

# Which Nature? A Case Study of Whitetop Mountain

David P. Robertson and R. Bruce Hull

David Robertson is a Ph.D. candidate in the Department of Forestry at Virginia Tech. He holds a master's degree in landscape architecture from Virginia Tech. His research interests include American environmental history, science, and policy.

Bruce Hull is Professor of Forestry in the College of Natural Resources at Virginia Tech. He holds a Ph.D. in forestry from Virginia Tech. His research interests involve the human dimensions of natural resource management.

**Abstract:** *Nature is socially constructed and many different environmental conditions can be considered natural. These assertions have profound implications for landscape design, planning, and management. In our case study of Whitetop Mountain, we found four discrete but closely related natures—ecotourism, romanticism, pastoralism, and ecologism—each of which provides a unique way of understanding and valuing the landscape. These discourses of nature describe a variety of different environmental conditions that are both possible and acceptable at Whitetop Mountain. Each discourse suggests a different definition of environmental quality and a different vision of the mountain's future. In conclusion, we discuss implications of these differing discourses of nature for the design, planning, and management of natural landscapes and propose a fifth discourse—bioculturalism.*

## Introduction

[T]he environment about which we all argue and make policy is the product of the discourse about nature established by powerful scientific disciplines such as biology and ecology, in government agencies such as the Environmental Protection Agency, and in nonfiction essays and books such as Rachel Carson's *Silent Spring* and Paul Ehrlich's *The Population Bomb*. Beyond this, the values and beliefs we hold about the environment are established through the discourse of a bewildering variety of genres, institutions, and media. For example, the value the environment holds in our culture is shaped not only by documents such as environmental impact statements, but also by books like Thoreau's *Walden: Or Life in the Woods* or television shows such as Mutual of Omaha's *Wild Kingdom* that we watched as children. The language of these various discourses determines what exists, what is good, and what is possible.

(Herndl and Brown 1996, pp. 3–4)

Mountains, like all landscapes, are cultural as much as they are natural; they are social as much as they are physical; they are not simply “out there” shaped by the wind and rain; rather, they are formed by the ideas that exist inside

our heads. What a mountain looks like will depend upon what the observer wants to see. There is no single, objective description that best characterizes places such as Whitetop Mountain (e.g., Longino 1990; Haraway 1991; Daston and Galison 1992; Hayles 1995). As the quotation above illustrates, a variety of cultural traditions and social aspirations mediate public understandings of nature, landscapes, and the environment. It is in this sense that we say Nature and Whitetop Mountain are “socially constructed” (Evernden 1992; Greider and Garkovich 1994; Cronon 1995; Soper 1995).

The social constructivist critique applies to both popular and scientific understandings of nature (e.g., Worster 1994; Takacs 1996; Fischer 2000; Helford 2000; Scarce 2000; Hull and Robertson 2000; Hull et al. 2001). In fact, recent ecological theory suggests that many alternative environmental conditions are equally possible, equally “natural,” and equally healthy for any given place at any given point in time. There exists no single, ecologically optimum or naturally best environmental condition that can serve as an objective,

unequivocal goal for environmental management (e.g., Botkin 1990; Shrader-Frechette and McCoy 1993; 1995; Pickett et al. 1997; Callicott et al. 1999; Robertson and Hull 2001). *Which nature?* is a decision that must be negotiated among those with an interest in the outcome.

Whitetop Mountain, located within the Mount Rogers National Recreation Area and the Jefferson National Forest of southwest Virginia, is a prominent natural landscape valued by a constituency with diverse and sometimes conflicting expectations of *which nature* should exist at that place.<sup>1</sup> The controversies that so often surround natural areas management in places like Whitetop may be interpreted as recurring manifestations of a long-standing but largely unspoken debate concerning what is “natural,” what counts as environmental quality, and what should be the goals of management. Motivated by these concerns, our case study is an attempt to 1) illustrate how different discourses or understandings of nature influence what is considered to be “natural,” 2) show that environmental quality is defined differently within each of these different understandings of nature and naturalness, and 3) consider the implications of alternative understandings of nature and naturalness for

the design, planning, and management of natural landscapes.

In our case study of Whitetop Mountain we found four discursive themes, each of which reflects a different understanding of nature and naturalness: *ecotourism*, *romanticism*, *pastoralism*, and *ecologism*. Each discourse of nature that we identified meets the following criteria: 1) it is evident in the popular, professional, and/or scientific descriptions and expectations of Whitetop Mountain; 2) it exists elsewhere (both locally and globally) in contemporary environmental arenas; and, 3) it has significant implications for the design, planning, and management of Whitetop Mountain and related natural areas. While our case study focuses on one specific place, we would expect similar analyses of other places to produce similar results.

In this paper, we first provide a general overview of the history and present condition of Whitetop Mountain and then describe how the landscape is perceived within each of the four discourses. In conclusion, we propose a fifth discourse of nature—*bioculturalism*—as a more democratic, sustainable, and desirable vision of nature and human society in the twenty-first century.

### *Whitetop Mountain*

The vertical elevation that occurs between the South Holston River and the top of Whitetop is about 4,000 feet, essentially as much as that between Denver and the crest of the Front Range of the Rockies . . . not, by any standards, inconsequential.

Dr. Richard Hoffman, Virginia Museum of Natural History<sup>2</sup>

Whitetop Mountain, the second highest mountain in the state of Virginia (5,534 feet) and boasting the highest road in the state, is home to a rich natural and cultural heritage. Located in southwest Virginia, just a few miles from the Tennessee and North Carolina borders, Whitetop is part of the Blue Ridge Mountains of Southern Appalachia. Its location and qualities make it an attractive year-round destination for visitors.

The mountain is visually unique because much of its summit is

treeless. The south face of the summit resembles a high alpine meadow such as may be found above tree line in the Rockies and New England. This meadow-like opening, known as a grassy bald, is a phenomenon found scattered throughout the southern Appalachians. No one knows for sure how this portion of Whitetop Mountain came to be bald, but a century's worth of debate has produced a variety of fascinating stories.

Of the many explanations that account for the origin of southern Appalachian balds, Cherokee stories are particularly interesting. One story explains the balds to be the footprints left by the devil as he walked across the land. A second story tells of the Great Spirit clearing trees from the mountaintops to help the Cherokee better see the approach of marauders such as the U'la'gu', a giant, green-winged hornet with a taste for Cherokee children.<sup>3</sup>

Origin stories submitted by the scientific community are equally fascinating. The most recent (Weigl and Knowles 1995) speculates that the clearings may be the result of prehistoric disturbance (e.g., fire, wind throw, disease, glacial climate) during the Late Pleistocene (prior to 10,000 B.P.). This story contends that once cleared, the balds were maintained by grazing, first by mega-herbivores (giant grazers like mastodons, mammoths, and ground sloths, among others (all now extinct)), later by buffalo and elk (now extirpated from the East), and most recently by the domestic livestock (goats, sheep, horses, and cattle) of European settlers. Of the many scientific stories, this *mega-herbivore theory* is both the most inclusive and least verifiable.<sup>4</sup>

Beyond the bald, the remainder of the mountain is forested except for scattered shrub communities. Spruce trees occupy the summit and uppermost elevations of the mountain. At lower elevations, the spruce give way to a variety of northern hardwoods (e.g., beech, birch,

maple). Further down the slope, trees more typical of the region (e.g., oak, hickory, poplar) replace northern species.

