As we struggle at the turn of the century to define and implement "sustainable forestry"—
the next stage in the evolution of forest management in North America and the world—it is important
to realize that its components have strong roots in the forestry profession. This article examines the
relationship of forests and forestry with social equity issues during the last century. In the end,
the author leaves us with a question: can sustainable forestry as we understand it today lead
to conflict resolution? If not, what lies beyond sustainable forestry?

# BACK TO THE GARDEN

THE REDEMPTIVE PROMISE OF SUSTAINABLE FORESTRY, 1893-2000

t says something about our culture that a pair of ice cream moguls—Ben and Jerry—could scoop the forestry profession by making "sustainability" a household term. Who would have thought a rich, sweet, and frozen combination of vanilla ice cream, cashews, and Brazil nuts, and dubbed "Rainforest Crunch,"

could be successfully marketed in 1989 as a way to preserve the folkways and livelihoods of the indigenous peoples of the equatorial woodlands of Brazil? Or that this gastronomic concoction, which annually utilizes in excess of 150 tons of Brazil nuts, all of which are "sustainably harvested from the most biologically diverse regions" of the Amazon, would feed first-world consumers hungry for social relevance, environmental justice, and a bit of butterfat?<sup>1</sup>

It says something, too, about the depth of our cultural memory that we may not recognize just how derivative are the arguments of these caring capitalists; Ben and Jerry were not the first to define the intersection between forest management, economic development, and social equity. That honor surely belongs to those who brought the concept of forestry to the United States in the late-nineteenth century, individuals who fully appreciated

that this science could be a profound agent for political change and social reform. It is with their belief in the socially ameliorative aspects of forestry that this essay is particularly concerned. Offering an intellectual history of sustainable forestry as social uplift, it tracks foresters' faith that through the development of new land management techniques a better America would emerge wherein some of its most disadvantaged and marginalized citizens would be elevated with the stroke of an axe. As these reformers would discover, however, the path to such sustained change was never easy and only rarely realized.

## IN THE BEGINNING

Among those who recognized the impact that forestry might have on the commonweal and on its poor and downtrodden,

# BY CHAR MILLER



For almost ten years Ben and Jerry marketed Rainforest Crunch as a way to preserve the lifestyle of indigenous peoples in the woodlands of Brazil.

and who was drawn to the field as a consequence, was Gifford Pinchot. His training in Europe in 1889 and 1890—he studied at the French national school of forestry and had traveled throughout the continent evaluating forests and foresters had stimulated his perception of the profession's democratic potential, in ways both negative and positive. In correspondence to his parents and later in his autobiography, Breaking *New Ground*, Pinchot revealed he was particularly offended by the elitist quality of Prussian forestry, by its practitioners' disdain for the common people. While touring a forest near Neupfalz, for example, he witnessed a scene he never forgot: "the old peasant who rose to his feet from his stone-breaking, as the Oberfoerster came striding along," he wrote, "and stood silent, head bent, cap in both hands, while the official stalked by without the slightest sign that he knew the peasant was on earth." In stark contrast were his experiences in Switzerland which, like the United States, "was not an autocracy." Under the tutelage of Forstmeister Meister, who oversaw Zurich's famed Sihlwald forest, the young American (he was not yet twenty-five) came to understand "the qualities a pioneer public forester must have to succeed in a country like ours—practical skill in the woods, business common sense, close touch with public opinion, and an understanding of how and why things get done in government and politics in a democracy."2

These formative European experiences came into play two years later when Pinchot secured his first full-time job as a forester, working for one of the nation's wealthiest citizens—George W. Vanderbilt. Beginning in the winter of 1892, Pinchot began to develop a forest management plan for Vanderbilt's sprawling estate Biltmore, situated just outside Asheville, North Carolina. About that "magnificent chateau of Indiana limestone," he would later observe: "as a feudal castle it would have been beyond criticism, and perhaps beyond praise. But in the United States of the nineteenth-century and among the one-room cabins of the Appalachian mountaineers, it did not belong." That contrast, he affirmed, was a "devastating commentary on the injustice of concentrated wealth. Even in the early nineties I had a sense enough to see that." 3

