



Rough terrain: forest management and its discontents, 1891-2001

Char Miller

History Department, Trinity University, San Antonio TX 78212-7200, USA. e-mail:fmiller@trinity.edu

Received 2 October 2002, accepted 5 January 2003.

Abstract

The history of scientific forest management in the United States is relatively brief, about 125 years or so. But it has been rife with debate and controversy, and there is no reason to suppose that this will change with the introduction of biotechnology to this well-wooded land. This article tracks the varied challenges offered by and different tactics protesters have selected over time to fight against innovations in land management. By tracing the fights that broke out over the creation of the first National Forests in the early twentieth century, clear-cutting practices in the post-World War Two era, and the more violent reactions to government conservation agencies at the turn of the twenty first century, we will better understand some of the hostility that has emerged in response to genetic engineered trees and food.

Key words: Conservation, earth liberation front, forest management history, genetic engineering, natural resources.

Introduction

They came in the middle of the night, broke into Merrill Hall, site of the Center for Urban Horticulture on the campus of the University of Washington, and set incendiary devices within and around the office of researcher Terry Bradshaw; then they stole away before the fiery blasts ripped through the building. The subsequent conflagration destroyed Bradshaw's facility and gutted much of the rest of the complex, causing damage estimated at \$3 million. But that figure only encompassed the burned-out physical infrastructure; it has been impossible to calculate the loss of the results of decades of scientific research on such subjects as wetlands restoration, endangered plant species, urban landscaping, and genetic hybridization². It was Bradshaw's work on hybrid poplars that had been targeted for destruction. So admitted the Environmental Liberation Front (ELF) in a post-fire communiqué, in which it claimed credit for the May 21, 2001 assault. Bradshaw, it asserted, is "the driving force in G.E. [genetic engineering] tree research," and was thus responsible for unleashing "mutant genes into the environment that [are] certain to cause irreversible harm to forest ecosystems."³ The perceived threat of his work not only sanctioned this attack, but any subsequent ones. "As long as universities continue to pursue this reckless 'science' they run the risk of suffering severe losses," ELF warned. "Our message remains clear: we are determined to stop genetic engineering"³. Their determination and that of like-minded environmentalists had been manifest in earlier attempts to disrupt Bradshaw's research; in 1999 some of his trees were cut down as part of protests associated with that year's World Trade Organization meetings held in Seattle. Others had zeroed in on the work of Oregon State geneticist Steve Strauss, chopping down approximately 900 of his hybrid poplars in March 2001; and on the same night that Merrill Hall went up in flames, ELF also torched a poplar tree farm in Clatskanie, Oregon². Biologists at Michigan Tech, whose research was also slated for immolation, proved more fortunate: just before dawn on November 5, 2001 campus police stumbled upon large containers of flammable liquid, complete with electrical detonators, planted outside the school's forestry building and a nearby USDA Forest Service laboratory; a Michigan State Police bomb squad successfully dismantled the devices⁴.

Whatever the connections between these various incidents, and whatever their outcomes, realized or foiled, it is clear that the scientific innovations associated with hybrid research and genetic engineering have escalated some people's fear of the unknown. Their anxiety is bound up with a unshakable distrust of technology and its experts, and gives shape to their worries about the emergence of a Frankensteinish world portending the end of nature. But their attacks on engineered foods and forests is not just driven by an aesthetic distaste for the manufactured and the modified, although the desire to preserve wildness owes much to late-eighteenth-century Romantic disgust with a then-industrializing world. The stakes now appear much higher, more fundamental, and thus seem to sanction more visceral reactions. As one ELF supporter wrote in the wake of the Merrill Hall fire: Bradshaw's research was "[t]ampering with the fundamental blueprint for life—the genetic code," and as such "crosses an...ominous threshold"⁵. So threatening was this prospect that only "[s]wift and decisive action" by "dedicated Earth warriors" could halt these "emerging technological menaces before they escape the lab"; only late-night incendiaryism would "protect this beautiful planet"⁶. Pacific ends, ELF and its above-ground followers insist, justify violent means. This declaration is not unique to ELF, or even to the relatively short history of scientific forest management in the United States. Since the late-nineteenth-century importation of European ideas about how best to manage New World forests, many of the innovations in the human ability to manipulate the forested estate have been met with doubt, suspicion, and, occasionally, violence. By tracing some of the environmental concerns, social challenges, and political controversies that have swirled around attempts to manage this well-wooded land, we will gain a better understanding of the conflicted context in which genetic engineering has emerged in the early twenty-first century.