The mountain is a local landmark. The summit not only marks the intersection of three counties (Grayson, Smyth, and Washington), but also provides a gathering place for local residents who have long enjoyed meeting on the mountain for social occasions. At various times in the past, Whitetop has provided a unique setting for a diversity of cultural activities, including a mink farm, summer cattle grazing, resort hotel, dance hall, and a variety of annual festivals. These and other less organized events, such as driving to the top of the mountain to watch the sun glisten off a heavy frost, are part of many residents' cultural heritage (USFS 1995b, p. 9). The shared memories that result from these cultural activities add to the physical presence of the mountain to provide local residents with a source of identity and pride. People are proud of the place where they live when visitors come from miles away to enjoy the local landscape they call home.<sup>5</sup> In this sense, the mountain provides a physical location around which community takes place.

In addition to its local significance, Whitetop is of interest to a regional and national constituency. In the early 1970s, the United States Forest Service (USFS) purchased the summit and higher elevations of Whitetop Mountain from its private owners and incorporated the area into the recently established Mount Rogers National Recreation Area (MRNRA), a district of the Jefferson National Forest (JNF). This change of hands, from private to public and from local to national, marks a significant point in the changing public perceptions and use of the mountain. The constituency with an interest in the mountain changed and grew overnight.

Today, people visit the bald and forested summit of Whitetop Mountain for a variety of reasons. Local residents drive the two-mile gravel road to the summit for picnics, reunions, and chance meetings. Local and non-local recreationists either hike, bike,

or drive to reach the spectacular views, abundant wildflowers, and delicious berries. Amateur astronomers, appreciative of the clear winter night skies, come to gaze at stars. Hunters in search of wild game explore the mountain off trail. Technicians frequent an electronics compound located at the summit where equipment monitors air traffic, communications, and environmental conditions such as ozone and acid rain. Biologists visit the summit to study the ecosystems and species maintained by the grassy bald and northern forest (e.g., rare salamanders, endangered flying squirrels, and numerous plant species).

Whitetop is many things to many people. The mountain landscape has long been valued as both a natural playground and a local place of rich cultural heritage. In the 1980s, the United States Congress designated several adjacent mountains as Wilderness Areas. More recently, with the rise of global environmentalism, the meaning of Whitetop is shifting from “national recreation area” to “global biodiversity reserve.” In turn, an increasing number of people now see the mountain as a unique ecosystem, a rare and unusual specimen of nature. Public perceptions and expectations of Whitetop Mountain are dynamic and stakeholders involved in decision making are reminded that any portrayal of the mountain is only one of many possible descriptions. In the heartfelt words of one USFS employee, “We all love Whitetop, it’s just that we love it in different ways.”<sup>6</sup>

#### *Ecotourism and Outdoor Recreation Development*

Designation of this area as a national recreation area with its accompanying management programs will emphasize its capacity to meet the ever-growing outdoor recreation needs of our people, aid in conserving its special botanical and ecological features, and promote public awareness of the scenic beauty, and the recreation fields it offers.<sup>7</sup>

Whitetop Mountain—located midway between Shenandoah National Park and the Great Smoky

Mountains National Park, near the crossroads of Interstates 77 and 81, and within a day’s drive of Washington, D.C. and over half the population of the United States—has long been a regional tourist attraction. As previously mentioned, the mountain was once home to a resort hotel and dance hall and, throughout this century, tourists and locals alike have visited the summit for a variety of recreational activities. However, it was not until 1966, when Congress established the MRNRA in southwest Virginia that Whitetop Mountain began to experience the first aspirations of becoming a significant regional tourist attraction.

Congress had established the National Recreation Area “in order to provide for the public outdoor recreation use and enjoyment of the area . . . and to the extent feasible the conservation of scenic, scientific, historic, and other values of the area . . .” (United States Congress 1966). This national effort to develop regional outdoor recreational resources in Appalachia has roots in Depression Era state-federal cooperative planning efforts such as the Civil Conservation Corps, the Works Progress Administration, and the Tennessee Valley Authority programs. More directly, the federal government’s establishment of a National Recreation Area in southwest Virginia complemented the pro-development initiatives of the Appalachian Regional Commission and can be viewed as part of a national effort to modernize Appalachia.<sup>8</sup>

Promoters of development have long characterized Appalachia as impoverished, if not degenerate, and the MRNRA was cast as an economic asset that would “materially advance the local economy” by providing an infrastructure to benefit the region “both immediately and in the long run through the inflow of funds and the accelerated development and intensified administration and the upbuilding of a permanent economic base oriented to full utilization of all the national forest

resources” (Freeman 1966, p. 115; Raitz and Ulack 1984). According to these initial plans, the MRNRA was intended to “accommodate a diversified and, in places, intensive recreational use,” including: 900 family camping units, a ski area, reservoir, and Scenic Highway for an anticipated five million visitors by the year 2000 (Sarvis 1994, p. 44).

Consistent with this development-oriented conservation agenda, early USFS proposals for ecotourism and recreation opportunities at the summit of Whitetop Mountain involved three stages. Stage One was intended to accommodate the then existing use (late 1970s). Developments in this early stage were to include: temporary parking for fifty cars, sanitary facilities, and a central garbage collection system. Stage Two proposed more significant and controversial development to be implemented when visitation exceeded 200 people at one time on an average weekend day. At such time, a parking area for approximately 100 cars would be built, a new road constructed, and a shuttle bus service initiated to transport visitors the last mile from the parking area to a new observation facility at the summit. There were also plans for a restaurant, craft shop, and restrooms to be constructed. Stage Three anticipated further developments (including an undefined “self-supporting public conveyance”) to be initiated when the average day use regularly exceeded 400 visitors at one time (USFS 1978, pp. 92–3).

