeland, 65. Knox places the proportions for Tennessee in 1790 as: English, 80 percent; Scotch, 13 percent; German, 5 percent; Irish, 3 percent; other, 2 percent. John B. Knox, The People of Tennessee, 9, Chart 2.

Although they represented the largest ethnic group proportionally, the English made perhaps the fewest contributions to the land use culture of the backcountry frontier. A number of eighteenth century advancements in animal and plant husbandry can be attributed directly to the English (apple growing and sheep herding), but the shape and form of domestic houses was perhaps their biggest contribution. The English are well known for their brick making and brick laying skills, having perfected the art in the eighteenth century. In fact, elements of English architecture survive even in the crudest log cabins of the region.¹⁸ Exterior chimneys located at gable ends, for example, originated in the Tidewater. The English also influenced the political organization of the backcountry, as the system of English law was transplanted, basically intact, to the southern Appalachian frontier. Because English law is administered by county systems of government, the county became the primary social and geographic unit of the region. This political system also helped to established the two major settlements types in the region--the county seat, a township historically controlled by merchants and business elites; and unincorporated hamlets, a settlement area comprised

¹⁸Brick architecture was not unknown on the Appalachian frontier, particularly in the first permanently settled townships. While most early brick structures are associated with planter elites, a small number of "federal-style" brick homes were inhabited by middle-class farmers. Brickyards have themselves been important economic influence on the region after the early nineteenth century.

traditionally of rural farmers. County government, its leaders the most important men and largest landowners, from the beginning exercised a great deal of control over economic affairs, licensing gristmills and sawmills, overseeing the maintenance of roads, and fixing the prices at local taverns.¹⁹

Scotch-Irish

Despite their small numbers, the Scotch-Irish influenced frontier development much more than the English. Although the Scotch-Irish left much of their culture behind in the Old World--abandoning by the eighteenth century such things as Twelfth of July celebrations, sod and thatch houses, and the Gaelic language--many of their cultural practices and land use skills proved extremely useful in the new country. The Scotch-Irish brought to southern Appalachia a knowledge of cattle-herding and whiskey-making as well as the Presbyterian religion, Old World place names, folk ballads, and the art of

¹⁹On county government on the frontier, see Albert Porter, County Government in Virginia: A Legislative History, 1607-1904 (New York: Columbia University Press, 1947), 12-16; William C. Guess, County Government in Colonial North Carolina (James Sprunt Historical Publications, vol 11, no. 1. Chapel Hill, NC: University of North Carolina Press, 1911), 29-34; Malcolm J. Rohrbough, The Trans-Appalachian Frontier: Peoples, Societies, and Institutions, 48-49, 52-53; Milton Newton, "Cultural Preadaptation and the Upland South, in H. J. Walker and W.G. Haag, eds., Man and Cultural Heritage, vol. 5. Geoscience and Man (Baton Rouge: Louisiana State University Press, 1974), 150, n13; Raitz and Ulack, Appalachia; A Regional Geography, 101, 121.

weaving cloth on looms. In settling the frontier, the Scotch-Irish also borrowed many practices from other cultures, adapting these, in turn, to the mountain environment.²⁰ However, because each group interacted with the environment in a different way, a common frontier culture never fully emerged in the southern Appalachians.

Although scholars differ on the extent of influence in the southern mountains, the Scotch-Irish undoubtedly left their cultural imprint on the region. On the Appalachian frontier, Scotch-Irish immigrants settled in clusters of farmsteads patterned closely after clachans, the name of Ulster settlements in northern Ireland, their former homeland. According to Desmond McCourt, Old World clachans comprised a number of homesteads situated around a communally worked area of farmland.²¹ Nearest the dwellings was an infield, croplands generally cultivated in staple crops, such as oats, wheat, barley, rye, potatoes, and turnips. Beyond the infield lay the

²⁰John P. Arthur, Western North Carolina: A History From 1730 to 1913 (Raleigh: Edwards and Broughton Printing Company, 1914), 77; William K. Boyd, ed., "Information Concerning the Province of North Carolina," North Carolina Review 3 (October 1926), 614-615; Campbell, The Southern Highlander and His Homeland, 53-71; Jordan and Kaups, The American Backwoods Frontier, 118, 120; W. P. MacLean, An Historical Account of the Settlements of Scotch Highlanders in America Prior to the Peace of 1783. (Baltimore: Genealogical Publishing Company, 1968), 70; Anne Ross, The Pagan Celts (Totowa, NJ: Barnes & Noble, 1986), 64-65.

²¹McCourt, "Infield and Outfield in Ireland," Economic History Review 16 (July 1955), 369-370, 375-376; John S. Otto, The Southern Frontiers, 57; Jordan and Kaups, The American Backwoods Frontier, 125-126.

outfield, slightly poorer land reserved for oats or wheat that was, after yields declined, allowed to lay fallow and revert back to pasture. Beyond the outfield, lay the unclaimed wasteland, a grazing commons reserved exclusively for cattle and sheep. The landscape of southern Appalachia allowed for the transference (with modifications) of this field, fallow, and forest cycle. Bottom lands, below the house along the floodplain of a creek and river, were regarded as infields, with corn and wheat replacing wheat and oats as the main infield crop. Many Scottish farmers were familiar with the cultivation of this type of soil, having tilled the silt-rich bottom or haugh lands of Scotland.²² Interplanted among the corn were varieties borrowed from the native American: beans, melons, tobacco, pumpkins and squash. The Scotch-Irish also continued planting small vegetable gardens "adjoining the house" just as they had in the Old World. The New World equivalent of outfields were lands located farther from the house, cleared of timber and interplanted with corn or wheat. In two or three years, after they exhausted soil productivity, the Scotch-Irish settlers returned these fields to fallow pasture. The woodlands surrounding the settlement became a

²²Estyn E. Evans, The Personality of Ireland: Habitat, Heritage, and History (London: Cambridge University Press, 1973), 55-61; 160; James Handley, Scottish Farming in the Eighteenth Century (London: Faber and Faber, 1953), 37-45; G. Whittington, "Field Systems of Scotland," in Alan R. H. Baker and Robin A. Butlin, eds., Studies of Field Systems in the British Isles (Cambridge: Cambridge University Press, 1973), 534; Lord Ernle, English Farming Past and Present (London: Longmans, Green and Company, 1936), 160.

vast communal grazing area in which livestock were free to range. This practice of open-ranging cattle in the common woods also resembles "transhumance," a grazing system common in eighteenth century Ireland and Scotland.²³

As practiced in Britain, transhumance involved burning the moorlands during the winter months so that livestock could graze on the regenerated forage that resulted in the spring, summer, and fall. According to John S. Otto, the "animals grazed under the care of herdsman, who mollified stock by feeding them salt...When fall frosts killed moorlands grasses, owners collected herds, retained breeding animals, and sold surplus stock to professional drovers who operated in Scotland and Ireland."²⁴ Similarly, in the Blue Ridge mountains of southern Appalachia, cattle and sheep were grazed during the summer months on the "grassy balds" of mountaintops, far away from settlement croplands. Before ascending the mountains, herdsman burned mountaintop pastures in late fall or early

²³Estyn E. Evans, "Culture and Land Use in the Old West of North America," Heidelberger Geographische Arbeiten 15 (1966), 72-79; Estyn E. Evans, "The Scotch-Irish: Their Cultural Adaptation and Heritage in the American Old West in E.R.R., ed., Essays in Scotch-Irish History (London: Routledge and Kegan Paul, 1969), 80-81; Lord Ernle, English Farming Past and Present, 160-161.

²⁴John S. Otto, The Southern Frontiers, 57. See also Edward MacLysaght, Irish Life in the Seventeenth Century (Shannon: Irish University Press, 1969), 167-170; Ian Whyte, Agriculture and Society in Seventeenth Century Scotland (Edinburgh: John Donald, 1979), 80-83; Grady McWhiney and Forrest McDonald, "Celtic Origins of Southern Herding Practices," Journal of Southern History 51 (May 1985), 168-169.

spring to encourage new growth. One herdsman of Scotch-Irish ancestry, who left a diary of his herding activities, reported that "he set out for the top of the mountain" in April, and then, after gathering his herd in August, returned home.²⁵ Most herdsmen accompanied their livestock during the summer, often living in crude dwellings constructed solely for the purpose. As they had in Britain, mountain herdsmen used salt to keep cattle from straying too far or, when necessary, to move them from pasture to pasture. One eighteenth century traveler made the observation that the use of salt rendered cattle "gentle and tame," otherwise, the cattle would "roam far beyond the reach of their proprietors." In the fall, after gathering the animals, the cattle were taken down the mountains and sold to overland drovers, or in later years, herded to regional markets in Asheville or Knoxville. In fact, the common practice of salting ridgetops to ensure that cattle do not stray has left its mark on the region in the form of numerous placenames. Lickstone Bald in North Carolina, for example, derives its name from the huge flat rock near the

²⁵Diary of Samuel McCammon, 1846-1854 (McClung Collection, Lawson McGhee Library, Knoxville); Durwood Dunn, Cades Cove: The Life and Death of a Southern Appalachian Community (Knoxville, TN: University of Tennessee Press, 1988), 33; North Callahan, Smoky Mountain Country (New York: Dell, Sloan & Pearce, 1952), 10-11; Phil Gersmehl, "Factors Leading to Mountaintop Grazing in the Southern Appalachians," Southeastern Geographer 10 (1970), 67-72; Mary M. Lindsay and Susan Power Bratton, "The Vegetation of Grassy Balds and Other High Elevation Disturbed Areas in the Great Smoky Mountains National Park," Bulletin of the Torrey Botanical Club 106 (Oct-Dec. 1979), 264-275.

summit, "whereon the cattle-herders used formerly to place the salt brought by them to the stock which ranged the mountain meadows."²⁶

The introduction of the Scotch-Irish herding system to the region provides striking evidence for the origins of the southern Appalachian grassy balds. Once an ecological mystery, the early presence of mountaintop cattle herding is a clear indication that their origin results largely from this cultural practice. One of the first recorded instances of mountain grazing occurred in 1781, when an individual known by the name of Main is believed to have cleared several hundred acres on what is today Oldfield Bald near Grandfather Mountain, North Carolina.²⁷ As more and more settlers entered the Blue Ridge mountains during the late eighteenth and early part of nineteenth century, the cattle herding practice rapidly spread. A 1795 land grant for a parcel of land along Scott's Creek near Wesner's Bald in western North Carolina mentions the location of "Scott's old lick blocks," designating a former cattle range. According to Dr. Abraham

²⁶First quotation in J.F.D. Smyth, A Tour in the United States of America (London: G. Robinson, 1784), I: 143; Second quotation in Zeigler and Grosscup, Heart of the Alleghenies, 315; Gersmehl, "A Geographic Approach to a Vegetation Problem: The Case of the Southern Appalachian Grassy Balds," 1970, 244-253; Evans, "Folk Housing in the British Isles in Material Other than Timber," in H. J. Walker and W.G. Haag, eds., Man and Cultural Heritage, vol 5: Geoscience and Man (Baton Rouge, LA: Louisiana State University Press, 1974), 63.

²⁷Arthur, Western North Carolina, 194; Gersmehl, "A Geographic Approach to a Vegetation Problem: The Case of the Southern Appalachian Grassy Balds," 245.

Job, whose family moved to Cades Cove in 1821, his father "cleared a considerable amount of his 640 acres of land" to raise "a good deal of stock..."²⁸ John W. Oliver, also of Cades Cove, remarked that during the 1830s, James Spence burned trees and cleared brush in order to create the mountain meadow known as Spence Field, a grassy bald near Thunderhead Mountain currently managed by the Great Smoky Mountains National Park. By the 1890s, we have evidence that Nathan Sparks was grazing more than 700 head of cattle around the environs of Spence Field. Apparently this was an activity that mountain settlers had knowledge of prior to their arrival. Roderick Peattie, author of Mountain Geography, remarked that the Scotch-Irish came to the southern Appalachians and "cleared mountain farms by choice."²⁹

The cattle herding tradition in the southern mountains owes much to the Scotch-Irish. Indeed, cattle- and sheep-raising in Ulster offered a prototype for the practice in the southern mountains. In effect, the entire frontier landscape became an enormous grazing commons in which livestock grew fat

²⁸Gersmehl, "A Geographic Approach to a Vegetation Problem," 245; John P. Arthur, Western North Carolina: A History From 1730 to 1913 (Raleigh, NC: Edwards and Broughton Printing Company, 1914), 194; Job quotation in Inez Burns, "Settlement and Early History of the Coves of Blount County, Tennessee," East Tennessee Historical Society Publications 24 (1952), 61.

²⁹Dunn, Cades Cove, 33, 34; V.C. Gilbert, "Vegetation of the Grassy Balds of the Great Smoky Mountains National Park" (Master's thesis, University of Tennessee, Knoxville, 1954), 22; Roderick Peattie, Mountain Geography (Cambridge, MA: Harvard University Press, 1936), 224.

browsing among mountaintop pastures, woodland glades, and riverbottom canebrakes. It was not without certain dangers to the animals, however, as many backcountry men had to pen animals at night in order to protect them from wolves and mountain lions.³⁰ To properly keep track of ownership, frontiersmen utilized the Ulster custom of marking animals by cutting a small but distinctive portion of the animal's ear. Collecting the animals in the fall was yet another problem since they became semi-wild in the spacious forest. The animals had to be captured and then temporarily corralled in circular "cowpens," a roundup practice more characteristic of the Spanish herding tradition adopted by the Cherokee Indians during the early part of nineteenth century.³¹

³⁰Thomas Anburrey, Travels through the Interior Parts of America. In a Series of Letters. By an Officer (2 vols., London: William Lane, 1789), I: 326-327; J.F.D. Smyth, A Tour in the United States of America (2 vols., London: G. Robinson, 1784), I: 338, 363; Otto, The Southern Frontiers, 56; Terry Jordan, Trails to Texas: Southern Roots of Western Cattle Ranching, (Lincoln: University of Nebraska Press, 1981), passim.

³¹Stevenson W. Fletcher, Pennsylvania Agriculture and Country Life, 1640-1840 (2 vols., Harrisburg, PA: Pennsylvania Historical and Museum Commission, 1950), I: 85; John Stilgoe, Common Landscape of America, 1580-1845 (New Haven, CT: Yale University Press, 1982), 192-198; Bays, "Historical Geography of Cattle Herding," 62, 63, passim. Logan, who called the frontier cowpen "an important institution," said cowpens were used in the South Carolina upcountry "to collect the cattle at proper seasons; for the purpose of branding and counting them." Logan, History of the Upper Country of South Carolina, 151-152. As Bays points out, in tracing the cultural origins of frontier cattle herding, the best scholars argue for the diffusion and blending of certain cultural practices, but maintain that although certain traits are shared, many cultural complexes retain diagnostic attributes that are traceable across geographic regions and through time.