Discussion

Conservation and the Nation State, 1870-1910

The 1870s were a turning point in the development of a new perception of how Americans might better live on and within the land. Among the seminal texts that helped them redefine their place in nature was George Perkins Marsh's *Man and Nature: The Earth as Modified by Human Action* (1864), a

shrewd analysis of the environmental devastation that the Industrial Revolution unleashed, and a clarion call for a new-found conservative stewardship that would protect the Earth from human excess. Marsh warned of a coming apocalypse that could only be held off by a shift in attitude and behavior in the United States. Some who heeded his prophetic words founded the American Forest Association (1875), read widely in the European literature that Marsh himself had depended on to make his case, visited and studied with British, French, and German foresters to determine if their conceptions could be transferred across the Atlantic, and began to publish their findings in *Garden & Forest*, one of the new periodicals devoted to the cause of conservation⁷. Out of this initial intellectual energy came a small bureaucratic breakthrough—the opening of the Division of Forestry in the Department of Agriculture—and a series of legislative initiatives to create national forest reserves, which finally bore fruit in 1891. Shortly thereafter, the profession of forestry surged into being, with the creation of a clutch of forestry schools, the launching of the Society of American Foresters, and the publication of the *Journal of Forestry*. By 1905, National Forests, totaling more than 85 million acres, had been carved out of the public domain. A new agency, the USDA Forest Service, was founded 1905 with the mission of managing these forests and regulating their resources⁸. None of these changes could have occurred without the simultaneous transformation of the nation-state itself. Indeed, the implementation of forestry principles on the ground depended on what Bernhard Fernow, third chief of the Division of Forestry, had argued was the essential creation of a paternal government whose power trumped local rights and governance⁹. That preeminence was precisely what Fernow's successor, Gifford Pinchot, pursued when, after President Theodore Roosevelt had tapped him to be the first chief of the new Forest Service, he hired Forest Rangers to patrol the vast lands under the agency's control, and fought (and won) in the courts for the rangers' right to enforce user fees for grazing, mining, and lumbering. In sanctioning these actions, the U.S. Supreme Court extended the federal government's sovereignty and legitimized a new politics of conservation, the slogan of which Pinchot coined as "the greatest good, for the greatest number for the longest run"¹⁰.

Revolt in the West, 1905-1920

Not everyone accepted this as the prevailing definition, let alone ceded to the Forest Service's exclusive assumption of professional expertise, scientific legitimacy, and political authority. Throughout the west, site of all the then-extant National Forests, ranchers, miners, and timber-cutters rose up in opposition to the agency's implementation of federal conservationism. Some took the law into their own hands—violence flared, as forest rangers were shot at, beaten, or threatened with lynching when they attempted to uphold National Forest boundaries or to tax resource use¹¹.

The political arena was only slightly more restrained. To bolster their position, enraged westerners championed state rights as the only means to blunt what they perceived to be an aggressive executive branch; they branded its enforcement actions as "Pinchotism." One of many moments in which they came together to rail against the Roosevelt administration's actions was the 1907 Denver Public Lands Convention; the mid-June confab attracted an estimated four thousand delegates

from the west, and its raucous proceedings underscored western frustration with the new conservation ethos^{11, 12}.