However, in the Final Plan, the USFS (1981) proposed only two stages of development and made no mention of a restaurant, craft shop, or public conveyance. Thus far, visitation has remained well below projected levels and the agency has yet to fully implement either of these stages. Economic recession (in the 1970s), local opposition to “improvements,” and “increasing attention from state and national groups who challenged the NRA development on environmental grounds” are three factors that largely account for these undeveloped proposals (Sarvis 1994, p. 53). Nevertheless, the gravel road to the summit of Whitetop Mountain

remains “the heaviest used forest development road” on the MRNRA (USFS 1995a, p. 56). Several factors—a boost in the regional economy, improved access, an increase in the regional population, changing local demographics (due to a new back-to-the-land movement composed largely of retirees and telecommuters), and an increasing demand for outdoor recreation opportunities—may yet contribute to increased use and development.<sup>9</sup>

Within the discourse of ecotourism, environmental quality is defined as providing engineering solutions to accommodate visitor access, sanitation, and enjoyment of the area. Natural features are conserved “to the extent feasible” in order to accommodate outdoor recreational opportunities and regional economic development (United States Congress 1966). As was the case with early National Park Service policies, management goals for the MRNRA emphasized improving and making more accessible the tourist attracting natural scenery over the goals of preserving nature in unimpaired conditions (Howell 1994; Sellars 1997). As an example, Whitetop is currently classified by the USFS’s Recreation Opportunity Spectrum management framework as “Roaded Natural.” According to this classification, management actions seek to create an area

characterized by predominantly natural appearing environments with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities. (USFS 1986, p. II-32)

In the following section, we find that the discourse of ecotourism, as it is applied by the USFS at Whitetop Mountain, is derived from, but now contrasts sharply with, a more romanticized view of nature.

### *Romanticism and the Ideal of Wild Nature*

In the mid 1800s, Charles B. Coale wrote about a local legend by the name of Wilburn Waters, “The Famous Hunter and Trapper of White Top Mountain” (Coale 1878). In his accounts, Coale depicts Whitetop Mountain as a haven of edenic proportions. He portrays the mountain as a “fastness,” a stronghold to which men retreat, escaping the strictures of society in search of a more fulfilling life. In Coale’s stories, the trip to Whitetop Mountain is a difficult pilgrimage. The mountain is “approached through deep and intricate gorges, over steep foot-hills, and through almost impenetrable laurel jungles, sometimes infested by bears, wolves, wild-cats, and rattlesnakes.” But once there, Whitetop provides “luxuriant growth,” “fruits in never-failing abundance,” “waters so pure and light they never oppress,” and “exhilarating effects.” The image that Coale creates is a pious depiction of Whitetop Mountain as the very epitome of God’s Creation. Coale was writing in the mid to late 1800s, at the height of the Romantic period, and his colorful descriptions of Whitetop tell us less about the mountain than they do about the idealized version of Nature championed by poets, painters, and promoters of this tradition.

Romanticism, which “resists definition,” is a view of the world based on several well-rooted strands of aesthetic and spiritual thought in the Western tradition (Nash 1983). Organicism, primitivism, and the sublime are among the many sensibilities that coalesced in the eighteenth and nineteenth centuries as a coherent Romantic Movement. The movement emerged principally in literature but spread throughout the arts as a response, both negative and challenging, to the increasingly godless, inorganic, and urbanized world produced by ever expanding developments of modern science, technology, and industry (Oelschlaeger 1991). Coale’s Romantic contempo-

raries in America included the likes of Emerson, Thoreau, and Muir. In their writings, and in many instances of their daily lives, these Romantics expressed an enthusiasm for the “strange, remote, solitary, and mysterious,” and preferred their nature to be wild, rejecting “meticulously ordered gardens” in favor of the “unkempt forest” (Nash 1983, p. 47).

In America, this Romantic affinity for a living, wild, and sublime natural world gave rise to an impassioned constituency of nature preservationists who organized a successful political campaign to protect natural areas in the form of National Parks and federally designated Wilderness Areas. This campaign reached a climax with the passage of the Wilderness Act in 1964. Today, more than 100 million acres of land in the United States are protected as “wilderness.” According to the contemporary legal definition, “wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain” (Wilderness Act 1964).<sup>10</sup> This American “wilderness” and “idea of wilderness” are arguably two of the Romantic Movement’s greatest cultural achievements and, in the eyes and minds of many twentieth-century Romantics, wild nature—pristine and undisturbed by humans—has become the ideal American landscape.

Whitetop Mountain borders two federally designated Wilderness Areas and is often mistakenly attributed with this controversial federal designation. Soon after the 1966 establishment of the MRNRA surrounding Whitetop, the USFS began expanding its land holdings by purchasing (and occasionally condemning) private lands. As the agency gained control, they began removing buildings, cattle, and other evidence of humans. Whitetop Mountain was one of many regional locations that were cleaned up, sanitized, and generally made to appear more natural (Weaver 1996). In light of these Romantic aspirations, development at Whitetop is a contentious issue.

Despite extensive public involvement in early planning efforts for the area, many of the currently involved constituents are ignorant of the mountain's prolonged cultural history (reviewed in the pastoralism section below) and unaware of the USFS plan for development (reviewed in the ecotourism section above). For instance, two otherwise well-informed local residents, who regularly participate in USFS decision-making processes, were shocked to hear of the extensive development ideas. In a letter to the USFS, they wrote: "If improving the road will eventually result in any of those projects, heaven help Whitetop! It sounds terrible."<sup>11</sup>

To those living outside the region, Whitetop Mountain, like the whole of the Jefferson National Forest, appears as a "green dot" on the map and people who are unfamiliar with the history and changing land uses of the mountain may idealize the dot as a few shades greener than it actually is. Similarly, more well-informed stakeholders such as the members of Preserve Appalachian Wilderness (PAW) and Virginians for Wilderness, while lacking the strong political support necessary for federal wilderness designation, have actively lobbied for minimized human presence and action on Whitetop Mountain. These activists believe modern technology, particularly in the form of motorized recreation, negatively impacts the nature they want at Whitetop.

Roadlessness, restricted vehicular access, and wilderness are adamantly voiced preferences in public comments concerning the management of the Whitetop area.<sup>12</sup> One argument for such a preference is that roads and motorized vehicles detract from the aesthetic experience of wild nature. Stakeholders who share this point of view have pressured the USFS to close and remove the gravel road that provides access to the summit of Whitetop Mountain. This preference is clearly stated in numerous public comments to the USFS.<sup>13</sup> One example is found in a letter written by a PAW representative:

. . . I remember hiking to Whitetop from the west. I thought I was in paradise until I heard the roar of an automobile—I hadn't realized that there was a road up there. Up the road came the automobile, churning up the dust as it spun along. The driver was some fool who probably hadn't gotten any exercise in years, except in his right foot. He didn't stay very long. He just left his car in idle and looked out of the tinted window. Then he turned around and left. . . . It was much better before he came.<sup>14</sup>

Wilderness advocates, like this one, have a disdain for the noise, dust, and sloth that are the by-products of roads, cars, and other forms of human contrivance. A primary concern from this perspective is that too many people and the wrong kind of behavior have a negative impact on the sought after Romantic experience of nature. Mitigating these social impacts and conflicts among users was one of six major issues identified in a 1999 attempt to plan recreation use of the high country area of Whitetop.<sup>15</sup>

Clearly, human presence and human modification of the landscape are perceived as degrading the environmental quality of Whitetop Mountain. Accordingly, management actions strive to minimize the impacts of human visitation through limiting access and educating visitors to leave no trace. This discourse also promotes management and design solutions that reduce the evidence of humans by dismantling, removing, or hiding past land uses, built structures, and signs of active management.<sup>16</sup>

#### *Pastoralism and the Rural America Theme*

[T]he question is, will this area remain a rural Appalachian underprivileged area, which I believe most people want, or will it be allowed to be commercially developed and destroy our mountain culture?