In clearing the wooded landscape for pasture or agriculture, the Scotch-Irish first made "deadenings" in the surrounding forest. This was done by pulling up or cutting several acres of the undergrowth, burning the brush, and "girdling" the larger trees. To girdle a tree, pioneers removed a wide strip of bark around the base so as not to allow the sap to rise to the upper branches. This practice--first used by Native Americans throughout North America--quickly killed even the largest of trees.³² According to John Stilgoe, tree girdling was being practiced as early as the second decade of the seventeenth century in the Virginia Tidewater. In 1625, John Smith remarked that "the best way to spoil the woods was to cut a notch in the bark a hand broad round about the tree, which pull off and the tree will sprout no more and all the small boughs in a year or two will decay."³³ The Scotch-Irish, with little knowledge of large-scale timbering, found a number of advantages to the practice of forest deadening. Unlike clearcutting, it was less labor intensive and did not immediately require the felling of

³²J. S. Otto and N E. Anderson, "Slash and Burn Cultivation in the Highland South: A Problem in Comparative Agriculture History," Comparative Studies in Society and History 24 (1982), 133-142; Fletcher, Pennsylvania Agriculture and Country Life, 1640-1840, 36, 64; Jordan and Kaups, The American Backwoods Frontier, 96-100; Stilgoe, Common Landscape of America, 1580-1845, 171-173.

³³John Stilgoe, Common Landscape of America, 1580-1845, 172-173; John Smith, Advertisements for the Unexperienced Planters of New England, or anywhere (Boston, MA: Massachusetts Historical Society, Collections, 3d ser., 3, 1833), 38. See also Adair, History of the Indians, 434-435.

trees, since crops could be planted in shadeless areas among the standing trees the following year. Within a couple of years the deadened trees either fell down during high winds or would be cut into usable lengths with steel broad axes. Settlers used the trees for outbuilding construction, firewood and fences, or simply heaped into piles and burned. The intentional burning of trees provided a convenient way to remove large trees and produced large amounts of potash, which increased soil fertility. Despite the apparent wastefulness of the clearing process, the felling of trees, as Harriette Arnow noted, was seldom done "solely to be rid of the tree." If the trees were hardwoods, they might become firewood, axe handles, wooden utensils, roof shingles, or pegwood. Poplar and ash were more often used in cabin or barn construction, although on many parts of the Cumberland Plateau where mature stands of the eastern red cedar predominated, homes and barns were built of hewed cedar.³⁴

After the trees were removed, corn or other outfield crops were interplanted among the remaining tree stumps. In 1755, when touring the Rocky River valley in western North Carolina, Arthur Dobbs found settlers planting "Indian Corn, wheat, barley, rye and oats" in fields cleared from hardwood forests.³⁵ Corn was the most frequently planted crop in the

³⁴Arnow, Seedtime on the Cumberland, 256, 257-258.

³⁵William L. Saunders, ed., The Colonial Records of North Carolina, 1662-1776 (10 vols., Raleigh, NC: Joseph Daniels, 1886-1890), V: 356.

deadening, as it could be planted without the use of plows in ground "too filled with roots and stumps." The other small grains required an even seed bed of loose soil, which meant that the first plantings were either done in bottomlands or in the deadening after several years of hoeing and plowing had sufficiently broken the soil. This seems to have been the case on the Cumberland Plateau, where Scotch-Irish farmers grew small grains were grown two or three years after the first corn crop.³⁶

Flax, grown extensively by the Scotch-Irish in Britain, was another crop requiring fields largely free of stumps and cane roots. The first Scotch-Irish settlers used flax to make linen cloth and linseed oil as did their ancestors in northern Ireland. Ulster became a major exporter of linen during the late seventeenth century when King William III provided inducements for growing the crop. At that time linen manufacturing was organized exclusively on a domestic basis, "with piecework distributed widely through the homes of the region."³⁷

In the southern Appalachians, settlers grew the crop in small fields of several acres or less. After harvest, the plants were set aside to dry before threshing out the seeds, the major ingredient of linseed oil. Farmers then soaked the

³⁶Arnow, Seedtime on the Cumberland, 323.

³⁷Leyburn, The Scotch-Irish: A Social History (Chapel Hill, NC: University of North Carolina Press, 1962), 159; Arnow, Seedtime on the Cumberland, 91-92.

stalks in water to free the outer bark from the inner fiber. After another drying period, the farm women crushed the flax stems in a "break" and then "hackled" them to separate the fibers into desired weights. Women spun selected fibers into spools of long thread and then wove these into linen cloth, the strong and sometimes coarse fabric that dominated the dress of the early colonial settlers. With the introduction of cotton and hemp cultivation into the mountains during the early nineteenth century, flax-growing declined. By the end of the Civil War, almost none could be found growing in the southern Appalachian region.³⁸

Whatever crop was sown in the stump-ridden clearings of the frontier settlements, 24-hour protection was needed from cattle, hogs, deer, rabbits, or any other animal of the forest seeking food. The first settlers enclosed their gardens with rail, stone, or paling fences to avoid run-ins with unwanted animals. In the environment of southern Appalachia, some fences had a certain advantage over others. Split-rail or "worm" fences were constructed by stacking split rails in a

³⁸Reuben Gold Thwaites, ed., Travels West of the Alleghenies, (Cleveland, OH: Arthur H. Clark Company, 1904), 241; Harriette Arnow, Flowering of the Cumberland, 250-252; idem, Seedtime on the Cumberland, 222, 351; Carrier, Beginnings of Agriculture in America, 162-163; Lord Ernle, English Farming Past and Present, 136, 240, 312; Leyburn, The Scotch-Irish, 121. The Scotch-Irish were not the first nor the sole cultivators of flax. The French Huguenots, Swedes, and Germans grew the plant and continued doing so on the American frontier. When flax seed was not available, some chose to make fiber from a native plants then known as "wild nettle." Summers, History of southwest Virginia, 1746-1786, 124.

zigzag manner. Rail fences could be moved from one location to another and were especially easy to construct on uneven land or "rough and rocky ground."³⁹ On the other hand, rail fences seldom kept out rabbits, raccoons, squirrels, deer, and hogs--even when nine rails high. Moreover, in order for the rails to balance upon their diagonally crossed stake supports, each section of fence had to join the next at a 120 degree angle. "The actual path of the fence, therefore, stretched almost ten feet wide, and the swath of ground occupied by the rails proved almost impossible to cultivate, even with a hoe." A mile of worm fence left nearly an acre and a half of uncultivated land, and fence rows became a haven for weeds, groundhog, birds, and other pests. It also took a considerable number of large trees to build these fences: circumventing a ten-acre field required more than 4,500 rails, or the cutting of thirty to fifty large trees. Only where wood grew plentifully did the worm fence predominate.⁴⁰

³⁹Stilgoe, Common Landscape of America, 1580-1845, 188, Jordan and Kaups, The American Backwoods Frontier, 105-106; Arnow, Flowering of the Cumberland, 236. In the southern Appalachians, chestnut and locust logs were very often used for fence railing since they were easily split and resisted rotting. Fence posts made from chestnut wood can still be seen in the area of the Great Smoky Mountains National Park.

⁴⁰Stilgoe, Common Landscape of America, 1580-1845, 189; 191-192; Eugene Cotton Mather and James Fraser Hart, "Fences and Farms," Geographical Review 44 (April 1945), 201-223; Jordan and Kaups, The American Backwoods Frontier, 106-107. In determining the number of trees, I divided the number of rails needed to enclose a ten acre field (4,500) by the number of rails in a single large tree (150). If smaller trees were used, the figure would of course be considerably higher.

The paling fence was more difficult to build but better at keeping out pesky intruders. Settlers used them most often for smaller garden plots or yards. Paling fences were constructed by laying narrow boards or palings side-by-side along a panel of horizontal boards that were held upright on sturdy posts. The result was a very tall but solid picket fence, and with the ends of the boards sharpened to discourage deer from jumping over them, the structures were nearly impenetrable. Upon seeing one erected in North Carolina, William Byrd II remarked that "such a fence doth surprising well."⁴¹

Stone walls were much more rare in the mountains than in the Blue Grass, but numerous examples of stone construction are still visible in many parts of the Blue Ridge mountains. Settlers chose the stone wall for the same purpose as the paling fence--when they had a generous supply of smooth workable stones. On the "Old Settlers Trail" in the Great Smoky Mountains National Park, most of the former homesites that one sees along the trail are surrounded by stone fences built to keep wandering animals out of garden areas and corn fields. Many stretch for more than 200 yards without a single opening, and some are more than five feet in height. Since these large stones were extremely plentiful in the Smokies,

⁴¹1728 is the date of the observation. John Spencer Bassett, ed., The Writings of Colonel William Byrd, Esquire of Westover in Virginia (New York: 1901), 84; Arnow, Flowering of the Cumberland, 226.

and needed to be removed in order to cultivate the land, it is not surprising that stone wall construction was adopted by the early settlers of the Smokies. The Germans and Quakers of Pennsylvania were perhaps best known for stone masonry, but this practice apparently evolved independently of their influence. Interestingly, in official National Park Service literature, the still visible stone piles that were used to build the fences are referred to as cairns, a Celtic term meaning mounds of stones. Because it is unclear whether the use of the term was borrowed from the former residents who built the fences, it is impossible to determine if the practice in the Great Smoky Mountains has Scotch-Irish roots.⁴²

Germans

The Scotch-Irish were certainly not the only ethnic group

⁴²Delce Dyer, "The Farmstead Yards at Cades Cove: Restoration and Management Alternatives for the Domestic Landscape of the Southern Appalachian Mountaineer," Master's thesis, University of Georgia, Athens, Georgia, 1988, 14, 67n.; Great Smoky Mountains National Park, "Stone Walls, Cairns and Old Roads," Section E, Overview and Needs, Cultural Resources Section, Resources Management Plan, GSMNP, 1986. On German building construction see, for example, Stevenson W. Fletcher, Pennsylvania Agriculture and Country Life, 1640-1840, 65. According to R. Gerald Avery, many of the early stone walls constructed in the Blue Grass region of Kentucky, were built "by people with knowledge of the craft as practiced in Ulster and Britain." Gerald Avery, Kentucky Bluegrass Country (Jackson, MS: University Press of Mississippi, 1992), 38. On stone building construction in Great Britain, see E. Estyn Evans, "Folk Housing in the British Isles in Materials Other than Wood," Geoscience and Man 5 (June 10, 1974), 53-64.

to influence land use patterns in the southern Appalachians. Though small in number, Germans also changed the landscape of the mountains in particular ways. Most German immigrants came from a region known as the Palatinate, a centuries old principality on the southwest border of the German mainland. The first wave of overseas migration began in 1689, after a retreating French army destroyed much of the Palatinate territory. By the early 1700s, crop failures, religious persecution (Catholicism, in 1685, became the official religion of the Palatinate, an area of Lutherans and [Reformed] Calvinists), and high taxes substantially increased the number of German immigrants to this country. Between 1727 and 1755, no less than 239 ships carrying mostly Germans anchored in Philadelphia. In 1749 alone, twenty-five ships carrying 7,049 Germans arrived in that city.⁴³ Many came as indentured servants; the redemptioner system provided free passage to the New World and ultimately, after seven years of contracted labor, freedom. At the end of indenture, many sought out farms in Pennsylvania, Maryland, North Carolina, and Virginia. The Moravian missionaries of Wachovia, North Carolina, who settled near the foot of Blue Ridge mountains in the eighteenth century, were largely responsible for the influx of Germans to that area, and they too, made a

⁴³Gunter Moltmann, ed., Germans to America: 300 Years of Immigration, 1683-1983 (Stuttgart: Institute for Foreign Relations, 1982), passim; Sharon Pierce Schier, Dietz Family History (Chattanooga, TN: Sharon Pierce Schier, 1990), 1-5.

significant contribution to the development of the frontier.⁴⁴ When Abram Steiner and Frederick De Schweinitz visited Abingdon, Virginia in 1799, they saw "several German churches," one of which, they said, was "very large and looks fine." The Moravian brothers visited several German families in the surrounding area and made note of their "well tilled" croplands and "beautiful plantations."⁴⁵

A number of those who arrived in southern Appalachia during the late eighteenth century were Hessian mercenaries, hired by the British to fight in the Revolutionary War. However, muster rolls for the border counties of Virginia for the French and Indian War establish the presence of Germans in the region much earlier. Germans predominated in parts of the upper Shenandoah Valley, but according to 1790 census schedules, they represented only 5 percent of the total Tennessee population. Numbers in adjoining states appear to have been higher, especially for counties near the Moravian tract in North Carolina, where according to one source, they represented more than twenty percent of the population.⁴⁶

⁴⁴See, for example, Daniel B. Thorpe, "Assimilation in North Carolina's Moravian Community," Journal of Southern History 52 (1986), 19-42; idem, The Moravian Community in Colonial North Carolina (Knoxville, TN: University of Tennessee Press, 1989).

⁴⁵Williams, Travels in the Tennessee Country, 448.

⁴⁶Samuel Kercheval, A History of the Valley of Virginia (Woodstock, Virginia, 1850), 49; Arnow, Seedtime on the Cumberland, 102, n. 122; H. Roy Merrens, Colonial North Carolina in the Eighteenth Century (Chapel Hill, NC: University of North Carolina Press, 1964), 53-81; David

Despite their relatively small numbers, the German contribution to environmental and cultural change in the region was significant. Germans preferred level land over rolling hillsides and, unlike the Scotch-Irish, frequently spread manure over their fields to increase fertility. In preparing the frontier homesite, the Germans practiced clear-cutting--felling of all trees within the area and grubbing out the remaining tree stumps. Since they preferred systematic cultivation over land rotation, which meant that all debris had to be thoroughly removed. They gathered excess stones from plowed fields and used them to build fences and the foundations of barns or outbuildings. They cut the felled trees into firewood or burned them on the site, providing large amounts of fertile potash that also helped to neutralize soil acidity. From this German method of frontier land clearance came the expression "free and clear," a phrase first used to describe a parcel of land ready for planting.⁴⁷

One of the more important contributions that the Germans made to the southern Appalachian subsistence economy was log-building construction. In fact, many of the log cabins and barns in the region could not have been constructed without

Hackett Fisher, Albion's Seed, 635.

