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Mountaineers and Rangers

A History of Federal Forest Management in the Southern Appalachians 1900-81

United States
Department of
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Foreword

In 1978 the former Head of the Forest Service's History Section, David A. Clary, conceived the idea of doing a history of the impact of Federal natural resource management on the peoples of the Southern Appalachians. The contract was awarded July 25 that year under competitive bidding to Maximus, Inc., in McLean, Va.

We believe this study to be an important addition to the literature on the Forest Service and the Southern Appalachians. It is only the second scholarly publication to take a regional approach to Forest Service history, and it is the first to explicitly examine how Forest Service programs have affected local populations. We hope that it will stimulate other individuals, both in and outside the Forest Service, to write similarly significant histories.

Photographs and maps, mostly from official Forest Service sources, have been included to illustrate points covered in the text. Readers may order those from the National Archives collection by number from the Still Pictures Branch, Audiovisual Archives Division, National Archives, General Services Administration (GSA), Washington, DC 20408. Ask for GSA From 6797 with the latest valid price list; prices change each year on October 1. An advance payment made out to the Cashier, National Archives, GSA, must accompany each order. Requests for prints of photographs still held by the Forest Service, other photos, and for map photos should be sent to the History Section, Forest Service, U.S. Department of Agriculture, P.O. Box 2417, Washington, DC 20013; notification of the appropriate charge will be made, and the advance payment made out to Forest Service, USDA, must then be sent to us.

The source of each print is given in the description beneath each photograph, where it appears in the text. The designation "NA:95G" means it is an official Forest Service photograph, and the negative is held in the National Archives collection; the number following is the number of that photo. The designation "Forest Service photo" means the negative with the number following is still retained by the Forest Service in Washington, DC.

Sources of data for this study, including tables, are fully provided in the reference notes following each chapter and in the 11 lists in the Bibliography. The authors wish to thank personnel of the National Archives, Washington, DC; the Washington National Records Center, Suitland, Md.; the Lands and the Recreation Staffs of the Forest Service in Washington, DC, and Atlanta, Ga.; the various National Forests in the Appalachians; the Southeast Regional Office and the Supervisor of Great Smoky Mountains National Park, National Park Service; and the Appalachian Regional Commission, as well as the many other persons interviewed personally and by telephone, for their cooperation and special assistance which added greatly to the completeness of this report.

Dennis M. Roth, Head
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A Summary

Tracing the history of the impact of Federal land acquisition and land management on the peoples of the Southern Appalachians has not been a simple or direct exercise. The task was difficult, largely because the people most affected have been almost silent. Reflecting the inexpressiveness of their culture, they have rarely written their reactions.[1] Indeed, as Ronald Eller affirms, "no satisfactory history of the [Southern Appalachian] region has ever been written."[2] Perhaps the best work on the Southern mountaineer, John C. Campbell's 1921 classic *The Southern Highlander and His Homeland* is not by a native; he was educated in the Northeast and came from Indiana to observe and educate the mountaineer. In spite of its thoroughness and sensitivity, the book conveys an outsider's perspective. Similarly, the foregoing narrative of Federal land activity is told mainly through the remarks and writings of the Federal agents who came to the Southern Appalachians to purchase and manage the land, or by other outside analysts and observers, plus supporting data. The reactions of the mountaineer to massive Federal landowership and changing land uses have necessarily been largely inferred.

Federal land acquisition in the Southern Appalachians began shortly after the Weeks Act, authorizing the purchase of forest land by the Federal Government from other owners for the establishment of National Forests, was passed by Congress in March 1911. The Weeks Act represented an extension of Federal land management policies. In the western United States, nearly all National Forests had been reserved from the public domain, the lands held by the Federal Government for disposal under the land laws. In the East, however, there was little remaining public domain by the time of the 1891 act. All but a few have been created by Federal purchase of lands that had been held for generations in private ownership. Between 1911 and 1982, over 23 million acres were so acquired for National Forests east of the 100th meridian. Almost 4 million of these acres were in the Southern Appalachian mountains.[3]

First Reserves in the East

In response to appeals by leading local conservationists, the Southern Appalachians, stretching from southwestern Virginia to northern Georgia, and the White Mountains of New Hampshire were the first areas in the East to be identified by the Federal Government, and the affected State governments, as needing protection from destructive lumbering. Thus the two areas became the first to have large tracts converted to National Forests. Federal land agents—geologists, foresters, surveyors, and appraisers—were sent to the Southern Appalachians to carry out this mandate. They were impressed by the physical beauty and abundant resources of the region.[4]

Under the authority of Congress to regulate interstate commerce, the Weeks Act justified Federal purchase of forest lands for one stated objective: to protect lands on the headwaters of navigable streams from deforestation, fire, and erosion, so that streamflow could be protected. Behind this legislative rationale, however, was a complex history of land management controversies that accompanied the birth of forestry in America. Gifford Pinchot, who, before he became Chief of the Forest Service, had fathered America's first experiment in practical, conservative forestry at Biltmore, near Asheville, N.C., was an instrumental advocate of Federal land acquisition in the Southern mountains. The movement for a National Park in the Southern Appalachian Great Smoky Mountains, which had developed during the 1890's and grew into a broad movement for forest reserves in the East, provided further momentum for the establishment of National Forests in the region. The Weeks Act implied that Federal ownership was the best—perhaps the only—way to restore the cutover and burned Southern Appalachian slopes and to preserve the mountain region for future generations to enjoy and use.

By the time Federal land agents arrived in the Southern Appalachians, the region had already been discovered by outside investors, timber and coal barons, missionaries, local-color writers, and scientists, and had been defined as being unique and distinct from the rest of the United States. Exploitation of its natural resources, especially coal and timber, was well along. In 1900, the area was characterized by an economy of self-sufficient small farms settled in the mountain river bottoms and hollows, isolated from each other by steep, parallel ridges. The culture of the region appeared strange to outsiders: sometimes quaint, sometimes frightening. It was strongly Scotch-Irish in ethnic background, and reminiscent of pioneer America. The absence of large towns, the lack of formal schooling, the homogeneous population, the widespread distillation of corn liquor, the fierce independence, and the apparent lawlessness that prevailed were a few indicators of the region's "otherness."[5] Furthermore, the mountaineer seemed oblivious to the riches amidst which he had settled: coal and timber, both in high demand by the industrializing cities of the North.

Rail Opens Area to Industry

After 1880, with extensive railroad construction, the Southern Appalachian region began to change in fundamental and enduring ways, as absentee landownership became the single most important facet of the region's political economy. Investors from Europe and the Northeast purchased vast tracts of Southern Appalachian land, for its coal, its timber, or simply for the increasing value of the land itself. Often when they could not buy the land, they bought rights to the resources beneath or upon it. In certain portions of the Southern mountains—for example, the hardwood-rich Great Smokies and coal-rich slopes of eastern Kentucky—absentee landowners came to control the vast majority of the exploitable resources. Many mountaineers were displaced, moving into small towns within and adjacent to the region; some remained on the land as tenants or squatters. The self-sufficient farming economy and mountain culture were altered, as industrialization and small-scale urbanization became increasing features of the landscape.[6] Furthermore, once the land was acquired by outsiders, the mountaineer essentially lost it for good. Much of the land was eventually transferred to the Federal Government, and the Southern Appalachian farmer did not—indeed, could not—buy it back.

National Forests Are Assembled

As Shands and Healy have written, "the national forests of the East, in the main, were assembled from land that nobody wanted."[7] From the beginning, the Government purchased only from willing sellers, who either volunteered their land for sale or, approached by Government agents, were able to reach agreeable settlements with the Forest Service. In the early years, most of the acreage acquired in the Southern Appalachians was from large timber and landholding companies, such as Gennett, Ritter, Little River, and Champion, which found a ready market for their culled, cutover, or inaccessible tracts, and transferred their absentee ownership to the Federal Government. Some of the largest and most finely timbered acreage was acquired first; for example, in Tennessee, North Carolina, and Georgia, nearly 30 percent of the acreage so obtained was virgin timber.[8] Hundreds of small landholders of the region sold willingly as well, in plots of from 5 acres to nearly 1,000 acres, and a patchwork pattern of Federal and private landownership began to emerge within the gross National Forest boundaries. The first eastern National Forest, the Pisgah, was established in 1916 in North Carolina. By 1920, five more Southern Appalachian forests had been proclaimed.

The impact of these federally managed units was negligible at first; land owned mostly by absentee corporations had simply been transferred to another absentee owner, and little changed. Gradually, however, the process of Federal land acquisition accelerated the decline of the farming economy that had begun in the late 19th century. As more and more family farms were abandoned to National Forests status, the acreage that could potentially be settled or developed by private interests dwindled. The population growth of the mountain counties slowed. The irreversible interruption of previous settlement patterns had begun, and in Henry Shapiro's words, the notion of the southern mountains as "essentially uninhabitable" was "institutionalized."[9]

Fight Against Burning Is Slow

The arrival of Forest Service land managers was accompanied by the agency's campaign against burning the woods. The traditional folk practice of using fire—to clear brush, vines, and weeds, and to destroy insects, vermin, and snakes before spring planting and after harvest—was in clear conflict with this policy. Rangers assigned to the mountains in the early years considered their most difficult management task to be changing this native habit. The acculturation process was slow, never entirely successful. Although seasonal burning declined considerably, deliberate fires became a recurring symbol of resentment and protest. In the fall of 1980, nearly 50 years after the National Forest was established, fires spreading over 100,000 acres of the Daniel Boone were attributed to arsonists "seeking revenge on the government."[10]

Although large-scale Federal land acquisition helped to accelerate outmigration from the mountain recesses to nearby towns and cities, National Forests provided some employment for those who remained. Timber sales favored small lumber mill operators, who were sustained, although marginally, on National Forest timber. The Forest Service fire warden system relied on a team of local men who reported, and helped combat, forest fires in each ranger district. Ranger assistants, lookouts, and work crews were also recruited locally.

The number of local men so employed was not large at first, but increased significantly during the Depression years through the Civilian Conservation Corps. (In 1937, the peak year of the CCC, almost 9,000 young men were enrolled in Southern Appalachian National Forest CCC camps, the majority of them from the region.)[11] Many local experienced men were hired to help train them. Thus, the CCC helped to integrate the people of the small mountain towns with the goals and value system of Forest Service personnel. In addition, it accomplished much for the forests, in the way of reforestation, erosion control, and the construction of trails, campgrounds, fire roads, and fire towers.

The active participation of the Federal Government in the lives of the southern mountaineers came on a scale much larger than ever before with the New Deal of the 1930's. During Franklin D. Roosevelt's first administration, Federal funds were provided to relocate families on submarginal farms, and appropriations were enormously expanded for Federal land acquisition. The National Forests of the region were enlarged and consolidated through the addition of hundreds of small tracts. Impoverished family farms were purchased, often for as little as $3 per acre. During the Depression, such prices were standard, and acceptance of a Federal bailout, commonplace. However, 30 and 40 years later, when land prices had increased tenfold, even a hundredfold, the second-generation mountaineer expressed bitterness at the pittance paid.[12]

Two Parks Require Condemnation

During the Depression, two major Federal parks were established in the region: the Great Smoky Mountains National Park and the Blue Ridge Parkway. Each, promised by promoters as a sure tourist attraction, was generally locally supported and well received. However, because the acquisition of all land within certain prescribed park boundaries was required, the power of condemnation to obtain needed parcels from those unwilling to sell was exercised for the first time in the southern mountains. Although some timber companies and many small landholders were willing to sell, many were not. Litigation over land values, such as that over the nearly 93,000-acre Champion Fibre Co. tract, was time-consuming and costly.[13] Although land prices paid for the Appalachian

National Parks were often higher than comparable land in the National Forests, the use of the power of eminent domain to create the parks resulted in great misunderstanding and bitterness, which continued for generations. The same can be said of the land acquisition by the Tennessee Valley Authority to construct dams and reservoirs on the mountain tributaries of the Tennessee River.

World War II brought a temporary economic boom to the Southern Appalachians, as had World War I. The coal and timber reserves were again in demand; however, the slump that followed the war accelerated regional outmigration and increased the region's dependency. The Southern Appalachians lost population to urban areas of the Piedmont and North, and experienced a marked drop both in the number of farms and farm acreage. Most land in the region's core remained under Federal or absentee corporate control; farms were generally poor, and employment opportunities were few and unvaried. Low income, poor health, and inadequate schooling and housing were typical, and were particularly acute in the coal counties of eastern Kentucky, eastern Tennessee, and far southwestern Virginia.

Three Periods of Federal Activity

Federal involvement in the financial welfare of the Southern Appalachian region has come in three distinct phases: the earliest, between 1911 and 1920, when the first National Forests were established; the second, during the New Deal of the 1930's, and most recently, during the 1960's, when Appalachia was again rediscovered and millions of Federal dollars spent for development. With the presidency of Lyndon B. Johnson, programs such as Job Corps, Volunteers in Service To America (VISTA), and the Work Experiences and Training Program—flourished briefly, bringing temporary employment, training, and education to the region. Some Job Corps camps are still there. The Appalachian Regional Commission, created in 1965, was responsible for distributing billions of Federal dollars for regional development. Later came the Youth Conservation Corps and the Young Adult Conservation Corps. In 1980, after the expenditure of nearly $50 million in the core counties of the Southern Appalachians—for highway construction, vocational education, and health facilities—the lasting effect on the region's economy was still unclear. Although outmigration from the area had clearly slowed between 1965 and 1980, the standard indicators of income, education, and health showed little, if any, improvement relative to those for the Nation as a whole.[14]

Also related to Federal efforts to revitalize the region was the establishment of the Redbird Purchase Unit, an extension of the Daniel Boone National Forest, in eastern Kentucky. Like much of the acreage acquired for the first Southern Appalachian forests, the land in the Redbird was depleted, and its forests heavily culled. Its inhabitants were among Appalachia's most destitute. However, most of the Redbird tracts were acquired from the coal and timber companies that had held the bulk of the land. Thus, as a local relief measure, the purchase unit was of dubious immediate benefit.

Recreation Becomes Major Force

During the 1960's, the Southern Appalachians became a major focus for the recreational development legislation of the decade. A national sense of urgency about preserving open space was expressed through several Congressional actions that directly affected the region. The Land and Water Conservation Fund, administered by the Bureau of Outdoor Recreation, was established for purchasing Federal recreational lands and providing grants to the States for recreational development. Through the Fund, nearly $45 million were appropriated between 1965 and 1980 for National Forest land acquisition.[15] The Fund was the chief source of land purchase money for the Appalachian Trail, Wild and Scenic Rivers, National Recreational Areas, and forest wilderness areas. The urgency of the perceived need for these special recreational reserves forced a change in policy. For the first time, condemnation was used to acquire desired land that owners refused to sell. After 1965, single-purpose (recreational) needs were increasingly cited to justify condemnation, which the Forest Service had previously felt was not necessary to accomplish multiple-use objectives.

The new emphasis on recreation in the southern mountains helped to foster another Appalachian land investment boom. Vacationers, retirees, developers, and speculators began to buy many of the mountain acres still in local hands. With greater absentee landownership came an inflation of land values, and many mountaineers were no longer able to afford the family farm, or to consider buying a new one. Increasing numbers of tourists were drawn to the region, but the spurt of growth in the regional recreation industry was temporary, and the economic benefits of tourism that were often promised by developers and politicians were not widely realized. Nevertheless, the recreation attractions helped to slow, and often reverse, the trend of outmigration that had characterized the region for decades.

For the Southern Appalachian mountaineer, the 1970's were a time of uneasy adjustment to further change. People from outside the region were arriving in greater numbers, bringing a value system and attitude toward the land that were often alien to those of the mountaineers. The Forest Service was insistent as never before on acquiring selected lands. As property values soared, the amount of money returned to the counties from National Forest proceeds seemed paltry, considering the often large percentage of Federal acreage involved. The more development that occurred, the more its potential seemed restricted by Government landownership. L.E. Perry, of McCreary County, expressed a bitter attitude more extreme than most: "there is little room for expansion . . . [The Forest Service], by its very nature . . . [is] a bureaucracy with a miserly grip on a large part of the land area."[16]

Natives Resist More Wilderness

Wilderness areas were added to the National Forests of the East in 1975. In 1977, when the Forest Service asked the public's reaction to established new wilderness areas in the Southern Appalachian forests, the response was often vehemently negative. Many oldtime mountaineers felt betrayed. The relationship they had maintained with the Forest Service for decades had been based on their trust of individual rangers, gained through experience, and the sense that the Forest Service was sympathetic to their economic and social needs.[17] But for an often patronizing attitude and an unrelenting prohibition of fire, Federal foresters had allowed the mountaineer to use the woods essentially as he always had —to hunt, fish, and gather forest products—and had provided him employment if it was feasible. Wilderness designation, however, precluded lumbering and roads, and thus restricted most traditional forest uses. The mountaineer reacted strongly against it. As had happened only a few years before when condemnation was used to acquire recreational lands, the Southern Appalachian people organized to express themselves: specifically, to protest formally the designation of certain remote forest lands to be roadless areas.

They were not alone in registering protest to Federal land acquisition and management policies. The Carter Administration's large additions to roadless areas for wilderness consideration (RARE II) inspired widespread national reaction. Then, by 1980, continued Government acquisition of private land was being strongly challenged by citizens groups and legislators. A December 1979 report by Congress' General Accounting Office, investigating Federal land acquisition policies, contended that the Government had often acquired lands that were not really needed, but had been obtained simply because funds had been available.[18] Need, of course, is a relative and subjective term. From the Forest Service perspective, nearly all lands within the boundaries of a National Forest could be considered suitable or desirable; and if funds were available and sellers willing, lands had been acquired. The GAO report recommended that alternatives to acquisition be explored, and that potential land purchases be more carefully evaluated in terms of demonstrable Federal need. Actually, the Forest Service had been acquiring considerable land by exchange for more than 55 years.

Between 1900 and 1975, the Southern Appalachian people lost control of much of their land to "those who . . . were more powerful or more shrewd or more wealthy."[19] The steepest, most remote, and heavily forested mountain slopes were early acquired by timber and coal companies; subsequently much of this land—and thousands of acres more—were sold to the Federal Government for restoration and preservation. From the end of the 19th century until 1980, the region has effectively been a colony within the American economic system.[20] As land acquisition proceeded, the mountain people moved from the innermost parts of the region to urban areas on the fringe. Farming virtually died out as a viable means of gainful employment, but the manufacturing that moved into the area was itself often marginal, most of it controlled by large, nonlocal corporations. Although, over the decades, with the spread of television and the construction of the interstate highway system, the Southern Appalachian mountaineer gradually has been drawn into the social and cultural framework of 20th century urban-industrial America, in certain fundamental ways the Southern Appalachian region has remained the same.[21] The population of the region's core doubled from about 1.1 million in 1900 to nearly 2.2 million in 1975, but the population of the Nation as a whole tripled over the same period.[22] In spite of recent trends in inmigration, the region has remained sparsely populated and nonmetropolitan. It has also remained poor.

Federal Impacts Hard to Assess

Because the southern mountain region changed in various ways from many causes during the 20th century, it has often been difficult to isolate impacts specifically attributable to Federal landownership. The GAO report just cited identified several results of Federal land purchases, notably the escalation of prices of adjacent land, the erosion of local tax bases, the stifling of economic activity, and the preclusion of farming.[23] All of these have been identified and discussed as they pertain to Southern Appalachian history. Yet an assessment of the Federal impact on the region is more complex—because there have been beneficial effects as well, and because the Federal Government is by no means the only absentee landholder. Indeed, the impacts of Federal land acquisition and management must fairly be related to those of other types of absentee ownership. As this report has shown, many of the negative effects of absentee land control—such as outmigration, low income, and restricted employment—have been considerably more pronounced in the coal counties of the Southern Appalachians than in the mountain counties that are largely National Forest.

With a perspective on national forestry goals and priorities, the Forest Service has sometimes placed local needs and concerns second. Often what was perceived to be best for the Nation has been harmful to local needs, goals, and values. As the 1979 GAO report stated:

> Conflicts between Federal land managers and local landowners are probably unavoidable. The Federal land manager is directed to manage lands in the national interest for specified purposes. Local interests, on the other hand, want to use the land in ways that maximize local benefits. The extent of the conflict depends on local perceptions and expectations of economic gain or loss from the presence of a national area.[24]

Often, as illustrated by the case of Mount Rogers and the RARE II phenomenon, it has been a matter of mis- or non-communication that has fired the conflict. Only since the mid-1960's through its Inform and Involve Program, have the Forest Service and the local people formally exchanged perspectives on policies of land management in advance of actions.

Finally, one has to speculate what would have happened to the region had the Federal Government not created Natonal Forests there. Relative to the coal companies, land companies, and other self-interested developers, who still control large tracts of the region's land, the Federal Government has generally been less damaging both to the people and the environment. Even a group which often felt adversely affected by the decisions of Federal land managers has given them a a large meausre of praise. The Citizens for Southwest Virginia, one of the most outspoken citizens groups in the region, has placed the contribution of Federal land acquisition and management in perspective, as follows:

> There was a time when it appeared that Mt. Rogers would suffer the fate experienced by much of the rest of the land in the southern mountains. In the early part of this century, timbering operations devastated the region's forests and left the land in a state which, according to one local resident, "looked like the surface of the moon." The Forest Service was instrumental in reviving the land and bringing it back, if not to its original state, at least to a state where it was once again a valuable and productive resource. The early work of the Forest Service in the Mt. Rogers area (and in the eastern forests generally) is an example of one of the few government programs that has been an almost unqualified success. More than any other institution, perhaps, the Forest Service deserves credit for the survival of the region as an area of recreational and conservation potential.[25]

Reference Notes

1. See, for example, Norman A. Polansky, Robert D. Borgman, and Christine DeSaix, *Roots of Futility* (San Francisco: Jossey Bass, Inc., 1972), pp. 76-80. "Verbal inaccessibility" and inexpressiveness are identified as distinctive elements of the Appalachian subculture.

2. Ronald D. Eller, "Toward A New History of The Appalachian South," *Appalachian Journal* 5 (Autumn 1977): 75.

3. William E. Shands and Robert G. Healy, *The Lands Nobody Wanted* (Washington: The Conservation Foundation, 1977) p. 3.

4. See especially *Message From the President of the United States, Transmitting a Report of the Secretary of Agriculture in Relation to the Forests, Rivers, and Mountains of the Southern Appalachian Region* (Washington: Government Printing Office, 1902).

5. Shapiro, *Appalachia On Our Mind*, is the classic work on the history of outsiders' perceptions of Appalachia and the development of the mountaineer stereotype.

6. Ronald D. Eller, "Miners, Millhands, and Mountaineers: The Modernization of the Appalachian South, 1880-1930," Ph.D. dissertation, University of North Carolina, 1979.

7. Shands and Healy, *The Lands Nobody Wanted,* p. 1.

8. *The National Forests and Purchase Units of Region Eight,* USDA, Forest Service, Region 8, manuscript, Atlanta, Ga., January 1, 1955, p. 3.

9. Shapiro, *Appalachia On Our Mind,* p. 187.

10. "Arsonists Blamed for Fires In Appalachian Parklands," *Washington Post,* November 16, 1980.

11. National Archives, Record Group 35, CCC Station and Strength Reports, 1933-42.

12. See, for example, Eliot Wigginton, "Introduction," *Foxfire 5* (Garden City, N.Y.: Anchor Press, 1979), p. 12.

13. Carlos C. Campbell, *Birth of a National Park in the Great Smoky Mountains* (Knoxville: University of Tennessee Press, 1969), pp. 80-95.

14. *Appalachia—A Reference Book*; See also, Comptroller General, *Report to the Congress, Should the Appalachian Regional Commission Be Used as a Model For the Nation?*

15. Data from Heritage, Conservation, and Recreation Service, USDI.

16. Perry, *McCreary Conquest,* p. 224.

17. Jack E. Weller, in *Yesterday's People, Life in Contemporary Appalachia* (Lexington: University of Kentucky Press, 1965), wrote of the mountaineer, "He conceives of government processes in terms of personal relationships, much like those in his reference group. He sees the actions of government not in terms of general order or of law but in terms of the personal whims of each official. Thus, government agencies are closely identified with the persons who run them."

18. Comptroller General of the United States, *Report to the Congress: The Federal Drive to Acquire Private Lands Should Be Reassessed* (U.S. Government General Accounting Office, Washington, D.C., December 14, 1979), p. 9.

19. Wigginton, *Foxfire 5.* p. 12.

20. See Helen Matthews Lewis, Linda Johnson, and Donald Askins, eds., *Colonialism in Modern America: The Appalachian Case* (Boone, N.C.: The Appalachian Consortium Press, 1978; and Edgar Bingham, "Appalachia: Underdeveloped, Overdeveloped, or Wrongly Developed?", *The Virginia Geographer* VII (Winter 1972): 9-12.

21. See "The Passing of Provincialism," in Thomas R. Ford, ed., *The Southern Appalachian Region: A Survey* (Lexington: University of Kentucky Press, 1962); John B. Stephenson, *Shiloh: A Mountain Community* (Lexington: University of Kentucky Press, 1968); and Harry K. Schwartzweller, James S. Brown, and J. J. Mangalam, *Mountain Families in Transition* (University Park, Pa.: Pennsylvania State University Press, 1978), Chapter 11.

22. Population changes from 1900-1975 computed for 80 core counties of the region. U.S. Bureau of the Census, *Twelfth Census of the United States* (Washington, D.C.: Government Printing Office, 1902); Bureau of the Census, *County and City Data Book 1977* (Washington, D.C.: Government Printing Office, 1978).