Reverend William Gable<sup>17</sup>

Like wilderness, tourist development catering to urban recreationists and other outsiders may not fit with many local residents' expectations of the landscapes in which they live. Local residents value Whitetop Mountain, Appalachia, and the landscapes of rural America for their pastoral qualities. Pastoral is a phrase that describes a landscape that is lived-in, storied, made complete and unique by the presence and actions of people who care. Unlike the romantic and touristed natures discussed above, pastoral nature is a cultured nature, a middle landscape where people live and work, not just play.

Pastoralism is an idealized view of nature and one that was promoted by the USFS in a planning theme titled "Rural Americana." According to an early MRNRA plan written in 1968:

the meaning of Rural Americana is to restore, recreate, and perpetuate those elements of early rural America which have had a lasting charm and attraction. Virginia's verdant pattern of field and forest, the covered bridge, rail fences, the old mill, the stone-iron furnaces all exist near the NRA and have a strong appeal. (USFS 1978, p. 81)

This theme recognizes the local cultural heritage of the region and gives special emphasis to "civilized man's use of the area" in the years between 1776 and 1950 (USFS 1978, p. 107). The "Rural America" theme idealizes the landscape of Whitetop Mountain and Appalachia as a sparsely populated region characteristic of an earlier, and perhaps better, American life. According to the USFS,

In some places it's almost as if time has passed the area by and life is still very much as it was in the early days of our nation.<sup>18</sup>

This attempt on the part of the USFS to symbolically capture "the atmosphere of a bygone era" and provide for visitors' "nostalgic expectations" of early American life is an impulse that derives from a long-standing pastoral tradition in Western civilization.

Aesthetic appreciation of the pastoral is a tradition with roots in

Greek poetry. Beginning as early as Theocritus' *Idylls* in the third century B.C., the pastoral ideal developed over the course of several thousand years, growing from a strictly literary into a broad artistic tradition, with eventual influences on early American Jeffersonian ideals of the agrarian landscape (Marx 1967; Schmidt 1969; Short 1991; Worster 1994). In the words of Leo Marx (1967, p. 141):

Beginning in Jefferson's time, the cardinal image of American aspirations was a rural landscape, a well-ordered green garden magnified to continental size. Although it probably shows a farmhouse or a neat white village, the scene usually is dominated by natural objects: in the foreground a pasture, a twisting brook with cattle grazing nearby, then a clump of elms on a rise in the middle distance and beyond that, way off on the western horizon, a line of dark hills. This is the countryside of the old Republic, a chaste, uncomplicated land of rural virtue.

In Jefferson's mind, there was "no condition happier than that of the Virginia farmer" and this agrarian ideal of American society and the American landscape is one that has infused United States national identity throughout the past several hundred years (Jacob 1997, pp. 6–10).

In late twentieth-century America, the pastoral has come to mean "the real or symbolic landscape images in which nature predominates as a tended pattern, where human intervention is usually obvious but appears gentle and nonabusive" (Schauman 1998, p. 189).<sup>19</sup> This appreciation of the pastoral image, which is evident in early USFS descriptions of the existing and desired conditions of the MRNRA landscape, not only reflects, but also produces the landscape conditions currently existing at Whitetop. Not only did the USFS maintain many of the existing pastoral features of the landscape (e.g., the balds and grazing on small fields), but they actually removed incompatible ones and added others that are more appropriate to the ideal (e.g., vegetative thinning and buffering for scenic purposes).

The Rural America theme calls for period farms representing every fifty years from 1776 to 1950 to be included in the interpretive program of the MRNRA (USFS 1978). While this proposal does not target specific locations, Whitetop Mountain would likely be a prime candidate for such an interpretation. Period farms are reminiscent of Whitetop's earlier days when the grassy bald served as a commons area for summer pasture and a mink farm occupied a small clearing within the spruce forest.

Local community festivals further contribute to the American pastoral image in the Whitetop landscape. One example of this is the Whitetop Sugar Maple Syrup Festival, a springtime event celebrating the harvest of Whitetop's "Sugar trees." In addition to producing a supply of maple syrup, the festival provided an opportunity to display related aspects of the local traditional agriculture, including arts and crafts, mountain music, and draft horse exhibitions.<sup>20</sup>

Pastoralism and the Rural America theme, as aesthetic expectations for nature, are "basic factors underlying a host of land-use decisions and controversies" (Schauman 1998, p. 188). The pastoral qualities found at Whitetop Mountain are as much the result of a highly refined aesthetic ideal as they are the reflection of authentic cultural practices and traditional local livelihood. Therefore, while promoters of the Rural America theme see it as a way to preserve the pastoral qualities of the landscape (albeit enhancing the local economy by attracting visitors), others perceive it as a form of development which makes a patronizing sideshow of local life (thereby exploiting both the natural and cultural heritage of the mountain) (Sarvis 1994, pp. 50–1; Weaver 1996).

Environmental quality under the pastoral vision of nature is defined as small-scale human modifications of the environment through limited use of technology. Pastoral management allows and promotes small farming activities using primi-

tive technologies (e.g., grazing), renovates and maintains some "appropriate" structures for tourists, promotes and facilitates community festivals, and supports programs that interpret local cultural history at least as much as they interpret natural history.

#### *Ecologism and Global Biodiversity Hotspots*

Whitetop Mountain . . . is of exceptional biological interest because of the number of organisms which occur nowhere else in the state, most of them associated with elevations above 4,000 feet. Some represent northern forms which extend southward along the higher parts of the Appalachians but the majority are species endemic to the southern Appalachians which extend no further north.

Dr. Richard Hoffman, Virginia Museum of Natural History<sup>21</sup>

In 1995, the USFS produced a document titled the Whitetop Opportunity Area Analysis (WOAA) (USFS 1995a). This document was intended to describe the current and desired future conditions at Whitetop Mountain. The WOAA characterizes Whitetop as a place of "exceptional biological interest," and devotes the majority of its more than 100 pages to describe the mountain as a unique natural phenomenon. Unlike earlier USFS plans for the MRNRA, the WOAA emphasizes the biophysical and ecological qualities of the mountain and all but ignores the economic development potential and the local cultural heritage (past, present, and future) of Whitetop. This oversight may not be intentional so much as it is typical. Public land management agencies, such as the USFS, are attuned to the conditions of the biophysical resource and much less critically aware of the human dimensions of nature. Additionally, contemporary natural resource professionals are awash in a rising tide of global environmentalism and ever more predisposed to see the places they manage through an ecological lens where the value of biodiversity tends to eclipse cultural history (e.g., Redford and Stearman

1993; Worster 1994; Takacs 1996; Selars 1997).