That he was sensitive to some of the gross inequities of the so-called Gilded Age was remarkable, given that he too had been born into a family of great means and considerable influence. More striking still was the significance of a forest management plan he then crafted in his spare time, not for his employer, but for the indigenous people of the Appalachians—the Cherokees—who labored under even greater disadvantages than the region's poor white population. In early February, 1893, he tramped over a site the Indians owned, "about thirty-three thousand acres of mountain land, almost wholly covered with forest." As he wrote his father: "Parts of it are finer than any other deciduous woodland I have ever seen, and other parts of it, which I did not see, are said to be finer still." He was staggered by the size of some of the trees: the chest-high

circumference of one chestnut was 24'2"; poplars measured up to 21', and a red oak was over 17'—"the largest tree of the kind I have ever seen." But disaster threatened this arboreal heaven. A local lumber agent had signed a contract with the Cherokee to cut the vast tract, and had been aided in the negotiations by "certain politicians who are anxious to handle the money." Pinchot was worried that this agent and his political contacts, to feather their nests, would clearcut the woods, leading to the Cherokees' impoverishment.<sup>4</sup>

Conceding that "there is a great deal of ripe timber on the land," Pinchot nonetheless considered it "a great pity" that the "rest of the forest should be more or less sacrificed to the removal of the small portion which ought rightly to be cut." Rather than sell the lumber in one fell swoop, "which would of course mean disastrous injury to the forest on account of the way lumbermen do their work," he proposed an alternative that would lead to the "permanent preservation of the forest and the enrichment of the Indians." Drawing on his European training and his recent practical experience at Biltmore, he suggested that the forest be divided roughly into thirty or forty sectors, "in one of which the cutting would be done each year. By the time the last section had been cut over, the younger trees left standing on the first section would be ready for market." But only if the lumber company selectively harvested the forest. "The success of this plan would depend very largely on the way the timber was handled. That is, extra care would be necessary in felling and getting out the logs, as well as in selecting the trees to fall. But the cost of such extra care, as the experiment at Biltmore has proved, is comparatively slight, while the difference which it makes in the future of the forest is enormous."5

Considerable too were the potential social ramifications of his plan. If adopted, it would insure that there "would be a constant annual revenue coming in to the Indians," simultaneously enhancing the material life of the tribe and reducing the "tax on the Government for their support." Just as "certain villages in Europe pay all their school and road taxes from the product of their forest, so it seems to me this band of fifteen hundred Indians might go far to pay for the necessary improvements about their village by the rational handling of this magnificent forest." From such an outcome psychological benefits would also flow: the Cherokee would be "elevated by the influence of steady and responsible work," he wrote in the paternal language of nineteenth-century reform. Late-twentieth century forestry reformers might balk at the implicit condescension, but they should not mistake the larger thrust of Pinchot's argument. In imagining a scenario in which sustainable forestry, a rising standard of living, and political empowerment were inextricably linked, Pinchot had devised a way by which to enfranchise the Indian peoples of western North Carolina so that they did not resemble a degraded Prussian peasantry.6

Nothing came of Pinchot's proposal; there is no evidence that he submitted it to the relevant local or national authorities, and, besides, he was outside the system of governance that determined the Cherokee's economic life. But once on the inside, once he had become the chief of the Bureau of Forestry in 1898, he dusted off his earlier plan, and began to articulate a policy in which forestry would grapple with the many needs of Native Americans. In the late 1890s, for instance,

he became deeply involved in the creation of the first Minnesota National Forest. As with his earlier scheme in the North Carolina, the new forest was designed in part to halt political corruption that had led to the outright theft of Chippewa-owned timber and land, and the backroom deals that had robbed the Chippewa of their rightful profits.<sup>7</sup>

Such widespread fraudulence also led Pinchot to seek a closer relationship with the Indian Office in the Department of Interior; in 1908, as head of the Forest Service, he forged an alliance with the Office that had control over 12,000,000 acres of forest containing timber whose worth Pinchot estimated was \$75,000,000. "No one in the Indian Office or one the ground was capable of handling these forests," he asserted, and the "result was what you might expect." Throughout the nation, Indian peoples "were being cheated right and left by contracts unduly favorable to the purchasers of Indian timber" or by the "failure of Indian Agents to enforce such contracts as they had." In addition, most forests were simply clear-cut, making for a tremendous loss of young growth that decreased the chances of natural regeneration; that there were no provisions for reforestation only made matters worse. But nothing struck him as more absurd and devastating than the story he had heard of an Indian Agent whom had "sold for lumber the sugar bush upon which his Indians depended for their maple syrup." The Indian Office, he determined, had no sense either of conservative forestry or the social benefits that accrued from it.8