⁴⁷Roger W. Fromm, "The Migration and Settlement of Pennsylvania Germans in Maryland, Virginia, and North Carolina and Their Effects on the Landscape," Pennsylvania Folklife 37 (Autumn 1987), 39-40; Raitz and Ulack, Appalachia; A Regional Geography, 124; Delce Dyer, "The Farmstead Yards at Cades Cove," 14; Stilgoe, Common Landscape in America, 1580-1845, 177.

the use of German carpentry methods. According to most scholars of frontier material culture, the techniques of horizontal-log construction were introduced by Germans into southern Pennsylvania as early as 1710. Notching techniques varied according to where the immigrant may have originated in Germany, but the basic principle of corner timbering made the construction of all log houses possible. The first German log houses in the Mid-Atlantic region were rectangular, had two or three major rooms, and a central chimney.⁴⁸ The Germans built more elaborate barns than any other ethnic group; the most well known and most copied of these being cantilevered barn. Wooden shingles, the continental central chimney, board gables, vertical planking, and the rafter style roof all are among the German contributions to log building in the southern mountains.⁴⁹ In short, southern Appalachian log architecture owes a great deal to German building traditions.

Although Appalachian frontiersmen borrowed German construction techniques, the log cabin was not entirely of German origin. Not surprisingly, Scotch-Irish and English settlers built log structures to reflect the floor plans of

⁴⁸Fletcher, Pennsylvania Agriculture and Country Life, 1640-1840, 50; Henry Glassie, Pattern in Material Folk Culture of the Eastern United States (Philadelphia, PA: University of Pennsylvania Press, 1968), 78.

⁴⁹Henry Glassie, "The Old Barns of Appalachia," Mountain Life and Work 41 (1965), 21-30; Raitz and Ulack, Appalachia: A Regional Geography, 123-124; John Morgan, The Log House in East Tennessee (Knoxville, TN: University of Tennessee Press, 1990), 9.

their former homes. In most instances, the British builders chose to modify the three-room German house by squaring the structure into one or two room "pens," creating larger and more familiar living quarters. As the English did in the Tidewater region, The English, as noted earlier, also placed external chimneys on the ends of the cabin, again altering the central chimney form of the German log dwelling. The spaces between the cabin logs required "daubing" with mud, a building practice familiar to most British Islanders. When the Ulster settlers first came to America in the seventeenth century, they probably built houses of stone, thatch, and mud. Lacking the proper construction materials, and facing a ready supply of wood, they quickly abandoned the practice.⁵⁰ Culturally, the southern Appalachian log home was a collaborative effort, "characterized by a syncretism of Tidewater-English and Pennsylvania German-Scotch-Irish traits."⁵¹

⁵⁰E. Estyn Evans, "The Scotch-Irish in the New World: An Atlantic Heritage," Journal of the Royal Society of Antiquaries of Ireland 95 (1965), 78, n.3; Henry Glassie, "The Appalachian Log Cabin," Mountain Life and Work 39 (1963), 5-6. The word "cabin" is of Scotch-Irish origin. The Oxford English Dictionary defines it as "a permanent human habitation of rude construction. Applied especially to mud or turf built hovels...."

⁵¹David Hackett Fisher, Albion's Seed, 658; Quotation in Glassie, Pattern in Material Folk Culture of the Eastern United States, 78. See also idem, "The Appalachian Log Cabin," 5-14 idem, "The Types of the Southern Mountain Cabin," (Appendix C), in Jan Harold Brunwand, ed., The Study of American Folklore (New York: W.W. Norton & Co., 1978), 391-420; Raitz and Ulack, Appalachia: A Regional Geography, 122, 123.

Scandinavians

Some frontier historians have even argued that frontier land-use practices and building techniques have Scandinavian roots.⁵² Cultural geographers Terry Jordan and Matti Kaups believe that Swedes and Finns were the only culture group preadapted to such an environment, having arrived from a forested land possessing "a satisfactory axe and the ancestral skills to clear woodlands." After providing a successful example for later arrivals to the region, Scandinavian land-use practices apparently spread southward with the flow of migration. The origin of the Virginia rail or worm fence, they argue, can be traced to the Savo-Karelians (Finns), who settled in New Sweden in the seventeenth century. According to Jordan and Kaups, the prototype of the zigzag rail fence "is an ancient archaic Finnic type called perkka-aita, vestiges of which remain among the Lapps and Savo-Karelians."⁵³

Scandinavian methods did contribute to land clearance on the southern frontier. The practice Svedjebruket or svedging as it is sometimes called, involved felling deciduous trees in summer or fall, and then, the following year, removing the

⁵²See, for example, Fletcher, Pennsylvania Agriculture and Country Life, 1640-1840, I: 64-66, 167-169; Otto, The Southern Frontier, 1607-1860, 46-47; Amandus Johnson, The Swedes on the Delaware, 1638-1664 (Philadelphia, PA: Lenape Press, 1914), 103-135.

⁵³Jordan and Kaups, American Backwoods Frontier, 96, 107, passim.

largest limbs for building timber or firewood. A year later the Scandinavian farmers spread the remaining trees, stumps, limbs, and underbrush over the ground to be cultivated and burned them into ashes. They immediately planted the field in rye or oats, and after the fall harvest, burned it again. After several successive years of planting and burning, additional branches and brush were added to the field and again these were reduced to ashes. "Log-rolling," a frontier practice that required forming work groups to communally collect, pile, and burn the felled timber, also came from the Scandinavian tradition of forest clearance.⁵⁴

Traditional Scandinavian svedging influenced the "slash-and--burn" agricultural methods of southern Appalachia. Since the eighteenth century, southern mountain farmers have girdled, cut, and then burned the natural vegetation before planting new ground. Arnow mentions how, on the Cumberland Plateau, felled trees were "merely dragged into a pile and burned;" but the custom of chopping and firing the natural vegetation has been practiced in the southern Appalachians from frontier settlement until the early twentieth century.⁵⁵

⁵⁴Stilgoe, Common Landscape of America, 1580-1845, 175-177; Johnson, The Swedish Settlements of the Delaware, II: 527-28; Bert Vanberg, On Norwegian Ways (Minneapolis, MN: Dillon Press, 1974), 138-40, 217-219; Sigvard Montelius, "The Burning of Forest Land for the Cultivation of Crops: 'Svejebruk' in Central Sweden," Geografiska Annaler 35 (1953), 41-54.

⁵⁵Arnow, Seedtime on the Cumberland, 256; Stephen J. Pyne, Fire in America: A Cultural History of Wildland and Rural Fire (Princeton, NJ: Princeton University Press, 1982), 143-160;

One native resident, Stanley Pope, remembered that in the North Georgia mountains where he grew up "it was called cleaning up new ground. We grubbed up the bushes and trees with a maddock [and] piled up the brush and the trees and burn it off. That got rid of it and also improved the ground." Intentional fires not only cleared lands for agriculture but also helped eliminate unwanted pests and improve conditions for grazing livestock. "Fire do a heap of good," responded one mountaineer to a questionnaire on reasons for fire burning. It "kill th' boll weevil, snakes, ticks, an' bean beetle," and "greens up the grass."⁵⁶

As persuasive as this evidence for Scandinavian influence seems, it rests partly on the assumption that the first mountain settlers had direct or indirect contact with individuals who had once lived in or near the Delaware and Monongahela river valleys. While a great number of early settlers came from this region of North America, and a few even had Scandinavian ancestry, not all could have been exposed to cultural influences from the Mid-Atlantic culture

Otto, "Slash-and-Burn Cultivation in the Highlands South," 131-140.

⁵⁶Quoted in Kathy M. Thompson, ed., Touching Home: A Collection of History and Folklore from the Copper Basin, Fannin County Area (Orlando, FL: Daniels Publishers, 1976), 138; John Shea, "Our Pappies Burned the Woods," American Forests 46 (1940), 159; Pyne, Fire in America, 143-145.

core.⁵⁷ Immigrants originating from the ports of Charleston and Savannah, Hessian soldiers, German Moravians, British and French fur traders, Creeks and Cherokees, African slaves and English transplants from the Tidewater, are among those less likely to have had initial exposure to Scandinavian land use techniques. Although cultural borrowing can take place without direct or indirect contact (the premise of Zelinsky's principle of "first effective settlement"), it is unlikely that any one subsistence activity remained culturally "pure" for any length of time. The subsistence culture of the southern Appalachia frontier evolved in syncretistic fashion, synthesizing Scandinavian, German, Scotch-Irish, English, Spanish, and Cherokee traditions.

There is also the possibility that more than one ethnic group is responsible for introducing the same cultural practices to the region. The Native Americans and the Scandinavians, for example, could have both introduced woods burning to areas where their cultural traditions predominated. The burning of woodlands in parts of the Blue Ridge may also have Scotch-Irish origins, as transhumance suggests, but it could have been learned from neighboring Cherokee Indians. In pockets of eastern Kentucky where more individuals of

⁵⁷Surnames of probable Scandinavian origin include Bankston, Clemson, Holston, Olson, Yokum, and Swanson. In southern Appalachia, at least by 1820, these and other diagnostic surnames were found in pockets of western North Carolina, eastern Kentucky, southwest Virginia, and northeast Georgia. Jordan and Kaups, The American Backwoods Frontier, 235-240.

Scandinavian ancestry settled, the custom of slash-and-burn agriculture may well have had Swedish roots. However, the English could have also influenced woods burning activities in the southern mountains as "paring and burning" was practiced in England as early as the seventeenth century.⁵⁸ Because nearly all the culture groups who settled the region held in common a penchant for agriculture, it seems only logical that they would share a number of techniques for altering the landscape.

Nature, Culture

On the southwest frontier, all culture groups underwent considerable change. The environment favored some subsistence practices over others, and adaptation to the new landscape was necessary for survival. Because the soil and climate of the region favored Indian corn, the settlers quickly took up the practice. By 1800, hogs, hominy, and corn pone--not mutton and rye bread--were the most commonly eaten foods of the early frontier settlers whose supper fare was often as simple as their cabin furnishings.⁵⁹ The local environment also added

⁵⁸Lord Ernle, English Farming Past and Present, 107.

⁵⁹Hagy, Castle's Woods, 98. As we know from the ledgers of Thomas Amis, a storekeeper on the Tennessee frontier, corn was used for barter more than any other item, and gave "local farmers an outlet for their dominant crop." Lucy Gump, "Half Pints to Horse Shoes: Meeting the Needs of a Growing 18th Century Appalachian Frontier," paper presented at the Appalachian Studies Conference, East Tennessee State

a great deal of meat to their diet, as venison, bear, and small game were always at hand. Eating mutton or beef gave way to pork, since hogs were the livestock most suited for the region. Pigs found very little to dislike about the mountain ecosystem, devouring chestnuts, hickory nuts, acorns, cane stalks, and even the buried roots of trees and shrubs in great quantities. According to frontier historian Lucy Gump, "pork was the principle meat of all classes during the colonial period." In fact, between 1771 and 1796, hogs dominated the inventories of Washington County estates, representing the greatest percentage of all livestock breeds (Table 6.2). Although Arnow argues that pigs did not become abundant on the Cumberland Plateau until 1790, this does not appear to be the case in the upper Tennessee Valley. Archaeological evidence confirms the importance of hogs to early Washington County settlers. An examination of faunal remains at the Tipton-Hayes Farm in upper east Tennessee, corroborates that pork was probably the most frequently eaten meat of the frontier period.⁶⁰ After butchering, portions of the hog were either hung in a smokehouse to cure or stored in large wooden casks filled with salt, saltpeter, and brown sugar. For many, the proper time for hog-killing depended a great deal on the

University, Johnson City, Tennessee, 1993, 6.

⁶⁰Lucy Gump, "Possessions and Patterns of Living in Washington County: The Twenty Years Before Statehood, 1771-1796" (Master's thesis, East Tennessee State University, Johnson city, Tennessee, 1987), 98-100.

Table 6.2. Livestock ownership in Washington County, 1771-1796.

Livestock Breed	No.	% of total
hogs	1222	39%
cattle	805	26%
sheep	473	15%
Horses	344	11%
total	3133	100%

Source: Lucy Gump, "Possessions and Patterns of Living in Washington County the Twenty Years Before Tennessee Statehood, 1771-1796" (Master's thesis, East Tennessee State University, Johnson City, Tennessee, 1987).

weather or "proper sign," since the best days for killing hogs were those with "a moon on the wane." Hogs were raised not only for food, as the animal supplied lard for cooking, grease for metal gears and guns, and hides for leather.⁶¹

The proliferation of hogs and hog meat directly influenced frontier culture, changing eating habits, land-use practices, and eventually, the landscape itself. In the Old World, pork was not nearly so popular, particularly among the English and Scotch-Irish, who generally avoided the flesh of pigs. Scottish Highlanders held such an overt disdain for pork, that they were sometimes called "the Jewish Scots."⁶²

⁶¹Arnow, Seedtime on the Cumberland, 401-403.

⁶²Donald A. MacKensie, Scottish Folk-Lore and Folk Life: Studies in Race, Culture, and Tradition (London: 1935), 42; Rowland Bertoff, "Celtic Mist Over the South," Journal Of

Because deforestation wiped out nearly all of England's mast-rich oak forests before 1400 A.D., it was never really practical to keep hogs there. Whereas black cattle and sheep remained the principle livestock of the Highlands, hogs were the most practical animal for the settlers of the Appalachian South.⁶³

Hunting Big and Small

Besides hog husbandry, another subsistence practice that nearly all culture groups shared after their arrival was hunting. Here the environment played its biggest role in directing the daily activities of settlers. Because clearing the land and successfully harvesting crops sometimes took several years, hunting of large and small game became necessary for survival. The first pioneers hunted deer, elk, buffalo, bear, but they also relied upon smaller animals like turkey, rabbit, squirrel, ducks, geese, and even whistling swans. On March 27, 1780, for example, John Donelson reported killing a swan on the Cumberland River that he claimed was

Southern History 52 (November 1986), 539-543.

⁶³This isn't to say that cattle were not numerous in the region during the early colonial period. Cattle ranching was certainly being done on a large scale, although usually by professional drovers. Cattle herding was also more common on the Cumberland Plateau, where it flourished until after the Civil War. However, for home consumption, hogs were the animal of choice on the Appalachian frontier.

"very delicious."⁶⁴ However, settlers primarily sought buffalo, elk, and deer; and of these, buffalo were preferred. Buffalo provided meat, hides, and large quantities of tallow, an important eighteenth century food traded in distant cities where butter and lard were scarce. In 1767, in a single two month period, one group of English hunters killed on the Cumberland Plateau "upwards of 700 buffaloes" and then rendered their tallow for market.⁶⁵ Not all buffalo were taken by professional hunters involved in the business of trading skins or rendering tallow, however. In the winter of 1776, after clearing homesites for cropland, the first settlers of Carter's Valley, Virginia, are said to have "hunted and killed buffalo, twelve or thirteenth miles north-west of their settlement."⁶⁶

After a decade of intense hunting from both long hunters and settlers alike, most of the biggest buffalo herds were driven north and west off the Cumberland Plateau. Only a few small herds lingered behind, finding refuge among the highest hills and more remote river valleys of the region. In 1779, according to one eyewitness, a few herds of buffalo could be found near the Big South Fork of the Cumberland and Obed rivers. Within just

⁶⁴Williams, ed., Early Travels in the Tennessee Country, 240. Swans, no longer permanent residents of the region, were once "a favorite summer food" on the Cumberland Plateau. Arnow, Seedtime on the Cumberland, 57, 152, 237.