Despite the extensive resource extraction and repeated clear cutting that has occurred throughout Appalachia, the region is considered by conservation biologists to be a globally significant biodiversity reserve. This is particularly true for places like the summit of Whitetop Mountain, which has remained relatively undisturbed by intensive human manipulation. The grassy bald and the spruce forest which co-exist at the summit of Whitetop Mountain are relict, old-growth landscapes valued by biological conservationists as a unique ecosystem and a truly unusual specimen of nature.

Any number of more-or-less scientific reasons have been used to argue for the protection of biodiversity at Whitetop. Both the grassy bald and the spruce forest, like many of their attendant species, are rare and therefore classified as endangered, threatened, or sensitive.<sup>22</sup> The bald, spruce forest, and associated species are endemic and “range restricted,” which means that not only do they exist in few other places, but also there are few other places where they are even able to exist (White and Sutter 1999; Pyle and Schafale 1988). Conservation biologists have identified the spruce forest as a “critically endangered” ecosystem, and a forest type that is in rapid decline (Noss et al. 1995; Noss and Scott 1997; Nicholas et al. 1999). Other scientists claim that the Appalachian region surrounding Whitetop Mountain is but one of only twelve remaining areas in the lower forty-eight states that is large enough and intact enough to maintain viable populations of large vertebrates (Salwasser et al. 1987; Salwasser 1988) and the area is being considered as a setting for elk reintroduction.

In response to such concerns, citizen activists, ecological scientists, and natural resource professionals have joined in a campaign to promote and protect the biodiversity and ecological integrity of the Appalachian region and its special places like Whitetop Mountain. The Appalachian Restoration Campaign (ARC) “cites the failure of traditional

efforts to conserve biological integrity through piecemeal and reactionary attempts at conservation and responds with landscape approaches to protect biological diversity and natural evolutionary processes” (ARC 1998). This desire on the part of the ARC for systematic “ecosystem management” is an increasingly popular approach to conservation, one that encourages environmental decision makers to consider their actions within the context of ever larger scales of ecological space and evolutionary time.<sup>23</sup>

When a specific place, such as Whitetop Mountain, is conceptualized within larger scales of space and time, its unique particulars (including the humans who call it home) necessarily become increasingly abstract as they are simplified and categorized to fit within a theoretical model of the larger region. The setting, in general, and environmental quality, in particular, get defined in terms of the biological and ecological elements almost to the exclusion of human culture. For example, descriptions of the place emphasize “biologically diverse flora and fauna,” “remnants of old-growth forest,” “rare and endangered species,” “air and water quality” rather than pastoral culture or romantic recreation experiences. Management priorities within this discourse of biodiversity emphasize the impact of human visitation and economic development on these environmental elements, especially the rare and threatened elements. The emphasis of management shifts from mitigating impacts on the human experience of nature (e.g., solitude) to mitigating impacts on the ecology (e.g., wildlife habitat).

### Conclusion

Whitetop Mountain is one example of a “natural” landscape that is known and valued in different ways by the many people who care about it. Over a relatively short period of time, this one place has been construed in at least four different ways to produce four dramatically differ-

ent definitions of environmental quality and four dramatically different approaches to landscape design, planning, and management. *Eco-tourism*, *Romanticism*, *Pastoralism*, and *Ecologism* are distinct but closely related discourses of nature. Each can be used to justify and explain a different set of environmental conditions. What counts as an acceptable natural landscape differs according to each view of nature. For example, *Eco-tourism* will tolerate environmental change to the extent that it increases access and recreational opportunities without degrading the aesthetic experience of nature that tourists seek; *Romanticism* emphasizes little management, little evidence of humans, and finds acceptable changes that are natural or naturally-appearing; *Pastoralism* encourages small-scale management that uses primitive technologies and emphasizes traditional, rural communities; and, *Ecologism* finds active management acceptable when it mitigates impacts from humans or invasive species, protects ecological integrity, and meets ecological restoration goals. Alone, each of these discourses provides a limited view of the landscape. Taken together, these four discourses of nature provide a broader perspective that helps to explain the diverse public understandings of nature and conflicting management preferences for places like Whitetop Mountain. It is in this sense that nature and natural landscapes are as much socially constructed as they are biophysical.

*Which nature?* is a contested and controversial topic. In order for landscape design, planning, and management to be effective and successful, it must embrace a vision of nature that is socially acceptable to the people who are involved and who care about the specific place in question. A disagreement regarding the appropriate role of humans in the natural landscape is one of the key factors polarizing discussions about nature (Ingerson 1994; Dizard 1994; Senecah 1996; Callicott et al. 1999). Romanticism and Ecologism create a vision of nature that de-emphasizes or removes people from the natural landscape. Pastoralism and Eco-tourism, in contrast, place more em-

phasis on the human benefits from and human relationships to nature. The tension imposed by this human-nature dichotomy complicates decisions regarding the future of places like Whitetop Mountain.<sup>24</sup>

In conclusion, we offer a fifth discourse of nature—*Bioculturalism*—as a way to transcend the polarizing human-nature dichotomy. Bioculturalism is a view of the natural landscape that encourages stakeholders to recognize human society as an integral component of ecological systems and find ways for people to interact with and live sustainably in nature. Bioculturalism is increasingly accepted by the international conservation community, which has long recognized the limited effectiveness of conservation strategies that privilege biological diversity over cultural diversity (West and Brechin 1991; Droste et al. 1995; Ghimire and Pimbert 1997; Zimmerer and Young 1998). For Bioculturalism to be an effective conservation strategy at Whitetop Mountain and related places, stakeholders representing local, regional, and global interests must first recognize the conceptual limitations imposed by the human-nature dichotomy and accept humans as an integral, functional, and adaptive aspect of the natural landscape (Allen 1988; Redford and Stearman 1993; Haverkort and Millar 1994; Phillips 1998). Most simply, Bioculturalism is a view of nature that embraces humans as active and integral components of the ecosystem.

Toward this end, one place to look for inspiration and direction is the innovative ideas of contemporary Bioculturalists such as William Jordan, Frederick Turner, and Michael Pollan.<sup>25</sup> These three thought-provoking writers are among a growing contingent of Biocultural activists who are designing creative approaches to the human-nature relationship based on the belief that humans can be artful agents of landscape change. “Sunflower forests,” the Biocolonization of neighboring planets, and “the cultivation of a new American garden” are among Bioculturalists’ ideas for a better, more democratic, sustainable, and desirable future.<sup>26</sup>

We have seen some evidence of Bioculturalism at Whitetop Mountain. Discussions with local residents (Hull et al. 2001), the literature of regional organizations (e.g., ARC 1998, Peine 1999), and the recent policy of national-level institutions (e.g., USFS 2000) reveal the seeds of a Biocultural discourse of nature at Whitetop Mountain, the Southern Appalachian region, and related natural landscapes. Each of the stakeholders and the interests they represent have an important role to play in establishing Bioculturalism as a valid and powerful new discourse in negotiations of *Which Nature?*

---

#### Acknowledgements

This paper was produced as part of *The Public Ecology Project* at Virginia Tech ([www.cnr.vt.edu/publicecology/](http://www.cnr.vt.edu/publicecology/)). Research was made possible with funding from the USDA Forest Service North Central Experiment Station. The authors thank Mark Barrow, Troy Hall, Lee Skabelund, and two anonymous reviewers for helpful comments on earlier drafts.