23. Comptroller General, *The Federal Drive To Acquire Private Lands Should Be Reassessed*, p. 9.

24. *The Federal Drive,* p. 11.

25. Citizens for Southwest Virginia, Troutdale, *Response,* 1978, p. 22.

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At the end of the 19th century, when much of America was experiencing strong urban-industrial growth, the Southern Appalachian region of eastern Kentucky, eastern Tennessee, southwestern Virginia, western North Carolina, and northern Georgia was sparsely populated, nonindustrial, and very largely rural. After the mid-18th century the mountains had been settled by westward-moving pioneers in a pattern of widely scattered clusters of small farmsteads — first along the wider river bottoms, and later into the coves and up the ridges. Towns were few, small, widely separated, and connected only by narrow, rutted dirt roads. Most mountaineers lived self-sufficiently, growing corn and raising hogs, isolated from each other and the outside world by the region's many parallel ridges.

Until 1880 the rich resources had been barely touched. Steep mountainsides were covered with unusually heavy and varied hardwood forests and underlain with thick seams of coal and other minerals. Water rushed abundantly down and through the mountains on its way west to the Tennessee and Ohio Rivers, east to the Atlantic Ocean, and south to the Gulf of Mexico. Then, however, railroads penetrated the mountains, and with them came tourists, journalists, missionaries, scientists, investors, businessmen, and industrialists who found a society and economy at once pristine and primitive. By 1900 these outsiders had described and publicized the region, purchased much of the land, and were beginning to extract its resources; they had also tried to educate, reform and transform the southern mountaineers.

In 1911 the Federal Government came to the Southern Appalachians to purchase and manage vast tracts of mountain land as National Forests. The Weeks Act, passed in March of that year, authorized the Federal purchase of "forested, cut-over or denuded" lands on the headwaters of and vital to the flow of navigable streams. Land acquisition under the Weeks Act focused at first principally on forests of the southern mountains. Several thousand acres were acquired within a few years. In June 1924 this Act was amended and broadened by the Clarke-McNary Act to allow purchase of timber lands unrelated to navigable streams.[1] The creation of these National Forests helped to define Appalachia as a discrete region.

In the 70 years since 1911, the Federal Government has acquired over 4 million acres of land in the Southern Appalachians, principally for National Forests supervised by the Forest Service of the U.S. Department of Agriculture, by far the largest single land manager in the region. Federal lands are managed for a variety of public purposes that often differ from profit-oriented private land management practices. Therefore, the effects of this massive series of purchases on the people of the region have been considerable, though subtle and gradual for the most part during the first 50 years.

Since 1960, changes in the region have accelerated, and although mountain residents are still largely wary spectators and often victims of events, they are no longer silent; their response has quickened and sharpened. They have learned to join together to at least modify some of the changes being imposed by modern society.

Boundaries of the Region

As it is for any cultural region, defining the boundaries precisely is arbitrary and subjective. The region encompasses the southern half of the great multiple Appalachian Mountain chain that runs from Alabama to Maine, but its exact boundaries have varied according to the differing purposes of various studies. Often considered besides terrain are political boundaries and socioeconomic and cultural factors.

Three definitions have gained prominence.[2] John Campbell, in his 1921 classic, *The Southern Highlander and His Homeland,* included all of West Virginia, the western highlands of Maryland, Virginia, North Carolina, and South Carolina, easternmost Kentucky and Tennessee, northernmost Georgia, and northeastern Alabama: 256 counties in 9 States. His principal criterion was physiography.[3]

In 1960 Thomas R. Ford, in *The Southern Appalachian Region,* outlined an area of 189 counties, 25 percent smaller area than Campbell's. Ford excluded westernmost Maryland, South Carolina, and West Virginia, and included less of Virginia, Alabama, and Tennessee. He based his region on "State Economic Areas", a concept developed in 1950 by the U.S. Bureau of the Census and the U.S. Department of Agriculture in order to group counties with similiar economic bases.[4]

The Appalachian Regional Commission has provided a more recent definition. This 169-county "Southern Appalachia" stretched down to include a corner of Mississippi and almost half of Alabama, but excluded West Virginia and eastern Kentucky, putting both in a new category, "Central Appalachia". The principal criterion is weak or lagging economic development.[5]

All three definitions include a mountainous "core": far southwestern Virginia, far western North Carolina, easternmost Tennessee, and northernmost Georgia. These sections, although the most rugged and least accessible, are not all the weakest economically.

There is some doubt whether any of the above three broad regions, or even the "core", constitute a true cultural region. Geographer Wilbur Zelinsky says two features identify a cultural region: (1) how its distinctiveness is manifested (physically and behaviorally), and (2) how its people consciously behave.[6] Scholars generally have treated the Southern Appalachians as a cohesive cultural entity. Although Campbell and Ford acknowledged that the region was not culturally homogeneous, both emphasized its distinctiveness. However, others have insisted that the region is too culturally diverse to be regarded as a unit and that it is not a functional social and economic area.[7] Indeed, some have questioned whether its people show a genuine regional selfconsciousness or whether the region's cultural distinctiveness is not simply a reaction to outside forces.[8]

This study covers counties with large Federal land purchases, including the crest of the Blue Ridge Mountains where the Blue Ridge Parkway was built, as well as the Great Smoky Mountains of Tennessee and North Carolina that are now largely enclosed in the National Park of that name, and part of the Cumberland Plateau in Kentucky. The major focus is on the counties of Kentucky, Tennessee, North Carolina, South Carolina, and Georgia that respectively contain the Daniel Boone, Cherokee, Pisgah, Nantahala, Chattahoochee and part of the Sumter National Forests, as well as the southwesternmost counties of Virginia below the New River divide that contain part of the Jefferson National Forest. Thus, this study area encompasses the core of the Southern Appalachians that all previous definitions of the region share.[9]

Nearly all of the National Forests in the eastern half of the United States stem from the 1911 Weeks Act, as amended by the 1924 Clarke-McNary Act. The justification for such purchases was at first to control erosion and streamflow through the rehabilitation, maintenance and improvement of forests.[10] In the Southern Appalachians, lands at stream headwaters were naturally the steepest, most remote, and least inhabited. In 70 years, the Federal Government has purchased over 4 million acres of land there, most of it for National Forests.[11] These purchases have been largely concentrated in the region's core and in the separate Cumberland Highlands belt of Kentucky. Today several "core" counties are more than 50 percent federally owned.[12]

Purpose of This Study

Assessing the impact of Federal land acquisition and land management on the peoples and cultures of the Southern Appalachian region is the purpose of this study. Even before the lands in question were purchased, they were special in several ways. Besides being generally the most mountainous and least accessible, they were often the least populous and most scenic in the region. Thus, even without purchase and management by the Federal Government, they might have developed differently from adjacent lands that were not purchased. It is unlikely, for example, that they would ever have supported a large population. Nevertheless, the very act of Federal purchase and the introduction of new land management techniques to the region changed its demographic, economic, and social structure. Indeed, the large Federal presence has certainly helped to shape the region's distinctive culture.

Physical Geography of the Region

The Southern Appalachian mountains, a broad band of worn-down parallel ridges of sedimentary rocks, are among the oldest in the world. They were formed several hundred million years ago in an "accordion" effect of the movement of very deep continental plates and accompanying upheavals of the earth's surface.[13] They comprise three geologic subregions: the Blue Ridge Mountains, the Valley and Ridge section, and the Appalachian Plateau.[14]

The Blue Ridge Mountains, rising sharply from the Piedmont to form the eastern subregion, are the oldest and were the deepest layers of rocks, and so were greatly changed by heat and pressure (metamorphosed). From 5 to almost 75 miles wide, the Blue Ridge area is in some places a single ridge of mountains and in others a complex of ridges. It includes the Blue Ridge Mountains of Virginia and North Carolina; the Iron, Black, Unaka, Nantahala, and Great Smoky Mountains of North Carolina; and the Cohutta Mountains of northern Georgia. The highest peak in the eastern United States, Mount Mitchell, 6,684 feet (2,037.3 meters) in elevation, lies within the Black Mountains and is a State Park.[15]

The Valley and Ridge subregion is a band of nearly parallel, "remarkably even-crested" ridges and river valleys; from the air it looks almost like corrugated cardboard.[16] This subregion stretches from northern Georgia northeastward slightly west of the North Carolina-Tennessee border, into southwestern Virginia and eastern Kentucky. It includes the Greater Appalachian Valley, actually a series of broad river valleys that run in broken stretches from the Shenandoah Valley of Virginia south to the valley of the Tennessee River and its tributaries. These valleys were the major avenues of immigrant travel diagonally through the mountains into the region from the mid-Atlantic States and Carolina Piedmont.

The Appalachian Plateau, a broad, uplifted area in eastern Kentucky and Tennessee, forms the westernmost subregion of the Southern Appalachians. The plateau has been so severely dissected over millenia by running streams that it appears almost mountainous, although its elevations are not nearly as high nor its slopes as steep as those of the Blue Ridge to the east. Known as the Cumberland Plateau in Tennessee and Kentucky (and as the Allegheny Plateau in West Virginia) the subregion is marked on the west by an escarpment which drops down to a gently rolling piedmont.[17]

The long-stretching parallel ranges and ridges of the Southern Appalachians formed a strong barrier to westward pioneer travel. There are only a few passes: water gaps where rivers now cut across the ridges, such as the New River gap; or wind gaps, such as Cumberland Gap, where ancient, now diverted streams once cut. No river flows directly or all the way through the region covered by this study. However, the very old New River, together with the Kanawha, does flow clear across almost the entire width of the Southern Appalachians, and is the only river system to do so, just north of the study area.

Geographers have noted the "odd behavior" of rivers in the Southern Appalachians. The main rivers begin as many mountain streams that drain, first in trellis patterns and then at right angles, across the ridges to the west. In contrast, the rivers north of Roanoke, Va., drain to the east.[18] Only the Chattooga and Tallulah Rivers of northern Georgia, and the Yadkin, Pee Dee, and Catawba Rivers of North Carolina, originate in the mountains and drain to the Atlantic; the remainder flow west or southwest. The Clinch, Powell, Holston, Watauga, Nolichucky, Tellico, Little Tennessee, Pigeon, Nantahala, French Broad, Hiwassee and Toccoa-Ocoee

Figure 1.—Forested ridges and slopes of Black Mountains, a section of the Blue Ridge near Mt. Mitchell, N.C., highest point in the East, on Pisgah National Forest. When photo was taken in March 1930 a new summer home had just been built under special use permit, in foregound. (Forest Service photo in National Archives, Record Group 95G-238076)

Figure 2.—Sparse spruce-fir growth on 5,700-foot ridge of Black Mountains, Pisgah National Forest, N.C., looking toward Pinnacle Peak, with Swannona Gap in foreground and Asheville reservoir watershed at right. (NA:95G-254616)

Figure 3.—Cascades near headwaters of Catawba River between Old Fort, N.C., and Black Mountain, east of Asheville, Pisgah National Forest; photo taken in June 1923. (NA:95G-176371)

Rivers all flow into the Tennessee River, which passes by Chattanooga and the northwestern corner of Georgia into Alabama before turning northward to join the Ohio River in Kentucky. The New River, actually the oldest in the region, joins the Kanawha, which also drains into the Ohio. The streams of eastern Kentucky drain into the Licking, Kentucky, and Cumberland Rivers which all join the Ohio, too.

The climate of the region is mild, and rainfall is plentiful. Average annual temperature is about 65°F. (18.3°C.); growing season is about 220 days. Rainfall is fairly uniform throughout the year, usually accumulating between 30 and 50 inches (76.2 and 127.0 cm.); in the Nantahala and Great Smoky Mountains up to 80 inches (203.2 cm.). In general, slopes facing south and southeast are warmer and drier than those facing north and northwest.[19]

Flora, Fauna, Coal, Minerals Abundant

Because of its geological history and climate, the Southern Appalachian region possesses an abundance and great variety of trees, at least 130 species, perhaps the greatest variety of any temperate region in the world. Species distribution varies with location and altitude. Up to 2,500 feet (762 meters) above sea level, oak forests predominate; principally red, chestnut, scarlet, white, and black oaks, as well as shortleaf pine, various species of hickory, black gum, sourwood, dogwood, and red maple. Before the disastrous blight early in this century, American chestnut was a major and exceedingly valuable species. Between 2,500 and 3,500 feet (1,067 meters) in elevation, yellow (tulip) poplar, white pine, hemlock, birch, beech, walnut, and cheery are abundant. Above 3,500 feet, black spruce and balsam fir forests cover the mountain slopes. Dense undergrowths of rhododendron and mountain laurel are common in much of the region. In general, the heaviest rainfall and most luxuriant forest are on the protected northwestern-facing Blue Ridge slopes.[20]

The region's forest is home for an unusual variety of fauna. Although most of the species are rodents and other small mammals, many have provided a rich quarry for hunters. Deer, squirrels, black bears, raccoons, opossums, grouse, and wild turkeys abound. Until they were eliminated or driven from the region early in this century, elk and wolves were present in the Southern Appalachians; foxes and bobcats remain. Wild boars, which were imported from Europe in 1912 and introduced near the Tennessee-North Carolina border south of the Great Smokies, persist on remote slopes.[21]

Soils are of disintegrated and decomposed sedimentary rock. Each subregion has its own typical soils; those of the Blue Ridge are most subject to erosion and those of the greater Appalachian Valley most conducive to productive cultivation. The alluvium in the broader river valleys is fertile and productive if not overworked, and the region's bottomland soil is excellent for growing corn, beans, and other garden vegetables. However, some mountain soils are thin, rocky, and infertile; when exposed on steep slopes, they can become severely eroded.[22]

The Southern Appalachians are rich in coal deposits, both bituminous (soft) and anthracite (hard), as well as true minerals. Most of the coal is high-grade bituminous, concentrated in eastern Kentucky, where it lies close to the surface of the folds and ridges of the earth in horizontal beds from 8 to 10 feet thick. Kentucky coal thus can be easily stripped or mined by boring horizontally into a mountainside. The Valley and Ridge subregion of Virginia and Tennessee also contain high-quality coal, much of it anthracite, that is usually mined in deep shafts. The Southern Appalachians contain reserves of limestone, copper, manganese, and sulfur, all of which have been mined with varying degrees of financial success over the last century.[23] They are also presumed to contain sizeable deposits of oil and natural gas. Recent

Figure 4.—A group of huge old "virgin" American chestnut trees up to 13 feet in diameter deep in the Great Smoky Mountains of western North Carolina; photo taken about 1890. Note the men at left and center. A foreign blight wiped out this extremely valuable species between 1900 and 1930. (Photo courtesy of Shelley Mastran Smith)

Figure 5.—A 70-year-old stand of white pine with understory of sugar maple and birch high up in the Bald Mountains near Hurricane Gap and the Tennessee-North Carolina State line. Nolichucky Ranger District, Cherokee National Forest, near Rich Mountain Lookout and the Appalachian Trail, just up the ridge from Hot Springs, N.C., and the French Broad River. When photo was taken in May 1962, Ranger Jerry Nickell was marking trees for a partial cut. These northern species do well at this 3,200-foot elevation. This site along Courtland Branch is used as a dispersed camping site by visitors. (NA:95G-502184)

geological research has shown the mountains to be underlain to a depth of 12 miles with layers of sedimentary rock, the kind least likely to have dispelled hydrocarbons and therefore most likely to contain natural gas and oil.[24]

Thus, the region is unique in its geology and physiography, and has natural assets which contribute to its distinctiveness. The physical geography of the Southern Appalachians greatly influenced its settlement and early development, as well as the way the region was perceived and used throughout the 19th and 20th centuries.

Settlement of the Southern Appalachians

Thousands of years before white men settled the Southern Appalachians, aboriginal Indians inhabited the area. Archeological evidence suggests human activity over most of western North Carolina, eastern Tennessee, southwestern Virginia, northeastern Georgia, and northwestern South Carolina as early as 10,000 to 8,000 B.C. Throughout the Blue Ridge and the Valley and Ridge subregions, weaponry and domestic tools have been discovered that suggest a mobile hunting civilization evolving slowly over the millennia. By 1000 to 1650 A.D. the Cherokees, as the largest group of Indians came to be known, were cultivating corn, beans, squash, sweet potatoes, and fruits in scattered, nucleated villages, where Europeans encountered them.[25]

The first European to see the mountains may have been Hernando DeSoto who, on an expedition from Florida in 1540, named them after the Appalache Indians. Next were John Lederer and his party, sent in 1669 by Virginia's Governor, William Berkeley, to discover a route to the western Indians. Over the next 50 years, several more expeditions explored the Blue Ridge area, primarily for Indian trade, but none resulted in permanent settlement.[26]

The Southern Appalachians were settled after 1730 by pioneers of western European stock searching for more freedom and abundant land. For 100 years considerable pioneer traffic to the west moved through the gaps of these mountains.[27]

The early settlers were primarily Scotch-Irish Presbyterians from northern Ireland and Palatinate (west Rhine) Germans. The latter immigrated in large numbers between 1720 and 1760, fleeing religious persecution and economic hardship. They settled first in Pennsylvania, gradually moved westward, then, along with others, ventured down the Greater Appalachian Valley of Virginia and North Carolina. Other early settlers moved inland from the Carolina Piedmont, over the ridges into Kentucky and Tennessee, which became States in 1790 and 1796, respectively. They traveled by wagon and horseback, following river valleys and Indian game trails, crossing the parallel ridges where streams had cut through the mountain chains at places like Saluda Gap just south of present-day Asheville, on the North Carolina South Carolina line, and Cumberland Gap, the furthest west point of Virginia, on the Kentucky-Tennessee border.

Most pioneers moved through the Southern Appalachians to the Ohio River valley, on to Missouri, Arkansas, and further westward. But a permanent population, attracted by the mountains, remained in the valleys and coves to live by hunting, stock raising, and simple farming. By 1755 the Cumberland Gap area had several permanent clusters of dwellings; Watauga became the first settlement in Tennessee in 1768.[28]

After 1810, the stream of pioneer settlers began to slow, and by the 1830's it had all but stopped. The last major influx of pioneer migration to the Southern Appalachians occured after gold was discovered near Dahlonega, Ga., in 1828. By 1830 between 6,000 and 10,000 persons lived in northern Georgia, but many left when the gold rush ended.[29]

After the major settlement phase, people and goods between East and West still passed through the Highlands. Merchandise from eastern ports was transported on primitive roads. Large livestock herds were driven from the interior across the ridges to Baltimore, Philadelphia, and to the cotton plantations. Travelers heading west might meet droves of as many as 4,000 or 5,000 hogs heading to market. In 1824 it was estimated that a million dollars' worth of horses, cattle, and hogs came through Saluda Gap to supply South Carolina plantations.[30] Whiskey was also frequently shipped through the mountains; it was less bulky, higher in value, and less perishable than the corn that produced it. By midcentury, however, Middle West farm products were more often shipped down the Mississippi to the East. Traffic on the mountain gap routes gradually declined.

Natives Were Cherokee Indians

When the pioneers first entered the Southern Appalachians, they encountered the Cherokee culture. Trade between the white settlers and the Indians developed early, and was the means of mutual influence. Pioneers learned from the Cherokees what crops to cultivate, how to farm, where and how to hunt. The Indians received material goods from white settlers, and soon abandoned their thatched huts for cabins with log and rail siding.[31]

The two cultures, however, did not remain compatible. Over the course of the 18th century, as settlers moved into the mountains the Indians' territory was circumscribed. Between 1767 and 1836, through a series of controversial treaties between the Cherokees and the State of North Carolina, the Indians, under severe pressure, gradually relinquished all tribal lands east of the Mississippi River. Although about 2,000 Cherokees voluntarily emigrated to the West, many were hunted down, forcibly removed and marched to Oklahoma by Federal troops after 1838. Many died on this "trail of tears." A band of about 1,000 Cherokees refused to leave and instead hid in the Great Smoky Mountains. In 1878, with the aid of an attorney, William H. Thomas, these fugitive Cherokees obtained title to over 60,000 acres of land in Swain and Jackson counties, N.C., site of the present Qualla Reservation.[32]

By the middle of the 19th century, the Southern Appalachians were fairly widely settled and the important towns established. Just as topography influenced pioneer routes of travel, so did it structure the region's settlement pattern. Settlement occurred first in the broader, flatter, more accessible river valleys, such as the Watauga, Nolichucky, Clinch, Holston, Powell, New, and French Broad, where the soil was relatively rich and productive. Asheville, N.C., on the French Broad River, started as a trading post in 1793 and was incorporated in 1797. By 1880 it had over 2,600 inhabitants. Knoxville, located at the confluence of the French Broad and Holston rivers, was founded in 1791, although a fort had been there as early as 1786.[33] Smaller river and stream valleys which cut west through the ridges were also settled early. Protected coves and hollows with arable land, good water, and abundant timber were sought as homesites. Only gradually did people occupy the steeper ridges where the terrain and rocky soils often made farming difficult. In general, ridge settlements were more characteristic of the Cumberland Plateau area than of the Blue Ridge region, where, as Ronald Eller has written, "the predominance of larger coves permitted oval patterns of settlement around the foot of the slopes, leaving the interior basin open for cultivation and expansion."

Many Small Family Clusters

The mountains became a land of scattered, self-sufficient "island communities" divided by ridges and hills.[34] These communities generally consisted of small clusters of two or three homes within easy walking distance of each other. Groups of neighbors were often kinfolk as well. Later generations added to these clusters, but there were rarely more than a dozen households together. Commercial settlements often developed at a gap, at a crossroads, or at the mouth of a large hollow, but they were small, usually containing one or two stores, a mill, a church, and a school.[35] Larger towns were widely scattered and slow to grow.

Figure 6.—The "Pink Beds-Cradle of Forestry" area of the old Biltmore Forest of William Vanderbilt, nucleus of the Pisgah National Forest just south of Asheville, N.C. Panoramic view was taken from Pounding Mill Overlook on U.S. highway 276 about 1950. (Photo from National Forests in North Carolina)

From early in the 18th century, the land was divided into units later called counties, subdivided as population increased. In western North Carolina this process took 150 years. Rowan, the first, was formed in 1753; Avery, the last, in 1911. County seats were smaller and less important than elsewhere in the South.[36]

Until about 1900, mountain communities were connected to each other and outside points only by narrow rutted, muddy or dusty roads that inhibited frequent or long-distance travel. Nevertheless, the isolation was much like that of most communities in early 19th-century rural America. Mountaineers traded with nearby communities, worked seasonally outside the mountains, received letters and periodicals through the mail, and were visited by occasional peddlers and local politicians.[37] Mountain people had some access to new goods and ideas.

The relative isolation of the region become more pronounced after the Civil War. Although the war engaged the sentiments of many, it did little to alter the economy and settlement of the region. The rise of industrialization and urbanization was slow to reach it. Not until more than a decade after the first transcontinental railroad was completed in 1869 did a rail line cross the region. The mountains were then gradually opened to tourists, travelers, and investors. In the 1880's timber and mining interests began to acquire mountain land, and the region's population started to swell.

By 1900 industrialization had finally arrived. However, impacts for long were only scattered and fragmentary. The settlement pattern survived, and the self-sufficient family farm remained dominant. In 1900 only 4 percent of the region's population could be classified as urban (living in places of 2,500 people or more). Asheville, the largest city, had a population of 14,694, while the neighboring centers of Knoxville and Chattanooga, across the mountains on the Tennessee River, each boasted counts of over 30,000. Other large mountain towns were Bristol and Johnson City, Tenn.;

Middlesboro, Ky. and Dalton, Ga., each with over 4,000 people. Several mountain counties had one town of at least 1,000, but many counties had no village with more than 500 people.[38] Larger towns were usually county seats, but there were notable exceptions, such as Middlesboro, near Cumberland Gap.[39] The most populous areas were the Asheville vicinity, northeastern Tennessee, and southwestern Virginia. These Tennessee and Virginia areas each had four counties with over 20,000 inhabitants. Least populated were the highlands of extreme southwestern North Carolina and northern Georgia. Both Clay and Graham Counties, N.C., for example, had fewer than 5,000 people.

Population density over the region was about 35 per square mile in 1900, and some counties had less than 20, like Rabun, Ga.; Leslie, Ky.; Bland, Va.; and Graham, Swain, and Transylvania, N.C.

Fast Population Growth

In the last decades of the 19th century, the rate of population growth in the Southern Appalachians was greater than for the Nation as a whole. For the 79 counties in the region's core, the rate from 1890 to 1900 was about 23 percent. For the United States it was 20.7 percent. The growth varied considerably from State to State, however. Kentucky led the mountain counties with 34 percent during the 1890's; northern Georgia had only 14 percent. Certain counties grew by more than 50 percent over the decade, primarily coal counties, such as Wise (100 percent) and Dickerson in Virginia, and Leslie (70 percent), Bell, Harlan, and Knott, in Kentucky. Some noncoal counties also spurted.

Although only 4 percent of the region's population was urban in 1900, about one person in four lived in nonfarm homes (33 percent in eastern Tennessee and 40 percent in southwestern Virginia, both of which had more small towns; Virginia also had larger farms). Most farms in the region in 1900 were between 50 and 175 acres, averaging about the same as that for the States involved and for the South Atlantic region, but smaller than the 147-acre average for the Nation as a whole.[40] Typical ranges of farms by size are in table 1.