⁶⁵Arnow, Seedtime on the Cumberland, 126.

⁶⁶Ramsey, Annals of Tennessee, 144.

a few years, however, even these were eliminated from the southern Appalachians. One of the last ones seen in the entire eastern U.S. was killed in West Virginia in 1825, at the mouth of the Tygart river, just north of the study area.⁶⁷

Only a few years after their arrival, hunters involved in the fur trade helped to exterminate the largest game animals from vast areas of the region. The native elk, like the buffalo, scarcely could be found in the Blue Ridge mountains after 1770. Like most big game animals, elk vanished first nearest the leading edge of settlement. Fleeing the approach of the settlers, a few elk herds found their way to the Virginia and West Virginia mountains, where they remained until well after the turn of the century. As late as 1847, naturalist John Audubon and James Bachman heard rumors of an elk herd in West Virginia that was known to "range along the high and sterile mountains west of Red Sulfur Springs." In 1806, Thomas Ashe wrote that elk still roamed the mountainous areas of Tennessee, but that were much more rare. When an elk was killed in Dickson County, Tennessee, that same year, "the hunter had a great barbecue and invited all his neighbors." By that time, believes Arnow, "elk meat...was to most either a

⁶⁷Ramsey, Annals of Tennessee, 144; Daniel Smith, "Journal," Tennessee Historical Magazine (1915-1937), 58-60; Otis Rice, The Allegheny Frontier: West Virginia Beginnings, 1730-1830 (Lexington, KY: University Press of Kentucky, 1970), 7.

curiosity or distant memory."⁶⁸

Most large game animals disappeared east of the Blue Ridge well before the Revolutionary War. By 1780 big game was scarce in most of Kentucky, Virginia, and Tennessee. Prior to the 1780s, men hunted in any season, and they often left the flesh of the deer to rot in the woods. The deer harvest could be staggering: When Jesse Bledsoe had his entire stash of peltry stolen by Indians, he carved on a tree, "2300 deerskins lost, ruination by God."⁶⁹ Deer populations suffered so greatly that territorial assemblies passed the first game laws restricting the killing of deer solely for their skins. Night-hunting also was thought to be excessive and dangerous, and South Carolina forbade it in the upcountry as early as 1769. The same South Carolina law stated that "no doe or fawn should be killed between the first day of January and the last of July, in any year after; nor any buck between the first day of September and the last Friday of October..." This did not seem to stop the slaughter, at least in South Carolina where

⁶⁸Francis Latham Harris, Lawson's History of North Carolina (London: 1714; reprint 1952; Garrett and Massie: Richmond, Virginia, 1952), 127; Samuel Nicholson Rhoads, "Contributions to the Zoology of Tennessee," Academy of Natural Sciences, No. 3, Mammals. (1897): 180; Thomas Ashe, Travels in America, 267; Murie, Elk of North America, 27. Quotation in Arnow, Seedtime on the Cumberland, 170. Elk Valley, a small town near Jellico, Tennessee, was named for the numerous elk that ranged in the valley and surrounding mountains during the eighteenth century. In nearby Kentucky, a small number of elk thought to be present in 1847, although these too had vanished by the end of the decade.

⁶⁹Quoted in Thomas D. Clark, Kentucky: Land of Contrast (New York: Harper & Row, 1968), 12.

additional legislation and stiffer penalties were needed to protect the deer. In 1785, it was ordained "that any person who should thereafter hunt with fire, or kill any deer, or horse, or cattle or stock of any kind, in the night-time, should pay the sum of twenty pounds sterling."⁷⁰ Similar legislation had been enacted in North Carolina, where deer populations had been declining since the 1750s. After 1784, it was unlawful in that state to kill deer "by firelight and at unreasonable times."⁷¹

The small farmer was less ambitious than the long hunter and fur trader, but he, too, took his share of wild game. On any given day, the frontier settler might hunt bear, elk, deer, wild turkey, rabbit, squirrel, raccoon, grouse or opossum. Some were taken using snares or deadfalls, others were shot using flintlock rifles. All supplied meat during the winter months when home fruit and vegetable supplies become low or absent. The furs and skins also could be valuable commodities and were exchanged at frontier stores for such things as sugar, coffee, chocolate, tobacco, rifle bullets,

⁷⁰John Logan, A History of the Upper Country of South Carolina, 29, 31; Statues of South Carolina, IV, 719.

⁷¹The Records of North Carolina, XXIV, 595-596; Arnow, Flowering of the Cumberland, 266. In North Carolina, the General assembly placed regulations on killing deer as early as 1745. Night hunting after 1784 was only considered a misdemeanor, but a more stringent law was passed in 1810. "Such laws," as Stuart Marks has observed, "had little effect on maintaining stocks of deer in settled areas." Stuart Marks, Southern Hunting in Black and White: Nature, History, and Ritual in a Carolina Community (Princeton, NJ: Princeton University Press, 1991), 31.

and garden seeds.⁷²

At the same time that the legal system cracked down on some hunting practices, it sanctioned the slaughter of other animals. Settlers complained that timber wolves were killing their livestock and demanded bounties on their heads. The state of Tennessee placed a bounty on these animals in 1812, and by the 1830s, three dollars a scalp was the going rate. Between 1830 and 1840, a few scalps continued to be cashed in around the area of the Great Smoky Mountains, where wolves were known to exist until after the Civil War.⁷³ In western North Carolina, bounty hunters received \$2.50 per scalp, regardless of the animal's size. To take advantage of the situation, hunters would often follow a mother wolf into its den, and upon killing her six or ten pups, would allow the mother to escape, thus insuring another year's litter and supply of scalps.⁷⁴

With the loss of big game, the competition for masts--acorns, chestnuts, beech and hickory nuts--became much less intense among the remaining animals of the forest. Accordingly, small animal populations rose in many areas of

⁷²Lucy Gump, "Half Pints to Horse Shoes: Meeting the Needs of A Growing 18th Century Appalachian Frontier," paper presented at the Appalachian Studies Conference, East Tennessee State University, Johnson City, Tennessee, 1993, 5-6.

⁷³Dunn, Cades Cove, 30.

⁷⁴John Preston Arthur, Western North Carolina: A History From 1730 to 1913 (Raleigh, N.C.: Edwards and Broughton, 1914), 523.

the region during the last quarter of the eighteenth century. Gray and Fox squirrels became so common and were taken so regularly that they became a major source of subsistence. By the end of the eighteenth century, the woods were so "infested with squirrels," that the "children are sent around to the fields to frighten them away." Squirrels apparently did so much damage to the corn crop that the state of Tennessee made "squirrel scalps" legal tender. In the fall months, "they appeared in so great a number that the inhabitants are obliged to meet together in order to destroy them...they generally go two by two, and sometimes kill thirty or forty in a morning."⁷⁵ Occasionally the pioneer rifleman would "bark the squirrel," which meant that he would take careful aim at the piece of bark on which the animal was resting. At the report of the gun, the bark under the squirrel would splinter to pieces and the stunned squirrel would fall to the ground and be quickly clubbed by the hunter. This "sport" attests both to the sharpshooting skills of the frontiersmen and his desire not to waste meat. Designed for larger game, the .45 calibre Kentucky rifle did great damage to the flesh of small mammals. "Barking the squirrel" minimized waste.⁷⁶

Turkeys, like squirrels, benefitted from the increase in

⁷⁵On squirrel scalps, see Gump, "Possessions and Patterns of Living in Washington County," 115; Arnow, Seedtime on the Cumberland, 239; Thwaites, ed., Travels West of the Alleghenies, 235.

⁷⁶Robert H. White, Tennessee: Its Growth and Progress (Nashville, TN: Robert H. White, 1947), 79.

masts caused by the loss of big game animals. Their size, numbers, and apparent tameness made them easy targets on the Appalachian frontier. In 1785, the hunting party of General Butler travelling up the Big Kanawha River, West Virginia, "had nothing to do but spring from the boats among flocks of turkeys and kill as many as desired."⁷⁷ Around 1800, at the time of his arrival in Kentucky, Audubon claimed that "turkeys were so abundant, that the price of one in the market was not equal to that of a common barnyard fowl." According to Sylvester Judd, the birds sold "for six cents apiece, though the largest ones, sometimes weighing from twenty-five to thirty pounds, sometimes brought a quarter of a dollar." Gilbert Imlay, another Kentuckian, believed that the abundance of turkeys in the area was best explained by the "rapidity of settlement" that, he believed, had driven the turkey out of the "middle countries" of the Tennessee Valley.⁷⁸

On the southwest frontier most turkeys were taken with a flint-lock rifle, but Adair reported on a method of capturing the birds that may have been influenced by Spanish ranching

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⁷⁸R. Butler, "Journal of General Butler," The Olden Time 2 (1848), 447. Audubon quotation in Arthur Cleveland Bent, Life Histories of North American Gallinaceous Birds: Orders Galliformes and Colubiforms (Washington, DC: Smithsonian Institution/United States Natural History Bulletin 162, 1932), 328. Judd quoted in Henry Mosby and Charles Handley, The Wild Turkey in Virginia: Its Status, Life History and Management (Richmond, VA: The Commission of Game and Inland Fisheries of Virginia, 1943), 13. Imlay, Topographical Description of North America, 65.

traditions. According to Adair, the birds grew so fat on acorns that "they cannot fly farther than three or four hundred yards; and not being able soon to take wing again, we speedily run them down with our horses and hunting masts." Another method was to build a "turkey pen," a partially underground trap that was baited with handfuls of corn. After capture, the thirty-pound birds were roasted in a large Dutch Oven, or "cooked in a pit beneath a mound of hot coals."⁷⁹ Frontier people ate nearly all parts of the wild turkey, and sometimes fashioned the large wing and tail feathers of the bird into useful feather dusters.

Raccoons, another small mammal frequently taken in the hunt, were valued more for their fur than as food. In fact, the hides of all small mammals--raccoon, mink, otter, beaver, and even opossum--were valuable to the frontier economy. Because raccoons are nocturnal, capturing them generally required the use of hunting dogs. Dogs were trained to "tree" the raccoon, holding at bay in a tall tree until the hunter arrived with gun and axe. If the treed animal could not be seen with the aid of moonlight or a fire-lit "pine knob," the hunters cut down the tree⁸⁰ Generally the dogs would end the life of the animal quickly, but sometimes a longer fight

⁷⁹Adair, History of the Indians, 387; Arnow, Seedtime on the Cumberland, 143. For a fuller description of the construction and use of the turkey pen, see Forrest Carter, The Education of Little Tree (Albuquerque, NM: University of New Mexico Press, 1976), 7-10.

⁸⁰White, Tennessee; Its Growth and Progress, 59-60.

ensued. Dogs became invaluable companions and traveled with the pioneers from the earliest period of settlement. In fact, pioneers could not kill bears in large numbers without the use of dogs, who forced the bear in trees or held then at bay in rock houses or caves. Although the Plott hound, a breed developed in North Carolina during the late eighteenth century, is probably one of the most well-known breeds of southern Appalachian bear dogs, the "mountain feist" was the most commonly used dog in bear hunts.⁸¹

All culture groups came to the mountains with the intent of changing the environment. Hunting, land cultivation, forest cutting, woods burning, livestock herding, and dwelling construction were all more than just simple acts of cultural adaptation. Frontier settlers created dramatic and recognizable changes in the mountain landscape. As more and more expanses of land succumbed to the axe and plow, the countryside began to take on a different look--at times even resembling Old World environs. To use the terminology of the eighteenth century Anglican minister Charles Woodsmason, the

⁸¹For the use of hounds in the southern Appalachians, see James Jordan, "An Ambivalent Relationship: Dog and Human in the Folk Culture of the Rural South," Appalachian Journal 27 (1975), 238-248; Mary Sery Young, "Pets," in Charles Reagan Wilson and William Ferris, eds., The Encyclopedia of Southern Culture (Chapel Hill, N.C.: University of North Carolina Press, 1989), 1233. On mountain feists as bear dogs, see Davis and Stotik, "Feist or Fiction?," 197.

countryside begin to take on "a new face."⁸² These changes were due not only to what settlers removed from the environment--trees, canebrakes, buffalo, elk, deer, and beaver. An assortment of trees, vines, shrubs, grasses, flowers, weeds, and animals also invaded the landscape. By the beginning of the nineteenth century, portions of the southern mountain region resembled the Old World more than the New World out of which it was created.

Natural Aliens

Grasses were among the first plants introduced to the region. Early settlers on the Atlantic coast were deceived by the luxurious summer growth of native grasses. In colder months, they discovered that native grasses withered away, leaving cattle to forage on lifeless brown foliage. As early as 1619 John Smith warned that native grasses, "good and sweet in summer," will "deceive your cattle in winter." A London pamphlet published in 1635 instructed the prospective settler to take "a good store of calver-grasse seed to make good meadow." The introduction of some European grasses was probably unintentional, though, as the seeds of non-native plants arrived among the livestock fodder on trans-Atlantic

⁸²Richard J. Hooker, editor, The Carolina Backcountry on the Eve of Revolution: the Journal and Other Writings of Charles Woodsmason, (Chapel Hill: University of North Carolina, 1953), 63; Timothy Silver, A New Face on the Countryside, 184.

ships. English grasses were among the first grasses brought to this country. In fact, the term "English" was generally used to distinguish introduced grass species from indigenous vegetation.⁸³

Timothy grass (Phleum pratense) was a favorite of early British settlers. Brought from England sometime during the seventeenth century, it grew in New York prior to 1720. In England, it was locally known as "cat's tail grass" and grew naturally in isolated waste lands. The grass gets its name from Timothy Hansen, the settler who first took the seed south, and distributed it in Virginia and North Carolina before the Revolutionary War. In 1799, Abraham Steiner and Frederick De Schweinitz reported seeing "meadows" of "timothy grass and red clover" growing in southwest Virginia.⁸⁴ Prior to the Civil War, cattle herders preferred Timothy grass as "the best grass we have for making hay." Settlers also sowed red and white clover, each non-native plants, in the southern mountains before the beginning of the nineteenth century. Red clover was very often planted with Timothy grass as a mixed hay crop, a tradition that continued into the twentieth

⁸³Smith quoted in Stilgoe, Common Landscape of America, 1580-1845, 182-184, Carrier, Beginnings of Agriculture in America, 239, 240; Gray, History of Agriculture in the Southern U.S., 177-179.