---

#### Notes

1. In recent years, Whitetop Road, which leads to the mountain’s summit, has been a point of much contention. In the early 1990s, the USFS recognized “damages” due to vehicular use of the mountain and decided to temporarily and seasonally close Whitetop Road. The ensuing controversy has embroiled and polarized a community of people all of whom care about the mountain. The Whitetop Road controversy (see MRNRA Project Files) provides the impetus and much of the data for this case study.
2. USFS 1995a, p. 3.
3. There are many versions of these Native American stories, many of which are contested. Considering the dynamic aspect of the oral tradition, the degree to which these stories predate European influence is debatable. For more of these stories and an explanation of their problematic interpretations, see, in particular, Gersmehl (1970, pp. 45–69) and also Smathers (1981).
4. Summaries of earlier scientific theories can be found in: Gersmehl (1970), White and Sutter (1999), Peterson (1981), and Smathers (1981). Other stories include the legends told by European settlers and the narratives posed by local authors. These stories contribute to an

on-going debate concerning the origin of the Appalachian balds, much of which is focused on whether the balds are “natural,” due to Native American influences, or caused by early European settlement. It is increasingly evident that the balds must be studied as both individual occurrences and as a collective type of landscape feature. Based on historical documentary evidence, the USFS assumes Whitetop Bald to predate European settlement. While there is limited consensus as to the origin of the Appalachian grassy balds (either on an individual or collective basis), there is wide agreement that active management is required to arrest forest succession of these clearings. The balds will not remain bald unless they are actively managed. Management options include: prescribed burning, livestock or wildlife grazing, herbicides, and mechanical or manual mowing. The Whitetop bald is currently maintained through prescribed burns, but prior to the 1970s livestock grazed the area. White and Sutter (1999) provide a thorough discussion of the balds as a regional management issue.

5. Letters to USFS dated 1/27/95 and 2/1/95 in MRNRA Project Files.
6. Personal communication with one USFS line officer.
7. Freeman (1966, p. 5) in a letter advocating congressional designation of the area.
8. National level initiatives to modernize Appalachia are a topic of much historic and current debate. The media has a long and dark history of portraying the region in a negative light and public perception has followed accordingly. (Sarvis 1994; USFS 1981).
9. Highway 58, providing access to Whitetop Mountain, is earmarked for upgrading and, in 1998, more than \$1 million of federal money was appropriated for improvements to a Rail-to-Trails project adjacent to the mountain (Boucher 1998).
10. The Eastern Wilderness Act (1975) is a more practical expectation of the pristineness of wilderness conditions. This Act of Congress provides for the restoration of wilderness conditions in anthropogenically disturbed areas and thereby recognizes both the creative and destructive potential of humans in the natural landscape (Hendee et al. 1990).
11. Letter to USFS dated 8/12/93 in MRNRA Project Files.
12. Public comments made in October 26, 1999 citizens workshop on “Roadless/Wilderness” areas, during the revision of the Jefferson National Forest Plan.
13. MRNRA Project Files.
14. Letter to USFS (undated) in MRNRA Project Files.
15. Planning documents published on the Jefferson National Forest web page ([http://www.fs.fed.us/outernet/gwjnf/lac\\_nra\\_welcome.html](http://www.fs.fed.us/outernet/gwjnf/lac_nra_welcome.html)) from the 7/27/99 and 8/17/99 Limits of Acceptable Change planning process in the High Country area where Whitetop is located.
16. The intention to remove evidence of prior human activity is made explicit in the USFS (1980) plan: “[A]ll unnecessary roads will be obliterated, filled with native vegetation, and returned to the original contour of the mountain.” For photographic evidence of actual removals see Price (1970). As another example



of the effort to hide human management, the USFS vegetative management plan for the bald says that the spruce forest will be “staggered” and “unevenly spaced to give a soft feathered natural appearance” to the edge of the bald (USFS 1995a, appendix C).

17. As quoted in Sarvis (1994, pp. 50–1).

18. This quotation, attributed to the USFS, appeared in Basgall (1973).

19. Schauman (1986) is careful to point out that contemporary countryside ideals involve at least three dimensions: agrarianism, ruralism, and pastoralism; which she identifies as distinct conceptual categories. Along similar lines, Tuan (1974, p. 112) writes that appreciation of the countryside reflects three distinct images: “shepherds in a bucolic landscape; the squire in his country estate reading a book under an elm; and the yeoman in his farm.”

20. *The Plow* March 4, 1978 (p. 26); Blanton, B. 1978. Maple Festival is Success. *The Plow* April, 1978.

21. USFS (1995a, p. 3).

22. USFS (1995a; 1995b); VDCR (1994; 1996).

23. This conservation strategy is closely aligned with the Wildlands Project proposals for the Appalachian region (Mann and Plummer 1993) and the Southern Appalachian Man and the Biosphere (SAMAB) project (Peine 1999).

24. “The nature-culture dichotomy . . . is so deeply ingrained in our everyday language that anyone trying to work around that dichotomy sounds at best idiosyncratic and a worst mystical” (Ingerson 1994, 44). Ingerson (1994), Bird (1987), Raglon and Scholtmeijer (1996), Shrader-Frechette and McCoy (1993), Norton (1998) and other environmental researchers are calling for studies of specific situations that exist along rather than at the extremes of the human-nature continuum. They argue that case studies are needed to help develop referents to work our way through the dichotomy towards a more sophisticated, less polarized, understanding of the environment.

25. Jordan (1994); Turner (1994); Pollan (1991).

26. Bioculturalism is offered as a distinct discourse of nature. It should not be confused with the concept of bioregionalism or other conservation strategies that are heavily steeped in the Romantic and Ecologist traditions. Bioculturalism draws on and privileges Eco-tourism and Pastoralism at least as much as it supports the values of Romanticism and Ecologism.