The independence and self-sufficiency of the Southern Appalachian farmer is generally confirmed by farm tenure statistics for 1900. Most farms in the region (about two-thirds) were owner-operated; however, the second highest category of tenure, "share tenants," indicates an increasing tendency toward absentee landlordism and tenancy in general. In some counties, as many as 30 percent of all farms had share tenancy. This situation was one reflection of the outsider investment and changes in landownership that began toward the end of the 19th century.[41]

Although modern enterprise was beginning to bring significant changes, there was in 1900 only small-scale and scattered industry. Most counties of Appalachian North Carolina, Tennessee, and Virginia had from 50 to 100 factories; those in Georgia and Kentucky usually had less than 50. These firms did not employ many people. Less than 1 percent of the region's population earned wages in manufacturing. Even in Asheville's Buncombe County, the 208 factories employed only 3 percent of the people.

Thus, industrial development was nascent and the small, 100-acre, owner-occupied farm prevailed in the core of the region, which would within two decades experience major Federal land acquisition. The mountains were only partially populated and cleared, towns were small and few, and settlements were scattered.

Marginal, Self-Sufficient Farms

In 1900 the marginally self-sufficient family farm — in Rupert Vance's words, "the *modus vivendi* of isolation" — was still the most significant element in the economy of the Southern Appalachians. Unlike other rural areas of the

Table 1. — Number and percentage of farms by size in four typical Southern Appalachian Counties, 1900

Size of farm	Union, Georgia		Graham, North Carolina		Unicoi, Tennessee		Bland, Virginia	
in acres	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Under 3	None	0	2	1	7	1	3	Under 1
3-9	36	2	22	3	64	9	25	4
10-19	91	6	45	6	98	15	37	6
20-49	245	17	137	19	189	28	104	16
50-99	395	27	212	29	149	22	118	18
100-174	419	29	185	25	104	15	149	23
175-259	140	10	64	9	32	5	89	13
260-499	93	6	40	5	16	2	82	12
500-999	22	2	18	2	11	2	32	5
Over 1000	3	1	7	1	8	1	21	3
Totals	1444	100	732	100	678	100	660	100

Source: Bureau of the Census, *Twelfth Census of the U.S.* (Washington: Government Printing Office, 1902).

country, especially the nonmountain South where the raising of a single cash crop prevailed, the mountain farm remained diversified. Before the Civil War at least, the mountain farmer produced up to 90 percent of the products he needed.[42] By 1880 the region had a greater concentration of noncommercial farms than any other part of the United States.

In the late 1800's the typical mountain farm contained both bottomland and steep hillsides. About a quarter was in crops, a fifth in cleared pasture, and the remainder, over half, was in forest. Springs and a nearby creek provided plentiful water. About half the land under cultivation was devoted to corn, which provided a household staple and the basis for whiskey, as well as grain for horses and hogs. Secondary crops were oats, wheat, hay, sorghum, rye, potatoes, and buckwheat. An orchard of apple and other fruit trees was planted. Many farmers had their own bee hives, and every farm had a large vegetable garden where green beans, pumpkins, melons, and squash were commonly grown. Contour farming was still unknown there. Crops and gardens often stretched vertically up the side of a hill, hastening erosion, runoff, and siltation of mountain streams.[43]

Mountain farmers cleared land for cultivation by felling the largest trees and burning the remaining vegetation. Indeed, burning was the accepted practice of "greening" the land, including woods for browsing, in the spring and "settling" it in the fall. The fires were set to destroy rodents, snakes, and insects, and to clear underbrush. The thin layer of ash left added a small nutrient to frequently depleted soil, the only inorganic fertilizer then known to mountain farmers. Once lands became unproductive through overcultivation or erosion, they simply cleared more adjacent forest and abandoned garden plots to scrub.

A variety of livestock helped make the mountain family self-sufficient. A few milk cows, a flock of chickens, a horse or mule, or a yoke of work oxen, and a dozen or more shoats (pigs) were found on nearly every farm. Sheep were often raised for their wool, which the women weaved into clothing, blankets, or rugs. Geese were useful for insect and weed control and for their down which was plucked for bed quilts and pillows. A good hunting dog or two were necessary to keep rabbits and groundhogs out of the garden and for the year-round hunting of rabbits, squirrels, quail, and other wild game to supplement the farm's meat supply.[44]

Usually 8 to 12 people — parents, children, and occasionally grandparents or other relatives — lived on the farm. Aided by a horse or mule, the family performed all the work necessary to provide its own food and shelter. The center and symbol of mountain life was the farm home itself. Homes were usually built in sheltered spots with good water readily accessible and within easy walking distance — but not sight — of neighbors. The traditional mountain homested was a handhewn log cabin, usually one room with a loft, front porch, and possibly a lean-to at the back. When sawmills became more prevalent throughout the region in the late 1800's, small frame houses were built. Eventually two- to four-room box houses and larger frame houses became more common. However, log cabins continued to be built in more isolated areas well into the 20th century.[45]

A limited exchange occurred between farms, between farms and towns, and between farms and distant markets. From the earliest settlement until the 1880's, the principal commercial activity was the raising of livestock. Cattle, hogs, and other animals were allowed to roam the forest freely or were driven to pasture on the ridges or high grassy mountain "balds," which resulted from forest fires. The most important animal for sale was the hog. Fattened on the abundant chestnuts, acorns, walnuts, and hickory nuts, and "finished off" before sale or slaughter on several weeks' diet of corn, mountain hogs provided considerable ham and bacon for the South. Throughout the 19th century cattle and hogs were driven at least semiannually from the mountains to markets in North Carolina, South Carolina, and Virginia, and even to Baltimore and Philadelphia. The practice continued even after the coming of the railroads, although crops and bacon were also shipped by rail to such markets as Chattanooga and Augusta.[46]

Timber, Herbs, Honey, 'Moonshine' Add to Income

Mountaineers also supplemented their incomes with occasional timber cutting. Small-scale logging provided work during the winter and an opportunity for trade. Some families operated small, local steam-engine sawmills. Some produced wood products such as chairs, shingles, and fenceposts for exchange with their neighbors or local merchants. Until the early 20th century when it was wiped out by a foreign blight, chestnut was the favored Southern Appalachian wood, readily marketable as timber or finished product, and its nuts (mast) were an important food for hogs and wildlife.

The forests provided the mountaineer with other abundant marketable produce. For many families, the gathering of medicinal herbs and roots was an important commercial activity. In late summer the family would collect yellow-root, witch hazel, raspberry leaves, spearmint, sassafras, golden-seal, and bloodroot (used for dyes). Ginseng and galax were especially important forest plants. Ginseng is a perennial herb with a long aromatic root, long favored by the Chinese for its supposed stimulant properties. It was heavily gathered from 1850 to 1900 until its supply was severely depleted. Galax, an evergreen ground cover used especially in floral arrangements, became an important collectible toward the end of the century. A town in Grayson County, Va., is named after galax. Such plants were often used as exchange for household items at local stores. Merchants receiving the plants dried and packaged them for shipment by wagon and later railroad to distribution centers in the Northeast. Between 1880 and 1900, merchants paid $2.00 to $5.00 for a pound of ginseng root collected in the forests.[47]

Figure 7.—Illustrative of the rich home crafts tradition of the Southern Appalachians was Mrs. Lutitia Hayes, seated with many of the blankets and quilts she had made, in front of her home in Clear Creek, Knott County, Ky., in September 1930. (NA:95G-249152)

Families also supplemented their incomes by trading products of their fields, kitchens, and parlors, such as jams, honey, apple butter, woven and knitted goods, and illegally distilled liquor. Indeed whiskey ("moonshine") became the fundamental, unique, virtually universal domestic industry of the Southern Appalachian region after the Civil War when the tax on it skyrocketed. As Rupert Vance has written, distilling was a natural outgrowth of the combined circumstances of corn production and relative isolation. Corn was the chief cash crop cultivated, but its transportation was "a baffling problem." Therefore, instead of being carried to market as grain, it was transmuted to a more valuable condensed product: its essence was conveyed by jug.[48] In some hollows particularly northwestern North Carolina, tobacco became an important cash crop. Surrey, Madison, Burke, Catawba, and Buncombe counties had sizeable acreage in tobacco from 1880 to 1900, but this crop faded there as piedmont and coastal tobacco became more popular.[49] It is still grown in some mountain sections near Winston-Salem, however.

Only rarely would a mountaineer actually receive cash for the livestock, timber, whiskey, roots, sweets, or herbs he might trade. Barter was universal. There were few banks in the mountains until after 1900. Before railroads and industrialization, local merchants extended credit and exchanged their wares for the produce of the mountaineers. A good source of cash was seasonal fruit picking. Thousands of mountain men traveled to lowland orchards at harvest time, and took most of their wages back to their families.[50] On the whole, however, mountaineers seldom saw cash.

Isolation Fosters Independence, Equality

The relative isolation and self-sufficiency of the 19th-century Southern Appalachians fostered a loose social and political structure that emphasized independence and equality. Since mountain settlements were clusters of extended families, religious, social, and political activities were organized along kinship lines.

The concept of equality — that any man was as good as another — flourished in a setting where most people owned their own land and made their living from it with family labor. Slavery existed in mountain counties before the Civil War, but it never had a significant impact. In traditional mountain society, social divisions were not based on wealth but rather on status derived from the value system of the community. In mountain neighborhoods where economic differences were minimal, personality or character traits, sex, age, and family group were the bases for social distinction. Thus, the rural social order was simply divided into respectable and nonrespectable groups, with varying degrees in each.[51]

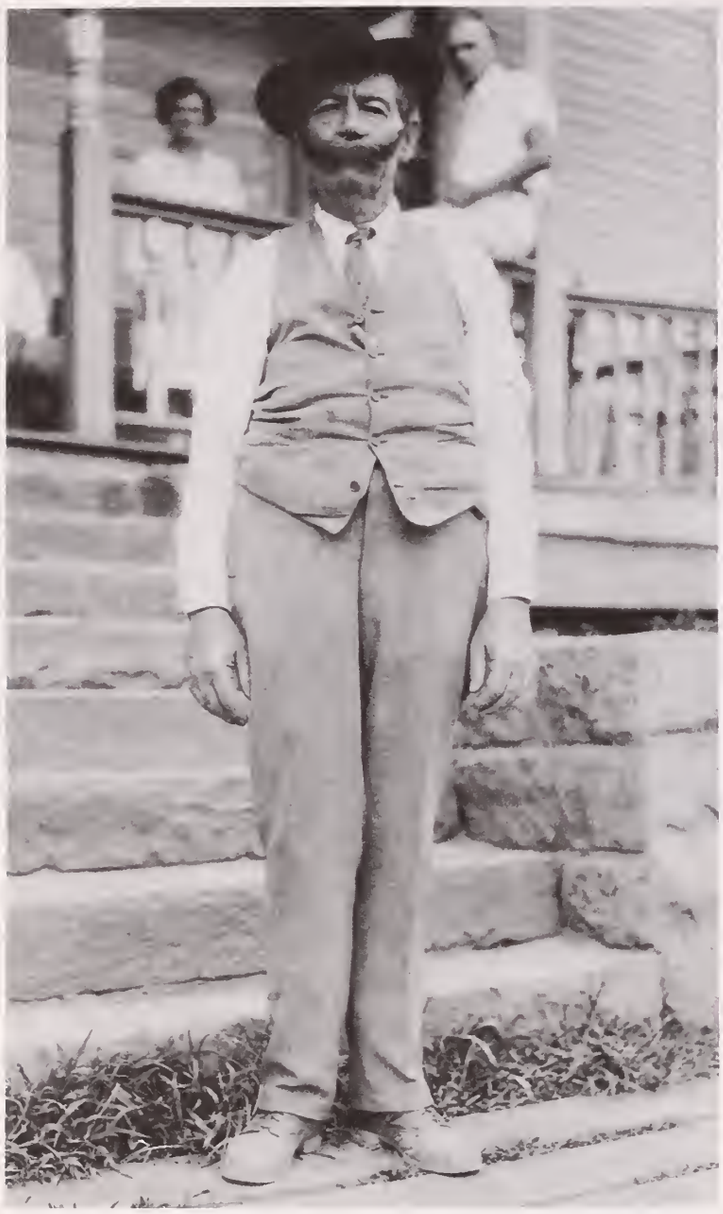

Figure 8.—Jim Perkins, who then was county attorney in the tiny Knott County seat of Hindman, in the bitumimous coal belt of eastern Kentucky, August 1930, then a severely depressed area. (NA:95G-247046)

In larger towns, however, a class consciousness based on wealth was more evident. Wealthier, landed families who controlled local businesses and provided political leadership formed a local elite, as elsewhere in the South. They sent their sons outside the mountains to be educated, to become teachers, lawyers, doctors, and businessmen.[52] Using their political influence, education, outside contacts, and comparative wealth, members of these families played an important role in the region's industrialization. They purchased land and mineral rights from their neighbors for sale to outsiders, and they publicized and promoted the development of transportation improvements, especially the railroads, often acquiring large fortunes as a result.[53]

Political activity in the Southern Appalachians was informal, personal, and largely based upon ties of kinship. Respected patriarchs and commercial leaders often obtained political power. They relied on family ties to get elected and, having won elected office, were expected to look out for their kinfolk. National or State politics were of little concern to the mountaineer. Political interest was largely in local matters and the election of county officials: the county attorney, superintendent of schools, circuit court judge, and the sheriff.[54]

Political activity centered on the county courthouse. What the VanNoppens have written of western North Carolina can be said of the region as a whole:

> The courthouse was to the county seat what the cathedral was to a medieval city: it expressed the hopes and aspirations of the people. It was . . . the shaper of human lives and destinies. It was the center of government and authority. It brought order and system to the wilderness . . . It was the focal point of the social life, the occasion when those from one cove could meet and gossip with their neighbors from other coves and ridges, whom they had not seen for months.[55]

Thus, when circuit court met in the county seat several times a year, many families attended the sessions to shop and meet with friends and relatives. On election days large crowds gathered to be entertained by campaigning politicians. Until the turn of the century voting was by voice rather than secret ballot and voters would often stay all day, waiting to see how the election came out.[56]

Churches, Schools Are Simple

The strong egalitarianism and independence of the mountaineer were reflected in the prevailing forms of religious belief and practice. Presbyterians, Baptists, Methodists, and Lutherans were the chief denominations of the Southern Appalachians, although the area fostered hundreds of smaller sects as well. In the 18th century, Presbyterian' were dominant among the pioneers. This denomination, however, is highly organized and rigidly structured, emphasizing formal ritual, and with a firm requirement for a well-educated ministry. Thus, it was not readily adaptable to life in the small, isolated, unlettered neighborhoods of the mountains. Baptists became by far the most successful of the Protestant denominations, here as elsewhere, founding thousands of churches which grouped under the Southern Baptist Convention.[57] It was less structured, more democratic, and appealed strongly to the emotions. When members were too far from an established church to attend services regularly, they formed their own congregation. By 1900 Baptists accounted for well over a third of the total membership in religious groups of the region.[58] For 100 years, Baptist splinter groups and other small sects had developed, each expressing its variety of a down-to-earth, simple, emotional Christianity of sin and personal salvation. Although the Bible was the supreme religious authority, each person was free to interpret it.[59]

Education in the Southern Appalachians until well into the 20th century was largely informal, sporadic, and practical. In the smallest and most isolated settlements, one family member would serve as instructor in the rudiments of reading, writing, and mathematics for all the neighboring kin. The school term, only 3 to 5 months long, depended on weather and crop conditions. Meager tax money deprived teachers of equipment and materials. School houses were one- or two-room log cabins, poorly lighted, with fireplace or stove. Glass windows were rare before 1900. Teachers were young and inexperienced. County seats and more affluent communities established independent grade-school districts with 9-month terms that attracted trained teachers with better pay and living conditions. In Kentucky, firms such as the Stearns Coal and Lumber Co., provided schools at their own expense in company towns.[60]

Railroads, Investors, and Tourists Arrive

During the 1880's and 1890's, a series of developments began almost imperceptibly to alter the economic and social life of the Southern Appalachians. Railroads, which before the 1880's had just skirted the mountains on their way West, finally crossed the big hurdle of the Blue Ridge, after much difficulty, and the region was "discovered" by outsiders — tourists, health-seekers, journalists, novelists, and investors. A line reached Asheville from Winston-Salem and Raleigh in 1880, and then went over the Great Smokies to Knoxville.[61] As railroad construction accelerated, and as more northerners became familiar with the area, the resources of the region drew increasing national attention. The tremendous industrial expansion and urban growth that the northeastern and north central United States experienced after the Civil War created a heavy demand for raw materials, particularly timber and coal. Sources of these materials that had previously been inaccessible or even unknown grew attractive to investors. By 1900, northern and foreign capital was invested in even the remotest areas, as the region was pulled into the national urban-industrial system.

In the last decade of the century the Southern Railway extended lines into northern Georgia, reaching the heavily wooded slopes that would one day be included in the Chattahoochee National Forest.[62] In the early 1880's the Norfolk and Western Railroad extended lines into southwestern Virginia, principally to tap the wealth of coal in Tazewell County. A branch down the Clinch River Valley opened up the coal fields of Wise County. In 1890 this line was linked to Knoxville by the Louisville and Nashville Railroad.[63] In 1901 the Southern Railway joined the area of Brevard and Hendersonville, near Asheville, to its system.[64] The Chesapeake and Ohio Railroad consolidated lines in eastern Kentucky after 1900, linking Cairo, Ill., with Cumberland Gap.[65] Some mountain areas, however, remained unconnected by rail. Most of the northwestern North Carolina was reached late by railroad. Not until 1917 did a rail line arrive in Boone, seat of Watauga County.[66] But by 1910, a rail network was well established in the Southern Appalachians.

Well before the railroads, the mountains had been a mecca, however. As early as the 1820's, wealthy Charlestonians traveled by carriage to spend summers in the mountains, particularly at mineral springs. Several prominent South Carolinians built summer homes in the Cashiers area of southwestern North Carolina before the Civil War. Resort hotels were established throughout the region, notably in Asheville, White Sulphur Springs, and Hot Springs, N.C., which were interconnected by stage coach lines. In 1877 a log lodge was built on the 6,150-foot crest of Roan Mountain, in Mitchell County, N.C., bordering Carter County, Tenn. More elaborate ones followed.

Early Tourist Boom

With the railroads, tourism boomed, albeit highly localized and seasonal. Nowhere was the boom so evident as in Asheville. From 2,600 residents in 1880, it grew fivefold in 10 years. The town thrived first as a haven for tuberculosis patients; its many sanitaria included the well-known Mountain Sanitarium.[67] Notable among numerous hotels were the large, luxurious Battery Park Hotel, built shortly after the railroad arrived, and the Grove Park Inn, built in 1913. The city soon became a favorite resort for wealthy and middle-class businessmen from the industrial Northeast. The town bustled in the summer with crowds of tourists; in 1888 Charles Warner, New York journalist, praised its gay atmosphere and facilities highly.[68]

Many who were attracted to Asheville as tourists became residents. Wealthy families, like the George Vanderbilts of New York and the Vances of North Carolina, built lavish mountain estates nearby. The English financier, George Moore, created a hunting preserve in the Great Smokies in Graham County, N.C., which he stocked with bears and wild boars to provide sport for his guests. Meanwhile, resorts and hotels proliferated. After the railroad was extended to Knoxville, the large hotel at Warm Springs added 100 rooms. Investors constructed a resort town at Highlands, Macon County, N.C., which in 1890 had 350 inhabitants and was attracting tourists from coastal South Carolina and Georgia. Carl A. Schenck, a German forester who taught forestry on the Biltmore estate near Asheville, noted that, in about 1901, a "modern hotel" was built even in the small town of Brevard, Transylvania County, N.C., "where rooms with real baths were obtainable."[69]

Tourists spread word of the resources and increasing accessibility of the region. State resource surveys of the 1880's and 1890's publicized it. In 1891 the North Carolina Geological Survey examined the State's resources in an effort to further economic development. Foresters W. W. Ashe and Gifford Pinchot, who later became Chief of the Forest Service, U.S. Department of Agriculture, were hired to conduct the forest survey. This survey and others like it confirmed the observations of tourists and helped induce investments in timber, coal, and other minerals worth millions of dollars.[70]

Mountaineer Stereotype Develops

As the railroads opened up portions of the mountains and resort areas sprang up, the region attracted novelists and journalists in search of local color. During the last 30 years of the 19th century, travelogues and short stories set in little-known locales were extremely popular with the national reading public. Major magazines of the period — *Lippencott's, Harper's, Scribner's,* and *Appleton's* — provided a ready market for such writing. Professional authors looking for a romantic setting and for dramatic, novel materials found both in the Southern Appalachians.

Writers who popularized the region generally focused on the mountains of one State. For example, Mary N. Murfree, under the pseudonym Charles E. Craddock, wrote numerous stories such as "The Romance of Sunrise Rock" and "The Despot of Broomsedge Cove," most set in the Great Smoky Mountains of eastern Tennessee. The background of Frances H. Burnett's stories was North Carolina. James L. Allen wrote extensively of travels through the Cumberland area of Kentucky. Such writings found a wide audience; the most popular stories and articles were printed both in magazine and book form, and books often went through several editions.[71]

These authors pictured a culture different from the rest of America, especially the urban middle-class reader. The mountain environment was described as mysterious and awesome, and the mountaineer as peculiar and antiquated, with customs and a language of his own.

Along with northern journalists came the northern Protestant home mission movement. Protestant missionary work in the mountains grew out of a general effort to transform the South along northern lines and to eliminate racial discrimination through education and religious influence. At a time when the major older Protestant denominations were competing for new mission fields to develop, the Southern mountains were seen by many as an "unchurched" land, despite the numerous small Baptist congregations, because these northern Protestant denominations were weakly represented there. To overcome this situation, several hundred church schools were established throughout the region, supported by the American Missionary Association. One of the best known private Christian schools in Appalachia is Berea College in Berea, Ky., founded in 1855 by John S. Fee, a Presbyterian (later a Baptist) minister, as an integrated, coeducational, but nondenominational institution. These schools emphasized what they saw to be Christian and American values, modern ways, and provided practical training for the "exceptional population" of the region to participate fully in national life. Henry Shapiro claims that mission schools institutionalized Appalachian "otherness," through the implicit insistence that the mountaineers did in fact compose a distinct element in the American population."[72]

By the end of the 19th century, the southern mountaineer had been identified by others as not only different from most Americans but also in need of their help. Two aspects of mountain behavior in particular captured the interest of outsiders. These were the sometimes-linked practices of moonshining and feuding. Mountaineers came to be perceived and characterized as illegal distillers of corn whiskey and as gun slingers who fiercely protected their stills, their homesteads, and their family honor with little regard for the law.[73]

Estimating the actual prevalence of moonshining and feuding in 19th century Southern Appalachia is difficult at best, for from the beginning the documentation of these practices was unscientific. Certainly, moonshining was a common household industry. During the Civil War, distilleries were required to be licensed, and liquor was taxed at increasingly higher rates (from 20 cents per gallon in 1862 to $2.00 per gallon in 1864). Although a certain degree of compliance with these regulations occurred, many mountaineers resented the Government's authority to take a large cut of one of the few profits they could realize from their labors. They simply defied the system by hiding their stills in the woods, literally making whiskey by moonshine, and selling the liquor on the sly.[74]

After the Civil War, as the liquor tax increased but the revenues from it decreased, the U.S. Internal Revenue Service established new penalties for tax violations and instituted an era of raids on illegal mountain stills. Although moonshiners often established secret cooperative relationships with Federal revenuers (perhaps proferring their wares in exchange for Government oversight of their stills), they generally evaded the Federal agents or challenged them. As Carl Schenck, the German forester, wrote of the late 19th-century moonshiners in western North Carolina, liquor distilleries were hidden in the mountain coves and were "shifted . . . from site to site to avoid discovery." Moonshiners "went about armed, keeping the others in awe and threatening death to any betrayer of their secrets." Federal raids sometimes resulted in bloodshed. Violence was often the penalty for informers and the outcome of discovery of an illegal still.[75]

Family Feuds

The common denominator of bloodshed linked moonshining and feuding in the minds of Appalachian observers. Although in fact the two were sometimes related, feuding stemmed from broader and more basic causes. Feuding has been interpreted by some to have developed from the interfamilial disputes of the Civil War that occurred in and around the Southern Appalachians. Major campaigns and battles took place at Knoxville and Chattanooga, and numerous mountain gaps provided significant passage for both Union and Confederate troops. In John Campbell's words, "the roughness of the country led to a sort of border guerrilla warfare." Throughout the region, mountaineers joined both the Union and Confederate armies, with family members often on opposite sides. Such divisions provoked bitter local hostilities and

provided the seeds for lasting feuds. In Madison County, N.C., Union sympathizers "seized the town of Marshall, plundered the stores and committed many acts of violence." In retaliation, a thousand Confederate sympathizers from nearby Buncombe County engaged them in a punishing skirmish. After the war, as political parties developed along lines of Union-Confederate sympathies, such acrimony continued not only as interfamilial feuds, but as partisan rivalry as well.[76]

The most notorious of feuds was that between the Hatfield family of Tug Valley, W.Va., and the McCoys of Pike County, Ky. Beginning in the early 1880's with a series of minor misunderstandings, the feud quickly escalated into violence. Members of each family kidnapped, ambushed, and killed members of the other family with avenging spirit throughout the decade. Both Governor MacCorkle of West Virginia and Governor Bucknew of Kentucky tried to intervene by strengthening law enforcement in the area. The feud continued sporadically until about 1920 when Anderson "Devil Anse" Hatfield, the family patriarch, died of pneumonia.[77]

By the end of the 19th century, outsiders were seeking not only to describe and to change the mountaineer, but also to explain his quaint, peculiar, and sometimes disturbing behavior. Such explanations perpetuated and even enhanced the mountaineer stereotype. Geographical determinism and ethnic origin were most generally accepted as explanations. In 1901, a geographer, Ellen Churchill Semple, in a study of the mountain people of Kentucky, emphasized the Scotch-Irish heritage of the mountaineer and described his behavior as a pattern of adjustments required by the rugged and isolated mountain environment. He was soon widely perceived to be a remnant of pioneer days, a man of pure Anglo-Saxon stock whose culture had been isolated and been preserved by the rugged terrain and inaccessibility of the mountains.[78]

Moonshining and feuding, as examples of mountaineer behavior left over from frontier days, symbolized the independence and lawlessness of the pioneer. Mountain feuding was explained by identifying the mountaineers as Highlanders and relating the feuds to Scottish clan warfare, an idea deriving from James Craighead's *Scotch and Irish Seeds in American Soil,* an 1878 publication popularized by the American Missionary Association. Later, John Campbell attributed both moonshining and feuding to the mountaineer's high degree of individualism: "His dominant trait is independence raised to the fourth power." Geographer Rupert Vance emphasized environmental adaptation as an explanation of moonshining and feuds: "Stimuli to homicide were many where lands were settled by the squatter process and titles were so obscure. . . . "[79]

An alternative view of the mountaineer that developed early was also based on ethnicity. John Fiske, a popular historian of the late 19th century, gave currency to the false idea that virtually all Southern mountaineers were descendants of whites transported to America as servants or criminals in early colonial times.[80] Such a distorted, ignorant view of the mountaineer as Anglo-Saxon criminal made it easier for some to see why feuding and illegal distilling persisted in spite of Christian education and increased law enforcement. This naive view, which was repeated and reinforced in the 20th century by the writing of John Gunther and Arthur Toynbee, achieved a modern stridency in the words of Kentuckian Harry Caudill. Caudill claimed the mountaineer was "the illiterate son of illiterate ancestors," and of debtors, thieves, and orphans who fled the cities of England:

> . . . cast loose in an immense wilderness without basic mechanical or agricultural skills, without the refining, comforting, and disciplining influence of an organized religious order, in a vast land wholly unrestrained by social organization or effective laws, compelled to acquire skills quickly in order to survive, and with a Stone Age savage as his principal teacher.[81]

Investors Transform the Region

The railroads opened the area to investors as well. Some of the investors were northern financiers; some were British investment capitalists whose interest in the region was but a small part of their overseas investments. A few of the capitalists came to the region to stay as did Joseph Silverstein of New York who formed the Gloucester Lumber Co. southwest of Asheville, and Reuben B. Robertson of Canton, Ohio, who managed the Champion Fibre Co. of North Carolina. Most, however, invested in the region only to extract the desired riches, and then withdrew.