⁸⁴Carrier, Beginnings of Agriculture in America, 214-242; Stilgoe, Common Landscape of America, 1580-1845, 183; Williams, ed., Early Travels in the Tennessee Country, 448.

century.⁸⁵ White clover, cultivated in the United States as early as 1739, was used as both a honey crop and as forage for cattle. A highly prolific ground cover, white clover, observed the Cherokee, "follows the white man."⁸⁶

Yet another grass brought by European settlers to the mountain region was orchard grass (Dactylis glomerata). The cultivation of orchard grass appears to have started in Virginia prior to 1760, although it did not achieve popularity in that state until sometime after 1780. The grass did extremely well on all limestone soils, but as the name implies, it did best sown among fruit trees.⁸⁷ Bermuda grass (Cynodon dactylon), a native of the tropics, arrived in the New World as bedding for slaves and probably spread to this country as a result of Spanish trade in the West Indies. Exactly when it reached the southern mountains is hard to know with certainty, but it was probably being grown in the upper Tennessee Valley during the early 1800s. Today it is commonly planted in lawns, golf courses, and pastures, and its pollen is considered a major cause of hay fever. Its ability to rapidly spread has made it a pest in some areas, a trait that

⁸⁵J.B. Killebrew, Introduction to the Resources of Tennessee (Nashville, TN: Tavel, Eastman & Howell, 1874), 116, 117.

⁸⁶Haragan, Weeds of Kentucky and Adjacent States (Lexington, KY: University of Kentucky Press, 1990), 38; Mooney, Myths of the Cherokee, 412.

⁸⁷Carrier, Beginnings of Agriculture in America, 242; Killebrew, Resources of Tennessee, 115-116.

Species	Scientific name	Area of Origin
White clover	<u>Trifolium repens</u>	Europe
White sweetclover	<u>Melilotus alba</u>	Eurasia
Japanese brome	<u>Bromus japonicus</u>	Eurasia
Quackgrass	<u>Agropyron repens</u>	Europe
Goosegrass	<u>Eleusine indica</u>	Europe
Johnson grass	<u>Sorghum halepense</u>	Mediterranean
Bermuda grass	<u>Cynodon dactylon</u>	American tropics
Large crabgrass	<u>Digitaria sang.</u>	Europe
English plaintain	<u>Plantago lanceolata</u>	England/Europe
Wild carrot	<u>Daucus carota</u>	Eurasia
Common burdock	<u>Arctium minus</u>	Europe
Henbit	<u>Lamium amplex.</u>	Europe
Wild garlic	<u>Allium vineale</u>	Eurasia
Hedge Mustard	<u>Sisymbrium officin.</u>	Europe
Wild Parsnip	<u>Pastinaca</u>	Europe
Velvetleaf	<u>Abutilon theophras.</u>	India
Prickly lettuce	<u>Lactuca serriola L.</u>	Europe
Hairy Bittercress	<u>Cardamine hirsuta</u>	Europe
Yellow rocket	<u>Barbarea vulgaris</u>	Europe
Curly Dock	<u>Rumex crispus</u>	Eurasia
Oxeye daisy	<u>Chrysanthemum l.</u>	Europe
Dandelion	<u>Taraxacum officin.</u>	Europe
Star-of-Bethlehem	<u>Ornithogalum umb.</u>	Europe
Chicory	<u>Cichorium intybus</u>	Mediterranean
Common Mullien	<u>Verbascum thapsus</u>	Eurasia
Bouncingbet	<u>Saponaria officin.</u>	Europe
Field pepperweed	<u>Lepidium campestre</u>	Europe
Field Pennycress	<u>Thlaspi arvense</u>	Eurasia
Common yarrow	<u>Achillea millefolium</u>	Europe

Fig. 6.1. Selected plant species introduced to southern Appalachia before 1820.

Sources: Patricia D. Haragan, Weeds of Kentucky and Adjacent States (Lexington, KY: University of Kentucky Press, 1990); William A. Niering, The Audubon Society Field Guide to North American Wildflowers, Eastern Region (New York: Alfred A. Knopf, 1979); Gary C. Goodwin, Cherokees in Transition: A Study of Changing Culture and Environment Prior to 1775 (Chicago: The University of Chicago Department of Geography Research Paper No. 181, 1977); James Mooney, Myths of the Cherokee and Sacred Formulas of the Cherokee (19th and 17th Annual Reports, American Bureau of Ethnology, reprint 1982; Nashville: Charles and Randy Elder-Booksellers); Lee Allen Peterson, A Field Guide to Edible Wild Plants, Eastern/Central North America (Boston: Houghton Mifflin, 1977); Great Smoky Mountains Natural History Association (GSMNHA), "Checklist of Vascular Plants in the Great Smoky Mountains National Park" (GMNP brochure, Gatlinburg, TN: GSMNHA, 1992).

originally brought it numerous accolades. James Meese, in his "Geologic Account of the United States" published in 1807, stated that it was "as important a grass as any in the southern states...[It] grows with great luxuriance and propagates with astonishing rapidity by means of its numerous jointing, everyone of which takes root." Large crabgrass, which resembles bermuda grass, was not officially introduced into the country until 1849, when it was brought from Europe to alleviate a shortage in livestock forage.⁸⁸

Red and white clover, Timothy, orchard, and bermuda grass are just four of dozens of herbaceous plants that were brought to the region as a result of frontier settlement (Fig 6.2). Many spread so rapidly so early that people thought these plants were native to the region. In 1785, in his Notes on the State of Virginia, Thomas Jefferson wrote that "our grasses are Lucerne, St. Foin, Burnet, Timothy, rye, and orchard grass; red, white, and yellow clover, greensward, blue grass, and crab grass." None of these varieties were native to the United States, an observation that Jefferson himself failed to

⁸⁸Quotation in Patricia Dalton Haragan, Weeds of Kentucky, 228. In the eighteenth century, bermuda grass was also referred to as crab grass, see idem, 253. See also Carrier, Beginnings of Agriculture in America, 243. Bonner maintains that in Georgia there was only "a few individuals devoted any sustained effort to improved grasses before 1850," but that in the Cotton Belt--which includes portions of north Georgia--bermuda grass became well known by 1840. idem, A History of Georgia Agriculture, 1732-1860, 129.

make.⁸⁹ Collectively, European grasses changed the complexion of the mountain landscape, choking out native plants and weeds as they helped to turn canebrakes and woodlands into verdant pasturelands.

With exotic grasses came a variety of weeds and herbaceous plants, many of which later became important to mountain life and folklore. Like grasses, some of these plants found their way to the mountains unintentionally; others, however, were brought here because they were important food sources in the Old World. Chicory, introduced into the United States in 1785, quickly made its way into the Appalachians, serving as both a salad green and coffee substitute. When nineteenth century mountaineers reported eating the many varieties of field cresses--"narrow dock," and "greasy greens," for example--were talking about the consumption of non-native, European plants.⁹⁰ Winter cress, yellow rocket, prickly lettuce, English plaintain, bitter cress, Queen Anne's

⁸⁹Thomas Jefferson, Notes on the State of Virginia (New York: Harper, 1964), 37; Gray, History of Agriculture in the Southern U.S., 177; Stilgoe, Common Landscape of America, 1580-1845, 183. For grass introductions see Haragan, Weeds of Kentucky and Adjacent States, 194, 233, 238, 247, 252; Silver, A New Face on the Countryside, 182-83, 188.

⁹⁰On the use of mountain cresses see, for example, A. Randolph Shields, The Cades Cove Story (Gatlinburg, TN: Great Smoky Mountains Natural History Association, 1977), 20. On the introduction and use of chicory, see Lee Allen Peterson, A Field Guide to Edible Wild Plants of Eastern and Central North America (Boston: Houghton Mifflin, 1977), 58, 144; Haragan, Weeds of Kentucky and Adjacent States, 173. The curious reader should first consult a reputable field guide before consuming any plants mentioned below or above. Some are highly toxic, particularly when eaten in large quantities.

Lace, common yarrow, field pennycress, common chickweed, shepherdspurse, bitter nightshade, henbit, and wild garlic are all from the European continent. Some of these plants were eaten for nutritional value, but many served as tonics and herbal remedies. Common mullein, for example, a European plant sometimes employed in the making of candlewicks in colonial America, was used in the north Georgia mountains as the major ingredient in cough syrup. To make the syrup, the pioneers boiled a "handful of mullen roots and leaves in a pint water." They added sweetener to this light tea and instructed the patient to take "a spoonful at a time."⁹¹

Many of the herbs and so-called weeds brought by the settlers were first cultivated in kitchen gardens of the homestead. In Europe, women developed herbal remedies and folk medicine, and they continued the tradition in the southern mountains.⁹² Eighteenth century women gardeners generally planted a variety of ornamental flowers among their herb patches, and like exotic grasses, these soon spread into the surrounding countryside. Many are now assumed to be native

⁹¹Quoted in Elliot Wigginton, ed., The Foxfire Book (New York: Doubleday, 1972), 236. In 1802 Michaux found mullein "very abundant in the United States," but saw little of it "beyond the Alleghany Mountains." Its entry into the region probably post-dates Michaux's travels into the region, if only by a few years. Thwaites, Travels West of the Alleghenies, 187.

⁹²For women's images of gardens and domestic space on the frontier see, Annette Kolodny, The Land Before Her: Fantasy and Experience of the American Frontiers, 1630-1860 (Chapel Hill, NC: University of North Carolina Press, 1984), 48-54, *passim*.

wildflowers, but their presence in the region is due foremost to frontier settlement. Star-of Bethlehem ("snowdrops"), multiflora rose, dandelion, oxe-eye daisy, wisteria, bouncing bet, several species of field violets, butter-and-eggs, daylily, vipers bugloss ("blueweed"), and a variety of thistles are all naturalized flowers of southern Appalachia.⁹³ Although it is not well known, the Cherokee rose, once common around nineteenth-century Cherokee homesites, and the state flower of Georgia, is a non-native species introduced to this country in 1757.⁹⁴ Ornamental roses, shrubs, and trees were favorites in the yards of the first settlers, and finding these today are good indicators of former homesites. The Royal Paulownia or "Princess Tree," a native of China, was planted widely in the region during the nineteenth century. Privet, the evergreen shrub of hedgerows, is another introduced species that has flourished well in the mountains.⁹⁵

To help pollinate these Old World flowers and shrubs, the settler also brought "English flies"--honeybees--into the mountain region. Some bees had already escaped from parent

⁹³Haragan, Weeds of Kentucky and Adjacent States, 15, 88, 144, 160, 172; William A. Niering and Nancy C. Olstead, The Audubon Society Field Guide to North American Wildflowers, Eastern Region (Alfred A. Knopf, 1979), 370, 371, 420, 425, 600, 798.

⁹⁴Bernice McCuller, This is Your Georgia (Northpost, AL: American Southern Publishing Company, 1966), 52. Brought by way of England from China, Andre Michaux was the first to describe the Cherokee rose.

⁹⁵C. Frank Brockman, Trees of North America (New York: Golden Press, 1979), 264, 265.

hives on the coastal settlements, where they were introduced in the seventeenth century. According to Lyman Carrier, these initially introduced honeybees helped to stock the woodland forest with numerous bee-trees in advance of settlement. "Wild" honeybees were not unknown on the Appalachian frontier by 1790, but most settlers preferred to manage their own bee-hives in order to have ready access to sweetener or to assist in the pollination of crops. Beeswax was an important by-product of keeping bees, as it was the chief ingredient in making tapered candles. In the Washington County tax inventories, no fewer than sixty bee-gums were listed among the possessions of the first settlers, along with 31 candle sticks, 13 snuffers, and 5 candle molds.⁹⁶

Even a few small mammals from the European continent came to the region at the time of settlement. Red foxes were brought to the America sometime prior to 1750, when, according to Peter Kalm, an English fox hunter "brought over a great number of foxes from Europe and "let them loose in his territories." The introductions were corroborated by the "unanimous testimony" of Native Americans, who claimed that "this kind of fox never was in the country before the Europeans settled it..."⁹⁷ In 1802, Michaux did not believe

⁹⁶Gump, "Possessions and Patterns of Living in Washington County," 130; Arnow, Seedtime on the Cumberland, 38, 415; Carrier, Beginnings of Agriculture in America, 258.

⁹⁷Adolph B. Benson, ed., Peter Kalm's Travels in north America (2 vols., New York: Dover Publications, 1964), I: 148-149. Gray foxes are an indigenous North American species.

there to be any "European" rats on the Cumberland Plateau, even though by that time they appeared to be "very numerous in other parts of the country, particularly in those settlements belonging to whites." The common crow, a native species, also followed the path of human migration across the Appalachians. According to Michaux, crows were "a true plague in the Atlantic states," but had "not yet made their appearance in Tennessee."⁹⁸

When exotic plants and animals are introduced to a region, they often explode in numbers, disrupting the ecological balance of the area (As I write this, Japanese beetles are devouring the native plum trees outside my study window). In The Ecology of Invasions by Animals and Plants, published in 1958, Charles Elton argues that introduced species such as privet and dandelion are able to proliferate because they fill an empty niche in an ecosystem, "a means of living which is not being used by anything else."⁹⁹ A better way of understanding this phenomena might be to first recognize that exotics flourish best where there is ecological disturbance. Because of the rapid environmental change caused by human settlement (of which most plant and animal introductions are related), the non-native plant or animal,

⁹⁸Quoted in Thwaites, Travels West of the Alleghanies, 277. Andre Michaux, who toured the region five years earlier, does not mention seeing crows in Kentucky or Tennessee.

⁹⁹London: Methuen, 1958. See also, Davis, Ecophilosophy: A Field Guide to the Literature (San Pedro, CA: R & E Miles, 1989), 40.

without any natural predator, is the best suited for the new environment. The fact that these "natural aliens" have historically done so well in the region, is confirmation of the vast changes that have occurred in the mountains over the past two hundred years.¹⁰⁰ Recognizing this, it should not be so surprising that the Great Smoky Mountains National Park has been largely unsuccessful in eradicating exotics like privet and multiflora rose within Park boundaries, despite persistent efforts by diligent work crews. Because today more than half of all weeds and grasses in the United States are non native,¹⁰¹ any effort to restore areas of the region to pre-settlement conditions is a truly herculean task.

Settlers both took and gave something to the southern Appalachian environment. They came to the region to carve civilization out of a wilderness and, with the aid of Old World plants and animals, were largely successful. They relied heavily on indigenous flora and fauna for everyday subsistence and formed close cultural bonds with the mountain environment. Of course not every parcel of land was settled prior to 1800, nor was every settler successful in taming the wilderness. As

¹⁰⁰Neil Evernden, The Natural Alien: Humankind and Environment (Toronto: University of Toronto Press, 1985), 108, 109-111.