The Forest Service, by contrast, recognized that the connection between land management and political reform could produce substantial results. Eighteen months after inking a contract with Interior officials to handle the reservations' forests, the chief would boast that his agency had "saved large sums of money to the Indians, gave many of them profitable employment, and by the introduction of Forestry promised to make that employment permanent." These first steps would help those he considered to be the original conservationists, who once had handled natural resources with "foresight and intelligence," to do so again.<sup>9</sup>



While Pinchot followed his overwhelming desire to "make forestry pay," and took his first forestry job with George Vanderbilt in western North Carolina; he also commented on the "injustice of concentrated wealth" that he saw at the Biltmore Estate.



J. P. Kinney was Director of the Division of Forestry, Bureau of Indian Affairs from 1910 to 1933. Kinney was an early advocate of selective cutting on tribal lands.

His idea was never fully implemented: in 1909, Richard Ballinger, who recently had been appointed as Secretary of the Interior, put a halt to the working arrangement between the Forest Service and Indian Office, a move that infuriated Pinchot; it proved to be one of the sources of the later Ballinger-Pinchot controversy that so devastated the Taft administration in 1910. Not for another twenty years, the chief forester believed, would the idea that Indian forests should be "handled not for the profit of political contractors, but for the lasting benefit of the Indians and the rest of us" regain political ascendance. <sup>10</sup>

# **MID-LIFE REFLECTIONS**

His belief was not entirely accurate, for in the interim there were important attempts to establish conservation and forestry on reservation lands. A central figure in these initiatives was J. P. Kinney. Trained in forestry and law at Cornell University, he entered the employee of the Indian Forest Service (IFS) in 1910, precisely at the wrong time. Caught in the crossfire between the Department of Interior, in which the IFS was housed, and the Forest Service, Kinney found his first years extremely exacting; Interior employees, he later recalled, thought because he was a forester he must be a "Pinchot man"; those in the Forest Service considered him untrustworthy due to his employment in Interior. Collateral controversies within Interior further confounded Kinney's labors: "I had a hard row to hoe for a while." 11

He plowed on nonetheless. Although he believed "the young fellows in the Forest Service were over-idealistic," he shared their

critique of his Interior predecessors' actions: "Soon after I began with the Indian Service," he remembered, "I learned that the things that had been done on the Indian lands were not wise. Therefore, my sympathies were with the Forest Service, as far as forestry went." That led him to espouse selective cutting to produce a steady stream of revenue for the tribes. On the Menominee reservation in Wisconsin, the Klamath in Oregon, and throughout the west, the understaffed and under budgeted agency sought to make the case that clear-cutting forests was bad science, poor economics, and misguided social policy. "The attitude of the lumber industry in Wisconsin, as well as that of the Menominee Indians, was very hostile to the introduction of lumbering methods involving the expenditure of funds for future forests if the effect was to reduce current income." A turning point came, he claimed, when he learned that a local, whiteowned lumber operation had been conservatively and profitably harvesting its lands for some time. "I used the fact that the Goodman Lumber Company was adopting selective cutting to convince the Menominee Indians that it was practical."12