The foreign investment and industrial development which followed was frequently hailed as a natural solution to "a whole range of problems . . . resulting from the isolation of Appalachia and the poverty of the mountaineers."[82] Much of the capital investment in the Southern mountains between 1880 and 1900 was justified by a belief that economic development and industrialization were best for the region itself.

The impact this industrial investment was to have on the people of the Southern Appalachians was profound. By 1900 the isolated, self-contained farming existence that had characterized the region was quickly changing and, by 1920, was seriously disrupted. Before 1880, the southern mountaineer made his living directly from the land, and needed only modest amounts of cash, which he could raise from the sale of livestock, trees, or other products from his land. From 1890 on, the timber and coal companies purchased much of the mountaineer's land, gave him a job in a mill, mine, or factory, paid him in cash, brought in canned food and consumer goods for him to buy, and educated him in the ways of the modern world. Industrialization, urbanization, large-scale changes in landownership and land use, as well as deliberate attempts to change the society and culture of the mountaineer, had come to the Southern Appalachians to stay. Two world wars, the Great Depression, the New Deal social programs, TVA, and the introduction of the Federal forest and parks also had major lasting impacts on the area and its people.

Reference Notes

1. 36 Stat. 962 (16 U S C 515, 521); 43 Stat. 653 (16 U.S.C. 471, 505, 515, 564-70).
2. For general discussions of the alternative definitions of the Southern Appalachian region, see Bruce Ergood, "Toward A Definition of Appalachia" in Bruce Ergood and Bruce Kuhre (eds.), *Appalachia: Social Context Past and Present* (Athens, Ohio: Ohio University, 1976), pp. 31-41 and Allen Batteau, "Appalachia and the Concept of Culture: A Theory of Shared Misunderstandings," *Appalachian Journal* 7 (Autumn/Winter, 1979-80): 21, 22.
3. John Campbell, *The Southern Highlander and His Homeland* (Lexington: The University of Kentucky Press, 1969), pp. 10-13. Campbell distinguishes a Southern Appalachian region as that part of the Southern Highlands which is south of the New River divide, p. 12.
4. Thomas R. Ford (ed.), *The Southern Appalachian Region: A Survey* (Lexington: University of Kentucky Press, 1962).
5. Map published by the Appalachian Regional Commission, January, 1974. The Commission has divided "Appalachia" into Northern, Central, and Southern subregions. Within each of these, there is a "Highlands Area," representing the most mountainous counties of the region.
6. Wilbur Zelinsky, *The Cultural Geography of the United States* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973), p. 112.
7. Helen M. Lewis, "Subcultures of the Southern Appalachians," *The Virginia Geographer* (Spring 1968):2.
8. Batteau, "Appalachia and the Concept of Culture: A Theory of Shared Misunderstandings":29.
9. This geographic focus includes all the Appalachian National Forests within the Forest Service's Southern Region (R-8), with the exception of the George Washington National Forest. Because it is located north of the New River divide and within a 90-minute drive of Washington, D.C., the George Washington National Forest was felt to belong more properly with a consideration of the Monongahela National Forest in West Virginia, the Allegheny in Pennsylvania and Wayne National Forest in Ohio.
10. 36 Stat. 962; 43 Stat. 653.
11. Some 61,500 acres were purchased for the Blue Ridge Parkway and over 507,000 for the Great Smoky Mountains National Park. Almost 3.5 million acres have been acquired for the Nantahala, Pisgah, Cherokee, Chattahoochee, Daniel Boone, and Jefferson National Forests.
12. Si Kahn, "The National Forests and Appalachia," Cut Cane Associates, 1973, p. 1.
13. Charlton Ogburn, *The Southern Appalachians: A Wilderness Quest* (New York: William Morrow and Co., 1975), pp. 67-72; and Frederick A. Cook, Larry D. Brown, and Jack E. Oliver, "The Southern Appalachians and the Growth of Continents," *Scientific American* 243 (October 1980): 156-169.
14. The three subregions have also been labeled "belts" or "provinces" and have received varying names. The Valley and Ridge subregion for example, has been called The Greater Appalachian Valley, The Newer Appalachians, and The Folded Appalachians. For physiographic descriptions of the three subregions, see John C. Campbell, *The Southern Highlander and His Homeland,* pp. 10-18; Edgar Bingham, "Appalachia: Underdeveloped, Overdeveloped, or Wrongly Developed?" *The Virginia Geographer* VII (Winter 1972): 9; Wallace W. Atwood, *The Physiographic Provinces of North America* (Boston: Ginn and Company, 1940), pp. 109-122; Charles B. Hunt, *National Regions of the United States and Canada* (San Francisco: W.H. Freeman and Co., 1974), pp. 282-299; Thomas R. Ford (ed.), *The Southern Appalachian Region: A Survey,* pp. 1-3; and Rupert B. Vance, *Human Geography of the South* (Chapel Hill: University of North Carolina Press, 1932), pp. 27, 28.
15. Atwood, *The Physiographic Provinces,* p. 14.
16. The subregion has also been likened to "a wrinkled rug." Cook, *et. al.,* "The Southern Appalachians," p. 160.
17. Ogburn, *The Southern Appalachians,* p. 103.
18. One explanation for the reversal is that, north of Roanoke, the sea advanced and retreated several times over millions of years and, in so doing, created a new drainage pattern. See Atwood, *The Physiographic Provinces,* p. 120.
19. Hunt, *Natural Regions,* pp. 287, 288.
20. Ogburn, *The Southern Appalachians,* 151-171; Ina W. VanNoppen and John J. VanNoppen, *Western North Carolina Since the Civil War* (Boone: Appalachian Consortium Press, 1973), p. 291.
21. Ogburn, *The Southern Appalachians,* pp. 139-150.
22. Campbell, *The Southern Highlander and His Homeland,* pp. 246, 247.
23. Hunt, *Natural Regions,* pp. 297-299.
24. Cook, *et. al.,* "The Southern Appalachians."
25. Roy S. Dickens, Jr., *Cherokee Prehistory: The Pisgah Phase in the Appalachian Summit Region* (Knoxville: University of Tennessee Press, 1976), pp. 9-15; and Ogburn, *The Southern Appalachians,* p. 55.
26. Ogburn, *The Southern Appalachians,* pp. 10, 11. David S. Walls, in "On the Naming of Appalachia," maintains that DeSoto's discovery of the Appalachians is merely "legend" and that the first European to designate the mountains by their names was Jacques le Moyne de Morgues, a Frenchman, in 1564. J.W. Williamson (ed.), *An Appalachian Symposium* (Boone: Appalachian State University Press, 1977), pp. 56-76.
27. Frederick Jackson Turner, *Rise of the New West, 1819-1829* (New York: Collier Books, 1962), pp. 56-58.
28. Descriptions of the pioneer settlement of the Southern Appalachians are found in Campbell, *The Southern Highlander,* pp. 23-42; John Caruso, *The Appalachian Frontier: America's First Surge Westward* (Indianapolis: The Bobbs-Merrill Co., Inc., 1959); Vance, *Human Geography of the South;* and Harry Caudill, *Night Comes to the Cumberlands* (Boston: Little, Brown and Co., 1962).
29. Campbell, *The Southern Highlander,* p. 42.
30. Turner, *Rise of the New West,* pp. 84-86.
31. Dickens, *Cherokee Prehistory,* pp. 14, 15.

32. Ogburn, *The Southern Appalachians,* pp. 55-58. See also Kenneth B. Pomeroy and James G. Yoho, *North Carolina Lands: Ownership, Use, and Management of Forest and Related Lands* (Washington: The American Forestry Association, 1964), pp. 92-120; and Duane H. King (ed.), *The Cherokee Indian Nation* (Knoxville: The University of Tennessee Press, 1979).
33. VanNoppen and VanNoppen, *Western North Carolina,* p. 379. Campbell, *The Southern Highlander and His Homeland,* p. 33.
34. Ronald D. Eller, "Land and Family: An Historical View of Preindustrial Appalachia," *Appalachian Journal* 6 (Winter 1979): 84, 86.
35. Ronald D. Eller, "Miners, Millhands, and Mountaineers: The Modernization of the Appalachian South, 1880-1930" (Ph.D. dissertation, University of North Carolina, 1979), p. 23.
36. VanNoppen and VanNoppen, *Western North Carolina,* pp. 2, 3. Gene Wilhelm, "Folk Geography of the Blue Ridge Mountains," *Pioneer America* (1970): 1, 2.
37. Eller, "Land and Family," p. 85. Eller, "Mountaineers, Miners, and Millhands," p. 20.
38. This and the following demographic description of the Southern Appalachians is based on Bureau of the Census data for 79 mountain counties which represent the core of the region. These counties include:

Georgia:	Banks, Catoosa, Chattooga, Fannin, Gilmer, Gordon, Habersham, Lumpkin, Murray, Rabun, Stephens, Towns, Union, Walker, White, Whitfield;
Kentucky:	Bath, Bell, Clay, Estill, Harlan, Jackson, Knott, Knox, Laurel, Lee, Leslie, Letcher, Menifee, Morgan, Perry, Powell, Pulaski, Rockcastle, Rowan, Whitley, Wolfe;
North Carolina:	Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Graham, Haywood, Jackson, Macon, McDowell, Madison, Mitchell, Swain, Transylvania, Watauga, Yancey;
Tennessee:	Blount, Carter, Cocke, Greene, Johnson, McMinn, Monroe, Polk, Sevier, Sullivan, Unicoi, Washington;
Virginia:	Bland, Dickenson, Giles, Grayson, Lee, Pulaski, Russell, Scott, Smythe, Tazewell, Washington, Wise, Wythe.

Data comes from Bureau of the Census, *Twelfth Census of U.S.* (Washington: Government Printing Office, 1902).
39. For a full discussion of Middlesboro's founding, see Eller, "Miners, Millhands, and Mountaineers," pp. 130-137.
40. See Note 38.
41. See Note 38.
42. Vance, *Human Geography of the South,* p. 247. Gene Wilhelm, Jr., "Appalachian Isolation: Fact or Fiction?" in J. W. Williamson (ed.), *An Appalachian Symposium* (Boone: Appalachian State University Press, 1977), p. 88.
43. Eller, "Miners, Millhands, and Mountaineers, p. 36, 37; and Jack E. Weller, *Yesterday's People* (Lexington: University of Kentucky Press, 1966), pp. 12, 13.
44. Weller, *Yesterday's People,* 38-40.
45. Frank L. Owsley, *Plain Folk of the Old South* (Chicago: Quadrangle Books, 1965), p. 45.
46. Eller, "Miners, Millhands, and Mountaineers," pp. 40-42; Susie Blaylock McDaniel, *Official History of Catoosa County, Georgia 1853-1953* (Dalton, Georgia: Gregory Printing and Office Supply, 1953), p. 195; Goodridge Wilson, *Smythe County History and Traditions* (Kingsport, Tennessee: Kingsport Press, 1932), p.171; and Wilhelm, "Appalachian Isolation," p. 83.
47. Eller, "Miners, Millhands, and Mountaineers," p. 43; and George L. Hicks, *Appalachian Valley* (New York: Holt, Rinehart and Winson, 1976), pp. 20, 21.
48. Wilhelm, "Appalachian Isolation," p. 88; and Vance, *Human Geography of the South,* p. 249.
49. VanNoppen and VanNoppen, *Western North Carolina,* pp. 276, 277.
50. Wilhelm, "Appalachian Isolation," p. 83.
51. Eller, "Miners, Millhands, and Mountaineers," p. 26.
52. VanNoppen and VanNoppen, *Western North Carolina,* p. 18.
53. Eller, "Miners, Millhands, and Mountaineers," p. 29.
54. Campbell, *The Southern Highlander,* p. 102.
55. VanNoppen and VanNoppen, *Western North Carolina,* p. 27.
56. Eller, "Miners, Millhands, and Mountaineers," p. 65, and Laurel Shackelford and Bill Weinberg, eds., *Our Appalachia* (New York: Hill and Wang, 1977), pp. 23-25.
57. Willis D. Weatherford, ed., *Religion in the Appalachian Mountains: A Symposium* (Berea, Ky.: Berea College, 1955), pp. 35-50.
58. Campbell, *The Southern Highlander,* pp. 170, 171; and VanNoppen and VanNoppen *Western North Carolina,* p. 72.
59. Weatherford, *Religion in the Appalachian Mountains,* pp. 96-98, and Shackelford and Weinberg, *Our Appalachia,* pp. 44-50.
60. Campbell, *The Southern Highlander,* p. 264; L. E. Perry, *McCreary Conquest, A Narrative History* (Whitley City, Ky.: L. E. Perry, 1979), pp. 63-72.
61. Wilma Dykeman, *The French Broad* (New York: Rinehart and Company, 1955), p. 164. See pp. 159-165 for colorful description of Western North Carolina Railroad construction. See also VanNoppen and VanNoppen, *Western North Carolina,* pp. 253-259.
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Mountaineers and Rangers

A History of Federal Forest Management in the Southern Appalachians 1900-81

Figure 10.—Steam engine loading railroad flatcars at log boom on Big Lost Creek, Polk County, southeastern Tennessee, just above Hiwassee River and line of Louisville & Nashville Railroad, near old mill town of Probst, not far from present town of Reliance, in Unicoi Mountains. This area was part of the new Cherokee National Forest Purchase Unit when photo was taken in February 1912. Logs are largely yellow-poplar, which shows good reproduction in this highland region of heavy annual rainfall. Timberlands of the Prendergast Company, which also owned the flatcars and the logging railroad. (National Archives: Record Group 95G-10832A)

Though this first major venture failed, others were not deterred. H.N. Saxton, an Englishman, organized the Sevierville Lumber Co. in the late 1880's, and later started Saxton and Co., a firm exporting hardwoods to Europe.[2] As the forests of the Northeast and the Great Lakes region were depleted, more and more northern lumber companies came to the Southern Appalachians. Speculators came too, to take advantage of the rich resources and low land costs. Businesses were organized for the explicit purpose of buying land and timber.

In the 1890's the timber speculators began in earnest, and an astonishing number of timber companies moved into the southern mountains. In North Carolina, the Unaka Timber Co. of Knoxville, Tenn., was active in Buncombe, Mitchell, Madison and Yancey Counties, while the Crosby Lumber Co. from Michigan operated in Graham County. In 1894 the Foreign Hardwood Log Co. of New York and the Dickson-Mason Lumber Co. of Illinois made extensive purchases in Swain County. The Tuckaseigie Lumber Co. purchased 75,000 acres of land in Macon, Jackson, and Swain Counties. Other firms included the Toxaway Tanning Co., the Gloucester Lumber Co., the Brevard Tanning Co., the Asheville Lumber and Manufacturing Co., and the Asheville French Broad Lumber Co. After 1900 the Montvale Lumber Co., the Bemis Lumber Co., and the Kitchen Lumber Co. bought large tracts in the North Carolina Great Smokies. The largest North Carolina firms were Champion Fibre Co. which came from Ohio to Canton, N.C., in 1905, and the William Ritter Lumber Co. from West Virginia. The Ritter firm, the largest lumber company in the Southern Appalachians, owned almost 200,000 acres of land in North Carolina alone.[3]

New timber companies also acquired land and timber rights in eastern Kentucky, eastern Tennessee, and northern Georgia. The Burt-Brabb and Swann-Day lumber companies, early developers in eastern Kentucky, were followed by the Kentucky River Hardwood Lumber Co., which at one point owned over 30,000 acres of forest land. Watson G. Caudill operated a lumber company that was active in several counties. However, it was not until the William Ritter Co. moved in that truly extensive and long-term operations began in the eastern counties of the State. The Ritter companies were so large and enterprising that they built their own railroads after the Norfolk and Western Railroad refused to construct lines needed for their business.[4] The Ritter Co. also purchased acreage in the mountains of eastern Tennessee.

The Little River Lumber Co. became a major landowner in the Great Smoky Mountains, with over 86,000 acres near Clingman's Dome. The Norwood Lumber Co., the Vestal Lumber and Manufacturing Co., and the Pennsylvania-based Babcock Lumber Co. also bought land in eastern Tennessee. The Gennett Lumber Co., organized in Nashville in 1901, speculated in land and timber in Tennessee, South Carolina, Georgia, and North Carolina for most of the 20th century. The Gennett Lumber Co. was one of the most prominent in northern Georgia, along with the Pfister-Vogel Land and Leather Co. of Milwaukee, which actively purchased land there after 1903, for about $2.00 an acre.[5]

Timberlands Sell Cheaply

Prices paid by the timber companies for land in the southern mountains were astonishingly low. The agents of northern and foreign firms found a people unaccustomed to dealing in cash and unfamiliar with timber and mineral rights and deeds. The companies bought up huge tracts of land for small sums. When local opposition to such purchases began to develop, they switched to buying only timber or coal rights. Some lumber companies even purchased selected trees. The mountaineer, offered more cash than he had seen before in one transaction, found it difficult to refuse an offer, especially since he usually had no idea of the fair value of the land or timber. Enormous yellow- (tulip) poplars and stands of white and red oak and black cherry were sold for 40 to 75 cents a tree.[6]

Ronald D. Eller tells how much Appalachian mountain land was acquired:

> The first timber and mineral buyers who rode into the mountains were commonly greeted with hospitality by local residents. Strangers were few in the remote hollows, and a traveler offered the opportunity for conversation and a change from the rhythms of daily life. The land agent's routine was simple. Riding horseback into the countryside he would search the coves and creek banks for valuable timber stands or coal outcroppings, and having found his objective, he would approach the cabin of the unsuspecting farmer. [The farmer's cordial] greeting was usually followed by an invitation to share the family's meal and rude accommodations for the night. After dinner, while entertaining the family with news of the outside world, the traveler would casually produce a bag of coins and offer to purchase a tract of 'unused ridgeland' which he had noticed while journeying through the area. Such an offer was hard to refuse in most rural areas, where hard money was scarce, life was difficult, and opportunities few.[7]

Thus the money often provided a welcome opportunity for a family to leave a farm that had been worn out for years. In northern Georgia especially, the farm population was greater than the land could reasonably support, and people sold willingly.[8] In other areas, people were more reluctant to sell to outsiders. Some unscrupulous firms enlisted the aid of local

Figure 11.—A team of four horses and mules pulling a flatbed wagon carrying a large white oak log to the sawmill along a dirt road near Jonesboro, Washington County, Tenn., in July 1915. Log probably came from Locust Mountain area west of Johnson City, not far from the Unaka National Forest, now a part of the Cherokee. (NA:95G-23262A)

merchants, who would make purchases for "dummy" corporations.

Sometimes land with inexact or missing titles was simply taken from the mountaineers, who often had failed to obtain formal title to their land. This "unclaimed" land could be taken by anyone willing to stake a claim, survey the land, and pay a fee to the State. Other claims were clouded, or not properly surveyed.[9] In some counties, courthouse records had been destroyed by fire, creating uncertainty about ownership. Thus, a timber company could move into an area, conduct its own surveys, and file claim for lands that the mountaineer had long used and thought were his. Litigation was expensive and time-consuming; most residents had neither the sophistication nor the resources to carry a case through court proceedings. In Kentucky, the State legislature passed an act in 1906 that permitted speculators who had held claims and had paid property taxes for 5 years to take such property from previous claimants who had not paid taxes.[10] Thus, rising property taxes created by speculation worked to the advantage of the corporation and against the original claimant, who probably paid low taxes to start with and could not afford an increase. These processes were gradual, but they marked the beginning of the disestablishment of the mountaineer, and further alteration of the mountain economy.

Timber Cutting Often Delayed

Once the land was acquired, timber companies often did not cut the timber immediately. Most of the Pfister-Vogel lands of northern Georgia were never cut by the firm. The Gennett brothers bought and sold land for decades, cutting over parts, and waiting for good or better lumber prices on others. The Cataloochia Lumber Co. lands in Tennessee were sold to the Pigeon River Lumber Co., and in turn were bought by Champion Lumber Co. The firm of William Whitmer and Sons purchased tracts in North Carolina which it deeded to the Whitmer-Parsons Pulp and Lumber Co., which later sold the lands to the Suncrest Lumber Co., a Whitmer-backed operation.[11]

Other outside firms bought land, timber, or mineral rights for speculation, or for possible use. For example, the Gennetts bought an 11,000-acre tract from the Tennessee Iron and Coal Co.; the Consolidation Coal Co. owned vast tracts in Kentucky, and employed a forester to manage those lands.

At one point, Fordson Coal Co., a subsidiary of the Ford Motor Co. owned about half of Leslie County, Ky., and several land development companies purchased extensively in the mountains of northern Georgia.[12] Such speculation was to inflate the value of all land in the region, as illustrated in the following comments by a Forest Service purchasing agent who came to the Southern Appalachians in 1912:

> This is a virgin timber county [the Nantahala purchase area] and about three years ago the big lumber companies, seeing their present supplies in other regions running low, came in here and quietly bought up large "key" areas of timberland. They are now holding these at prices which are more nearly compared with lands in regions where railroad developement [*sic*] is more favorable . . . The withdrawal of these large bodies has enhanced the value of the smaller tracts . . .[13]

Between 1890 and the First World War, a great deal of timber was cut on purchased lands, and the economic impact was felt throughout the southern mountains. The years 1907 to 1910 were the years of peak activity. Throughout the region, lumber production rose from 800 million board feet in 1899 to over 900 million board feet in 1907.[14] In 1910, the number of lumber mills in Georgia reached almost 2,000; a decade later it had fallen to under 700. Individual tracts yielded vast quantities of lumber: in 1909, one 20,000-acre tract in the Big Sandy Basin produced 40 million board feet of tulip (yellow-) poplar, while in 1912, the mountains around Looking Glass Rock in North Carolina yielded 40,000 board feet of tulip (yellow-) poplar per acre.[15].

Logging Boom Displaces Farmers

The social and economic impact of the logging boom on the peoples of the Southern Appalachians was lasting. For decades small firms and individuals had engaged in selective cutting throughout the region without appreciably changing the economy, the structure of the labor force, or the size of the forests. Now, within a decade or two, the landownership pattern of the southern mountains changed drastically. As mountain lands were sold to the timber interests, farms and settlements were abandoned. As Ron Eller has written:

> Whereas mountain society in the 1880's had been characterized by a diffuse pattern of open-country agricultural settlements located primarily in the fertile valleys and plateaus, by the turn of the century the population had begun to shift into non-agricultural areas and to concentrate around centers of industrial growth.[16]

By 1910, vast tracts of mountain land, which had previously been held by privately scattered mountain farmers, had fallen into the hands of absentee landowners, and towns were becoming important centers of population. Although some mountaineers remained on the land as tenants, sharecroppers, caretakers, or squatters, many were displaced.