¹⁰¹W.C. Muenscher, Weeds (New York: Macmillan, 1952), 21; Le Roy G. Holm, et al, The World's Worst Weeds: Distribution and Biology (Honolulu, HI: University Press of Hawaii for the East-West Center, 1977), 92-94; Alfred Crosby, Ecological Imperialism: The Biological Expansion of Europe, 900-1900, 169-170; Arnow, Flowering of the Cumberland, 239.

late as 1810, large areas of the Blue Ridge and Cumberland Plateau remained unoccupied, and large stands of virgin timber were still uncut. Huge stores of iron ore and coal lay just beneath the land's surface, ready for the bellows of industry. Settlement made considerable changes in the mountain environment, but there were more changes to come.

For those settlers who fully attempted to live off the bounty of land, life was not easy. Hard currency was extremely scarce on the frontier, so furs, ginseng, corn, and tobacco were used to purchase rifles, nails, tools, salt, or seeds. By 1785, the headright system had expired and most land grants had been issued to veterans of the Revolutionary War, so good productive lands were increasingly hard to find. After the grants were allocated to veterans, land increasingly fell into the hands of private speculators, which decreased opportunities for small farmers wanting to purchase large fertile tracts. When land was available, it was often on hillsides or on much poorer soils, since most of the best lands had been acquired by that time. Upon arrival, many settlers simply located their homestead at the mouth of a creek and cut the timber on the creek bottom and hillsides for planting. After several years of growing corn, the native soils of the hillside generally washed away, forcing the settler to move on, or clear land higher up and repeat the process over. Many settlers chose to leave, as there were always tales of better, cheaper lands farther to the west.

To complicate matters, the first residents of the southern mountains continued the Old World custom of partible inheritance, the practice of dividing up property among living children. Families on the frontier were often large, as additional hands were needed to help with farm chores.¹⁰² However, a 640 acre tract, the standard frontier purchase, could not withstand very much dividing, as nearly two-hundred acres of field and woodland was needed to run a successful farmstead. This conundrum often initiated searches for new land, forcing settlers or their children to leave the region entirely. Around 1800, many settlers were drawn to the Tug River valley of the Cumberland Plateau on the Kentucky/West Virginia border, where vast amounts of property still sold for 2.5 cents per acre. Even though nearly two-thirds of this steep, mountainous lands was unsuitable for farming, the narrow strips along river and creek bottoms were quickly claimed.¹⁰³ Others moved on to north Georgia, settling lands belonging to the Cherokee, an illegal action that sadly helped to force the Indians' removal in 1838.

Surveying procedures were another hindrance to permanent frontier settlement. When surveyors marked off land claims,

¹⁰²Hooker, ed., The Carolina Backcountry on the Eve of the Revolution, 39; Otto, Southern Frontier, 61-62.

¹⁰³Otis K. Rice, The Allegheny Frontier: West Virginia Beginnings, 1730-1830 (Lexington, KY: University of Kentucky Press, 1970), 15-16; William Ely, Big Sandy Valley: A History of the People and County From Earliest Settlement to the Present Time (Catlettsburg, KY: Central Methodist Publishing Company, 1887), 202-204

they used a system known as "metes and bounds." Under this method natural objects such as trees and stones were used as boundary markers. Because trees die and grow and stones can be moved, the use of these markers resulted in bitter disputes between landowners. Settlers unsure of achieving clear title would sell their claim and move elsewhere. Thomas D. Clark called the metes and bounds surveying method "one of the most unsatisfactory land claim and survey systems in North America," adding dryly that "original surveyor's notes read more like botanical inventories of Kentucky's virgin forests than as foundations for legal documents."¹⁰⁴

As difficult it was for the pioneer to acquire and hold land, settlement did not slow. By 1800, more than 150,000 settlers lived in the mountain region, individuals who shaped, and were shaped by, their environment. Immersed in the seasonal rhythms of the landscape, they felt the intense heat of summer, the bitter cold of winter and used the moon and sun to direct their planting and harvesting. They gathered herbs from the forest floor, hunted the woodlands, and fished the mountain streams. Like those who came before and after them, they were seduced by the pristine beauty of the region and its seemingly unlimited natural resources. At the same time that they were "people of waste," they could be, paradoxically, enormously inventive and resourceful in making do when the

¹⁰⁴Thomas D. Clark, Kentucky: Land of Contrast (New York: Harper & Row, 1968), 30.

abundance they imagined failed to materialize.¹⁰⁵ By claiming areas as their own, they subdivided the landscape into smaller and smaller parcels of individually owned property, thus replacing the amorphous and indeterminate boundaries of nature with those of human settlement. Some of these changes were unintentional, others were made exclusively by the plants and animals that accompanied them to the mountain region. All had a permanent impact on the environment. The southern Appalachians would never be the same.

¹⁰⁵In his book about New England colonists, Cronon concludes that "ecological abundance and economic prodigality went hand in hand: the people of plenty were a people of waste." Cronon, Changes in the Land, 107.

Chapter Seven

Conclusion: The Nature of Culture

Stories of cultural contact and change have been structured by a pervasive dichotomy: absorption by the other or resistance to the other. A fear of lost identity, a Puritan taboo on mixing beliefs and bodies, hangs over the process. Yet what if identity is conceived not as [a] boundary to be maintained but as a nexus of relations and transactions actively engaging a subject? The story or stories of interaction must then be more complex, less linear and teleological.

James Clifford, The Predicament of Culture

Scholars studying Appalachia largely ignore the two hundred years of human history that preceded the eighteenth century frontier. Most who have written about the settlement of the southern mountains have not recognized the important contributions that the Mississippians, Cherokees, and even Spanish made to the history of the region. The Europeans did not settle an empty wilderness; rather, they reoccupied lands made vacant by two centuries of disease, famine, warfare, and indiscriminant resource extraction. Even though European groups did bring specific skills to the Appalachian frontier, their former way of life did not go unchanged. Old World land-use practices were certainly important to the settlement and social development of the region, but the Appalachian environment brought new and difficult challenges to the

Europeans. In the southern mountains culture evolved, as this study demonstrates, in relationship to both social and environmental influences.

However, underscoring the role that the environment plays in social development is not an attempt to resurrect the thinking of Frederick Jackson Turner. Late in the nineteenth century, Turner, a historian, argued that environmental forces were responsible for the development of uniquely American social institutions and cultural forms. "Forest philosophy," wrote Turner" in The Frontier in American History, "is the philosophy of American democracy." American politics, individualism, nationalism, and even ideals about progress, according to Turner and his followers, were created in response to settling the wilderness landscape.¹

Turner is certainly correct in pointing to the frontier environment as an important agent of culture change, but his thesis is overly deterministic and far from ecological. Turner defined the frontier environment in extremely broad terms, including any geographic area with a population of fewer than two persons per square mile. Nor did Turner recognize that the rate, direction, and pattern of settlement varied considerably from region to region and from physical environment to

¹New York, NY: Henry Holt & Company, 1962. See also Ray A. Billington, American's Frontier Culture: Three Essays. College Station, TX: A & M University Press, 1977.

physical environment.² In short, Turner (like anthropogeographers writing at the same time) saw physical space, not plants, animals, or ecological niches, as the shaping force behind culture. Moreover, Turner believed that technology, behavior, and ideology were products of the frontier environment, not causal agents in its development.

The process of culture formation and change is a much more complex phenomenon. In the southern Appalachians, for example, we find three very distinct periods of cultural and environmental change. The Spanish started the process during the sixteenth century, introducing important new crops and initiating trade in furs and other goods. The Spanish also brought deadly microbes into the region, which decimated a large percentage of the Mississippian population. The social chaos that resulted forced native peoples to migrate both to and from the area, further weakening traditional cultural practices. Within a century, pre-Columbian Mississippian life

²In the "Significance of the Frontier in American History," Turner defined the frontier as the edge of settlement having a population density of two or more persons per square mile. It should be noted that by 1820 only small portions of West Virginia, eastern Kentucky, western North Carolina and north Georgia had not achieved a population density of at least six persons per square mile. Moreover, nearly all counties in the ridge and Valley province outside Cherokee territory had achieved a population density of more than eighteen persons per square mile. F.J. Turner, "The Significance of the Frontier in American History," American Historical Association, Annual Report, 1893, 1893, 199-227. for an excellent discussion of Turner's thesis as applied to Frontier population densities, see John Fraser Hart, "The Spread of the Frontier and Growth of Population," Geoscience and Man 5 (June 10, 1974), 73-84.

had all but vanished from the Appalachian South. The second period of social and environmental change occurred after the English and French initiated trade with the Cherokee during the early part of the eighteenth century. Initially the Cherokee saw the fur trade as beneficial to their people and participation in it was not necessarily discouraged. As game became increasingly scarce, the Cherokee became more and more dependent on English goods for their sustenance. Debts were often paid in large tracts of land, which further decreased their access to game. Fur traders became the first Europeans to actively live among the Cherokees and their presence in the region also had a profound influence on the natives. Fur traders married Cherokee women and introduced cattle and hogs into the surrounding countryside. When the French encouraged Cherokee warriors to fight against the British, English armies retaliated by destroying Cherokee dwellings and grain supplies. As a result of these losses, natives found it harder to maintain their traditional cultural practices.

The permanent settlement of the region by white settlers represents the third and final era of cultural and ecologic change for the period under study. As early as 1760, after land became harder to find east and north of the mountains, Europeans cleared and settled land in what is today southwest Virginia. Indian occupance made it difficult for settlers to push deeper into the area until after the Revolutionary War when Cherokees relinquished control over much of their

territory. The first settlers to the region were mostly of English, Scotch-Irish, or German extraction, and they brought a variety of European crops, grasses, plants, and livestock with them. The introduced plants flourished in the rich soils of the mountain river valleys, gradually overtaking indigenous species. As timber was cut for fences, dwellings, and pasture, more and more openings appeared in the mountain forest. By 1810 only the most remote mountain coves and ridge tops had not been settled by whites.

Because Cherokees occupied the region throughout the frontier period, their influence on mountain culture was significant. Many Europeans were forced to abandoned Old World crops for varieties commonly grown by Cherokees. Corn, pumpkins, squashes, beans, and melons became popular, as were Cherokee preservation methods. Hunting and fishing techniques were also borrowed from the natives. Pioneer women learned the use of mountain herbs from Cherokee women and soon were making home remedies in the same manner. Likewise, Cherokee women learned how to milk dairy cows, tend poultry flocks, and spin and weave European fabrics. Plants brought by Europeans to the region were also adopted by the Cherokee, many taking a central place in their home gardens and kitchens.

While it may be conceptually convenient to discuss the evolution of Appalachian culture and ecology within the framework of three seemingly distinct historical periods, it would be a gross simplification to assume that each occurred in

isolation of the other. Peaches, watermelons, and sweet potatoes, all Spanish-introduced crops, became central to the diets of the Cherokees and later became important to the first European settlers. The building of weir-dam fishtraps, originally a practice of the Mississippians, was taken up by the Cherokee and later the pioneer settlers. In fact, the early Cherokees inherited a considerable amount of material culture from the Mississippians, including wattle and daub building construction and the making of cane mats and baskets. Cherokees preferred sites formerly inhabited by the Mississippian Indians and settlers regularly sought out lands farmed by the Cherokee.

Geographically, the settlement of the Appalachian region has always been in close proximity to rivers, creeks, and streams. Site selection obviously changed from century to century, since each social group preferred some locations over others. During the sixteenth century, the Mississippians chose to settle along the largest rivers, so most villages were found either in the Ridge and Valley or Blue Ridge provinces. Archaeologist Roy Dickens recorded the existence of more than three hundred Mississippian sites in the Blue Ridge province of western North Carolina, all along sizable mountain streams.³ On the Cumberland Plateau, Mississippian occupation

³Dickens, Cherokee Prehistory, 13-14, 16-17. Dickens defines the Mississippian period occurring between 1000 to 1650 A.D. The extremely large number of sites is partly explained by settlement movement over this extended time period.

was less prevalent, although villages were certainly present along the Cumberland and Kanawha rivers. The largest Mississippian townships, however, were those located in the Coosa river basin in north Georgia, in the extreme southern end of the region. Here the soils of the Ridge and Valley were extremely suited for corn and bean production and the proximity to the slow-moving Coosa River provided convenient access to fish, mussels, and waterfowl. Because the Mississippian settlement pattern was organized around a large central chiefdom, distances between villages were frequently very large.

The Spanish displacement of the Mississippians greatly altered the social organization and settlement pattern of the region. The Cherokees continued using former Mississippian village sites, but since there were so few of these locations, other sites had to be found. Cherokee social organization was less centralized and their numerous villages, much smaller. The Cherokees spread out linearly along rivers, generally in close proximity to one another, and often on the same river, stream, or watershed. As populations increased during the seventeenth century, more and more river systems became occupied by the Cherokee. On the Tuckaseegee river in western North Carolina, five Cherokee towns existed along a single thirty-mile stretch of the river.

The fur trader and frontier settler gravitated toward Cherokee villages, since they were nearly always found along

level river bottoms where the soil was the most productive. Cherokee land-clearance techniques provided numerous clearings and adjoining canebrakes provided important browse for livestock. Because the bottomlands of the largest rivers were the first areas occupied, smaller streams became the preferred destination of later arrivals. Gristmills, used to grind grain into flour, were erected along creeks and rivers and served as important centers of commercial activity. Those who could not find or afford land along streams built homesteads near small springs or, as a last resort, settled away from water on hillsides and ridge tops. As many scholars have failed to emphasize, southern Appalachia is a region of mountains and rivers. The early settlement history of the region is one in which rivers played an important role. The Mississippian, Cherokee, and the eighteenth century white settler all chose to live along rivers, largely because river bottoms have the most productive soils. Rivers provided transportation networks for canoes and keelboats and water power for grist- and sawmills. The alluvial soils of river bottoms were also the easiest to cultivate and adjacent canebrakes provided winter fodder for cattle and hogs. The major role that the Ridge and Valley and Blue Ridge played in the region's early settlement history can be partially explained by the fact that the largest rivers are found in these subregions.

Of course the settlement of the Appalachian South was always heavily influenced by external social forces. From the

sixteenth century on, population pressures, warfare, land scarcity, and external economic relations have all had a major impact on the settlement of the region. The desire for gold and silver brought the Spanish to the area, the fur trade brought the fur trader, and European settlers came seeking refuge from servile living conditions in the Old World. Prior to the sixteenth century, the region remained largely outside the world economic system, but soon afterwards the native population was feeling the effects of an expanding global economy. By the early seventeenth century the native population was trading in furs, albeit largely through middlemen to the south, Old World crops from Europe and Africa had been introduced into the mountains, and thousands of natives had perished from introduced diseases. As the Mississippian case demonstrates, world commerce and trade profoundly affected the culture and ecology of the region.