## References

- Allen, W. H. 1988. “Biocultural Restoration of a Tropical Forest.” *BioScience*. 38(3): 156–161.
- ARC. 1998. Appalachian Restoration Campaign. Appalachian Affinity: Restoration Campaign Opens Office in Athens. November 13, 1998. <<http://www.greenlink.org/affinity/11097/athens.html>>.
- Basgall, M. 1973. “A Battle for Land in the Hills.” *Richmond Times-Dispatch*. Richmond. May 13, 1973.
- Bird, E. A. 1987. “The Social Construction of Nature: Theoretical Approaches to the History of Environmental Problems.” *Environmental Review* (Winter):255–264.
- Boucher, R. 1998. Annual Congressional Activities Report for 1998. US House of Representatives, Ninth District, Virginia.
- Botkin, D. 1990. *Discordant Harmonies: A New Ecology for the Twenty-First Century*. New York: Oxford University Press.
- Callicott, J. B., Crowder, L. B., and Mumford, K. 1999. “Current normative concepts in conservation.” *Conservation Biology* 13:22–35.
- Coale, C. B. 1878. *The Life and Adventures of Wilburn Waters*. Richmond: G. W. Gary & CO.
- Cronon, W., ed. 1995. *Uncommon Ground: Rethinking the Human Place in Nature*. New York: W. W. Norton.
- Daston, L., and Galison, P. 1992. “The Image of Objectivity.” *Representations* 40(Fall): 81–128.
- Dizard, J. E. 1994. *Going Wild: Hunting, Animal Rights, and the Contested Meaning of Nature*. Amherst: University of Massachusetts.
- Droste, B., Plachter, H., Rossler, M. 1995. *Cultural Landscapes of Universal Value*. New York: Gustav Fischer Verlag.
- Evernden, N. 1992. *The Social Creation of Nature*. Baltimore: The Johns Hopkins University Press.
- Fischer, F. 2000. *Citizens, Experts, and the Environment: The Politics of Local Knowledge*. Durham: Duke University Press.
- Freeman, O. L. 1981. Letter to Chairman Cooley, Committee on Agriculture, House of Representatives. Reprinted in MRNRA Plan 1981, pp. 112–114. March 20, 1964.
- Gersmehl, P. 1970. A Geographical Approach to a Vegetation Problem: The Case of the Southern Appalachian Grass Balds. Unpublished Ph.D. dissertation. Athens: University of Georgia.
- Ghimire, K. B., and Pimbert, M. P., eds. 1997. *Social Change & Conservation: Environmental Politics and Impacts of National Parks and Protected Areas*. London: Earthscan.
- Greider, T., and Garkovich, L. 1994. “Landscapes: The Social Construction of Nature and the Environment.” *Rural Sociology* 59(1):1–24.
- Haraway, D. 1991. *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge.
- Haverkort, B., and Millar, D. 1994. “Constructing Diversity: The Active Role of Rural People in Maintaining and Enhancing Biodiversity.” *Etnoecologica* 2(3):51–64.
- Hayles, K. 1995. “Searching for Common Ground.” In *Reinventing Nature: Responses to Postmodern Deconstruction*, eds. M. Soule and G. Lease. Washington, DC: Island Press.
- Helford, R. 2000. “Constructing Nature as Constructing Science: Expertise, Activist Science, and Public Conflict in the Chicago Wilderness.” In *Restoring Nature: Perspectives from the Social Sciences and Humanities*, eds. P. Gobster and R. B. Hull. Washington, D.C.: Island Press.
- Hendee, J. C., Stankey, G. H., and Lucas, R. C., eds. 1990. *Wilderness Management*. Golden: North American Press.
- Herndl, C. G., and Brown, S. C., eds. 1996. *Green Culture: Environmental Rhetoric in Contemporary America*. Madison: University of Wisconsin Press.
- Howell, B. J. 1994. “Linking Cultural and Natural Conservation in National Park Service Policies and Programs.” In *Conserving Culture: A New Discourse on Heritage*, ed. M. Hufford. Urbana: University of Illinois Press.
- Hull, R. B., and Robertson, D. P. 2000. “The Language of Nature Matters: We Need a More Public Ecology.” In *Restoring Nature: Perspectives from the Social Sciences and Humanities*, eds. P. Gobster and R. B. Hull, pp. 97–118. Washington, DC: Island Press.
- , Robertson, D. P., and Kendra, A. 2001. “Public Understandings of Nature: A Case Study of Local Residents Perceptions of “Natural” Forest Conditions.” *Society and Natural Resources* 14:325–340.
- Ingerson, A. E. 1994. “Tracking and Testing the Nature-Culture Dichotomy.” In *Historical Ecology: Cultural Knowledge and Changing Landscapes*, ed. C. Crumley. Santa Fe: School of American Research Press.
- Jacob, J. 1997. *New Pioneers: The Back-to-the-Land Movement and the Search for a Sustainable Future*. University Park: The Pennsylvania State University Press.
- Jordan, W. 1994. ““Sunflower Forest”: Ecological Restoration as the Basis for a New Environmental Paradigm.” In *Beyond Preservation: Restoring and Inventing Landscapes*, eds. A. D. Baldwin, J. De Luce, C. Pletsch. Minneapolis: University of Minnesota Press.
- Longino, H. E. 1990. *Science as Social Knowledge: Values and Objectivity in Scientific Inquiry*. Princeton: Princeton University Press.
- Mann, C. C., and Plummer, M. L. 1993. “The High Cost of Biodiversity.” *Science* 260:1868–1871.
- Marx, L. 1964. *The Machine in the Garden: Technology and the Pastoral Ideal in America*. London: Oxford University Press.
- Nash, R. F. 1983. *Wilderness and the American Mind*. New Haven: Yale University Press.
- Nicholas, N. S., Eagar, and C., Peine, J. D. 1999. “Threatened Ecosystem: High Elevation Spruce-Fir Forest.” In *Ecosystem Management for Sustainability*, ed. J. D. Peine. New York: Lewis.
- Norton, B. G. 1998. “Improving ecological communication: the role of ecologists in environmental policy formation.” *Ecological Applications* 8:350–364.
- Noss, R. F., LaRoe, E. T. I., and Scott, J. M. 1995. “Endangered Ecosystems of the United States: A Preliminary Assessment of Loss and Degradation.” Washington: US Department of the Interior.