His claim only partly convinces. The Menominee had a pragmatic set of reasons of their own for pursuing this "new" cutting strategy, and it pre-dates Kinney's assertions by many years. In the 1860s, deeply concerned that white timber interests, known locally as the "Pine Ring," were illegally and destructively harvesting on the reservation, the tribe established a committee to defend its interests; it regularly filed complaints with the Department of the Interior about the clear-cut depredations, and subsequent loss of income. Seeking to retain control of the resources on its property, and to develop an internal skilled labor force, the Menominee constructed a sawmill and lumber camp in the early 1870s; from this enterprise, the tribe gained considerable experience and financial rewards. Its bid for self-sufficiency in this instance was short-lived—the federal government ordered the logging to cease in 1878—but it was exactly this kind of outcome that led to continued agitation through the last decades of the nineteenth and early-twentieth centuries for greater control over its lands and their productive capacity. In response to these demands, the La Follette Act of 1908 granted the Menominee the right to commercially log and mill timber, under the supervision of the USDA Forest Service. In arguing on behalf of the bill that would bear his name, Wisconsin Senator Robert La Follette enthused: "The forest is the natural home of these men. They are what is known as 'Timber Indians.' Their every instinct teaches them to seek a livelihood from within the forest." That instinctive response would be guided by a desire to insure a sustained yield. In these northern woods, "the harvest of the crop of forest products should be made in such a way that the forest will perpetuate itself; that it shall remain as a rich heritage to these people from which, through their own labor, they may derive their own support, and that, too, without ruthless destruction." His words spoke for many—though not all Menominee—a convergence that suggests that when Kinney voiced similar arguments years later, his words fell on already-receptive ears. 13

That Kinney's interpretation of events framed the Menominee as a naive people forever acted upon by more sophisticated whites suggests the degree to which his perspectives on the prospects of American Indians diverged from other foresters. He allowed that he was considerably more

skeptical than visionaries like Pinchot, and by extension La Follette, whom he felt over-estimated the noble character of American Indians and who over-emphasized the role the federal government should play in their restoration. In A Continent Lost—A Civilization Won (1937), Indian Forest and Range (1950), and a memoir, My First Ninety-Five Years (1972), he loudly proclaimed the virtues of complete assimilation of Indian peoples into the dominant white culture. His decades in the Indian Service, he observed in his autobiography, had led him to "the conclusion that the nourishing of the idea or notion in the mind of the Indians that they should remain an insulated group, separate from other inhabitants of the United States, constituted the greatest obstacle to their social and economic advancement." Disputing the well-established record that by hook, crook, and purchase whites had absorbed prime Indian lands, believing that such transfers were not necessarily bad in any event because they forced Native Americans to come into greater contact with prevailing cultural values and social norms, Kinney insisted reservations were traps. Never snared like those do-gooders whom he brushed off as "short haired women and long haired men," he wrote A Continent Lost—A Civilization Won in eager rebuttal of what he described as the "urgent propaganda" of one of these starry-eyed idealists, his superior in the Indian Service, John Collier.14

Collier, whom President Franklin Roosevelt had tapped to be the Commissioner of Indian Affairs, apparently was unruffled by his subordinate's contrariness; Kinney remembered showing his boss the manuscript for *A Continent Lost-A Civilization Won*, and Collier merely shrugged, and suggested he "Go ahead and publish it." The commissioner was unfazed because, like Pinchot before him, he was convinced that more needed to be done for the Indian peoples, including a renewed emphasis on land reform and conservative forestry. The link with Pinchot is not gratuitous; Kinney, for one, believed the two men were similar types of crusaders. The campaign Collier launched became known as the Indian New Deal, the essential characteristics of which he sketched out in the initial, heady days of Roosevelt's first term.<sup>15</sup>

In collaboration with his Special Advisor, forester Ward Shepard, and Robert Marshall, then chief of the Indian Forest Service, Collier outlined a bold plan to alter the status of the Native American peoples. They went public with their ideas in an article in the *Journal of Forestry*, the title of which—"The Indians and Their Lands"—captured the authors' desire to reestablish Indian rights to possess indigenous grounds; as the authors acknowledged, the "Indian forest problem is only one phase, though an extremely important one, of the whole Indian land problem." At its heart lay the Allotment Law of 1887, which



A 1909 logging crew, Camp Seven; Menominee Indian Reservation, Neopit, Wisconsin; Enos Gale, Foreman.

had commanded that tribal lands be distributed to individual members of the community so as to transform "the Indian into a responsible, independent, self-supporting American citizen by the over-simple expedient of mandatorily applying to him the individualistic land tenure of the nineteenth-century white American." The consequences were devastating, indeed the exact opposite of the stated purpose of the allotment law: with the loss of more than 63 million acres, "much of it the best" once under their control, the Indian peoples had become "landless," deprived "in large measure, of their chief means of support without substituting any other means in its place." A miserable failure, the allotment policy demonstrated just how "dangerous it is to try to solve problems by theories not soundly based on the facts of life and nature." 16