The changing pattern of landownership was reflected in changes in population and acreage devoted to farming. The population growth of some mountain counties slowed considerably by 1910, and a few actually lost population. For example, Macon and Graham Counties, N.C., which had grown at a rate faster than the State between 1880 and 1900, experienced almost no growth between 1900 and 1910. Over the same decade, Rabun and Union Counties, Ga., lost 11.5

percent and 18.4 percent of their populations respectively. Similarly, both number of farms and farm acreage declined in areas where heavy outside investment had occurred. Between 1900 and 1910, in the counties of extreme northern Georgia, southwestern North Carolina, and southeastern Tennessee, the number of acres in farms dropped roughly 20 percent. In Rabun County, Ga., the number of acres in farms declined 40 percent over the decade.[17]

As the timber companies moved into the region, numerous logging camps and milling towns were established. These centers absorbed the mountain people who had sold their lands, and attracted outsiders eager to benefit from the logging boom. Over 600 company towns are believed to have been established in the southern mountains in 1910, most of which became permanent parts of the landscape.[18] Logging settlements and mill towns circled the Great Smokies: Fontana, Bryson City, and Ravensford, N.C.; Rittertown, Gatlinburg, Elkmont, and Townsend, Tenn.[19] By 1911, Tellico Plains, Tenn., with a population of about 2,000, discovered itself a "busy little city," boosted by the heavy demand for the area's timber. Probably the most famous mill town was Canton, in Haywood County, N.C., created by Champion Fibre Co. In 1905, Champion had bought timberlands along the Pigeon River and built a large flume from the site to the town, about 15 miles away. Carl Schenck wrote about the operation some years later: "At the upper inlet of the flume a snug village with a church and a school was planned. The whole scheme was the most gigantic enterprise which western North Carolina had seen."[20]

Numerous temporary logging camps were established to shelter the thousands of timber company employees. Many of these flourished for several years before being abandoned. Although the lumber companies employed local men, they also imported timber crews from the North and overseas, sometimes hundreds of laborers at one time from their camps in Pennsylvania, New York, or Michigan. A logistical network of support personnel was needed to maintain a lumber camp; thus, building and servicing the camps provided labor for many mountain families. Local men also lived in the logging camps for a few weeks or months at a time while maintaining the family farm. For several years, lumbering provided steady, dependable employment for thousands of mountaineers.

For this reason, although logging helped to disestablish the mountaineer, its social impact was not nearly so destructive as that of coal mining. The southern mountaineer could work in lumbering without relinquishing his life to the company employing him; many of the lumber camps were never intended to be permanent and did not demand that a laborer give up his home for work. Thus,

> the immediate effects of lumbering were not especially destructive. In many respects the operations suited already established work habits. Nor were wasteful methods likely to disturb a people who traditionally viewed the forests as a barrier to be destroyed whenever the need for crop land demanded.[21]

Figure 12.—Barthell Mine of Stearns Coal and Lumber Company at Paunch Creek in Stearns (then Laurel) Ranger District, Daniel Boone (then called Cumberland) National Forest, McCreary County, Ky., in 1940. Note mining camp houses, and stacks of mine props along railroad. (NA:95G-400254)

Nevertheless, in bringing industrial capitalism and absentee landownership to the Southern Appalachians, the lumber boom altered the region's economy, and made a lasting mark upon its landscape.

Mining Boom Destructive to Land

The penetration of the mountains by railroads was a key unlocking the region's mineral wealth, as it had the region's timber. In McCreary County, Ky., for example,

> a virtual wilderness of untouched and unwanted wild lands . . . considered worthless for generations, overnight aroused the interest of the large corporations and land speculators whose agents invaded the territory on the heels of the new railroad . . .[22]

As with timber lands, the sale of mountain lands to coal company agents was usually done willingly, even if unscrupulous methods sometimes were used. In Kentucky, where the Stearns Coal and Lumber Co. bought thousands of homesteads beginning in the late 1890's, William Kinne, the Stearns land agent, was received warmly and came to be regarded with respect and even endearment.[23] Nevertheless, the transfer of landownership to land and development companies in the 1880's and 1890's insured that the control of the mining industry, and much of the profit from it, would flow outside the region.

Mineral developments in the Southern Appalachians included mica, iron, copper, manganese, and coal mining. Mica mining flourished for a time around the turn of the century in North Carolina, and then declined as mica was replaced by other substances. Some mica mining continues, but it is a comparatively small business.

Between the end of the Civil War and about 1910, an iron and copper industry based on locally produced coal, iron ore, copper ore, sulfur, and limestone grew up in eastern Tennessee. Although railroad construction at first improved the market for iron, the expansion of the national transportation network eventually drove the regional producers out of business. Limitations in the quality and quantity of iron ore also were a factor. By World War I, little remained of the iron industry that had flourished earlier in Chattanooga, Ducktown, Rockwood, and Dayton.[24]

In spite of these mineral developments, it is coal mining that most significantly altered the economy and society of the mountains. From 1900 to 1920 the increasing national demand for coal led to the penetration of the Great Lakes market by Southern Appalachian coal producers and to the rapid development and, ultimately, overdevelopment of the mountain coal fields. It was comparatively cheap and easy to extract coal by strip-mining from seams in the mountainsides. The most important requirement was a large supply of cheap labor.[25]

Although large areas of accessible mountain land were affected by the timber boom, coal and other forms of mining at first affected only individual isolated valleys, chiefly in Kentucky and Tennessee. However, the impact of mining was more permanent. Timber companies would "cut and get out," but mining companies, working rich and extensive seams of coal, would remain for years. Unlike the logging camps, the mining towns became of necessity the permanent homes of those who came to work the mines. Mine operators developed company towns partly to provide housing in isolated areas, and partly to gain control of the labor force. Workers often had no alternative to the company town because the coal company owned all the land for miles around.

To the coal entrepreneur, a local mountaineer who remained on his own "home place" was an unreliable worker. He would take time off for spring planting, and several times a year he would go hunting. He might also take off from work for a funeral or a family reunion. Once a worker was housed in the company town, however, he could be disciplined more effectively because, if he lost his job in the mine, he would be evicted from his house at the same time. Also, most company towns did not permit independent stores to operate. Workers were generally in debt for purchases made at the company-owned store. In many towns even a garden patch to supplement the store-bought food was, for lack of space, impossible.

When the timber boom began to slacken just after World War I, mountaineers who had been dependent on work in the logging camps and sawmills moved into the coal mining areas of the mountains to find work. Many went across the crest of the Appalachians from North Carolina and Virginia into Kentucky to the coalfields of the Cumberlands. Mountaineers were also faced with competition for jobs, when outsiders, including blacks from the Deep South, as well as European immigrants, were imported to enlarge the labor force.

Squalid Company Towns

The coal industry in the Southern Appalachians continued to grow until 1923. However, throughout the 1920's the coal producers maintained their competitive advantage by wage reductions. The cut-throat competition in the coal industry discouraged investment in improvements for the company towns. Many of these hastily constructed communities grew increasingly squalid. Miners moved frequently, hoping for better housing and working conditions at another mine.

Mining was destructive to the environment, even in the early days. The demand for pit props, poles, and railroad ties contributed to the exploitation of the surrounding forests. The mines produced slag heaps and acid mine runoff which severely damaged streams and wildlife. The company towns had no facilities for sewage and refuse disposal, so human waste and trash heaps polluted the creeks, causing serious health hazards. One particularly blighted area, perhaps the largest and most notorious in the United States, was near Ducktown, Polk County, Tenn., and McCaysville, Fannin County, Ga. There, the acid fumes from the smelting and refining of copper and iron had destroyed thousands of acres of the mountains' entire vegetative cover. Erosion was severe from the bare slopes, and heavy silting occurred in the main channel of the Tennessee River, 45 miles to the west.[26] Yet decades went by before such devastating impacts of mining attracted wide attention.

The impact of largescale logging on the Southern Appalachians in the years after 1890 was not only economic and social. It encouraged fires, erosion, and floods that drew national attention to the region and sparked legislation authorizing most of the eastern National Forests.

Figure 13.—"Spoil banks" of raw acid subsoil, left over from strip-mining of shallow seams of soft coal 5 years earlier. McCreary County, Ky., Daniel Boone (then Cumberland) National Forest, July 1955. (Forest Service photo F-478950)

Figure 14.—Smelter of Tennessee Copper Company at Copper Hill-McCaysville on Tennessee-Georgia State line in Southern Appalachian Highlands along Ocoee River. When photo was taken in September 1905, plant was undergoing great expansion. Forest devastation from sulfur fumes of smokestacks was already evident. Area is near the edges of three National Forests and three States. Acid fumes from this and other smelters in the "Copper Basin" destroyed timber and wildlife on thousands of acres of forests and caused severe soil erosion for many years, muddying waters of the Tennessee River, more than 40 miles distant, before operations ceased. (NA:95G-63040)

In terms of both investment and impact, logging operations in the mountains actually occurred in two phases. The first, roughly from 1880 to 1900, was characterized by low investment, "selective" cutting (usually "high-grading"), and a spatial separation between timbering operations and milling. The second phase, beginning around 1900, peaking in 1909, and lasting into the 1920's, involved a higher level of investment, heavy cutting, and the construction of rail lines and mills thoughout the mountain forests. It was with the latter stage that environmental damage became acute.

In the early days, only the largest and highest quality trees were cut: cherry, ash, walnut, oak, and yellow- (tulip) poplar, often as large as 25 feet in circumference. Although it is difficult to imagine today, trees were felled that were larger in diameter than an average man stands. Some portable sawmills were brought into the mountains in the earlier years, but logs from these enormous trees were usually transported to a mill, some miles distant, by horse, oxen, or water. Typically, log splash dams were built on the shallow mountain streams so that many logs could be moved at one time. Logs were rolled into the lakes formed behind the dams, and with a buildup from rain or melting snow, the dams were opened to let the logs cascade down the mountains. From wider places on the river, trees—as many as 40 to 120 at a time—were lashed together to form rafts, which were piloted downriver to the mills.[27]

Elbert Herald reminisced about this kind of logging for the compilers of *Our Appalachia.* As a boy, Herald logged with his father in Leslie County, Ky., between 1922 and 1930. His experiences are typical of the small local lumbering operations that went on before, during, and after the big timber boom.

> I was eleven years old when I moved to Leslie County. It was a very isolated country up there, mind you, I said this was in 1922: there was not one foot of highway, there was not one foot of railroad. My father, he looked around and there was plenty of hard work to get done, and we went to work cutting logs.
>
> There wasn't any saw mill around to sell them at closer than Beattyville, a right smart piece away. There was a number of companies we would contact [to] get a contract for so many logs . . .
>
> Walnut and white oak at that time was best. We would get $35 a thousand [board feet] for that, but when it come down to beech and smaller grades we done well to get $25 a thousand.
>
> [We] cut roads through the hills and hauled our logs down to the riverbanks with work oxens and horses. When we got [the logs] to the river we would raft them together and buyers would come along buying. If it was real big logs—anywhere from 24 to 28 inches [in diameter]—we would take about 65 logs. If they were smaller logs—anywhere from 18 to 22 inches—we'd take 75 or 80 on a raft, which would amount to anywhere from 8 to 10 thousand board feet, depending on the length of the logs.[28]

Although logging was hard work and timber prices were not high, Herald explained that it was the only way to make money at that time. The market for farm crops was dismal.

Although this kind of logging was careless and destructive, its environmental impact was minor compared to the intense logging of the boom period. Small local lumber operations cut trees very selectively, according to size, quality, and proximity to a stream. Relatively few men were engaged in lumbering at first, and the visible effects of milling were scattered and removed from the source of supply. It had been estimated that even in 1900 most of the area was wooded and at least 10 percent of the Southern Appalachian region remained in virgin timber.[29]

Before that year, however, distinct changes began. Out-of-state and foreign investors began purchasing large tracts of mountain land, and rail lines were built into previously inaccessible valleys. With railroads, mills could be located close to the source of supply; trees had to be transported only short distances, and finished lumber could be carried to the market.

One of the most impressive railroad projects in the mountains was that of the Little River Lumber Co. Chartered in 1901, the Little River Railroad was a standard-gauge line from Maryville, Tenn., at the southwestern corner of the Great Smokies, to the mill at Townsend, then running 18 miles up the gorge of the Little River to the base of the timber operations. The rail construction greatly increased the ease and scale of operations. By 1905, the mill was cutting about 60,000 board feet of wood per day. This area is now well inside the Park, not far from the cross-Park highway, U.S. Route 441.

Other methods, too, were devised to further largescale tree removal; among them were inclined railways controlled by yarding machines, and overhead cable systems, both used with considerable success in the Smokies.[30] To facilitate log transportation, larger flumes and splash dams were built. A concrete splash dam built across the Big Sandy River in Dickenson County, Va., was probably the largest. Completed in 1909, it was about 360 feet high and 240 feet across, with five flumes, each 40 feet wide, through which the pent-up logs tumbled.[31] The dam enabled the Yellow Poplar Lumber Co. to run logs to Cattletsburg, Ky., in record time; within 10 years, the merchantable hardwood timber supply of the Big Sandy Basin had been virtually exhausted.

Wasteful Cutting Damages Forests

Throughout the region, as the scale of logging increased, size selectivity in cutting declined:

> The depletion of the forests is revealed by the rapidly changing cutting standards as culling became the rule rather than the exception. In 1885 few logs under 30 inches in diameter were cut. Ten years later the usual cutting was 24 inches. By 1900 the average limit had dropped to 21 inches. By 1905 lumberman were taking chestnut and oak only 15 inches on the stump.[32]

Figure 15.—Steam overhead cable skidder on rails bringing in logs from two facing slopes on tract of Little River Lumber Company in Great Smoky Mountains, Sevier County, Tenn., in 1913. (NA:95G-15507A)

Not only was there a decline in the average size cut, there was a shift as well in the species of trees harvested. As the best cherry, ash, and oak were depleted, the demand for hemlock and spruce grew. Both were used for pulpwood in the manufacture of paper products, and during World War I spruce was used to build the first fighter airplanes. Chestnut, which the leather goods industry had used profitably for its byproduct, tannin, came into increasing demand when a process was developed by Omega Carr to manufacture pulp from chestnut chips, once the tannin was removed. The Champion Paper and Fibre Co., mill in Canton, N.C., became a major producer of pulp from chestnut wood—until this source disappeared after the chestnut blight reached the area in 1920.

Throughout the logging boom, trees were harvested with little regard for other resources or future timber supplies. Young growth was damaged and smaller limbs and brush were left to ignite untended in dry spells, destroying the humus and remaining ground cover, preventing absorption of rain and snow. In areas of heavy logging, particularly on steep slopes, the soil became leached and erosion was often severe.

It is difficult, if not impossible, to assess the amount or lasting effects of this damage. Even at its peak, the timber industry left large sections of remote mountain forests little touched.[33] Parts of the Great Smokies, and much of far southwestern North Carolina (later the Nantahala National Forest) remained in "virgin" timber. However, in more accessible mountain regions—southern Union, Fannin, and Rabun counties, Ga.; northeastern Tennessee; near Mt. Mitchell and Asheville, N.C.,—whole mountainsides were cut over and burned, hillsides were eroded, and dried-up autumn streams became raging rivers in the spring.

Figure 16.—Railroad bridge washed out over the Nolichucky River at Unaka Springs, Tenn., after flood of May 21, 1901. Such floods stimulated strong public demands early in this century for national parks and forests in the Southern Appalachians. Forests in this area became part of Unaka National Forest in 1921, later the Unaka District of Cherokee National Forest. (NA:95G-11062)

Such conditions came to national attention shortly after the turn of the century. In 1900, the Division of Forestry, U.S. Department of Agriculture, in cooperation with the Geological Survey, U.S. Department of the Interior, conducted a field investigation of the Southern Appalachian region. The survey results, sent to Congress by President Theodore Roosevelt 2 years later, decried the widespread damage, and attributed the land conditions to poor farming practices, repeated fires, and destructive lumbering:

> In these operations there has naturally been no thought for the future. Trees have been cut so as to fall along the line of least resistance regardless of what they crush. Their tops and branches, instead of being piled in such way and burned at such time as would do the least harm, are left scattered among the adjacent growth to burn when driest, and thus destroy or injure everything within reach. The home and permanent interests of the lumberman are generally in another state or region, and his interests in these mountains begins and ends with the hope of profit.[34]

Such conditions supported the survey report's conclusion that a Federal forest reserve in the Southern Appalachians was the only way to stop the continuing losses.

Figure 17.—Severely eroded steep rocky slope, the result of bad crop farming, along Scotts Creek, Jackson County, west of Asheville, N.C., after heavy rains of May 21, 1901. Scattered hardwoods and pitch pine are visible on hillside. (NA:95G-25315)

Figure 18.—Enormous load of gravel and silt deposited on 20-acre field on farm of William Brown along Catawba River, McDowell County, above Marion, N.C., by floods of May 21 and August 6, 1901. This area borders the present Pisgah National Forest. (NA:95G-25325)

Figure 19.—Cane creek at Bakersville, Mitchell County, N.C., showing broad heavy deposit of silt from flood of May 21, 1901. Seven of the houses at right were washed away or badly damaged. The flood aroused wide interest in a Federal Forest Reserve. This area borders the present Pisgah National Forest. (NA:95G-25369)

American Forestry Begins in Appalachia

This indiscriminate but profitable logging exploitation of the mountain forests was soon challenged by a conservative approach. In 1892, amidst the timber boom, America's first experiment in practical forestry began in the Blue Ridge Mountains of western North Carolina.

Practical forestry was a vital part of the general conservation movement that arose in the United States in the last quarter of the 19th century and reached its peak during the presidency of the Progressive, Theodore Roosevelt. An intellectual and political phenomenon, the conservation movement was largely a response to the rapid industrialization and urbanization after the Civil War. Settlements had extended across the continent, the landscape had been altered, and American culture appeared increasingly materialistic. A countermovement developed to preserve pristine areas and to try to conserve the Nation's natural resources for present and future generations. As with the Progressive movement in general, conservation concerns were expressed essentially by urban dwellers and Easterners. The focus of conservation attention, however, was primarily in the West, where vast extents of land remained in the public domain and where large tracts of forest remained in "virgin" timber.[35]

The conservation movement embodied two distinct groups: preservationist and utilitarian. The preservationists, inspired by Henry Thoreau and exemplified by the influential founder of the Sierra Club, John Muir, believed in saving as much as possible of the Nation's scenic wilderness and forest expanses just as they were—never to be exploited by humans. They believed the beauty of the natural landscape should be valued in and of itself. The creation of Yellowstone, the first National Park, in 1872, was one of the earliest outgrowths of such concerns.[36]

In the last four decades of the 19th century a second conservationist faction developed: those who believed that renewable resources should be protected and managed through wise and economical use. The principal focus of this philosophy was the Nation's forests where the mechanics of economical conservation were to be demonstrated. A leading spokesman for this philosophy was Gifford Pinchot, early forester, who became Chief of the USDA Division of Forestry in 1898 and of its successor, the Forest Service, in 1905.

Forest Reserves Authorized in 1891

Between 1890 and 1910, practical-conservationist concerns were translated into political action. In 1891 by an amendment to the General Land Law Revision Act, often called the Creative Act, Congress gave the President almost unlimited power to withdraw huge expanses of forested lands from the public domain. In 1897 an amendment to the Civil Appropriations Act, often called the Organic Administration Act, established the management objectives of these reserves: ". . . securing favorable conditions of water flow and to furnish a continuous supply of timber for the use and necessities of citizens of the United States."[37] Timber in forest reserves was to be harvested and sold; waters could be used for mining, milling, or irrigation.

Before the passage of the Weeks Act in 1911, numerous large forest reserves were set aside in the West from lands in the public domain. It was in the East, however, where practical forestry was inaugurated. At Biltmore, between 1890 and 1910, the foundations were laid for scientific forestry as the Nation was later to practice it; here too some experiences and problems with the local population and commercial interests foreshadowed those of the first Federal foresters.

In 1889, the wealthy George W. Vanderbilt of New York, who had previously visited the area as a tourist, purchased about 300 acres of small farms and cutover woodlands near the French Broad River southwest of Asheville. The tract was composed of "some fifty decrepit farms and some ten country places heretofore owned by impoverished southern landed aristocracy."[38] The lands were in poor condition, having been abused by cutting, fires, erosion, and neglect. There Vanderbilt began construction of the palatial Biltmore House, and acquisition of what was to become a 100,000-acre estate. Over the next two decades Vanderbilt established an English-style village, an arboretum, parks, a wildlife preserve stocked with deer and pheasant, ponds and lagoons, a dairy farm, and miles of roads and trails as part of a vast experiment in landscape alteration.[39]

Vanderbilt's land-management philosophy was ahead of its time. His goal was to recultivate the fields and rebuild the forests with the most scientifically advanced methods of the day; Biltmore was to be a model of dairying, horticulture, landscaping esthetics, wildlife management, and productive forestry. In 1892, upon the recommendation of the famous landscape architect, Frederick Law Olmstead, creator of Central Park, New York City, who was in charge of landscaping the Biltmore grounds, Vanderbilt hired Gifford Pinchot, the future Chief of the Forest Service, to supervise Biltmore's forest lands.

Pinchot was at Biltmore for 3 years. During that time he conducted a survey and inventory of the more than 7,000 acres that had been acquired; continued management of the Biltmore Arboretum (an experimental garden with over 100 species of trees); continued the reforestation of badly cutover and eroded areas on the estate; and supervised the purchase of mountain lands to the west which came to be known as Pisgah Forest. There, in the fall of 1895, Pinchot directed the first logging of yellow- (tulip) poplar. To disprove the local notion that once such a forest was felled, it would never grow back, Pinchot cut selectively in the Big Creek valley below Mt. Pisgah only those large trees he had chosen and marked—felling, bucking, and hauling the logs out carefully so as to avoid damaging young trees. Although he claimed to know "little more about the conditions necessary for reproducing Yellow poplar than a frog knows about football," he understood that it needs strong light to grow well and that creating openings in the forest by felling mature trees would encourage a new crop.[40] Although the immediate goal was profit, the long-range objective was to preserve the remaining stand and insure a steady annual yield. Pinchot claimed his lumbering to be profitable, rather unconvincingly, since Vanderbilt himself consumed most of the timber.[41]

Pinchot left Biltmore in 1895; he had gradually become disappointed and disillusioned with Vanderbilt's motivations, and was ambitious for new experiences. Replacing Pinchot was Carl Alwin Schenck, a young highly recommended German forester, who for 14 years carried on and intensified Pinchot's efforts. He continued the practice of selective lumbering, and intensified reforestation efforts throughout the Vanderbilt estate. Schenck initially experimented with hardwood plantings, but eventually concentrated on reforestation of culled and eroded areas with eastern white, pitch, and shortleaf pines.[42]

Early Forestry School at Biltmore

Schenck carried out one of Pinchot's recommendations by establishing in 1898 the Biltmore School of Forestry in Pisgah Forest, now the site of the Forest Service's Cradle of Forestry historical exhibit. There, Schenck personally trained young men in all aspects of practical and textbook forestry, from seedlings to sawmilling. Although most went into industrial forestry, many became State and Federal foresters. Among his graduates were several leaders of the early Forest Service, including Overton W. Price, Associate Forester under Pinchot, Inman F. Eldredge, who supervised the first Forest Survey of the South, and Verne Rhoades, first supervisor of Pisgah National Forest.[43]

Although both Schenck and Pinchot believed in the wise utilization of resources as opposed to strict preservation, Schenck ran his school under a philosophy slightly different from Pinchot's. Schenck alternated book learning with practical experience in the woods, and was more interested than Pinchot in the hard economics of forestry. Over the years, the two men, both with very strong viewpoints and personalities, bickered continuously, sometimes bitterly. In essence, Pinchot separated forestry from sawmilling; Schenck did not. His frequently quoted dictum, "That forestry is best which pays best" indicates Schenck's orientation to industry.[44]

Figure 20.—Schenck Lodge, built in Black-Forest-of-Germany style on site of old Biltmore Forest School, now the Cradle of Forestry Visitors Center, Pisgah National Forest, Brevard, N.C., as it appeared in August 1949. Lodge had just been restored with new roof and foundation. It was originally built to house forest workers on the old Biltmore Forest, and then to house students in Dr. Carl A. Schenck's school. It is now used for administration and public recreation. (Forest Service photo F-458641)

He felt Pinchot's silvicultural practice of selective cutting to be a luxury that market prices or financial pressures often did not allow. This remains a debated issue today. Schenck wrote that Pinchot was furious "When he learned that in the school examinations at Biltmore a knowledge of logging and lumbering was weighed higher than that of silviculture or of any other branch of 'scientific' forestry . . . ."[45]

Although Schenck was more commercially oriented than Pinchot, he too was frequently frustrated with the local inhabitants of the French Broad area. The Vanderbilt estate, including Pisgah Forest, was dotted with many small inholdings, as it still was when the Federal Government purchased it in 1914. In spite of Vanderbilt ownership, the indwellers continued to use the land as if it were theirs; they cut wood, farmed, grazed cattle, and hunted freely on Vanderbilt land. Schenck considered this trespassing a serious block to his forestry efforts:

Figure 21.—Replica of original Biltmore Forest School building on Pisgah National Forest, Brevard, N.C., south of Asheville, now part of the Forest Service's Cradle of Forestry Visitor Center. Photo was taken in August 1967, a year after reconstruction. (Forest Service photo F-516882)

> In the Southernmost part of Pisgah Forest the size and the number of the interior holdings were so great that Vanderbilt's property in the aggregate was smaller than that of the holders. The woods in my charge were on the ridges and on the slopes above the farms where there was no yellow poplar. Mine seemed a hopeless task. For years to come, I could not think of conservative forestry.[46]

Throughout his service with Vanderbilt, Schenck continued to urge acquisition and consolidation of the inholdings, with some success.