- , Scott, J. M. 1997. "Ecosystem Protection and Restoration: The Core of Ecosystem Management." In *Ecosystem Management: Applications for Sustainable Forest and Wildlife Resources*, ed. M. S. Boyce, A. Haney. New Haven: Yale University Press.
- Oelschlaeger, M. 1991. *The Idea of Wilderness*. New Haven: Yale University Press.
- Peine, J. D., ed. 1999. *Ecosystem Management for Sustainability*. New York: Lewis.
- Peterson, K. M. 1981. "Natural Origin and Maintenance of Southern Appalachian Balds: A Review of Hypothesis." *Conference Proceedings: Status and Management of Southern Appalachian Mountain Balds*. Crossnore, North Carolina. November 5–7, 1981.
- Phillips, A. 1998. "The Nature of Cultural Landscapes—A Nature Conservation Perspective." *Landscape Research* 23(1): 21–38.
- Pickett, S. T. A., Ostfeld R. S., Shachak M., and Lickens, G. E., eds. 1997. *The Ecological Basis of Conservation: Heterogeneity, Ecosystems, and Biodiversity*. New York: Chapman & Hall.
- Pollan, M. 1991. *Second Nature: A Gardener's Education*. New York: Dell.
- Price, T. 1970. Appraisal Report prepared for USDA-FS (MRNRA Files). Galax, Virginia. May 30, 1970.
- Pyle, C., Schafale, M. P. 1988. "Land Use History of Three Spruce-Fir Forest Sites in Southern Appalachia." *Journal of Forest History*: 4–21.
- Raglon, R., and Scholtmeijer, M. 1996. "Shifting Ground: Metanarratives, Epistemology, and the Stories of Nature." *Environmental Ethics* 18:19–38.
- Raitz, K. B., Ulack, R. 1984. *Appalachia: A Regional Geography*. Boulder: Westview Press.
- Redford, K. H., Stearman, A. M. 1993. "Forest-Dwelling Native Amazonians and the Conservation of Biodiversity: Interests in Common or in Collision?" *Conservation Biology* 7(2):248–255.
- Robertson, D. P., and Hull, R. B. 2001. "Beyond Biology: Toward a More Public Ecology for Conservation." *Conservation Biology* (In press).
- Salwasser, H. 1988. "Managing Ecosystems for Viable Populations of Vertebrates: A Focus for Biodiversity." In *Ecosystem Management for Parks and Wilderness*, ed. J. K. Agee, D. R. Johnson. Seattle: University of Washington Press.
- , Schonewald-Cox, C., and Baker, R. 1987. "The Role of Interagency Cooperation in Managing for Viable Populations." In *Viable Populations for Conservation*, ed. M. E. Soule. Cambridge: Cambridge University Press.
- Sarvis, W. 1994. "The Mount Rogers National Recreation Area and the Rise of Public Involvement in Forest Service Planning." *Environmental History Review* (Summer): 40–65.
- Scarce, R. 2000. *Fishy Business: Salmon, Biology, and the Social Constructions of Nature*. Philadelphia: Temple University Press.
- Schauman, S. 1986. "Countryside Landscape Visual Assessment." In *Foundations for Visual Project Analysis*, eds. R. C. Smardon, J. F. Palmer, J. P. Felleman. New York: John Wiley & Sons.
- . 1998. "The Garden and the Red Barn: The Pervasive Pastoral and Its Environmental Consequences." *The Journal of Aesthetics and Art Criticism* 56:181–190.
- Schmidt, P. L. 1969. *Back to Nature: The Arcadian Myth in Urban America*. Baltimore: Johns Hopkins.
- Sellars, R. W. 1997. *Preserving Nature in the National Parks: A History*. New Haven: Yale University Press.
- Senecah, S. 1996. "Forever Wild Or Forever in Battle: Metaphors of Empowerment in the Continuing Controversy Over the Adirondacks." In *Earthtalk: Communication Empowerment for Environmental Action*, eds. S. A. Muir and T. L. Veendall. Westport, Connecticut: Praeger.
- Short, J. R. 1991. *Imagined Country: Environment, Culture, and Society*. London: Routledge.
- Shrader-Frechette, K., and McCoy, E. D. 1993. *Method in Ecology: Strategies for Conservation*. New York: Cambridge University Press.
- , McCoy, E. D. 1995. "Natural Landscapes, Natural Communities, and Natural Ecosystems." *Forest & Conservation History* 39(3):138–142.
- Smathers, G. A. 1981. "The Anthropogenic Factor in Southern Appalachian Bald Formation." *Conference Proceedings: Status and Management of Southern Appalachian Mountain Balds*. Crossnore, North Carolina. November 5–7, 1981.
- Soper, K. 1995. *What is Nature?* Cambridge: Blackwell.
- Takacs, D. 1996. *The Idea of Biodiversity: Philosophies of Paradise*. Baltimore: Johns Hopkins University Press.
- Terrie, P. G. 1997. *Contested Terrain: A New History of Nature and People in the Adirondacks*. Syracuse: Syracuse University Press.
- Tuan, Y. 1974. *Topophilia: A Study of Environmental Perception, Attitudes, and Values*. New York: Columbia University Press.
- Turner, F. 1994. "The Invented Landscape." In *Beyond Preservation: Restoring and Inventing Landscapes*, eds. A. D. Baldwin, J. De Luce, C. Pletsch. Minneapolis: University of Minnesota Press.
- United States Congress. 1966. Public Law 89–438. 89th Congress, H. R. 10366. May 31, 1966.
- USFS. 1978. Draft Plan for the Mount Rogers National Recreation Area. USDA Forest Service.
- . 1980. Mount Rogers National Recreation Area Final Management Plan Summary. USDA Forest Service, Southern Region.
- . 1981. Mount Rogers National Recreation Area Final Management Plan and Environmental Impact Assessment.
- USDA Forest Service. USDA-FS-R8-FEIS Adm. (78–02).
- . 1986. The 1986 ROS Book. USDA Forest Service. Washington, DC.
- . 1995a. Whitetop Opportunity Area Analysis (WOOA). United States Forest Service, Jefferson National Forest. March 31, 1995.
- . 1995b. Environmental Assessment (EA) for Whitetop Road Gate. USDA Forest Service, Jefferson National Forest. November 30, 1995.
- . 2000. Land and Resource Management Plan Revision: The Jefferson National Forest. August 16, 2000. <<http://www.fs.fed.us/gwjnf/lrmp/revcover.html>>.
- VDCR. 1994. A Natural Heritage Inventory of the Appalachian Trail in Virginia. Virginia Department of Conservation and Recreation, Division of Natural Heritage. NH-TR 94–16.
- . 1996. Special Biological Areas of the Jefferson National Forest: Candidates for Special Interest Area and Research Natural Area Designation. Virginia Department of Conservation and Recreation, Division of Natural Heritage. NH-TR 96–14.
- Weaver, B. J. 1996. "What to Do with the Mountain People?: The Darker Side of the Successful Campaign to Establish the Great Smoky Mountains National Park." In *The Symbolic Earth*, eds. J. G. Cantrill, C. Oravec. Lexington: University Press of Kentucky.
- Weigl, P. D., Knowles, T. W. 1995. "Megaherbivores and Southern Appalachian Grass Balds." *Growth and Change* 26: 365–382.
- West, P. C., Brechin, S. R., eds. 1991. *Resident Peoples and National Parks: Social Dilemmas and Strategies in International Conservation*. Tucson: The University of Arizona Press.
- White, P. S. Sutter, R. D. 1999. "Managing Biodiversity in Historic Habitats: Case History of the Southern Appalachian Grassy Balds." In *Ecosystem Management for Sustainability*, ed. J. D. Peine. New York: Lewis.
- Worster, D. 1994. *Nature's Economy: A History of Ecological Ideas*. New York: Cambridge University Press.
- Zimmerer, K. S., Young, K. R., eds. 1998. *Nature's Geography: New Lessons for Conservation in Developing Countries*. Madison: The University of Wisconsin Press.