Upset that the administration was expanding the size and number of National Forests over the West's repeated protests, those at the Denver gathering demanded a showdown with the federal government to determine whether the states or the executive branch held ultimate sovereignty over public lands. A Colorado newspaper denounced the arbitrary character of the Roosevelt-Pinchot edicts. "Very few of the autocratic monarchs of the world," the *Steamboat Pilot* asserted, "would so dare to set aside the will of the people this way." The *Rocky Mountain News* published a mocking cartoon that depicted Pinchot as a throne-sitting, mace-wielding czar, behind whom was six mounted forest rangers brandishing whips, markers of unchecked authority. In the foreground kneel abject westerners, hats in hand; deferential and impotent, they are no longer masters of their own fates¹². To defuse the charged atmosphere, Roosevelt sent Pinchot to the Denver convention, but from the start his work there was complicated: in the two days before he spoke, anti-government rhetoric built up as each of those addressing the crowd fed off his predecessor's animosity; speech after speech excoriated the Roosevelt administration and its conservation agenda. "We cannot remain barbarians to save timber," boomed Senator Henry Teller of Colorado. "I do not contend that the government has the right to seize land, but I do contend that we have the right to put it to the use that Almighty God intended"¹². His contentious language emboldened the audience, so that when Pinchot finally strode across the stage of Denver's Brown Theater, it erupted in a vociferous round of catcalls and jeers. Hoping to deflect the hecklers' anger with a joke—"If you fellows can stand me, I can stand you,"—Pinchot gave little ground. The cornerstone of his address was what he identified as the critical relationship between national forests, conservation practices, economic growth, and political equity. "[G]overnment-regulated timber auctions prevented monopoly and the consequent excessive price of lumber," they stabilized markets and insured that there was "no question of favoritism or graft." The environmental benefits were no less important: forested lands protected "watersheds of streams used for irrigation, for domestic water and manufacturing supply, and for transportation". For these reasons alone, he asserted, "the protection of irrigation throughout the west would justify the president's forest policy"¹². It was further justified by the fact that federal conservation took local needs into account. Grazing, for example, "is primarily a local issue and should always be dealt with on local grounds. Wise administration of grazing in the reserves is impossible under general rules based upon theoretical considerations," Pinchot noted¹². Being sensitive to different landscapes meant that "[l]ocal rules must be framed to meet local conditions, and they must be modified from time to time as local needs may require"¹².

Citizen participation in defining the mission of the national reserves also constrained federal power. In "The Use of the National Forests," a 1907 Department of Agriculture pamphlet released to coincide with the Denver meetings, Pinchot declared that public lands "exist to-day because the people want them. To make them accomplish the most good the people themselves must make clear how they want them run"¹³. But no interest, individual or combined, could or would be allowed to dominate Forest Service policy. "There are many great interests on the National Forests," and of necessity these

“sometimes will conflict a little”¹³. To secure the necessary consensus that will insure a rational use of the land it “is often necessary for one man to give way a little here, another a little there”. In this new Rooseveltian age, there “must be hearty cooperation from everyone”¹³. Nature would compel their cooperation in any event, he believed, for the carrying capacity of the land was the first and final arbiter of how and when a landscape would be utilized. “The protection of the forest and the protection of the range by wise use,” Pinchot reminded his Denver audience, “are two divisions of a problem vastly larger and more important than either.” This is “the problem of the conservation of all our natural resources,” for if “we destroy them, no amount of success in any other direction will keep us prosperous.” Private, short-term interests must give way to public, long-term needs¹².

Local Control v. National Sovereignty, 1920-1990

Many of Pinchot’s listeners were not persuaded by his assertions, and western resistance to the imposition of federal conservationism continued long after he left the Forest Service in 1910. These eruptions have been dubbed the Sagebrush Rebellions, and have been characterized by efforts to disrupt the Forest Service’s capacity to manage the National Forests, or to dismantle the National Forest system outright. In the 1920s, for example, Secretary of the Interior Albert Fall, a New Mexico rancher who chafed at federal grazing regulations, failed in his attempt to transfer the Forest Service (and its woods) to his department; critics believed Fall was attempting to strip the agency of its regulatory authority and perhaps sell off some of its prime lands¹⁴. Similar worries surfaced in subsequent decades, a tradition that pitted state rights against federal sovereignty, placed ranchers in opposition to conservationists, and framed the struggle as one between economic development and environmental preservation. When in the 1950s, Bernard DeVoto railed against the power that the western livestock industry wielded in Congress to attack federal conservationism—“They have reversed most of the policy, weakened all of it, and opened the way to complete destruction”¹⁵ he did so in language that drew off of what amounted to a half-century legacy of political tension. Forty years later members of the so-called Wise-Use movement, encouraged by President Ronald Reagan’s anti-environmentalism and his rhetorical assaults upon government regulation, and goaded by right-wing, vitriolic talk-radio commentators, moved to assert local control over federal land. In Nevada, county commissioners crashed bulldozers through Forest Service fences to lay claim to the disputed terrain. In other parts of the interior west, ranger district offices were fire-bombed, agency equipment vandalized, and, in at least one incident, a ranger discovered a pipe-bomb under his truck parked in the driveway of his home¹⁶. These explosive episodes, however much tied to the particularities of time and place, were also part of a long-standing pattern of western political protest, a pattern with which Progressive Era conservationists such as Theodore Roosevelt and Gifford Pinchot had had considerable experience.

