

The Machine in the Garden

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They broke into the Center for Urban Horticulture at the University of Washington, set incendiary devices around the office of researcher Terry Bradshaw, and stole away before 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.

In a post-fire communiqué, the Earth Liberation Front (ELF) 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."

Their determination to stop genetic engineering has led to a series of other attacks on labs around the country—all helpfully chronicled on the ELF website—and as the extensive list makes clear, 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 an 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 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." 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 incendiarism would "protect this beautiful planet."

CONSERVATION AND THE NATION STATE

This presumption 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 these innovations have been met with doubt, suspicion, and occasionally, violence. The environmental concerns, social challenges, and political controversies of the past set the stage for the conflicted context in which early-twenty-first century genetic engineering now finds itself.

Among the seminal texts that helped nineteenth century Americans redefine their place in the environment was George Perkins Marsh's

Man and Nature: The Earth as Modified by Human Action (1864). Marsh warned of a coming apocalypse that could only be held off by a shift in Americans' attitudes and behaviors. Some who heeded his prophetic words founded the American Forest Association (1875), read widely in the European literature that Marsh had depended on to make his case, and began to publish their convictions in *Garden & Forest*, a new journal devoted to conservationism.

Out of this initial intellectual energy came a small bureaucratic breakthrough—the establishment 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. By 1905, National Forests totaling more than 85 million acres had been carved out of the public domain, and were managed by the newly founded Forest Service under Gifford Pinchot's leadership.

None of these changes could have occurred without the simultaneous transformation of the nation-state itself. Bernhard Fernow, third chief of the Division of Forestry, had linked scientific forestry with the creation of a "paternal" government whose power transcended local rights and governance, a connection Gifford Pinchot forged when, after President Theodore Roosevelt had tapped him to be the first chief of the Forest Service, he won court approval to charge user fees for grazing, mining, and lumbering. In sanctioning these ac-



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tions, the U.S. Supreme Court extended the federal government's sovereignty and legitimized a new politics of conservation, what Pinchot coined as "the greatest good, for the greatest number for the longest run."

REVOLT IN THE WEST, 1905–1920

Not everyone accepted this as the prevailing definition, let alone ceded to the Forest Service's claim of professional expertise, scientific legitimacy, and political authority. Throughout the west, economic interests opposed 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 use.

The political arena was only slightly more restrained. Enraged westerners championed "state rights" to blunt what they perceived to be an aggressive executive branch, whose enforcement actions they branded as

"Pinchotism." Hoping to defuse the animosity, Roosevelt sent Pinchot throughout the west to meet with leaders, speak before angered audiences, and rearticulate the administration's commitment to conservation. As he told a vast gathering in Denver in 1907, "There are many great interests on the National Forests," and of necessity these "sometimes will conflict a little." 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."

Nature would compel their cooperation in any event, Pinchot believed, for the carrying capacity of the land when and how a landscape could be utilized. "The protection of the forest and the protection of the range by wise use," Pinchot reminded his 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 direc-

tion will keep us prosperous." Private, short-term interests must give way to public, long-term needs.

LOCAL CONTROL V. NATIONAL SOVEREIGNTY, 1920–1990

Not all were persuaded, and western resistance to federal conservationism continued throughout the twentieth century. In the 1920s, for example, Interior Secretary 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 lands.

Similar worries surfaced in subsequent decades, which resulted in a struggle framed 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"—he did so in language that depended on 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 goaded by right-wing, 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 federal property. 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 home. 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 with which Theodore Roosevelt and Gifford Pinchot had considerable experience.

ENVIRONMENTALISM EMERGES, 1945–1970

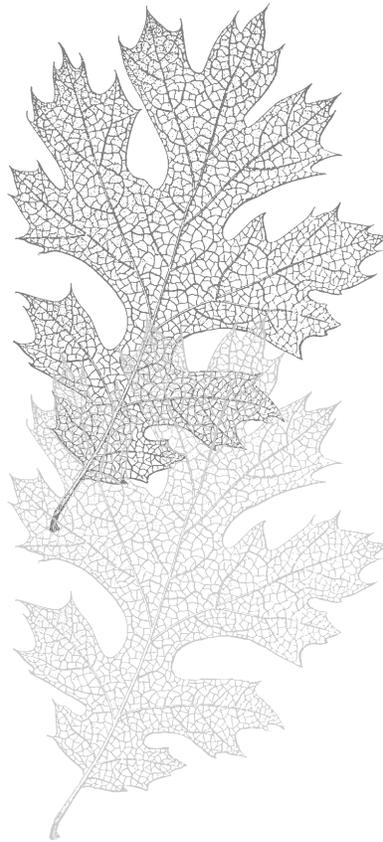
Other late-twentieth century controversies over land management would have been less recognizable to Progressive Era reformers. And they would not be because those who earlier had founded the major conservation agencies in the departments of Agriculture and Interior—among them, the Forest Service, National Park Service, Fish & Wildlife Service—could not have anticipated the escalating resource demands associated with the post-World War II economic boom, or the range of political responses they generated.

One consequence of this was that federal land-management agencies found themselves confronted with a newly energized environmental movement that challenged the prevailing scientific belief that intensified resource production would not damage forest and land health.

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.

POLITICAL BACKLASH

Within a decade, however, some environmentalists would conclude that these manifold efforts were too insignificant. They worried 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 mainstream environmental organizations



appeared incapable of countering these renewed threats to nature. 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 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), in which fictional activists disabled road-building machinery and timber-cutting equipment, and unfurled a large banner simulating a crack in the Glen Canyon Dam, real-life protesters in time graduated to potentially more deadly forms of sabotage and property damage. When in 1998, ELF incinerated three major buildings and four ski lifts in Vail, CO, a response to Vail, Inc.'s plans to expand into threatened lynx habitat, it made it clear that it had no interest in reaching consensus with an economic system it believed must be destroyed.

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 natural resources. 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. 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 unfolds with the twenty-first century.

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