During the eighteenth century, the Cherokees were drawn even deeper into world economic relations. By the early 1700s, Charleston had become an important center of trade, exporting skins, ginseng, and other commodities from the region to the European continent. Initially, Cherokee participation in the fur trade changed their lives relatively little. Hunting deer had long been part of their traditional culture and the killing of surplus animals did not immediately bring significant changes to their lives. The Cherokee bartered furs for weapons, tools, and other Europeans goods and the rates of

exchange was largely controlled by the natives. As competition for furs increased, traders made permanent settlements in the area, enticing the Cherokee into acquiring more skins by offering them such items as durable fabrics, colorful glass beads, and alcohol. Because of their close proximity to Charleston, Cherokees living in the southern Blue Ridge were the first to engage in the trade networks, and also the first to experience the resulting ecological changes.

As participation in the fur trade increased, Cherokee men began losing skills such as the making of bows and arrows and the crafting of stone celts and arrowheads; they became increasingly dependent on Europeans weapons and ammunition (which could only be obtained by killing more deer). As deer became harder to find locally, the Indians had to make longer and longer excursions into the upland forests in order to supply their own villages with meat and skins. After relations between the Cherokee and the English--the primary purchaser of southern Appalachian furs--became strained, warfare broke among the two groups. The British were largely successful in defeating the Cherokees, destroying their most valuable orchards, granaries, and croplands. The British victory insured the acquisition of thousands of acres of prime Cherokee hunting land, leaving the native population even more dependent on Europeans for their sustenance.

The extraction of natural resources for European markets did not, by any means, stop with white settlement. Fur

trappers and long hunters, in direct competition with the Cherokee, traded elk, buffalo, deer, and beaver skins to exporters from Charleston, Augusta, and Savannah. Frontier settlers also collected and sold ginseng, which was shipped to France and then China. Because overland travel across the mountain region was often difficult, river settlements became important outposts for commercial trade. On the Cumberland Plateau, products were regularly sent down the Cumberland River to shipping ports as far away as New Orleans. From there, goods from the southern mountains might find their way to the Carribean, Spain, England, France, or China.

While external economic forces were certainly powerful in shaping the subsistence culture of the region, they do not tell everything about the process of cultural persistence and change. Economic models of social evolution too often portray individuals as caught in a closed system of market relations over which they have little or no control. In the 1820s, Johann H. Von Thunen argued, for example, that the subsistence activities of a geographic region were determined solely by market accessibility. In explicating his theory, Von Thunen created the image of an isolated state, whose economic center was an thriving urban metropolis. Outside the city was homogenous "wilderness," accessible by animal-drawn wagons on straight and level roads. According to Von Thunen, only those areas immediately surrounding the city would possess enough capital for intensive commercial agriculture, particularly

given the difficulties of long distance wagon travel. Because of spatial, temporal, and other obvious constraints caused by transportation problems, the most intensive kinds of agriculture would occur closest to urban markets.⁴

In order to visually conceptualize Von Thunen's model, one would have to imagine concentric rings of progressively less intensive forms of agriculture encircling the urban city or core. On the periphery of the intensive farming zone are plantations and other farms that produce both meat from fenced cattle and hogs and feed grains for fattening the livestock. Beyond the third belt are the graziers, who range livestock on the unfenced, open range and who drive them relatively long distances to market. Lastly, is a peripheral zone of hunters and trappers who in the isolated wilderness procure peltry--commodities easily transported over long distances.

Central to Von Thunen's model are the concepts core and periphery, ideas borrowed in this century by a number of social theorists who have used the market accessibility model to represent the Western world as a whole.⁵ In the sixteenth

⁴Peter Hall, ed., Von Thunen's Isolated State (Oxford: Pergamon Press, 1966), xii-xv, 7-153. For two excellent discussion of the relevance of Von Thunen's work to frontier development, see John S. Otto, The Southern Frontiers, 1607-1860, 3-8; Jordan The American Backwoods Frontier, 24-28.

⁵See, for example, John T. Schlebecker, "The World Metropolis and the History of American Agriculture," Journal of Economic History 20 (June 1960), 187-208; J. Richard Peet, "The Spatial Expansion of Commercial Agriculture in the Nineteenth Century: A Von Thunen Interpretation," Economic Geography 45 (October 1969), 283-301; idem, "Von Thunen Theory and the Dynamics of Agriculture Expansion," Explorations in

century one could say that western Europe, especially Britain and Spain, represented the world metropolis and the North American continent, including the Appalachian frontier, represented peripheral economic zones. As the "world city" grew, demand for raw materials and natural resources increased, enlarging markets in the North American periphery. By the eighteenth century, considerable portions of the United States were, in fact, producing cash crops, livestock, and peltry for European markets. Proponents of the core/periphery model argue that the settlement of the Appalachian frontier--and the social organization that accompanied it--is best explained in the context of this ever-expanding world economic system.

Implicit in this model of social and economic transformation and central to our discussion here, is the idea that an unequal exchange of goods occurs between the core and periphery. The core, controlled by elite capitalists forever seeking surplus wealth, grows richer at the expense of a progressively impoverished peripheral population. As conventionally formulated, those in the periphery participate in this economic system, however unfair, because the absolute power of the core precludes other options. In the Appalachian

Economic History 8 (1971), 181-201; Immanuel Wallerstein, The Modern World System, I: Capitalist Agriculture and the Origins of the European World Economy in the Sixteenth Century (New York: Academic Press, 1974), passim. Robert Paynter, Models of Spatial Inequality: Settlement Patterns in Historical Archaeology (New York: Academic Press, 1982);

case, for example, the Cherokee Indians became progressively involved in the fur trade, despite the fact that participation in it was also destroying their environment and culture.

Illustrative and provocative as the core/periphery theories are, they alone do not tell how or why culture may change. Market incorporation of the periphery is seldom a universal process affecting all social groups equally. Human agency very often leaves room for individuals, or entire communities to maneuver within, or even around, the world economic system. Ideology, ethnicity, as well as the physical environment can, over time, restrict the ability of the core to extract resources from peripheral areas. In any given region, there is generally more than one path of development, and the choice among them may depend on a number of different variables.⁶ Culture is certainly one important factor, since it helps individuals determine what resources are the most meaningful in a given setting. The Mississippians, for example, chose peaches over other Spanish cultigens, partly because of the plant's prolific fruit bearing qualities, and partly because of their resemblance to native plum trees. At the same time, because of a cultural prejudice against

⁶See, for example, Thomas Hall, "Peripheries, Regions of Refuge, and Nonstate Societies: Toward a Theory of Reactive Social Change," 582-597; idem, "The Effects of Incorporation into the World System on Ethnic Persistence: The American Conquest of the Southwest," Paper presented at the American Sociological Association annual meeting, September 1992, San Francisco; Terry Jordan, The American Backwoods Frontier, 26-28, 32-35.

European livestock, the Cherokees did not raise hogs for more than a century after initial contact with the animals. European settlers, themselves from vastly different regions of the core metropolis, brought a range of subsistence practices to the region, none of which fully replaced indigenous agriculture practices. Some cultural activities, such as flax growing, did persist well into the nineteenth century; but many Old World practices, such as mud and thatch building construction, were eventually abandoned.

As important as core/periphery models are for illuminating the role that economic forces play in social life, they also leave certain questions unanswered: How do economic mechanisms influence the formation and evolution of culture? Why do culture groups respond differently to the world economic system? In what ways does ethnicity limit the ability of the core to dictate economic relations? What role does the physical environment play in the incorporation process? In my own opinion, questions such as these cannot be adequately answered given the present limitations of core/periphery theory. Another conceptual framework is needed to explain the culture change process.

A theory of culture change gaining popularity among contemporary scholars is syncretism. Proponents of syncretism argue that when peoples, cultures, and economic systems interact, a byproduct of their interaction is new cultural

forms.⁷ These scholars suggest that over time, no single culture group, including imperial powers, can avoid absorbing aspects of the other. The armies of De Soto and Pardo survived excursions into the Appalachian backcountry by eating Indian corn, a New World crop that became the agricultural mainstay of the Iberian peninsula. The Cherokees eventually adopted the practice of cattle-raising, and the white European borrowed a great number of subsistence techniques from the Cherokees. Unlike simple acculturation, syncretism suggests that all culture groups, not just subordinate ones, share in the process of cultural change.

This is certainly not to suggest that political and economic forces were not influential to the cultural development of the region. Obviously, those in power helped determine which cultural traits would persist on the frontier. In some instances, the success of a group did have less to do with adaptive superiority than with their sheer economic and military might. In the eighteenth century, both British and American forces drove Cherokees into submission by violent acts of warfare and destruction. Unable to adequately defend

⁷Not a formal school, advocates of syncretism belong to a variety of disciplines and credit a number of thinkers in their scholarly work. One of the most frequently cited is James Clifford, an ethnologist who has studied cultural change in both primitive and modern societies. Relevant works promoting syncretic models of cultural evolution include John S. Otto, The Southern Frontiers, 1607-1860; Richard White, Middle Ground; James Axtell, The Invasion Within; Charles Joyner, Down By the Riverside; James Clifford, The Predicament of Culture: Twentieth Century Ethnography, Literature, and Art (Cambridge, MA: University of Cambridge Press, 1988).

themselves against these powerful militias, the Cherokees had little choice but to adapt their culture to the changing political and economic environment.

Despite military defeats, the Cherokees, however, retained some agency in governing their human affairs. For the Cherokee, cultural change involved both pro- and reactive responses to outside forces. In the early 1760s, for example, the Cherokee became political allies of the French, and by doing so, were partially directing the course of world trade. Certain Cherokee factions always resented European presence in the region, including Chief Dragging Canoe, who fought to his death to save his native homelands from white settlement. Cherokee women--devoted agriculturalists, basket makers and weavers of native fabrics--maintained many of these cultural traditions until well into the twentieth century. Although southern Appalachia was certainly no static "region of refuge," to use the language of social theorist Aguirre-Beltran,⁸ it did, in many ways, operate as a "middle ground" for the Cherokee. It was what Richard White has described as a place in between "cultures, peoples, and in between empires and the nonstate world of villages....a place where many of the North American subjects and allies lived. It is the area between the historical foreground of European invasion and

⁸Gonzalo Aguirre-Beltran, Regions of Refuge (Washington, DC: Society for Applied Anthropology, 1979).

occupation and the background of Indian defeat and retreat."⁹

While cultural syncretism may have conceptual advantages over conventional theories of acculturation, all proponents of the theory do not see the environment as central to cultural change process. Syncretism focuses attention almost entirely on social relationships; the cultural dynamics between two or more groups. But often the environment remains the fulcrum upon which cultural identity rests. As powerful as they may be, members of imperial or colonizing groups always find themselves strangers in a strange land. Having little knowledge of their new surroundings, they rely heavily on the ecological knowledge of native peoples, which, in turn, changes the nature of the relationship between the two groups. In helping to maintain the local economy of the native population, the environment, as long as it remains unchanged, provides cultural stability. Dependency on other groups increases only when access to environmental resources is severely restricted or denied. Ecological forces are equally important to the culture change equation: in the southern mountains, culture did not arise in a social vacuum, it was the product of both human and natural history.

Before European settlement, the living landscape was less a resource to be consumed than a matrix for sustaining individual and community life. Prior to the fur trade, frontier settlement, and nineteenth century industrialization,

⁹White, Middle Ground, x.

the environment was something one adapted to, not something radically changed in one's own image. Mississippians and Cherokees certainly found ways of changing the local landscape, but their subsistence methods did not, in the long view, drastically alter the ecology of the region. This is not to say they didn't have an impact on the environment but that, more accurately, the impact differed from that of the Europeans. As William Cronon states it, "the choice is not between two landscapes, one with and one without a human influence; it is between two human ways of living, two ways of belonging to an ecosystem."¹⁰ In fact, both Indian groups generally adhered to patterns of subsistence that integrated and minimized their presence on the landscape.

Mississippian and Cherokee culture evolved in direct relationship to the Appalachian environment, a physical environment very different than the one we know today. By reconstructing that environment, we better understand that culture as well as its relationship to our own. In Native American societies, distinctions between culture and nature are much more difficult to make. The society and the surrounding environment are often inseparable; one nourishing, and dependent upon, the other.

In the modern world, nature and culture have largely become separated from their once common mooring. Most humans now only immerse themselves in wild or even semi-wild nature

¹⁰Cronon, Changes in the Land, 12.

during weekend retreats or summer vacations. In the modern world, attention is focused on technological advances, which allows us to continue destroying nature under the guise of harnessing it for "human advancement."¹¹ Historically, this has not always been the case, nor should we uncritically accept the view that human groups will, by necessity, accept environmental degradation. Only by degree does society wrestle a "second nature," out of a "first nature," to use the distinction of the Roman philosopher Cicero. As Murray Bookchin has argued, "social life always has a naturalistic dimension, however much society is pitted against nature in our thinking, society is not a sudden 'eruption' in the world."¹² Nature is always present in human culture, even if we have to look harder, as we do in the twentieth century, to find it.

By studying the ecological history of the southern Appalachians, it was possible to see, perhaps for the first

¹¹See, for example, Michael Adas, Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance (Ithaca, NY: Cornell University Press, 1990).

¹²Murray Bookchin, Remaking Society: Pathways to a Green Future (Boston, MA: South End Press, 1990), 26. Interestingly, the word "culture" itself comes from the fifteenth century practice of 1) cultivating the soil, tilling, husbandry; 2) the cultivating or rearing of plants or crops (the earliest documented use of the term in English is found in a 1420 treatise on husbandry). The word does not become separate from its agricultural roots until well into the seventeenth century, when it also comes to mean 1) the training, development, and refinement of mind, tastes, and manners; 2) the condition of being thus trained and refined. Oxford English Dictionary (London: Clarendon Press, 1989), 121.

time, the full impact of early human settlement on the landscape. It was also clear that, over the longue duree, ecological forces retained considerable agency over the course of human action. The rich, level soils of river floodplains helped to concentrate settlement along mountain river valleys, and the warmer climate favored Native American agricultural practices over European ones. Apple cultivation, wheat growing, and sheep-raising were far less significant on the eighteenth century frontier because ecological conditions were not conducive to their husbandry. In the Appalachian South, hogs, corn, beans, and peaches became primary staples because they were best suited for the upland environment. American chestnuts became important to human diets as well as valuable mast for European livestock. Indigenous plants were routinely gathered for consumption and medicinal purposes as were Old World species brought to the region during the eighteenth century.

In the final analysis, culture must be viewed as a product of both social and environment forces. From 1500 to 1800 A.D., plants, animals, and ecosystems had a profound effect on social life in the region. By emphasizing the environment in our investigation, a more complex story of social evolution and environmental change was told. Culture is never simply the outcome of social and environmental forces: it is, more accurately, the product of complex interactions between the two. When humans and the environment came together

in the southern mountains, both influenced the other.