Environmentalism emerges, 1945-1970

Other late-twentieth century controversies over land management would have been less recognizable to those who had established conservationism as a key element in the American political landscape. And they would not because

those who earlier had founded the major conservation agencies in the Departments of Agriculture and Interior—among them, the Forest Service, National Park Service, Fish & Wildlife Service—could not have anticipated the escalating resource demands associated with the post-World War Two economic boom, or the range of political responses they generated. With the close of war came an upsurge in spending on consumer items, most notably homes and automobiles. The rapid construction of new housing stock on the urban fringe, the laying down of high-speed expressways to connect these suburban developments with the metropolitan economy sparked a swift shift in timber-cutting practices. During the Great Depression of the 1930s, there had been little pressure to harvest large quantities of wood from public or private forests. Global conflict and later peace-time development changed that situation, leading the federal government and industry to initiate clear-cutting practices on their respective woodlands. System-wide production on national forests soared from 3 billion board feet (BBF) in 1945 to nearly 12 BBF in the late 1960s; in the same time period, on National Forests located in the Pacific Northwest, harvests went from less than two BBF to five BBF¹⁷.

The houses these escalating cuts built sheltered the Baby-Boom generation, whose parents took their numerous children on vacation to the American Wonderlands—its stunning national parks and forests. There, they encountered some of the costs associated with the suburban landscape they lived within: once-spectacular forested vistas marred by cut-overs. They also confronted reminders of the world they temporarily had left behind: lines of automobiles snaked along mountain roads and packed valley parking lots, and crowds of people queued up for lodging, restaurants, and other amenities. The motoring masses had brought the city to the wilderness¹⁸. The inescapable tension between the desires for economic growth and open space escalated in the 1950s and 1960s, one consequence of which was that the federal land-management agencies found themselves confronted with a newly energized environmental movement; it challenged the prevailing scientific assurances that intensified resource production would not damage forest and land health, and generated an ever-more intense level of public scrutiny of their failure to protect treasured landmarks. Organizations such as the Sierra Club, Wilderness Society and National Resource Defense Council funded lawsuits that stopped the damming of some free-flowing western rivers and halted some clear-cutting of eastern and western forests; they also successfully lobbied for legislative initiatives to protect wilderness and endangered species, promote clean air and water, and sustain riparian and wetland habitats. When these political victories and congressional legislation were combined with a clutch of favorable legal mandates and a new-found expertise based on the ecological sciences, the post-war environmental movement swelled in size, political power, and cultural significance. One marker of its stature was the creation 1970 of what has become a global celebration: Earth Day¹⁶.

Political Backlash

Within a decade, however, some environmentalists would conclude that these manifold efforts were too little, too late. They feared that the Reagan administration would roll back critical environmental legislation, were riled by the unchecked militancy of the Wise-Use movement, and were dismayed that

now-mainstream environmental organizations appeared incapable of countering these renewed threats to Mother Earth. Those who broke off into splinter groups such as EarthFirst!, and later, the Earth Liberation Front, adopted their organizational names to signal their disaffection with what they took to be their predecessors' more anthropocentric agendas; their tactics in turn were (and are) designed to shock, bloody, and disrupt those forces arrayed against what they define as planetary health and survival. Taking their early cues from Edward Abbey's novel, *The Monkey Wrench Gang* (1975)¹⁹, in which fictional activists pulled up survey stakes for highway construction, disabled road-building machinery and timber-cutting equipment, and unfurled a large banner simulating a crack in the Glen Canyon Dam, real-life protesters followed suit. In time, they have graduated to potentially more deadly forms of sabotage (spiking trees slated for harvest), and more destructive forms of property damage (firebombing scientific laboratories). This escalation was signaled in 1998, when ELF incinerated three major buildings and four ski lifts in Vail, Colorado, a response to Vail, Inc.'s plans to expand into threatened lynx habitat. To further mark its repudiation of mainstream environmental rhetoric and activism, ELF posted a photograph of the flame-engulfed mountain resort on its web page with the following inscription: "Every Night is Earth Night!"²⁰.

That such language offers no room for compromise is intentional. ELF has no interest in reaching consensus with an economic system, business culture, and scientific research agenda that it believes must be destroyed. In an January 2002 communiqué following its attack on the construction site of the University of Minnesota's Microbial and Plant Genomics Research Center, a project funded in part by the Cargill Corporation: "we are fed up with capitalists like Cargill and major universities like the U of M who have long sought to develop and refine technologies which seek to exploit and control nature to the fullest extent under the guise of progress"²¹. Setting fire to heavy equipment and a on-site trailer is described as step in ELF's wider war to bring about "the end of capitalism and the mechanization of our lives"²².