In addition to trespassing, Schenck was frustrated with the mountaineers' penchant for burning to "green up" the pastures and clear the brush, and remained incredulous that no local regulations existed to prevent or control fire:

> The citizens of the county do not realize—do not want to realize—that my work is for their benefit as well as for that of my employer. We have never found any encouragement whatsoever in our work on the side of the state, the county, or the town. We are aliens; we do things out of the ordinary; that is cause enough for suspicion—for antagonism and enmity.[47]

These sentiments were echoed a decade later by some of the first Federal foresters in the region. And the two major concerns of Schenck—trespass and fire—continue to occupy the foresters in the Southern Appalachians today.

Although the local population remained a problem for Schenck, he was to have a positive and notable impact on industrial forestry throughout the region. Schenck was well known and respected by several local industrialists, who sought his advice on reforestation and marketing. The St. Bernard Mining Co. of Earlington, Ky., for example, experimented extensively before 1909 with hardwood plantings on lands no longer valuable for farming, and communicated with Schenck for guidance and expertise.[48]

Schenck's influence on industrial forestry was most noteworthy, however, in his association with the Champion Fibre Co. In 1906 Champion's president, Peter G. Thompson, came to North Carolina from Hamilton, Ohio, to buy spruce acreage in the Great Smoky and Balsam Mountains for making pulp. In 1907, Reuben B. Robertson, Thompson's son-in-law, opened the Champion Paper and Fibre Co. at Canton, N.C. Both men became well acquainted with Schenck. Although Schenck was never able to convince Thompson of the value of second-growth planting, he had more success with Robertson. Through Schenck, Robertson became convinced of the advantages of sustained-yield forestry, and earned Champion a reputation for intelligent, conservative lumbering. In 1920, Champion employed Walter Darntoft as corporate forester—the first such industrial forester in the South.[49]

Figure 22.—New Visitor Information Center at "Cradle of Forestry," Pisgah National Forest, Brevard, N.C., August 1967. (Forest Service photo F-516886)

The Move For Eastern Reserves

The Southern Appalachians gradually became a focus for the conservation movement. In addition to the forestry experiment at Biltmore, efforts began in western North Carolina to create an Appalachian National Park, largely through the Appalachian National Park Association, led by Dr. Chase P. Ambler of Asheville. Ambler, who had come from Ohio as a specialist in treating tuberculosis, valued the area's scenery and climate for what he considered its restorative characteristics.[50] The original sentiment behind the Association was preservationist: that the beauty and healthfulness of the Southern mountains should be preserved from destructive logging for the pleasure of future generations; the idea was to create an eastern equivalent of Yellowstone.[51] Within 2 years, however, the concern for scenic preservation was supplanted by the drive to create a forest reserve, and the interests of the park enthusiasts and foresters became temporarily commingled.

Through the lobbying effort of Dr. Ambler's group and the sponsorship of North Carolina Senator Jeter C. Pritchard, in 1900 Congress appropriated $5,000 for a preliminary investigation of forest conditions in the Southern Appalachians. The investigation, conducted by the U.S. Department of Agriculture with the help of the U.S. Geological Survey, also considered farmlands and the flow of streams throughout the region. Secretary of Agriculture James Wilson and Gifford Pinchot, at that time Chief of the USDA Division of Forestry, spent about ten days looking over the region themselves.

The report of the survey, published in 1902, details the land abuses of the Southern Appalachian region. Its tone is reminiscent of George Perkins Marsh's *Man and Nature*, the classic conservationist volume first published in 1864, with which Pinchot was very familiar.[52] Marsh's repeatedly stated theme was that man's influence on the land—particularly in clearing and burning forests and overgrazing pastures—had been detrimental and destructive. The message of the Southern Appalachian survey report, with pictures to support each point, was essentially the same: the special hardwood forests of the beautiful Appalachians were being destroyed by lumbering, fires, and—perhaps worst—by mountainside farming. These agents of destruction were causing the soil to leach, slopes to erode, and streams to flood their banks with rain and melting snow. The only clear solution: "for the Federal Government to purchase these forest-covered mountain slopes and make them into a national forest reserve."[53]

Throughout the decade of 1900 to 1910, the movement to create an Appalachian Forest Reserve grew in the size and diversity of its support to become a powerful and effective lobby group. In 1902 the National Hardwood Lumber Association and the National Lumber Manufacturers' Association passed resolutions favoring a Southern Appalachian Forest Reserve. Although many small mill operators and independent lumbermen continued to oppose the reserve movement, some of the largest firms, once assured that logging would continue, welcomed Federal land purchase as a relief from taxes on cutover useless land and an assurance of support for sound forestry.[54] In 1905, the movement gained the strong and broad-based support of the American Forestry Association, calling for Forest Reserves in both the Southern Appalachians and White Mountains. Indeed, when the AFA endorsed the Appalachian reserves, Ambler and his group disbanded and turned their efforts over to the more vigorous, nationally based association.

Throughout the decade nearly 50 bills to authorize an Appalachian Forest Reserve—or eastern reserves—were introduced in Congress. At first, Congressional opposition to the idea was strong, based on the issue of States' rights. This opposition was overcome in 1901 when the legislatures of North Carolina, South Carolina, Alabama, Georgia, Tennessee, and Virginia approved the Federal Government's right to acquire title to land in their States, and relinquished the right to tax that land. The Federal Government's constitutional authority to acquire land for reserves continued to be questioned, however, until the linkage was made between such acquisition and the power of Congress to regulate interstate commerce. The theory ran as follows: Removal of the forest cover affects streams flooding to such an extent that navigation is threatened; restoration of the forest will assure stream control, and hence navigation.

This linkage, however, was difficult to establish: in 1900 there was considerable doubt as to whether forests really did help control stream flow. The U.S. Army Corps of Engineers denied it. Indeed, there was disagreement within the Forest Service itself over the issue. Both Bernhard E. Fernow, Pinchot's predecessor as Chief of the Division of Forestry, and William B. Greeley, then Forest Assistant and later Forest Service Chief, believed that the effects of a forest cover on waterflow were often exaggerated, and questioned the extent to which forests could actually prevent floods. Even Pinchot acknowledged that the role of ground cover could be overestimated. Nevertheless, these internal doubts were suppressed, and the Forest Service adopted a position of aloofness in the ensuing public debate.[55]

Meanwhile, reserve proponents went to considerable pains to convince skeptical Congressmen that a cause and effect relationship existed between forests and floods. In May 1902, for example, representatives of Ambler's Appalachian National Park Association (soon renamed Appalachian Forest Reserve Association) took two miniature mountains which they had built to a Washington meeting with the House Agriculture Committee.

> These model mountains were about six feet high and were built on a slope of thirty degrees, being constructed on frames. The one miniature mountain was left bare, the gulleys and depressions in the sides of the mountain being faithfully reproduced. The other mountain was covered with a layer of sponge about four inches thick and over this was spread moss; in this moss were put small twigs of evergreens. The Committee on Agriculture admitted that we had two very good illustrations of mountains.
>
> Rain was caused to fall on these mountains by a member of the association climbing a step ladder with a sprinkling can, endeavoring to demonstrate what occurred when it rained on the forest covered mountain and bare mountains. The results were that the demonstration showed conclusively that the water which fell on the bare mountain ran off with a gush, forcing rivers in the lowlands out of their banks and causing devastating floods; while the rain which fell on the forest covered mountains was held in the humus and given up slowly in the form of springs, thus regulating the water supply in the lowlands.[56]

Most Congressmen remained unconvinced. In addition, legislators from the West and Midwest, particularly Speaker of the House Joseph G. ("Uncle Joe") Cannon of Illinois, were antagonistic toward the idea of eastern reserves, and some were resentful of the Pinchot-engineered transfer of the Forest Reserves from the Department of Interior to the Department of Agriculture early in 1905.

Severe Floods Trigger Weeks Act

The eventual success of the legislation for eastern Forest Reserves with the passage of the Weeks Act in 1911 can be attributed to two factors. First, the Weeks Act was the result of persistent, insistent lobbying. Absolutely convinced of the rightness of their cause, the Forest Reserve proponents gradually won broader and broader support, and outlasted the opposition. Second, physical events reinforced their arguments. In 1907 disastrous and costly flooding which occurred along the Monongahela and Ohio Rivers was traced directly to the cutover conditions of the upper watershed. In 1910 a series of mammoth, disastrous fires swept the Northwest, particularly Montana and Idaho. These environmental cataclysms helped persuade legislators that the destructive logging of the past two decades was taking its toll, and that forests had to be better managed for fire control.[57] The combining of these two interests helped to ease passage of the Act, eventually resulting in establishment of National Forests in Pennsylvania and West Virginia at the headwaters of the rivers flooded in 1907.[58]

After a final 2 years of intense debate but waning opposition the Senate passed a bill on February 5, 1911, that the House had approved in June 1910, to allow creation of Forest Reserves in the East, by purchase. The bill was known as the Weeks Act after John Weeks, Congressman from Massachusetts and member of the House Committee on Agriculture, who had been the bill's sponsor for several years.[59] Based on the authority of Congress to regulate interstate commerce, the bill authorized the Secretary of Agriculture to examine and recommend for purchase "such forested, cut-over, or denuded lands within the watersheds of navigable streams as in his judgment may be necessary to the regulation of the flow of navigable streams . . ." An initial $11 million was appropriated to cover the first several years of purchase. The bill created the National Forest Reservation Commission to consider, approve, and determine the price of such lands. The Commission, which was to report annually to Congress, was composed of the Secretary of the Army, Secretary of the Interior, Secretary of Agriculture, two members of the Senate selected by the President of the Senate, and two members of the House appointed by the Speaker. In addition, the bill authorized the Secretary of Agriculture to cooperate with States situated on watersheds of navigable rivers in the "organization and maintenance of a system of fire protection" on private or State forest land, provided the State had a fire-protection law.

Although the Weeks Act did not specify the Southern Appalachians or the White Mountains as areas of purchase, it was implicitly directed at those watersheds. Lands whose purchase was necessary for stream regulation were in rugged mountainous areas of heavy rainfall where the absence of a forest cover would threaten stream regularity and, hence, navigability. Having studied these lands for the last decade, the Forest Service knew in 1911 the general acreage it wanted to acquire. As soon as the Weeks Act passed, Forest Service Chief Henry Graves, Pinchot's successor, assigned 35 men to the task of examining the designated areas.

It is difficult to gauge precisely the involvement of the people of the Southern Appalachians in the Forest Reserve movement or to assess the impact on them of the growing national interest in their area. Certainly, the organized movement for an Appalachian National Park, and subsequently a forest reserve, was never very large. The original size of the Appalachian National Park Association membership was 42, composed principally of professionals: doctors, attorneys, editors, geologists among them.[60] The total membership in 1905 was 307, with more members living outside North Carolina than within the State.[61] Although the geographical base of the group's membership had broadened, it is unlikely that the occupational base had. Thus, the group of local, active supporters for a park or Forest Reserve remained small, essentially urban, and—in a sense—elitist.

The degree of local general awareness of the Forest Reserve movement is difficult to assess. Certainly, the publicity campaign of Appalachian National Park-Forest Reserve Association was earnest: Dr. Ambler and others, such as Joseph Holmes and Joseph Pratt of the North Carolina Geological Survey, spoke throughout the State and before Congress in support of the proposed reserve. Local and national newspapers favorably addressed the issue. However, the extent to which this publicity reached the mountain populace is uncertain. There were signs of local opposition to the forest movement, primarily from the smaller, independent lumbermen, some of whom were undoubtedly misinformed or confused about the purpose of such reserves, some of whom simply resented a Federal intrusion. For example, some lumber interests circulated erroneous information about the reserves, which was countered by editorials in the *Asheville Citizen*.[62] Inman Eldredge, a graduate of Biltmore Forest School who was with the Forest Service in the South from the earliest days, has spoken of the "murky atmosphere of animosity" between lumbermen and Pinchot's foresters in the years before the Weeks Act.

It is probably safe to say that the majority of the local population was oblivious or indifferent both to the Forest Reserve movement and the opposition to it. As Forester Eldredge expressed it:

> . . . All the rest of the people didn't know and didn't give a damn. Forestry was as odd and strange to them as chiropody or ceramics. The people right down on the ground, the settlers, the people who lived in the woods . . . were completely uninformed and were the greatest, ablest, and most energetic set of wood-burners that any foresters have had to contend with.[63]

The Early Forest Service

The Forest Service in 1911 was a very young and, at that time, threatened organization. Gifford Pinchot, who had been Chief Forester with the Department of Agriculture since 1898, had been fired by President Taft in January 1910 for his insubordination and highhandedness in challenging the policies of the recently appointed Interior Secretary, Richard A. Ballinger. Early in 1905, Pinchot had engineered the transfer of the Forest Reserves from the General Land Office of the Department of Interior to the Bureau of Forestry in the Department of Agriculture. He had virtually created the Forest Service. Having united in one office the functions of overseeing forest reserves and advising the Nation on forestry, Pinchot was beginning to achieve his goals:

> . . . to practice Forestry instead of merely preaching it. We wanted to prove that Forestry was something more than a subject of conversation. We wanted to demonstrate that Forestry could be taken out of the office into the woods, and made to yield satisfactory returns on the timberland investment—that Forestry was good business and could actually be made to pay.[64]

Unfortunately, although he had had strong support from President Roosevelt, Pinchot created enemies in his intense conservation campaigns. When Taft succeeded Roosevelt early in 1909, he allowed Pinchot to remain Forest Service Chief, but Taft's appointments and policies were soon intolerable to Pinchot. Less than a year later, as a result of Pinchot's public attacks on Ballinger, Taft was forced to remove Pinchot.

Henry Graves, Dean of the Yale School of Forestry, was named to replace Pinchot in January 1910, probably through Pinchot's maneuvering.[65] A serious, studious, no-nonsense administrator, Graves presented to many a needed contrast to the flamboyant, aggressive, self-righteous Pinchot. In 1910 the Forest Service was not in Congressional favor, and thus needed an economy-minded, moderate, apolitical leader.

The frugality imposed on the Forest Service during Graves' administration compounded the already demanding, self-sacrificing existence that Forest Service employees were expected to assume in those early years. Pinchot's original "Use Book," *The Use of the National Forest Reserves*, published in 1905, leaves little doubt as to the rigorous eligibility requirements of a ranger:

> To be eligible as ranger of any grade the applicant must be, first of all, thoroughly sound and able-bodied, capable of enduring hardships and of performing severe labor under trying conditions. Invalids seeking light out-of-door employment need not apply. No one may expect to pass the examination who is not already able to take care of himself and his horses in regions remote from settlement and supplies. He must be able to build trails and cabins and to pack in provisions without assistance. He must know something of surveying, estimating, and scaling timber, lumbering, and the livestock business . . . Thorough familiarity with the region in which he seeks employment, including its geography and its forest and industrial conditions, is usually demanded . . .[66]

Figure 23.—Forest Service ranger making camp at day's end. Pisgah National Forest, N.C., June 1923. (NA:95G-176512)

Although these words were softened slightly during Graves' administration, their tone continued to stress that Forest Service employment was only for those with special qualifications.

By 1915 the basic areas of Forest Service activities had evolved as three distinct organizational units: the National Forests, cooperation with States and private owners, and forestry research.[67] Forest administration was decentralized, with forests grouped into major Districts under largely independent District Foresters. (Districts became Regions in 1930.) A supervisor was responsible for each forest, and rangers were in charge of the administrative districts within the forests. Other Forest Service officers included deputy supervisors, forest examiners, forest assistants, lumbermen, and scalers. All were appointed after a Civil Service examination.

The district ranger, then as now a crucial position in the Forest Service field organization, was charged with the management of timber sales, grazing, fire protection, and special uses for about 60,000 acres, on the average, at that time. In 1915 he was paid an annual salary of between $900 to $1,200. By 1920 that salary had barely increased; forest supervisors were paid only twice that. Indeed, the continuing low salary caused a sizeable defection in the Forest Service technical staff between 1918 and 1920.[68]

Rangers were required to pass both a written and a field examination, the latter a test of various practical skills including lumbering, horsemanship, and surveying. Clyne and Walter Woody of Suches, Ga., whose father, W. Arthur Woody, became a U.S. forest ranger in northern Georgia in 1918, remember that the examination lasted for several days and was extremely demanding in the endurance and range of skills required.[69] W. Arthur Woody, who later became one of the most well-known rangers, was a native of the mountains who proved invaluable because of his devotion to conservation and the respect he had among the mountain people.

Even in the earliest days, the relationshp between Forest Service officers and the general public was regarded as important. According to the 1915 *Use Book*, Forest Service personnel were not just officers of the Government, but "also agents of the people, with whom they come into close relations, both officially and as neighbors and fellow citizens." Thus, they were encouraged to be "prompt, active, and courteous in the conduct of Forest business" and " to prevent misunderstanding and violation of Forest regulations by timely and tactful advice rather than to follow up violations by the exercise of their authority."[70] To help win popular respect, the Forest Service generally placed officers in districts close to their homes. This practice, followed even in recent years when possible, became especially important in eastern forests where the intermingling of Federal and private lands brought the Forest Service and the local population into greater contact than generally occurred in the West.

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2. Eubank, "Early Lumbering."

3. Ronald D. Eller, "Western North Carolina, 1880-1940: The Early Industrial Period," Chapter II of Draft Version, *Socio-Economic Overview in Relation to Pisgah-Nantahala National Forest.* (Prepared for National Forests of North Carolina by the Appalachian Center at Mars Hill College, N.C., 1979), p. 14. See also Eller's "Miners, Millhands, and Mountaineers," Chapters II and III.

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6. Harry Caudill, *Night Comes to the Cumberlands*, (Boston, Little, Brown and Company, 1976), p. 64.

7. Eller, "Miners, Millhands, and Mountaineers," pp. 94, 95.

8. Marion Pearsall, *Little Smoky Ridge, The Natural History of a Southern Appalachian Neighborhood* (University, Ala.: University of Alabama Press, 1959), p. 70.

9. Eller, "Miners, Millhands, and Mountaineers," p. 96. Similarly, Forest Service surveyors and purchasing agents often found titles, claims, and surveys to be haphazard when they entered the mountains in 1911 and 1912.

10. Judge Watson, "The Economic and Cultural Development of Eastern Kentucky from 1900 to the Present," Ph.D. dissertation, Indiana University, 1963, p. 45; Caudill, *Night Comes to the Cumberlands,* pp. 62-71.

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Chapter II

National Forests Organized in Southern Appalachians

The Weeks Act, establishing Federal authority to purchase lands for National Forests, was signed by President William Howard Taft on March 1, 1911. Almost immediately, the Forest Service examined, and optioned for purchase, lands in the Southern Appalachian Mountains. The first National Forest there was proclaimed by President Woodrow Wilson on October 17, 1916; more followed in 1920. By 1930 thousands of acres of culled or cutover mountain lands had been acquired and the Forest Service had begun its ambitious, long-term effort for environmental and economic stabilization of the region.

Within a week, the Act became law and the National Forest Reservation Commission had been appointed and had met for the first time.[1] In anticipation of the new law, the Forest Service had been working for many months to select a large number of precisely defined, very large tracts suitable for purchase, in the most promising areas, for Commission approval. These tracts, designated "purchase units," roughly bounded the mountain headwaters of navigable streams. Each unit was at least 100,000 acres (156.25 square miles, or 40,469 hectares) in size, and most were much larger. Final surveying and mapping was done early in March, and on March 27 the Commission announced the establishment of 13 purchase units, 7 of which were in the Southern Appalachians. By the end of fiscal year 1912, four more units in the region were announced. All 11 are listed in table 2.

The boundaries of these units were altered several times in later years, as lands were reevaluated and new lands became available for purchase. When the units were incorporated into National Forests, after sufficient lands had been acquired, some of the names were retained as the names of the new forests. Four Southern Appalachian purchase units were added considerably later: the French Broad in North Carolina and Tennessee (1927), the Cumberland in Kentucky (1930), the Chattahoochee in Georgia (1936), and the Redbird in Kentucky (1965). Of the original purchase units, no land was ever purchased in the Great Smoky Mountains area, and the Yadkin Unit was still inactive in 1982 and likely to remain so.

With the establishment of official purchase units, the actual acquisition process began, on something of an *ad hoc* basis. Although modified over the years, the procedure remained essentially the same in 1982. First, advertisements requesting offers to sell land within the purchase unit boundaries were published in newspapers throughout the area. Upon reasonable offers of sale, the lands in question were examined and surveyed and, if deemed suitable, were recommended for purchase to the National Forest Reservation Commission. The Commission, usually meeting twice each year, considered each tract separately. Depending upon the availability of funds, purchases were consummated within several months to a year of approval.

By June 30, 1911, 1,264,022 acres of land had already been offered for sale by owners; of those, about 150,000 had been examined.

Reputedly, the first land to receive preliminary Commission approval was a tract of over 31,000 acres offered on April 14, 1911, by Andrew and N.W. Gennett of the Gennett Land and Lumber Co. of Atlanta.[2] The tract, located in Fannin, Union, Lumpkin, and Gilmer Counties, Ga., was in an area which had formerly been "rather thickly settled" with small farms but was now almost abandoned. Although some of the tract had deteriorated with misuse, enough marketable timber remained to command a price of $7.00 per acre.

The Gennetts were probably eager to sell the tract because it was not immediately accessible. The nearest rail point was located from 16 to 25 miles away.[3] Indeed, after Commission approval of their first tract, the Gennetts offered 13,000 acres of land belonging to the Oaky Mountain Lumber Co., of which Andrew Gennett was President, in Rabun County, Ga. Gennett proclaimed his Oaky Mountain lands to be "solid and compact . . . as well timbered as any portion of that section . . . [and] not over 300 or 400 acres has ever been cleared.[4] In January 1913, the National Forest Reservation Commission approved the purchase of 7,335 Oaky Mountain acres at $8.00 per acre; additional Gennett tracts of 10,170 and 2,200 acres were approved in 1917 and 1919.[5]

The first tract actually purchased was an 8,100-acre tract of the Burke McDowell Lumber Co. in McDowell County, near Marion, N.C. This tract was officially approved at the same meeting the first Gennett tract was—on December 9, 1911; however, payment for it was made on August 29, 1912, almost 4 months before the Gennett tract was paid for. The Burke McDowell tract sold for just over $7.00 per acre.[6]

Table 2.—The 11 Original National Forest Purchase Units in the Southern Appalachians

Name	Location	Initial Gross Acreage
1911		
Mt. Mitchell	North Carolina	214,992
Nantahala	North Carolina and Tennessee	595,419
Pisgah	North Carolina	358,577
Savannah	Georgia and South Carolina	367,760
Smoky Mountains	North Carolina and Tennessee	604,934
White Top	Tennessee and Virginia	255,027
Yadkin	North Carolina	194,496
1912		
Boone	North Carolina	241,462
Cherokee	Tennessee	222,058
Georgia	Georgia and North Carolina	475,899
Unaka	North Carolina and Tennessee	473,533
Total		1,412,952

Source: The National Forests and Purchase Units of Region Eight, Forest Service unpublished report, Region 8 (Atlanta, Ga., January 1, 1955), p. 5.