Repairing this damage required a new approach and a different set of assumptions. Collins, Shepard, and Marshall proposed to consolidate or restore as much land as possible to communal ownership, utilizing land exchanges, purchase, and, where possible, relinquishment of allotments. This dramatic shift in land tenure on the reservations would be combined with ongoing training in the management of forested lands. The authors envisioned a harvesting system much as Pinchot had forty years earlier, in which "a light selection method of cutting" would be employed, one that would remove "not more than fifty per cent of the volume of the stand." This would leave "sufficient growing stock to make it profitable to return for at least one and perhaps several additional cuttings before the end of the rotation." And, again like Pinchot, they believed that such a logging strategy would work for the forest and for the people who depended on it: "The operation will...bring to the Indians the power to manage their own affairs and the selfrespect which such power insures."17

A similar restorative impulse was manifest in new arguments emanating from the Forest Service about its future course. This intellectual connection was not surprising, given that Collier's coauthors had been members of the Forest Service, and that they were friends with Ferdinand A. Silcox, the new and fifth head of the agency. Silcox believed that the forestry profession of the mid-1930s was at a critical juncture. He urged his peers to recognize that "[w]e must fit forestry into new economic and social conditions. Twenty-five years ago, relatively few persons could foresee the consequences of unbridled exploitation and over-development of all resources. Now these consequences are so clearly evident that few deny them." What that evidence of environmental devastation had clarified was the need for a new philosophical orientation that rejected "rugged individualism" because it often gave license to "the strong to take advantage of the weak." Instead, arguing that forestry ought to be "an instrument for social and economic betterment," he proposed basing "our forest policy not merely upon the need for timber, but also upon such other considerations as stability of communities and employment, dovetailing of agriculture and forestry, and balanced use of land resources." His articulation of forestry's communal responsibilities, paired with his call for the profession to return its former "crusading spirit of translating forestry ideals into actual life," won the praise of Gifford Pinchot, who was eager to help the new chief realize their shared ambitions. To fight "side by side with a leader like Silcox," Pinchot wrote forester Raphael Zon, "is a grand prospect, and I am perfectly delighted with it."18

### MATURING PRINCIPLES

Only a segment of foresters shared Pinchot's enthusiasm, embraced Silcox's notion of forestry as "social service," or accepted Collier's assumption that "intelligent, permanent land use," and "human understanding" were crucial to the resolution of the nation's ruinous Indian policy. But many foresters have come to do so, infusing these earlier arguments about economic opportunity and social regeneration into late-twentieth century sustainable forestry. "The definition of sustainable forest management that is now evolving," V. Alaric Sample and Roger A. Sedjo noted in 1996, "requires meeting three conditions simultaneously; it must be ecologically sound, economically viable, and socially responsible." This blend is essential to insure the success of a more ecosystemic form of land management, and reflects "a difficult lesson" that environmentalists learned at the end of the twentieth century in "developing countries around the world"—that it is impossible to secure "long-term protection of forest ecosystems without incorporating the economic and social needs of the local people into conservation strategies." Forestry and foresters must be as concerned with sustaining the land as with the development of "sustainable communities," the two being parts of a whole. 19

It is impossible to secure "long-term protection of forest ecosystems without incorporating the economic and social needs of the local people into conservation strategies."

That characteristic of sustainability is vividly captured in the 10 Principles and Criteria that the Forest Stewardship Council (FSC) adopted in August, 1994. FSC is an international organization whose membership has covered a spectrum of interest groups, including environmentalists and foresters, representatives from indigenous peoples organizations and timber companies, as well as those involved in forest product certification. To secure the FSC's independent certification of forest products as produced on lands managed according to a set of environmental, social, and economic standards, producers must adopt and demonstrate their adherence to the prescribed rules. This entails, for example, complying with all applicable laws, establishing "long-term tenure and use rights" to the affected land, enhancing "long-term social and economic well-being of forest workers and communities," conserving biological diversity, and maintaining sites of "major environmental, social, or cultural significance." Of particular note, given some foresters' concerns in the past about links between exploitative commercial development and social oppression, is FSC's third principle—the "Indigenous Peoples' Rights." Those organizations desiring FSC sanction must recognize and respect the "legal and customary rights of indigenous peoples to own, use and manage their lands,

territories, and resources...," which includes accepting that indigenous peoples "shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies." Additional constraints involve the adoption of a forest management regime that "shall not threaten or diminish, either directly or indirectly, the resources or tenure rights of indigenous peoples," protects sites "of special cultural, ecological, economic or religious significance," and compensates indigenous peoples "for the application of their traditional knowledge regarding the use of forest