Conclusions

The ELF's combative stance mirrors those adopted by some western insurgents at the turn of the twentieth century who reacted violently to what they perceived as a life-threatening imposition of federal regulatory controls on grazing, lumbering, and mining. It evokes as well the actions of ELF's more-immediate contemporaries on the radical right, who in the late 1980s and early 1990s lashed out at agents of the regulatory state they despised. Marginal though each of these groups may have been (and are), their marginality nonetheless has helped shape the broader context in which each era has debated the intersection of politics and science, social change and environmental health. Dave Foreman, founder of EarthFirst!, recognized that one role the radical left of the environmental movement has played has been "to make the Sierra Club or the Wilderness Society look moderate"²².

Contending organizations, by whatever means they choose, inevitably define and defend themselves in relation to their ideological competitors, a dynamic that will become ever more clear as the battle over genetic engineering in the fields and forests unfolds with the twenty first century.

References

- ¹ An earlier version of this article was delivered at the conference "Biotech Branches Out," Atlanta GA December 4, 2001.
- ² Sunde, S., Shukovsky, P. 2001. Elusive radicals escalate attacks in nature's name. IN: Seattle Post-Intelligencer, June 18: http://seattlepi.nwsourc.com/local/27871_ecoterror18.html
- ³ Earth Liberation Front, communiqué, May21,2001:www.earthliberationfront.com/news/2001/01052cl.mtml
- ⁴ Gribbon, A. 2001. Genetic Debate Sprouts Over Trees. IN: Washington Times,December3:<http://asp.washtimes.com/printarticle.asp?action=print&artcileID=20011203-31938212>
- ⁵ Tomchick, M. 2001. ELF Sets A Fire at the UW. IN: Eat the State, 5:<http://eatthestate.org/05-20/ELFSetsFire.htm>
- ⁶ Hanfords, M. 2001. Burning Poplars II. IN: EarthFirst!: The Radical Environmental Journal, 22: <http://www.earthfirstjournal.org/efj/feature.cfm?ID=121&issue=v22n2>
- ⁷ Miller, C. 2000. The Pivotal Decade: American Forestry in the 1870s. IN: Journal of Forestry, **98**: 6-10.
- ⁸ Miller, C., Lewis, J.G. 1998. A Contested Past: Forestry Education in the United States, 1898-1998. IN: Journal of Forestry, **96**: 38-43.
- ⁹ Fernow, B. F. 1895. Providential functions of government with special reference to natural resources. IN: Science. August **30**: 252-54.
- ¹⁰ Pinchot, G. 1998. Breaking new ground. 4th edition. Washington, D.C. Island press. pp. 261
- ¹¹ McCarthy, G.M. 1977. Hour of trial: the conservation conflict in Colorado and the west, 1891-1907. Norman: University of Oklahoma press. pp. 177; 200-210
- ¹² Miller, C. 2001. Gifford pinchot and the making of modern environmentalism. Washington, D.C.: Island Press. 162- 69.
- ¹³ Pinchot, G. 1907. The Use of the National Forests. Washington, D.C. Government Printing Office. pp. 25.
- ¹⁴ Steen, H. K. 1975. The U.S. forest service: a history. Seattle: university of washington press, pp. 148-52.
- ¹⁵ DeVoto, B.A. 1955. The easy chair. Boston: Houghton, Mifflin. p. 345.
- ¹⁶ Rothman, H.K. 1997. The greening of a nation? environmentalism in the U.S. since 1945. p. 109-25; 197-207.
- ¹⁷ Hirt, P. W. 1994. A conspiracy of optimism: management of the national forests since World War Two. Lincoln: University of Nebraska Press. p. xliv-xlv.
- ¹⁸ Sutter, P. 2002. Driven wild: how the fight against automobiles launched the modern wilderness movement. Seattle: university of washington press.
- ¹⁹ Abbey, E. 1975. The monkey wrench gang. Philadelphia: Lippincott
- ²⁰ <http://www.earthliberationfront.com/dao>
- ²¹ Earth Liberation Front, Communiqué, January 26, 2002:<http://www.earthliberationfront.com/news/2002/020126c1>
- ²² Parfit, M. 1990. Earth First!ers wield a mean monkey wrench. Smithsonian, April, p. 184-204