Figure 24.—Forest boundary survey crew camp No. 1 on Pfister & Vogel timber lands, Union-Fannin counties, North Georgia, in December 1911, preparatory to Federal purchase under the Weeks Act of March 1, 1911. This area became part of the Savannah Purchase Unit, which later became a portion of the Chattahoochee National Forest. (National Archives: Record Group 95G-10411A)

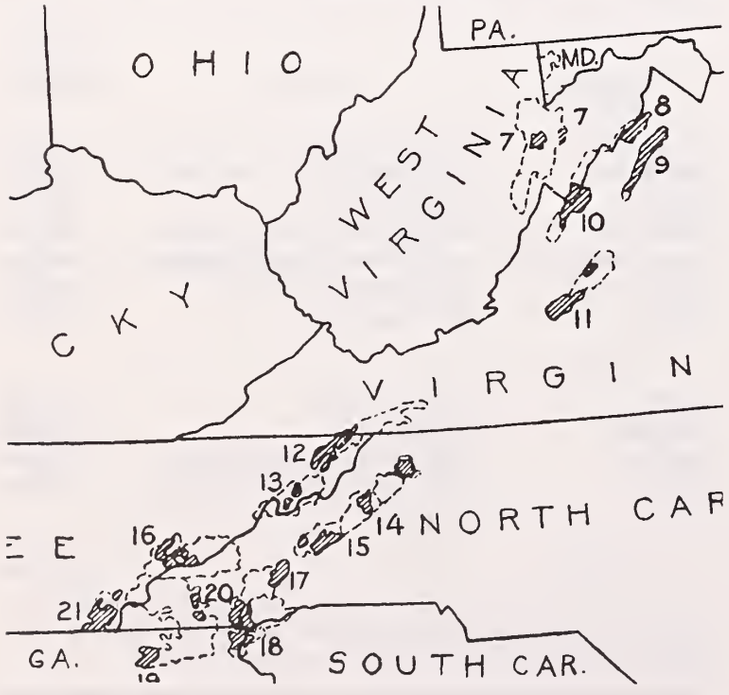

Figure 25.—Forested areas of the Southern Appalachian Mountains that were selected for purchase as National Forests under the Weeks Act of March 1, 1911, as of the summer of 1915. Dotted lines enclose proposed Forest boundaries; shaded portions show where lands had been acquired or were in process of acquisition. These various "purchase areas" or "purchase units" shown here, together with newer ones, were later consolidated and incorporated into nine National Forests. The numbered Purchase Units and the Forests that evolved are: 7, Monongahela; 8, Potomac; 9, Massanutten, and 10, Shenandoah, all three of which became the Shenandoah National Forest on May 16, 1918, and then the George Washington National Forest on June 28, 1932; 11, Natural Bridge, which became a Forest of that name in 1918 and then part of the George Washington in 1933; 12, White Top, and 13, Unaka, which together became the Unaka National Forest on July 24, 1920, and then part of the Cherokee on April 21, 1936 (except for the Virginia portions which became part of the new Jefferson National Forest); 14, Boone, 15, Mt. Mitchell, and 17, Pisgah, which all became part of the enlarged Pisgah National Forest by 1921; 18, Savannah, and 20, Nantahala, which together became the Nantahala National Forest on January 29, 1920; 19, Georgia, and 21, Cherokee, which together became the early Cherokee National Forest on June 14, 1920; and 16, Smoky Mountains Purchase Area, which finally became the southern half of Great Smoky Mountains National Park. The Georgia portion of Nos. 18 and 19 later became the nucleus of Chattahoochee National Forest. The South Carolina portion of No. 18 later became part of Sumter National Forest. (Forest Service map and photo)

Best, Largest Tracts Acquired First

The size and quality of the Gennett and McDowell tracts are representative of many of the earliest lands purchased in the Southern Appalachians. Generally, although many small owners sold tracts in the 100- to 300-acre category, some of the best and largest tracts were acquired first. Purchasing a few large tracts was an easier way to establish national forest acreage than purchasing many smaller tracts, and lumber companies were often willing to sell large tracts. The Forest Service maintained, however, that the boundaries of the purchase units were not necessarily drawn to include large tracts. In 1912, William Hall, Assistant Forester in charge of acquisition, advised his forest examiners near Brevard, N.C., "the question of whether a locality is to be put in a purchase area should be determined entirely irrespective of whether the lands are held in small or large holdings."[7]

Nearly 30 percent of the lands bought in the first 5 years in North Carolina, Tennessee, and Georgia were virgin timber.[8] Most of the remaining land had been partially cleared or culled for specific types of timber, especially yellow- (tulip) poplar and chestnut. Few of the first tracts purchased were totally cutover, although the proportion of cutover lands acquired increased over the years. The largest tracts were purchased almost without exception from lumber companies or land investment concerns. Most such land was either sparsely populated or uninhabited, the residents having left as the land was depleted and acquired by investors for its remaining timber. In the case of the Gennett tract:

> the emigration tendency in the vicinity of this tract was so strong that the remaining settlers have been unable to maintain schools and churches or keep roads in good condition. This situation has made it easy for a body of land of the size of this tract to be assembled . . . [9]

The quality of lands purchased varied considerably over the Southern Appalachian region. The best lands were those where topography and remoteness had delayed road and rail access. For example, the Nantahala Purchase Unit of far southwestern North Carolina was thought to contain "some of the best and most extensive virgin forests of the hardwood belt."[10] Among the first lands purchased there were about 21,000 acres of the Macon Lumber Co., high in the mountains. Only 102 acres of the tract had been cleared, "and the only settler [in 1912] is the keeper employed by the Company."[11] The lands sold for $11 per acre. Another early Nantahala purchase was over 16,000 "well-timbered" acres of the Macon County Land Co., sold between 1914 and 1919 for between $8 and $9 per acre.[12]

On the other hand, lands offered in the Cherokee and Unaka purchase units appear to have been lower and less uniform in quality. Of over 275,000 acres not in farms in the Unaka area in 1912, 40 percent of the land was estimated to have been cutover or culled, and on another 40 percent of the land, timber operations were ongoing, with at least 15 large sawmills and more than 50 smaller ones. Moreover, of 24,050 acres of "virgin" timber being offered for sale in the Unaka area as of March 1912, 22,000 were subject to timber reservations on all trees above 10 inches in diameter.[13]

Similarly, in the Cherokee Purchase Unit, much of the timber on the offered lands was either cutover, being cut, or reserved. In 1913 the Alaculsy Lumber Co. of Conasauga, Tenn., offered 32,000 acres, all of which were cutover or subject to a timber reservation.[14] Of the over 53,000 acres of the Tennessee Timber Co. surveyed between 1913 and 1915, sections had been extensively damaged by smoke and sulfur fumes from the smelting operations of the Tennessee Copper Co. and the Ducktown Sulfur, Copper, and Iron Co. near Ducktown, Tenn.[15] In certain areas, particularly northern Georgia and southwestern North Carolina, the Forest Service gained possession of finely timbered "virgin" forests. However, more often than not, the lands acquired, especially in later years, had been cleared, misused, or at least selectively culled.

Formal Field Surveys Required

Because all lands obtained under Weeks Act authority had to be acquired and paid for on a per-acre basis, a formal survey of each tract was necessary before it could be recommended for purchase. Survey work on the tracts offered during the early years was difficult, time-consuming, and costly. Many were remote and inaccessible, steep, and covered with dense undergrowth. Before the land examiners came to cruise the Gennett tract in northern Georgia, for example, Gennett warned them that it would take at least 10 days to go over the tract and that it would be very difficult to get accommodations, "and in some portions of the tract, it will be absolutely impossible."[16]

Most of the offered tracts had never been surveyed before, and often the owners had only a general awareness of their boundaries, as the letters and reports of the first survey teams recurringly attest. Thomas Cox, Survey Examiner in Georgia, wrote in his January 1914 report, "Tracts difficult to locate as owners do not know anything definate [*sic*] of corners." In surveying the Vanderbilt lands of the Pisgah Unit in 1914, James Denman wrote, "no one either in Vanderbilt employ or otherwise seems to know much about the location of their lands on the ground."[17] Indeed, sometimes lot descriptions were based on tree lines that no longer existed; in these cases, surveyors persuaded adjacent landowners to establish *ad hoc* corners and sign an agreement accordingly.[18]

Surveying for early Forest Service acquisitions in the Southern Appalachians even required surveying a county line for the first time. The boundary between Swain and Macon Counties, N.C., established in 1871, had never actually been surveyed; essentially it followed clear natural or man-made boundaries, except for an arbitrary line between the Nantahala and Little Tennessee Rivers. In June 1914 the Forest Service surveying party established the boundary on the ground.[19]

Figure 26.—Camp of forest boundary survey crew on lands of Little River Lumber Company, Great Smoky Mountains, Blount County, Tenn., in December 1911, just 9 months after passage of the Weeks Act. This area is now in the National Park, but then was scheduled to be in a new National Forest. (NA:95G-10071A)

Much of the surveyor's work involved resolving tract overlappings where lands were claimed by more than one owner. In parts of the southern mountains, early grants had been made and titles transferred—to the apparent ignorance or indifference of the current occupant. Many of the old grants in the Mt. Mitchell area were found so vague in description that they were almost impossible to locate.[20] Throughout the area lands had been claimed and counterclaimed with both parties often sharing the property in ambiguous peace until the Forest Service surveyors arrived. Upon initial survey of the Vanderbilt tract, at least seven claimants refused to acknowledge Vanderbilt title. An extreme example of the earnestness of such claimants is the Dillingham family, who claimed several sections of the Big Ivy Timber Co. lands near Mt. Mitchell. According to a 1914 leter from Thomas Cox, examiner of surveys, Ed Dillingham went so far as to build a fence around one of his Big Ivy claims, and "has gone to every length to forceably stop the survey and have me arrested."[21]

An unusual example of overlapping claims to ownership involved the Olmstead lands in the Nantahala Purchase Unit. In 1868, the Treasury Department had taken possession of the lands of E.B. Olmstead (not to be confused with Frederick Law Olmstead) who was convicted of embezzling funds from the U.S. Post Office Department. In 1912 these lands were transferred from Treasury to the Secretary of Agriculture. No Federal survey of the lands had occurred until the Forest Service came in 1913; before then, the "local populace were not generally aware of the Government's claim to ownership."[22] Consequently, there were scores of claims against portions of the land, 22 of which were not resolved until passage of the Weaver Act in 1934 which granted possession to all claimants and thus assured them of payment, and the U.S. Government of *bona fide* deeds.[23]

Perhaps the most serious example of overlapping claims involved the Little River Lumber Co. lands in Tennessee. Failure to established clear title eventually led to the

abolishment of the Smoky Mountains Purchase Unit, and thus influenced dramatically the course of history in the area.

As early as 1912, surveyors and examiners were cruising the large acreage of the Little River Lumber Co. and nearby smaller tracts of the Smoky Mountains unit. Several small landowners offered to sell right away, and by 1913 their proposals had been accepted by the National Forest Reservation Commission. By 1915 at least 8,050 acres in five separate units of the Little River Lumber Co. had also been approved for purchase.[24] However, no land in the Smokies was ever actually purchased. Titles predating occupancy by the Little River Lumber Co. were simply difficult, if not impossible, to clear to the Government's satisfaction. With the onset of World War I, the company, unable to wait for Federal title searches any longer, cancelled its offers of sale, and the purchase unit was subsequently rescinded.[25] With Forest Service interest in the area abandoned, in 1923 a movement began to promote the idea of a National Park in the Great Smoky Mountains.

Reactions to Federal Purchase

From the evidence available, it appears that the initial reaction of the people in the Southern Appalachians to the coming of the Forest Service was generally favorable in spite of some skepticism and distrust. Two written comments on early popular reaction to Weeks Act purchases came from Forest Service personnel. D.W. Adams, timber cruiser, wrote to Forester William Hall in September 1911, from Aquone, N.C., "The people generally, particularly on the Mt. Mitchell Unit, have been decidedly skeptical as to the purchase of lands by the government . . ." Verne Rhoades, forest examiner, a graduate of the Biltmore School of Forestry, and later the first supervisor of the Pisgah National Forest, writing of the Unaka area in February 1912, reported that "The people in general regard most favorably the movement on the part of the government to purchase these mountain lands."[26]

The large number of tracts quickly offered for sale testifies to a generally favorable reaction. For timber companies, sale to the Government offered an opportunity to rid themselves of cutover, useless land, or lands which, even though finely timbered, were inaccessible or steep. Sale to the Government thus offered payoffs for their speculation and risk and a lightening of their tax burdens. For small landholders, Forest Service acquisitions offered an undreamed-of profit on lands that no one else would pay for. The "lands nobody wanted"—if they were in the right place—were wanted by the Forest Service.[27]

The prices paid by the Forest Service were respectably high, especially in the early years. The Federal purchase process itself contributed to high land values. As O.D. Ingall, Forest Service agent, wrote from Andrews, N.C., in May 1912, "the government ties up the land for months and puts the owner to a great deal of trouble and expense." Besides delay, the owner might lose acreage through the careful surveys required and be put to considerable expense to prove title to the government's satisfaction.[28]

In addition, in the early years of acquisition, Forest Service survey teams and timber cruisers sometimes assessed tracts which had not yet been formally offered for sale. In such a case, a wily owner, whose corners had been set and boundaries located at no personal expense, would hold out for a higher price—figuring that the Government would not want to lose the cost of survey.[29] Initially, too, a number of land agents operated throughout the area to obtain a fee for boosting a seller's price. William Hall, Assistant Forester, wrote in September 1911:

> The effect of the work of agents in offering lands under the Weeks Act is in most cases bad. They tend to increase the price of land above what it ought to be and will make it difficult for the government to buy at a reasonable price.[30]

As early as April 1911, the National Forest Reservation Commission discussed the role of agents and determined to deal only with owners themselves. Hall warned his land acquisition teams to "be on . . . guard at all times" against such unscrupulous agents.[31]

Although there were some landowners who, in ignorance, asked too low a price and others who sacrificed land for sure money, on the whole, the southern mountaineers had become sophisticated negotiators and traders. The willingness of small landowners to sell their land depended in part on whether other owners in the area had already sold. R. Clifford Hall, forest assistant, noted in 1913 that it required "much time and patience" to deal with the "wavering" small landowners of the Hiwassee area of extreme northern Georgia.[32] A year later he found negotiation even more difficult:

> The small owners of this section are very hard to deal with, as all the 'traders' have sold out to the various buyers that have scoured the country. Where the land is so located adjacent to what we are getting as to be especially desirable, and the owner talks as if he might sell but will not sign a proposal, we should make the valuation now in order to be able to name a price and get a legal option without delay when he happens to be in a 'trading humour'.[33]

It was in considering such problems of price negotiation that the National Forest Reservation Commission discussed the use of condemnation. Although the Weeks Act did not make a specific provision for condemnation, the Commission assumed it had such authority.[34] William Hall, for one, felt that if the people know condemnation was a possibility, they would be more willing to sell at reasonable prices.[35] Nevertheless, the Commission determined it was "inexpedient" to condemn—except to clear title—and best to proceed with purchase as far as possible. This early decision by the Commission is a policy still followed by the Forest Service.

In spite of the generally high prices offered for the earliest purchases, as time went on and the delays between offer and survey, or between recommendations for purchase and payment, lengthened, the acquisition process could bring frustration, disillusionment, and anger. In the Smoky Mountains Unit, for example, Forest Examiner Rhoades noted in 1913 that several small landowners, who had been asked to discontinue milling operations while their tracts were being considered by the Commission, were becoming "restless and dissatisfied."[36] Similarly, a mill operator on the Burke McDowell tract near Mt. Mitchell, who had suspended operations during examination and survey, was reported to be "exceedingly reluctant to quit manufacturing timber and . . . very impatient with McDowell . . ."[37] In 1915, in the Mt. Mitchell area, the elderly J.M. Bradley had been waiting for his money for so long that his relatives "were afraid that he would lose his mind over it."[38] J.W. Hendrix of Pilot, Ga., threatened in 1914 to stop the sale of his over-350 acres if the Forest Service did not proceed more rapidly:

> I am in neede of money and I am ready to close the deal. I am going to give you a little time to cary out this contract, and if you do not take the matter up in a reasonable length of time, I will cansel the sale of this property. [*sic.*][39]

And Miss Lennie Greenlee of Old Fort, N.C., wrote to Ashe that:

> the time-killing propensities of this band of surveyors is notorious, although were the saying reported to them they would revenge themselves by doubling the gap of time between them and my survey.[40]

The First National Forests

As stated in the Secretary of Agriculture's Report to Congress in December 1907, the original thought behind the establishment of the eastern National Forests was that 5 million acres in the Southern Appalachians and 600,000 acres in the White Mountains should be acquired. By 1912, these numbers still appeared appropriate, but it was determined unnecessary to purchase all the land within any given purchase unit; between 50 and 75 percent was considered enough.[41] According to Henry Graves' *Report of the Forester* for 1912:

> There is every reason to believe that the purpose of the government may be fully subserved by the acquisition of compact bodies each containing from 25,000 to 100,000 acres well suited for protection, administration and use.[42]

Four Million Acres Acquired by 1930

Purchase of land for National Forests in the East continued fairly steadily throughout the two decades of 1911-31. By the end of fiscal year 1930, 4,133,483 acres had been acquired under the Weeks Act. The first Weeks Act appropriation of $11 million lasted for 8 years, through fiscal year 1919; only

Figure 27.—The National Forests of the Southern Appalachians in 1921. The Pisgah was established in 1916, the Shenandoah, Natural Bridge, and Alabama in 1918, and the Nantahala, Monongahela, Cherokee, and Unaka all in 1920. (Forest Service map and photo)

$600,000 was appropriated in 1920, and $1 million in 1921. Throughout the 1920's, typically about one-half of what the Forest Service requested was appropriated.[43] The number of acres purchased in any given year was primarily dependent upon funds available; there always were, and still are (1982), more tracts offered for sale than appropriated money could purchase.

In the Southern Appalachians, Weeks Act acquisitions were heaviest between 1911 and 1916, when some of the largest tracts of today's Pisgah, Nantahala, Chattahoochee, Cherokee, and Jefferson Forests were purchased. Most land was purchased in large tracts of more than 2,000 acres. Indeed, some 60 percent of the Nantahala National Forest was acquired from only 22 sellers, mostly lumber companies or land investment concerns. About 80 percent of the Pisgah National Forest was purchased from 29 sellers. The largest tract from a single owner was its nucleus of 86,700 acres from the Biltmore Estate.

Vanderbilt had had his lands preliminarily surveyed shortly after the Weeks Act passed. Purchase negotiations began in 1913, when members of the National Forest Reservation Commission, Chief Forester Graves, and other Forest Service personnel visited the Biltmore estate and Vanderbilt's hunting lodge on Mt. Pisgah. Vanderbilt died before a purchase agreement was reached, but after his death, his widow, Edith Vanderbilt, consummated the sale on May 21, 1914, for $433,500. This vast, cohesive tract became the core of the first National Forest in the Appalachians, the Pisgah, on October 17, 1916. With a gross acreage of over 355,000, only 53,810 acres had actually been purchased in 1916, but an additional 34,384 acres had been approved. On November 7, 1916, President Wilson proclaimed Pisgah a National Game Preserve as well.

Figure 28.—Mountain farm with expanded log house surrounded by forest, Carter County, Tenn., on Unaka National Forest, September 1926. This area became part of the Cherokee National Forest in 1936. The old Unaka Forest was established in July 1920 after several years as a Purchase Unit. (NA:95G-212633)

In 1918, the Natural Bridge National Forest was created in western Virginia. Then, in 1920, four more National Forests were proclaimed in the Southern Appalachians: the Boone in North Carolina (January 16, 1920); the Nantahala in North Carolina, Georgia, and South Carolina (January 29, 1920); the Cherokee in Tennessee (June 14, 1920); and the Unaka in Tennessee, North Carolina, and Virginia (July 24, 1920). Of these, only the Nantahala and Cherokee names remain: the Boone was joined to the Pisgah in March 1921; the Unaka was partitioned among the Pisgah, Jefferson, and Cherokee in 1923 and 1936. Until 1936 when the Chattahoochee and Sumter National Forests were proclaimed, the boundaries of the forests and purchase units in the area were somewhat fluid.

After the establishment of the first five National Forests in the southern mountains, the National Forest Reservation Commission turned its attention over the next decade to other eastern areas. Noticeable progress having been made toward protection of the headwaters of navigable waterways, the Commission broadened its perspective; by 1923 the members felt the National Forest system should be extended to all Eastern States, "to arouse the interest of landowners in these states in managing their properties for permanent timber production."[45] After a select Congressional Committee headed by Senator Charles McNary and Representative John Clarke met in 1923, this idea became embodied in the Clarke-McNary Act of 1924, which expanded the Weeks Act.[46] This act allowed purchases outside of navigable river headwaters. It also expanded Federal-State cooperation in fire protection and in production and distribution of seeds and seedlings for forest planting. Under Clarke-McNary, new purchase units were established in the southern coastal plains and Great Lakes States.

On March 3, 1925, the Weeks Law Exchange Act was passed, making consolidation of existing Forests easier in times of limited funding.[47] Under the Act, the Secretary of Agriculture can accept title to lands within the boundaries of National Forests in exchange for National Forest land or timber that does not exceed the offered land in value. This authority was used increasingly throughout the 1920's and after World War II, when Reservation Commission goals vastly exceeded the funds available. Thus, lands in the Southern Appalachian mountains continued to be acquired, although after 1920 the average size of the tracts and their quality decreased.

Forest Purchases Reduce Population, Farms

By 1930 the Forest Service had been a presence in the southern mountains for almost two decades. Within the purchase units and National Forests themselves, Federal lands were interspersed with those still held in private hands in an almost patchwork pattern of landownership. Inhabitants within and adjacent to National Forest boundaries were affected not only by the land acquisition program but by the ways in which the Forest Service managed its lands.

One of the most obvious effects of the first National Forest purchases in the Southern Appalachians was a decline in population growth and a decline in both farm acreage and number of farms. Although most of the first acreage purchased was timber company-owned, hundreds of small farms were acquired as well. In areas where many small landowners sold, the decline in population growth and in number of farms was marked.

This trend was especially evident in selected counties of northern Georgia where outmigration had been occurring before 1912. Union County, for example, whose population had declined by over 18 percent between 1900 and 1910, experienced another 7 percent decline between 1910 and 1920. Rabun County, where population had declined over 11 percent in the previous decade, experienced a population growth well below the State average between 1910 and 1920. Fannin and Towns Counties likewise experienced either no growth or an absolute population loss. This trend of population decline or slowing of growth, however, was not nearly so pronounced between 1920 and 1930.

A similar slowing of population growth took place in counties of North Carolina and Tennessee where large numbers of tracts were purchased early. For example, in Polk County, Tenn., population grew by only 0.9 percent between 1910 and 1920 (the State as a whole grew by 14 percent). In Macon and Graham Counties, North Carolina, population growth was only 6 and 3 percent respectively over the same decade. Yet, in adjacent Swain County—part of the Smoky Mountains Purchase Unit where no Forest Service acquisition occurred—population grew by 27 percent.[48]

Early acquisitions for National Forests are also reflected in agricultural statistics. In Georgia, North Carolina, and Tennessee, the number of farms increased between 1910 and 1920, but, in counties experiencing heavy National Forest purchases, the number of farms declined. In Fannin and Rabun Counties, Ga., and in Buncombe and McDowell Counties, N.C., this decline was between 11 and 13 percent. The decline in farm acreage was more dramatic. The number of acres in farms dropped 39 percent in Rabun County, Ga., 37 percent in Buncombe County, N.C., 22 percent in Fannin County, Ga., and 21 percent in North Carolina's Macon County.[49] (This trend continued between 1920 and 1930, although the percentage decline in acreage was slightly less.) Thus, at least for selected counties, in areas where Federal land acquisition was initially extensive, there was a decided change both in demographics and in the pattern of landownership and land use.

Evidence of the mountaineers' first reaction to the coming of the Forest Service, beyond the letters already cited, is almost nonexistent. For example, a search through the *Asheville Citizen* from 1910 to 1920, reveals "little local reaction to the creation of the National Forest Reserves." Indeed, Eller has concluded that "most local residents reacted indifferently to the legislation."[50] It was not until Forest Service personnel arrived in the mountains that the consequences of the Weeks Act could be understood, and even then it does not appear that the people's reactions were reflected in the local newspapers.

When Forest Service staff first appeared in the purchase units and early ranger districts, they were the object of some suspicion and distrust. Ranger Roscoe C. Nicholson, the first, and for many years, district ranger in Clayton, Rabun County, Ga., wrote about this early reaction:

> For several years the people . . . did not seem to know what to think of the government owning this land. Some of them did not like the idea of taking the land out from under taxation. Some thought they would be forced to sell their land and have to move out. Perhaps most of them thought at first that if they were stopped from burning out the woods they would never have any more free range and that the insects and other pests would destroy their crops.[51]

Figure 29.—The National Forests and proposed National Parks of the Southern Appalachian Mountains in 1930. Areas shaded with diagonal lines are the future Shenandoah National Park in Virginia, Great Smoky Mountains National Park in North Carolina and Tennessee, and Mammoth Cave National Park in Kentucky. The small black dots and squares are State forests. The Qualla Indian Reservation in the Great Smokies was later renamed the Cherokee Indian Reservation. The National Forests are little changed from a decade earlier. (Forest Service map and photo)

Figure 30.—Subsistence mountain farm homes on wagon track, surrounded by forest, in Lee County, Ky., near Kentucky River about 45 miles southeast of Winchester, in summer 1926. Lee County, like adjacent Estill County, today has little National Forest land, although much is hilly and forested. (NA:95G-214116)

Figure 31.—Tiny crude inhabited log cabin with a small window and tarpaper roof in Lee County, Ky., summer 1926. Note stoneboat and sunflower stalk in front; also water pump and privy both very close to cabin and each other. Daniel Boone (then Cumberland) National Forest. (NA:95G-214118)

Figure 32.—Log shack used as a temporary camp for Forest Service rangers and fire guards, near Silers Bald, Wayah Ranger District, Nantahala National Forest, west of Franklin, N.C., near present Nantahala Lake, in March 1916. Site was then a Purchase Unit. (NA:95G-27295A)

Many of the early rangers considered themselves highly dedicated considering the animosity they encountered. Former Forest Service supervisor Inman F. Eldredge, a graduate of the Biltmore School of Forestry, remembers that early foresters worked

> . . . in a hostile atmosphere where the settlers in the national forests . . . were against you because the Forest Service hemmed them in. The stock men were against you because you were going to regulate them and make them pay for grazing, count their cattle and limit where they could go . . .The lumbermen were against you from the lumberjack up. They thought you were a silly ass . . . because you limited their action with the axe, and the people at the top thought you were a misguided zealot with crazy notions. People who work in that atmosphere have to have tough hides—dedication.[52]

Forest Fire Control Stressed

Such dedication, and a strong sense of mission, soon produced results. One of the earlier influences of the Forest Service in the Southern Appalachians was the control of fire. Deliberate burning was a traditional method of land management in the region. Such burning usually occurred in the late fall and early spring to clear the woods of snakes and insects, to increase pasturage, and to enrich the soil. Uncontrolled fires had been noted by the first survey and examination parties in 1911, since they delayed surveys and altered land valuations. For example, E.V. Clark, an examiner in Georgia, noted a fire set on private holdings in Lumpkin County which, before being checked burned almost 100 acres of the Gennett tract. Henry Johnson, examiner in the Cherokee area, noted in March 1914 that a week had been spent in firefighting and would continue for a month, "cattle-owners and others being determined to burn the range."[53]

In general, burning was practiced by various segments of the population—the lumbermen, farmers, hunters, railroad men, and mischief makers; violators were seldom convicted, and people seemed generally indifferent to stopping the practice. Yet, as more and more Federal land was acquired, deliberate burning on adjacent or proximate lands was a matter of increasing concern to the Forest Service. One of its early goals was to practice fire control and teach its neighbors to do likewise.