In retrospect, European expansion into the Appalachian region was enormously myopic. The Spanish naively expected the Mississippians to be totally obedient to the crown, nor did they care that their very presence facilitated the spread of fatal disease. Anglo-Europeans thought that their culture could be wholly transplanted to the New World, and they had few reservations about imposing their will on the native people. Most European settlers believed that they were doing the Cherokees a great favor by introducing them to the modern plow. Driven to less productive areas, the Cherokee needed the plow to farm more intensively. But from the Cherokee perspective, planting and sowing had been a communal event involving men, women, and children. Collectively, the Cherokee could grow enormous amounts of corn without tillage and still have additional time for hunting, gathering, and recreation. The plow was not so much a symbol of modernization as it was the ascension of private property. The Cherokee adopted the new technology as a last resort in an act of frontier survival. By 1800, after more and more Europeans had settled over the landscape, the use of the environment became increasingly directed by profit, rather than purely subsistence, motives. This not only changed human/nature interaction, it launched a new era of environmental destruction.

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APPENDICES

APPENDIX I

Enumeration of counties within the study area

State	County	Province
Alabama	Cherokee	Ridge & Valley
Alabama	Dekalb	Ridge & Valley
Alabama	Jackson	Plateau
Alabama	Madison	Plateau
Alabama	Marshall	Plateau
Georgia	Catoosa	Ridge & Valley
Georgia	Chattooga	Ridge & Valley
Georgia	Cherokee	Ridge & Valley
Georgia	Dade	Plateau
Georgia	Dawson	Blue Ridge
Georgia	Fannin	Blue Ridge
Georgia	Floyd	Ridge & Valley
Georgia	Forsyth	Blue Ridge
Georgia	Gilmer	Blue Ridge
Georgia	Gordon	Ridge & Ridge
Georgia	Hall	Blue Ridge
Georgia	Lumpkin	Blue Ridge
Georgia	Murray	Ridge & Valley
Georgia	Pickens	Ridge & Valley
Georgia	Raburn	Blue Ridge
Georgia	Towns	Blue Ridge
Georgia	Union	Blue Ridge
Georgia	Walker	Ridge & Valley
Georgia	White	Blue Ridge
Georgia	Whitfield	Ridge & Valley
Kentucky	Bell	Plateau
Kentucky	Boyd	Plateau
Kentucky	Breathitt	Plateau
Kentucky	Clay	Plateau
Kentucky	Cumberland	Plateau
Kentucky	Floyd	Plateau
Kentucky	Harlan	Plateau
Kentucky	Jackson	Plateau
Kentucky	Johnson	Plateau
Kentucky	Knott	Plateau
Kentucky	Knox	Plateau
Kentucky	Laurel	Plateau
Kentucky	Lee	Plateau
Kentucky	Leslie	Plateau
Kentucky	Letcher	Plateau
Kentucky	McCreary	Plateau

Kentucky	Martin	Plateau
Kentucky	Morgan	Plateau
Kentucky	Owsley	Plateau
Kentucky	Perry	Plateau
Kentucky	Pike	Plateau
Kentucky	Pulaski	Plateau
Kentucky	Rockcastle	Plateau
Kentucky	Wayne	Plateau
Kentucky	Whitley	Plateau
Kentucky	Wolfe	Plateau
N. Carolina	Alleghany	Blue Ridge
N. Carolina	Ashe	Blue Ridge
N. Carolina	Avery	Blue Ridge
N. Carolina	Buncombe	Blue Ridge
N. Carolina	Burke	Blue Ridge
N. Carolina	Caldwell	Blue Ridge
N. Carolina	Cherokee	Blue Ridge
N. Carolina	Clay	Blue Ridge
N. Carolina	Graham	Blue Ridge
N. Carolina	Haywood	Blue Ridge
N. Carolina	Henderson	Blue Ridge
N. Carolina	Jackson	Blue Ridge
N. Carolina	McDowell	Blue Ridge
N. Carolina	Macon	Blue Ridge
N. Carolina	Madison	Blue Ridge
N. Carolina	Mitchell	Blue Ridge
N. Carolina	Surry	Blue Ridge
N. Carolina	Swain	Blue Ridge
N. Carolina	Transylvania	Blue Ridge
N. Carolina	Watauga	Blue Ridge
N. Carolina	Wilkes	Blue Ridge
N. Carolina	Yancy	Blue Ridge
S. Carolina	Greenville	Blue Ridge
S. Carolina	Oconee	Blue Ridge
S. Carolina	Pickens	Blue Ridge
S. Carolina	Spartanburg	Blue Ridge
Tennessee	Anderson	Plateau
Tennessee	Bledsoe	Plateau
Tennessee	Blount	Ridge and Valley
Tennessee	Bradley	Ridge and Valley
Tennessee	Campbell	Plateau
Tennessee	Cannon	Plateau
Tennessee	Carter	Blue Ridge
Tennessee	Claiborne	Ridge and Valley
Tennessee	Clay	Plateau
Tennessee	Cocke	Blue Rdge
Tennessee	Coffee	Plateau
Tennessee	Cumberland	Plateau
Tennessee	DeKalb	Plateau

Tennessee	Fentress	Plateau
Tennessee	Franklin	Plateau
Tennessee	Grainger	Ridge and Valley
Tennessee	Greene	Ridge and Valley
Tennessee	Grundy	Plateau
Tennessee	Hambleton	Ridge and Valley
Tennessee	Hamilton	Ridge and Valley
Tennessee	Hancock	Ridge and Valley
Tennessee	Hawkins	Ridge and Valley
Tennessee	Jackson	Plateau
Tennessee	Jefferson	Ridge and Valley
Tennessee	Johnson	Blue Ridge
Tennessee	Knox	Ridge and Valley
Tennessee	Loudon	Ridge and Valley
Tennessee	McMinn	Ridge and Valley
Tennessee	Marion	Plateau
Tennessee	Meigs	Ridge and Valley
Tennessee	Monroe	Ridge and Valley
Tennessee	Morgan	Plateau
Tennessee	Overton	Plateau
Tennessee	Pickett	Plateau
Tennessee	Putnam	Plateau
Tennessee	Roane	Ridge and Valley
Tennessee	Scott	Plateau
Tennessee	Sequatchie	Ridge and Valley
Tennessee	Sevier	Ridge and Valley
Tennessee	Sullivan	Ridge and Valley
Tennessee	Unicoi	Blue Ridge
Tennessee	Van Buren	Plateau
Tennessee	Warren	Plateau
Tennessee	Washington	Blue Ridge
Tennessee	White	Plateau

Virginia	Bland	Blue Ridge
Virginia	Buchanan	Blue Ridge
Virginia	Carroll	Blue Ridge
Virginia	Dickenson	Plateau
Virginia	Giles	Plateau
Virginia	Lee	Plateau
Virginia	Pulaski	Ridge and Valley
Virginia	Russell	Plateau
Virginia	Scott	Ridge and Valley
Virginia	Smyth	Ridge and Valley
Virginia	Tazewell	Plateau
Virginia	Washington	Ridge and Valley
Virginia	Wise	Plateau
Virginia	Wythe	Blue Ridge

W. Virginia	Boone	Plateau
W. Virginia	Cabell	Plateau
W. Virginia	Fayette	Plateau
W. Virginia	Kanawha	Plateau

W. Virginia	Lincoln	Plateau
W. Virginia	Logan	Plateau
W. Virginia	McDowell	Plateau
W. Virginia	Mason	Plateau
W. Virginia	Mercer	Plateau
W. Virginia	Mingo	Plateau
W. Virginia	Putnam	Plateau
W. Virginia	Raleigh	Plateau
W. Virginia	Summers	Plateau
W. Virginia	Wayne	Plateau
W. Virginia	Wyoming	Plateau

total counties= 154

Approximate surface area= 60,000 square miles

APPENDIX II

On Pre- and Post-Columbian Population

The Columbian Quincentennnial brought a renewed interest in the life of Native Americans prior to the sixteenth century. Of considerable interest has been the number of Indians that were displaced by diseases introduced from the European continent. Columbus and his followers brought smallpoxes, measles, influenza, and many other deadly pathogens to the New World, diseases that are reported to have wiped out literally millions of Indians. Because of the depopulation brought about by the Spanish conquistadors, it has been said that the North America colonized by European settlers was a "widowed" landscape, a country almost entirely void of its pre-Columbian population.¹

In his book, American Holocaust: Columbus and the Conquest of the New World, David E. Stannard, for example, places the late fifteenth century population of North America at somewhere between 8,000,000 and 12,000,000 persons. Stannard uses mostly secondary, translated, or historiographic data to arrive at these numbers, including the revisionist

¹Francis Jennings, The Invasion of America: Indians, Colonialism, and the Cant of Conquest (Chapel Hill, NC: University of North Carolina Press, Institute of Early American History and Culture, 1975), 30.

work of Henry Dobyns.² Dobyns, in his book, Their Number Become Thinned, was one of the first to argue that Native America Indian populations were grossly undercounted. The principal group of Indians for his study is the Timucuan Indians of north Florida, a Native American group that experienced direct contact with Europeans in the 1560s. In order to reconstruct original Timucuan populations, Dobyns relies almost entirely on "resource availability" estimates--the number of animals and plants in the region--in order to determine "human carrying capacity." From there, Dobyns projected his findings on the entire eastern United States.³ Little archeological or ethnohistorical evidence amassed in the last ten years corroborates such large population estimates for the southeast U.S..⁴

²Davis E. Stannard, American Holocaust: Columbus and the Conquest of the New World (New York: Oxford University Press, 1992), 268.

³Henry F. Dobyns, Their Number Become Thinned : Native American Population Dynamics in Eastern North America (Knoxville, TN: University of Tennessee Press, 1983), 34-45, passim.

⁴For example, John H. Hann, who devotes an entire chapter to the population of the Apalachee and other Indian groups of north Florida, believes that Dobyn's figures for the region are too much high. According to Hann, "no archaeological evidence shows the concentration of populations in large villages that such demographic estimates would seem to demand." Hann agrees that "protohistoric Florida possessed a much larger population than traditional authorities have accorded it," but remains skeptical of Dobyn's assessment of the impacts of epidemics on the Florida population. Whereas Dobyn's would place the population of the Apalachee Indians at 100,000, Hann thinks it more reasonable to accept a figure of 25,000. See Hann, Apalachee: The Land Between the Rivers, 161-162, 163-180.

Although he ignores the population studies of prominent archaeologists and ethnohistorians, Dobyns corectly asserts that diseases spread inland after coastal Indians first contracted them. Most scholars now agree that epidemics spread inland into the interior, and there is historical and archaeological evidence to support these claims.⁵ However, there is no clear consensus regarding the rate or intensity at which the epidemics spread into the interior southeast. In agreement with Smith and Hudson, this study argues that the greatest population losses occured after the Mississippians came in direct contact with the Spanish conquistadors: Herdinand De Soto, Juan Pardo and Tristan De Luna.

Russell Thornton, a sociologist specializing in Native American demography and who has made an entire career tracking the rise and fall of Native American populations, places the pre-Columbian population of North America at slightly over five million. In American Indian Holocaust and Survival, Thornton argues that while disease has a profound impact on native populations, base figures such as those projected by Dobyns and Stannard should be arrived at more cautiously.⁶ Using ethnohistorical, archaeological, ecological, and demographic data, Thornton estimates Cherokee Indian

⁵Marvin smith, Archaeology of Aboriginal Culture Change, 54-85; Hudson, The Juan Pardo Expeditions, 67-68, 72-73, 181-189.

⁶Russell Thornton, American Indian Holocaust and Survival (Norman, OK: University of Oklahoma Press, 1987), 32.

populations at initial European contact to be only slightly more than 30,000.⁷

It should be strongly noted that the lack of evidence for massive population loss in the southern mountains for the sixteenth century does not mean that a large number of people did not die. As stated in chapter three, ninety percent of an affected village might perish from introduced pathogens. The effect on Mississippian culture was sudden, dramatic, and permanent. Only when compared to the millions of natives who died at the hands of the Spanish in Central and South America, does population loss in the Appalachian South look small.

However, because Mississippian populations in the interior southeast were much lower to begin with, we shouldn't expect to find evidence for a large number of deaths. Most Mississippian scholars agree that the largest settlement in the Appalachian South, Etowah, was able to support about 5,000 people. Nor does Archaeological excavations of Mississippians settlements and historical accounts from the Spanish entradas support claims of an extraordinarily large population in the region. Less than fifty individual dwellings were uncovered at the King archaeological site in northwest Georgia; most scholars fix this community's peak population at around 300 individuals.⁸

⁷Thornton, The Cherokees: A Population History, 18.

⁸Smith, Archaeology of Aboriginal Culture Change, 68-70, 71-75.

In southern Appalachia the historical record does not show the level of atrocities committed by the Spanish conquistadors in other parts of the New World. The mountain region was never colonized, gold and silver was never mined for export, and Juan Pardo ultimately failed in his attempt to erect a string of permanent forts and missions in the region. The Mississippian chiefdoms of the Appalachian South also controlled fewer riches than the state-level societies of the Mayan, Aztec or Inca, making them less attractive to the Spanish empire. The Spanish conquistadors dramatically altered the population of the Southern Appalachians, but it was their breath, not the sword, that dealt the biggest blow to the native people.

APPENDIX III

Name	Location	Acres
James Davis	Head Branch Indian River	1,300
James Patton	N.W. Side Indian River	640
James Patton	South Fork Indian River	770
Thomas Walker	Castles Creek	6,780
James Wood	Holston or Cedar Creek	2,193
James Wood	Holston or Cedar Creek	2,800
John Shelton	Mockizen Creek	1,400
John Shelton	Indian River	995
John Shelton	Branch Clinch River	1,000
John Shelton	Crabapple Orchard	650
John Shelton	North Fork Indian River	150
John Shelton	Middle Fork Indian River	940
Jos Crockett	South Fork Indian River	450
Edmund Pendleton	Branch Indian River	950
Edmund Pendleton	Branch Indian River	676
Edmund Pendleton	Middle Fork Indian River	3,000
John Taylor	Waters Indian River	1,946
John Taylor	Shallow Creek	1,000
John Taylor	Shallow Creek	720
John Taylor	Middle Fork Indian River	1,150
Chas. Campbell	North Fork Indian River	1,400
Chas. Campbell	Branch of North Fork	330
Chas. St. Claire	South Fork Holston River	996
John Buchanan	Indian River	1,000
John Buchanan	Indian River	550
John Buchanan	Middle Fork Indian River	1,250
John Buchanan	Middle Fork Indian River	740
Chas. Campbell	Indian River	130
Chas. Campbell	Middle Branch Indian River	220
Chas. Campbell	Middle Branch Indian River	300
Chas. Campbell	Middle Branch Indian River	135

Appendix B. First settlers of southwest Virginia, 1748-1750.
Source: L.P. Summers, History of Southwest Virginia, 1746-1786, Washington County, 1777-1870 (Richmond, VA: J.L. Hill Printing Company, 1903), 45.

VITA

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