In the 1930's, Ferdinand A. Silcox, the fifth Chief of the U.S. Forest Service, urged that forestry needs to fit within new economic and social conditions.

species or management systems in forest operations." Through economic incentives and moral suasion, FSC hopes to empower historically disadvantaged peoples, restore devastated woodlands, and develop a greener marketplace for forest resources.<sup>20</sup>

Judging by the increased support that FSC principles—and others like them—have gained from among forest resource professionals in academia, industry, and government, sustainable forestry appears to have entered a new stage in its development. That is in part because it has become a matter of international significance, a logical outcome of the location of many of the affected forests—in the tropics and within Third World nations. Consistent with this globalization of the idea of sustainable forestry, is the growing concern for the maintenance of indigenous peoples and the rainforests within which they live. Much of these worries, echoing nineteenth-century concerns about the disadvantaged, revolve around the use of economic systems and political reform to conservatively manage the land so as to enhance aboriginal power within an intensely global system of trade.

Intriguingly, some late-twentieth century scholars and environmental activists have also turned this argument on its head. Noting, for instance, that most "Amazonian Indians continue to be like their forebears—they are still Indians—certainly in terms of the their plant resources and the ways in which they use and manage these," William Balée compares their land management techniques with those of the developed world: "The resource management practices of the indigenous farmers and foragers of Amazonia of today are less destructive of the environment, by any measure, than our rapacious nationstates with economies based on the burning of fossil fuels." It is not they, he argues, who are responsible for the industrial poisoning of rivers and lakes, not they who are complicit in the "increasingly apparent scenario of major biotic depletions." That being the case, he and others suggest that First World conservationists "rethink their premises," and recognize that their drive to protect Amazonian lands and peoples has two purposes—to insure the maintenance of the rainforest biota and human ecology, and to increase their own chances for survival. "If modern states cannot protect the remaining Indian villages and non-state societies of the world," Balée concludes, "will they ever be able to emulate them in terms of resource management, and biological and ecological diversification?" Apparently, sustainable forestry will save us all.21

What accounts for the greater receptivity to this claim of salvation in fin-de-siècle America? There are myriad factors, perhaps most prominent of which has been the rise of environmentalism in the United States since the early 1960s. A social movement and cultural critique that challenged "the dominant, development-oriented current of post-war American society," it has emerged as a powerful force in an increasingly affluent culture in which "quality of life" issues have come to define the political landscape. Strengthened by certain seminal texts—e.g., Rachel Carson's Silent Spring and Paul Ehrlich's The Population Bomb—and reinforced through battles over natural landmarks such as Dinosaur National Monument, the movement helped launch a series of new federal environmental initiatives; the Wilderness Act (1964), National Environmental Policy Act (1970), and the Endangered Species Act (1973), among others, have transformed the way many Americans think about their place in the world.<sup>22</sup>

U.S. FOREST SERVICE PHOTO

That these thoughts have led to intense political struggles over, even gridlock on, pressing land management issues, has been all too evident at century's close. Surely this is yet another compelling reason why contemporary foresters—a large cohort of whom have come of age in this environmental era have been drawn to idea of "sustainability." For them, it seems to represent an enticing middle ground on which competing forces can meet to discuss and perhaps resolve any number of essential, if occasionally contradictory, needs. Some of its lure for "advocates of sustainable development," as William DeBuys' has pointed out, lies in their faith "that economic use of environmental resources can be made compatible with good stewardship of them," and in their belief that this balance can be maintained over the long run. Sustainability, and its attendant language of consensus, is also alluring amidst the often brutal rhetorical clashes over wilderness values, economic development, and social justice. Speaking to this felt need to locate a space in which the combatants could more safely meet, argue their differences, and meld some of them was the motto of the Seventh American Forest Congress, held in Washington, D.C. in February 1996—"Many Voices... A Common Vision." That through sustainability we might reach the promised land of conflict resolution is made even more delicious knowing we can accelerate our arrival there simply by purchasing a quart of "Rainforest Crunch."23