Indeed the Forest Service was extremely concerned about the evils of fire. Within the Forest Service, some dissension developed during the 1930's over the use of fire as a tool of forest management. It had been demonstrated that in the southern coastal pine forests, annual burning, by removing the thick ground cover of pine needles, grass and other vegetation, and disease spores, helped the forests to regenerate and flourish. This discovery, however, was suppressed as harmful to the overall fire control effort, and the dominant official view of fire as a universal enemy to the forest prevailed.[54] There is certainly no evidence that anyone in the Forest Service suggested that annual burning of the Southern Appalachian hardwood forests was a useful management technique. The Forest Service was completely unsympathetic with the local custom of burning the mountain woods.

Fire control on National Forest lands in the Southern Appalachians began almost immediately with their establishment. Ranger Nicholson described the early fire prevention work in Rabun County, Ga.:

> Forest guards were appointed at a salary of $50 a month and went out on their tasks on horseback. There were then no towers or telephone lines. It was not until 1915 that the first telephone line was built from Clayton to Pine Mountain.[55]

Figure 33.—Forest Service ranger on top of Satulah Mountain near Highlands, N.C., using an alidade to locate on his map a forest fire to the northeast in the direction of Chimney Top Mountain on the old Savannah Purchase Unit in April 1916. Note binoculars. This area near South Carolina and Georgia became part of the Nantahala National Forest in January 1920. (NA:95G-27296A)

Figure 34.—Pisgah National Forest officer using a portable telephone hooked up to a newly installed Forest Service field line. Note wire hanging down from the overhead wire strung through the woods. The Pisgah was still a Purchase Unit when photo was taken in April 1916; it was officially established as the first purchased National Forest in the United States in October 1916. (NA:95G-27361A)

Figure 35.—A mounted Forest Service firefighter carrying hay rakes and a brushhook on his way to a forest fire on the Pisgah National Forest in 1923. (NA:95G-176511)

The rangers generally enrolled several local men to serve as forest guards and firefighters. These men helped to spread the new idea of fire control throughout the community. The Forest Service spent nearly $100,000 for fire control in the Smoky Mountains Purchase Unit before it was rescinded. Local firefighters, construction crews, and trail builders were hired. A fire tower was built at Rich Mountain, near Hot Springs, now in the Pisgah National Forest, and a preliminary network of trails constructed.[56]

One of the main provisions of the Weeks Act was to establish a system of Federal-State cooperation to prevent and control forest fires. The South was the most deficient area of the United States in organized fire protection. When the Weeks Act was passed, no Southern Appalachian State had passed a fire protection law. The Weeks Act, by providing Federal funds (about $2,000 in the early years) to match State funds to support qualifying fire protection programs, thus encouraged legislatures to meet Federal standards.

Figure 36.—Four-man crew on way to forest fire on railroad handcar, with various hand tools including pulaski, axes, pitchforks, canvas bucket, and lantern. Pisgah National Forest, N.C., 1923. (NA:95G-176444)

Figure 37.—Mounted Forest Service ranger, Lorenzo Jared, on Green Ridge, Bald Mountains, in French Broad District, Pisgah National Forest, using field glasses to look for signs of smoke of forest fires. Spot is near Hot Springs, N.C., and Tennessee State line, in spring 1930. (NA:95G-238056)

Kentucky revamped its forest fire laws in 1912, appointed a State Forester, and began receiving Weeks Act fire protection funds; its first forest fire protection association was organized in Harlan County in 1914. Virginia appointed a State Forester in 1914; in 1915 fire patrols were started in several far western counties (on lands all of which later became part of the Jefferson National Forest), and the State began receiving Weeks Act fire funds. In 1915 North Carolina passed a new fire law, appointed a State Forester, formed its first fire protection association, and began receiving Weeks Act fire funds. Tennessee hired a forester in 1914, but did not begin receiving Weeks Act fire funds until after it organized a Bureau of Forestry in 1921.[57] After the Clarke-McNary Act provided expanded grants-in-aid for fire protection programs, Georgia in 1925 and South Carolina in 1928 developed State fire control systems.[58]

From available accounts of the period, Forest Service efforts to control and prevent fires in the southern mountains began to show results quite early. In 1920, the National Forest Reservation Commission minutes claimed a "tremendous improvement" in forest cover and regularity of stream flow. "After seven years the effects of the stoppage of fires were beginning to show on several Forests."[59] Nevertheless, throughout the next decade, firefighting continued to engage the activities and funds of most Southern Appalachian forest supervisors.

'Home-Grown' Rangers Do Best

How were the mountaineers persuaded not to burn? According to an early ranger, "it took a great deal of educational work with lectures at schools, moving pictures, and literature to overcome this practice."[60] The effort was a gradual one which evolved as a system of trust developed between the Forest Service and the mountain people. This system was often founded upon the selection and placement of rangers and forest technicians who had grown up in the mountains and knew them well. As the Forest Service *Use Book* of 1915 states, "The most successful rangers are usually those who have been brought up in timber work or on ranches or farms, and who are thoroughly familiar *through long residence*, with the region in which they are employed."[61]

A classic example of a local resident who became an outstanding ranger was W. Arthur Woody, native of northern Georgia, who started as a laborer in 1912 and became a district ranger there July 1, 1918. He retired in 1945. Known for his accomplishment of restocking the forest with deer and protecting wildlife, Woody was also renowned for his ability to get along with the mountaineers of his home. Woody enlisted local boys to help watch for and fight fires and resorted to his own methods of punishing incendiarists. His sons, Clyne and Walter, who also became foresters, as did a nephew and grandson, tell the tale of Woody tracking a fire-setting turkey hunter with a bloodhound, jailing him, and then returning him to the scene of the fire, whereupon the hunter finally confessed.[62]

Figure 38.—Lorenzo Jared, French Broad District Ranger, Pisgah National Forest, N.C., talking over field telephone at Butt Mountain Lookout near Tennessee State line, spring 1930. (NA:95G-238057)

Figure 39.—William Arthur Woody, a real-life legendary Forest Service figure in North Georgia all his adult life. Native to the mountains, he was the senior ranger on the Toccoa and Blue Ridge Districts, Cherokee and Chattahoochee National Forests, from 1918 to 1945. This is an April 1937 photo. (NA:95G-344061)

Ranger Nicholson, of Rabun County, Ga., also employed a bloodhound. Former Regional Forester J. Herbert Stone remembers "Ranger Nick's" special fire prevention program:

> One of the firebugs whom Nick had had his eye on up in that area, Rabun County, had been setting fires each year in the spring to get the country in shape for his stock. The year after the bloodhound's reputation had gotten around, a friend of his asked if he's going to burn the woods that year and he says, "No sir, not me," he says, "I don't want any bloodhound tearing the seat out of my britches." The result was that the fire record for that particular drainage improved tremendously.[63]

Early rangers and foresters hoped, by example, not only to stop the deliberate burning but to encourage the local inhabitants and timber concerns to practice enlightened silviculture and forest conservation as well. As W.W. Ashe has written, "stimulating private owners . . . in developing and applying methods of management" to cutover lands was one of the main purposes of acquiring eastern forests.[64] Evidence suggests that this campaign may not have been so successful as the one against fire.

Throughout the South, the lumber industry as a whole declined after 1909, as small, portable sawmills replaced the large, stationary mills. Many once thriving mill towns had been abandoned as the forests nearby were cut over. In Georgia, for example, the number of lumber mills declined by two-thirds between 1909 and 1919.[65] In North Carolina, over the same decade, the number of lumbering establishments did not decline, but the number of wage earners employed in lumbering and the timber products industry declined by nearly 25 percent.[66]

Logging, of course, continued on National Forest land, managed with an eye toward preservation and profit, sometimes on a large scale. The Carr Lumber Co., for example, extensively logged the Pisgah Forest under a 20-year contract which had been signed by Louis Carr and the Vanderbilts in October 1912. However, National Forest timber sales generally favored small concerns and individual operators. Many such sales were for fence posts, crossties, and tanbark, and in the early years were often made for under $100.[67]

Figure 40.—A dramatic scene of devastation on the slopes of Mt. Mitchell, N.C., after destructive logging and numerous resulting fires, in June 1923. This was typical of the Southern Appalachians then. (NA:95G-176379)

Heavy Timber Cutting Continues

The influence of the Forest Service in controlling timber cutting on private land was less decisive. Certainly, in Kentucky, where no Federal purchases were made until 1933, heavy timber cutting continued throughout the 1920's, partly because many stands in eastern Kentucky did not become really accessible, or economically feasible to log, until that period. In areas where the National Forests had been established, in Tennessee, Georgia, and North Carolina, large-scale destructive lumbering continued. Forester William Hall noted in 1919:

> In most of the larger timber operations in the Southern Appalachians, there has been no change in former methods of cutting except to make the cutting heavier as a result of higher lumber prices.[68]

When the Weeks Act was passed, considerable animosity existed between many local lumbermen and Government foresters. To some extent this animosity can be attributed to the ideological and practical differences between lumbering and forestry which persisted, despite the teachings of Carl Schenck and Austin Cary. As Forester Inman Eldredge stated in his reminiscences of early Forest Service days, many foresters had little experience in using the woods and disparaged those who did:

> You produced the timber and cared for it, and then you turned it over to the roughnecks to cut it up and ship it around. There wasn't any science or art to it . . .[69]

Reciprocally, lumbermen regarded early forestry as frivolous and foolish, in Inman's words, "a parlor game." Inman felt that bad feelings between lumbermen and Pinchot's foresters had been created by the foresters' intense, but sincerely expressed, propaganda against the "timber barons."[70]

Certainly, Andrew Gennett resented the picture he felt was painted of lumbermen as "crooks and rascals," who had

"wasted and devastated the vast areas of the forests in the United States."[71] In 1926, Gennett, in cooperation with Champion and Bemis Lumber, bought up a vast acreage in western Graham County, N.C., from an English syndicate, and continued lumbering in his new operations in Clay County, N.C.; Beattysville, Ky., and Ellijay, Ga.[72] Throughout the 1920's, lumbering companies, such as Champion, Sunburst, Andrews, and Hutton and Bourbonnais, continued to clearcut and "high-grade" (cull) huge tracts, many of which, once depleted, were sold to the Forest Service in the mid-1930's.

Knowledge that the Forest Service would eventually buy their lands may have dissuaded some companies from practicing sound silviculture. Nevertheless, by the end of the 1920's, the relationship between the Forest Service and the lumber companies was improving. The lumbermen were beginning to trust the motives of the Federal foresters and were learning to turn Federal purchasing to their advantage. Gennett never cut his large tract in western Graham County, N.C., but sold it to the Forest Service in 1936 and 1937 for the unusually high price of $28.00 per acre. The 19,225-acre tract, containing some of the largest and most varied "virgin" timber in the Southern Appalachians, was steep and inaccessible, and, thus, too costly for Gennett to log. In 1936, 3,800 acres of the tract was set aside as the Joyce Kilmer Memorial Forest (since enlarged and now called Joyce Kilmer-Slickrock Wilderness), which the Forest Service pledged to protect as a place of inspiration and beauty.[73]

Federal land acquisition in the southern mountains had an initial, and continuing, effect on the tax base of all counties in which lands were purchased. Since all lands passing into Federal ownership were no longer taxable, a given county's property tax income was reduced by varying percentages. However, the Weeks Act provided that 5 percent of the receipts from all timber sales on National Forest land within a county went to its treasury for schools and roads. Verne Rhoades, forest examiner, noted in his February 1912 report on the Unaka Purchase Unit that:

> The question of taxation bothers many of . . . the people, especially the smaller owners, who think they will have to meet higher taxes when the land purchased by the government is removed from the total acreage of assessable property.[74]

County Rebate Raised to 25 Percent

The National Forest Reservation Commission considered the issue in 1911, and decided to study the extent to which local communities might be affected. In 1913 the group recommended that 5 percent be changed to 25 percent to provide greater compensation for the tax loss. Whether there was widespread local awareness of the possible loss of tax revenue from Federal acquisition in the early years is not apparent. Some counties undoubtedly suffered a loss by the change, although of those that did, the increase in small timber sales and Federal employment may well have balanced such loss.

Figure 41.—This huge burned-out yellow-poplar tree, a casualty of repeated forest fires, was long found useful by campers for shelter. Its size is indicated by man on horseback. Photo was taken on Little Santeetlah Creek in Unicoi Mountains, N.C., near Tennessee State line, in March 1916. This area is now part of the Joyce Kilmer-Slickrock Wilderness (formerly Joyce Kilmer Memorial Forest) in the Nantahala National Forest. (NA:95G-27294A)

The Forest Service, even in the earliest years, was a relatively generous employer. When the first survey teams arrived in 1911 and 1912, local men were hired as assistants. When district rangers arrived, men were recruited for fire watching, firefighting, trail building, and the like. Thus, although land sales to the Government often hastened outmigration as former landowners moved to towns for industrial employment, enough new jobs were also created in the forests to occupy both those who remained as tenants on Federal lands and those who lived on adjacent farms.[75]

Many rangers believed they had good relationships with the mountain people. Rangers and forest technicians often became community leaders and friends whom the local people learned to trust. J. Herbert Stone, who came to the Nantahala in 1930 as a technical assistant to the Forest Supervisor, testifies to the goodwill that the Forest Service felt had been built:

> . . . so the relationships and the cooperation received from the people throughout the mountains was very fine. There were of course a few that would want to set fires and who would become provoked when they didn't get just what they wanted, but in the main the relationships between the people and the leaders of the communities was all that could be expected by the time I got there.[76]

In other ways, early Federal land acquisition and land management practices had a more subtle effect. The Forest Service introduced to the Southern Appalachians an element of culture and education which was basically northeastern and urban. In 1919 William Hall went so far as to claim:

> . . . improved standards of living are coming in. Homes are kept in better repair. Painted houses and touches of home adornment are to be observed. Money is available for better food and clothing. The life is different. The people are different. Yet it must be remembered that these are the genuine Appalachian mountaineers who, until a few years ago, had no outlet for their products and none for their energies except the manufacture of moonshine liquor and the maintenance of community feuds."[77]

In spite of Hall's patronizing tone and reliance on the mountaineer stereotype to make his point, the Forest Service was providing leaders who began to earn the respect and loyalty of many local inhabitants and to effect lasting changes in the social and economic structure of mountain life.

Reference Notes

(In the following notes, the expressions "NA, RG 95, FS, OC, NFRC" means National Archives, Record Group 95, Records of the Forest Service, Office of the Chief and Other General Records, Records of the National Forest Reservation Commission, 1911-1976, Series 27. "LA" means Division of Land Acquisition, General Correspondence, Exchange, Purchase, Donation, or Condemnations, Region 8. See Bibliography, IX.)

1. The National Forest Reservation Commission was composed of three Cabinet members, two Senators appointed by the President of the Senate, and two Congressmen appointed by the Speaker of the House. The first such Commission members were Henry L. Stimson, Secretary of War; Walter Fisher, Secretary of Interior; James Wilson, Secretary of Agriculture; John Walter Smith, Senator from Maryland; Jacob H. Gallinger, Senator from New Hampshire; William Hawley, Congressman from Oregon; and Gordon Lee, Congressman from Georgia.

2. NA, RG 95, Office of the Chief, Records of the National Forest Reservation Commission, Work of the National Forest Reservation Commission, 1911-1933, p. 2.

3. NA, RG 95, OC, NFRC, "Lands of Andrew and N.W. Gennett," June 19, 1911.

4. NA, RG 95, LA, Correspondence, Surveys, Georgia. Andrew Gennett to W. L. Hall, May 28, 1912.

5. "The National Forests and Purchase Units of Region Eight," Forest Service unpublished report (Region 8, Atlanta, Ga., January 1, 1955), p. 30, copy in Regional Office.

6. Telephone interview with Walter Rule, Public Information Officer, National Forests of North Carolina, Asheville, N.C., September 19, 1979.

7. NA, RG 95, LA, Correspondence, Examination, North Carolina, William Hall to R. W. Shields, January 19, 1912, Correspondence, Examination, North Carolina.

8. "The National Forests and Purchase Units of Region Eight," p. 3, Region 8 report, January 1, 1955, copy in Regional Office, Atlanta, Ga.

9. NA, RG 95, OC, NFRC, "Lands of Andrew and N. W. Gennett."

10. "Lands of Andrew and N. W. Gennett," p. 41.

11. NA, RG 95, OC, NFRC, Minutes of the National Forest Reservation Commission, February 14, 1912.

12. "The National Forests and Purchase Units of Region Eight," p. 41, Region 8 report, January 1, 1955, copy in Regional Office.

13. NA, RG 95, LA, Correspondence, Examinations, Verne Rhoades, "Report on the Unaka Area in Tennessee and North Carolina," February, 1912, pp. 2-4, 10.

14. NA, RG 95, LA, Correspondence, Examinations, Tennessee, 1913, W. W. Ashe to H. L. Johnson, August 14, 1913.

15. NA, RG 95, LA, Correspondence, Examinations, Tennessee, 1912, Rowland F. Hemingway to the Forester, May 1, 1912.

16. NA, RG 95, LA, Correspondence, Surveys, Georgia, 1911-15, Andrew Gennett to W. L. Hall, June 5, 1912.

17. NA, RG 95, LA, Correspondence, Surveys, 1911-15, Thomas Cox, Survey Report, January, 1914; James Denman to Assistant Forester, July 21, 1914.

18. NA, RG 95, LA, Correspondence, Surveys, 1912-14, E. V. Clark to the Forester, April 7, 1912.

19. NA, RG 95, LA, Correspondence, Surveys, 1911-15, "Report on Establishment and Survey of Macon-Swain County Line Between the Shallow Ford of the Little Tennessee River and A Point on the Nantahala River."

20. NA, RG 95, LA, Correspondence, Surveys, 1911-14, Mt. Mitchell, Diffenbach to the Forester, July 19, 1912.

21. NA, RG 95, LA, Correspondence, Surveys, 1911-14, Mt. Mitchell, Thomas A. Cox to the Assistant Forester, August 17, 1914.

22. The Olmstead Lands, National Forests of North Carolina, Asheville, N.C., "Summary of Reports on Possession Claims on E. B. Olmstead Grants."

23. The Weaver Act of June 14, 1934, was passed solely to adjust the Olmstead claims (37 Stat. 189, 16 U.S.C. 4776). By reason of "long continued occupancy and use thereof," parties were entitled, with the authority of the Secretary of Agriculture and approval of the Attorney General, "to convey by quitclaim deed . . . interest of the U.S. therein." Olmstead Lands file, National Forests of North Carolina.

24. NA, RG 95, LA, Correspondence, Examinations, Supervision, Smoky Mountains, 1911-15, W. W. Ashe, Memorandum for District Seven, February 18, 1915.

25. Jesse R. Lankford, Jr., "A Campaign for a National Park in Western North Carolina," p. 46. (See Bibliography, III.)

26. NA, RG 95, LA, Correspondence, Examinations, D. W. Adams to Forester Hall, September 1911; Rhoades, "Report on the Unaka Area."

27. William E. Shands and Robert G. Healy, *The Lands Nobody Wanted* (Washington: The Conservation Foundation, 1977).

28. NA, RG 95, LA, Correspondence, Examinations, Nantahala, O. D. Ingall to the Forester, May 10, 1912.

29. NA, RG 95, LA, Correspondence, Surveys, Georgia, Thomas A. Cox to Assistant Forester, February 13, 1914.

30. NA, RG 95, LA, Correspondence, Examinations, North Carolina, William Hall to D. W. Adams, September 15, 1911.

31. NA, RG 95, LA, Correspondence, Valuations/Examinations, W. L. Hall to R. C. Hall, July 17, 1911.

32. NA, RG 95, LA, Correspondence, Examinations, R. Clifford Hall to Assistant Forester, May 4, 1913.

33. NA, RG 95, LA, Correspondence, Purchase, Georgia, R. Clifford Hall to Assistant Forester, April 4, 1914.

34. NA, RG 95, Office of the Chief, Records of the National Forest Reservation Commission, Minutes of the National Forest Reservation Commission, November 1, 1911.

35. NA, RG 95, OC, NFRC, "Work of the National Forest Reservation Commission," p. 3.

36. NA, RG 95, LA, Correspondence, Examinations, Supervision, Smoky Mountains, Verne Rhoades to Assistant Forester, August 6, 1913.

37. NA, RG 95, LA, Correspondence, Examinations, North Carolina, D. W. Adams to William Hall, September 2, 1911.

38. NA, RG 95, LA, Correspondence, Examinations, Mt. Mitchell, Robert J. Noyes, Forest Examiner, June 23, 1915.

39. NA, RG 95, LA, Correspondence, Examinations, Georgia, J. W. Hendrix to Forest Service, July 17, 1914.

40. NA, RG 95, LA, Correspondence, Examinations, Mt. Mitchell, Lennie Greenlee to W. W. Ashe, December 9, 1913.

41. NA, RG 95, OC, NFRC, "Work of the National Forest Reservation Commission," pp. 2, 3.

42. Shands and Healy, *The Lands Nobody Wanted.* (See Bibliography, I.)

43. "The National Forests and Purchase Units of Region Eight," p. 44, Region 8 report, January 1, 1955, copy in Regional Office.

44. Data on acquired tracts of the Nantahala and Pisgah National Forests obtained from Basic Information Sheets, National Forests of North Carolina, Asheville. Pisgah was not the first, but the ninth National Forest east of the Great Plains.

45. NA, RG 95, OC, NFRC, "Work of the National Forest Reservation Commission," p. 12.

46. Clarke-McNary Act, 43 Stat. 653; 16 USC 471, 505, 515, 564-570.

47. 36 Stat. 962; 16 USC 516.

48. Bureau of the Census, *Fourteenth Census of the United States, Volume I, Population* (Washington: Government Printing Office, 1923); and *Fifteenth Census of the United States, Volume I, Population,* 1933.

49. Bureau of the Census, *Fourteenth Census of the United States, Volume VI, Agriculture* (Washington: Government Printing Office, 1922); and *Fifteenth Census of the United States, Volume VI, Agriculture,* 1933.

50. Eller, "Miners, Millhands, and Mountaineers," p. 185. A search through selected county newspapers of the region confirms this finding.

51. R. C. Nicholson, "The Federal Forestry Service," in *Sketches of Rabun County History*, Andrew J. Ritchie, ed., (n.p., n.d., c. 1948), p. 359.

52. Elwood R. Maunder, "Ride the White Horse." (See Bibliography II.) Although Eldredge was a supervisor on the National Forests of Florida, his remarks are applicable to the Southern Appalachian forests as well.

53. NA, RG 95, LA, Correspondence, Surveys/Examinations, Supervision, (Georgia), E. V. Clark to Forester, December 4, 1912; Supervision, (Cherokee), Henry Johnson to Assistant Forester, March 30, 1914.

54. Ashley L. Schiff, *Fire and Water: Scientific Heresy in the Forest Service.* (See Bibliography, I.)

55. R. C. Nicholson, "The Federal Forestry Service," p. 360. (See note 51.)

56. Elizabeth S. Bowman, *Land of High Horizon* (Kingsport, Tenn.: Southern Publishers, Inc., 1938), p. 178.

57. "Cooperative Forest Fire Control, A History of Its Origins and Development Under the Weeks and Clarke-McNary Acts," USDA, Forest Service, M-1462, Rev. 1966, p. 26. Ralph R. Widner, ed., *Forests and Forestry in the American States, A Reference Anthology*, (Washington: National Association of State Foresters, 1968), pp. 203, 298, 309, 326-28. John R. Ross, "'Pork Barrels' and the General Welfare: Problems in Conservation, 1900-1920," p. 240. (See Bibliography, III.)

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59. NA, RG 95, OC, NFRC, Minutes of the National Forest Reservation Commission, April 8, 1920.

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61. USDA, Forest Service, *The Use Book*, 1915 (Washington: Government Printing Office, 1915).

62. Interview with Clyne and Walter Woody, Suches, Ga., July 12, 1979.

63. Taped interiew with J. Herbert Stone for Southern Region History Program, November 22, 1978. Made available by Sharon Young, Regional Historian, Region 8, Atlanta, Ga.

64. William W. Ashe, "The Place of the Eastern National Forests in the National Economy," *Geographical Review* 13 (October, 1912): 539.

65. Ignatz James Pikl, Jr., *A History of Georgia Forestry*, p. 17. (See Bibliography, I.)

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67. William L. Hall, "Influences of the National Forests in the Southern Appalachians," *Journal of Forestry* 17 (1919): 404.

68. W. L. Hall, "Influences," p. 407.

69. Elwood R. Maunder, "Ride the White Horse." (See Bibliography, II.) Cary was a Forest Service timber expert of the Schenck type.

70. Maunder, "Ride the White Horse."

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72. Douglas C. Brookshire, "Carolina's Lumber Industry," 162. (See Bibliography, II.)

73. Michael Frome, *Battle for the Wilderness* (New York: Praeger Publishers, 1974), pp. 174, 175.

74. NA, RG 95, LA, Correspondence, Examinations, Verne Rhoades, "Report on The Unaka Area," p. 9.

75. William L. Hall, "Influences of the National Forests in the Southern Appalachians," *Journal of Forestry* 17 (1919): 404.

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77. Hall, "Influences of the National Forests," 404.