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### **FOOTNOTES**

- I. Information about Rainforest Crunch from the web site of Community Products, Inc., "The creation of Ben and Jerry's Ice Cream" <a href="http://www.madriver.com/thestore/vtfoods.htm">http://www.madriver.com/thestore/vtfoods.htm</a>
- 2. Gifford Pinchot, *Breaking New Ground*, fourth edition, (Washington: Island Press, 1998), p. 21–22.
- 3. Ibid., p. 48.
- 4. Gifford Pinchot to James W. Pinchot, February 8, 1893, in Gifford Pinchot Papers, Library of Congress.
- 5. Ibid.
- 6. Ibid.
- 7. E. J. Carlson, "The Cherokee Indian Forest of the Appalachian Region," *Journal of Forestry*, September 1953, p. 628–30.
- 8. Pinchot, Breaking New Ground, p. 411–12.
- 9. Ibid., p. 24–25; 412.
- 10. Ibid., p. 412.
- II. "J. P. Kinney: The Office of Indian Affairs: A Career in Forestry," oral history, Forest History Society, 1969, p. 10–30; 44–46.
- 12. Ibid., p. 14–15; 50–56.
- 13. Felix M. Keesing, "The Menomini Indians of Wisconsin: A Study of Three Centuries of Cultural Contact and Change," *Memoirs of the American Philosophical Society*, volume x, 1939, p. 168–70; 172–4; 183–87; 232–34 describes the history of the reservation's lumber business, and notes some of the internal conflicts it generated; Patricia K. Ourada, *The Menominee Indians: A History*, (Norman: University of Oklahoma Press, 1979), p. 169–189; Nicholas C. Perloff, *Menominee Drums: Tribal Terminations and Restoration*, 1954–1974, (Norman: University of Oklahoma Press, 1982), p. 43–44; Catherine M. Mater, "Menominee Tribal Enterprises: Sustainable Forestry to Improve Forest Health and Create Jobs," in *The Business of Sustainable Forestry: Case Studies*

- (Chicago: A Project of the Sustainable Forestry Working Group, The John D. and Catherine T. MacArthur Foundation, 1998) argues that one sign of the Menominees' early commitments to conservative land management is that "Today, [they] remain the only Native American tribe to have their forestlands independently certified as being sustainably managed," p. 9-1; J. P. Kinney, *Indian Forest and Range: A History of the Administration and Conservation of the Redman's Heritage*, (Washington, D.C.: Forestry Enterprises, 1950), p. 116–141.
- 14. J. P. Kinney, A Continent Lost—A Civilization Won, (Baltimore: The Johns Hopkins University Press, 1937); Indian Forest and Range; My First Ninety–Five Years, (Hartwick, N.Y.: self-published, 1975), p. 78–9; "Kinney," oral history, p. 26, 31, 33. Kinney's dispute of contemporary assumptions about the damage that the allotment system wrought flies in the face of then-prevailing (and now-current) historiography; for a concise discussion of the damages of the allotment system, see Donald Pisani, "The Dilemmas of Indian Water Policy, 1887–1928," in Char Miller, ed., Fluid Arguments: Water in the American West, (Tucson: University of Arizona Press, forthcoming).
- 15. "Kinney," oral history, p. 69-71, 90-93.
- 16. John W. Collier, Ward Shepard, and Robert Marshall, "The Indians and Their Lands," *Journal of Forestry*, August 1933, p. 905–06.
- 17. Ibid., p. 909.
- 18. Ferdinand A. Silcox, "Foresters Must Choose," Journal of Forestry, March 1935, p. 198–99; 203; Gifford Pinchot to Raphael Zon, October 3, 1934, Raphael Zon Papers, Minnesota Historical Society, St. Paul MN.
- 19. H. H. Chapman, "The Responsibilities of the Profession of Forestry in the Present Situation," *Journal of Forestry*, March 1935, p. 204–210;
  V. Alaric Sample and Roger Sedjo, "Sustainability in Forest Management: An Evolving Concept," *International Advances in Economic Research*, 1996, 2(2), p. 171.
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