

"THE ENTIRE NATIONAL FOREST SYSTEM IN MICROCOSM"

Black Hills Forestry: A History. John F. Freeman. 246 p. \$34.95. University Press of Colorado, Boulder, CO. 2015. ISBN: 978-1-60732-298-6.

arvesting the ponderosa forests in the Black Hills had been big business long before Per Axel Rydberg, a graduate student in biology, arrived in the area in the mid-1890s to collect plants. Miners needing timber for shafts and loggers seeking wood to build the local boom towns had been operating nonstop for two decades; Homestake Mining Company alone consumed an estimated two million board feet a year. Rydberg was stunned by the resulting damage, by "the ravages of lumbermen, mining companies, fire, and cyclones, nothing being left but stumps, fallen logs, and the underbrush." His prediction of the region's future was just as bleak: "it will be no wonder if in a short time the dark pine forest is gone and the name 'Black Hills' has become meaningless" (p. 28).

His fear was understandable and not unique. Forester Henry Graves, later the second chief of the US Department of Agriculture (USDA) Forest Service, was just as concerned in 1897 about the splintered terrain he investigated. To his professional eye, the deforested high ground around communities like the aptly named Deadwood, the "reckless waste of timber that has been going on for years," boded ill for the chance to regenerate the original forest cover (p. 24).

Rydberg's and Graves' reactions depended as much on the conditions they encountered as on the political context: neither could know for certain that a new land management scheme, the Black Hills Forest Reserve (later National Forest), would alter the on-the-ground dynamics to such an extent that over the subsequent century the land has recovered. But nothing about its regeneration has been straightforward. Indeed, one of the great pleasures of John Freeman's *Black Hills Forestry* is how closely it tracks this complex recovery process, its insistence that history—time—matters.

And what a history it has been. Freeman's narration of it benefits from his sharp eye for detail. With a previous book on *High Plains Horticulture* (2008), it is not a surprise that among the subjects he includes in his new book is a wealth of natural history data that Euro-American explorers, military officers, railroad surveyors, and other travelers jotted down in their diaries, journals, and correspondence. He uses their insights to build up our understanding of the presettlement forests of the Black Hills. In 1855, one of them, geologist Ferdinand Hayden, wrote of the region's "inexhaustible quantity of the finest timber, mostly pine," a description that serves at once as a prediction of the forest's economic value and a foreshadowing of its coming destruction (p. 14).

Gold was the driving force behind the conversion of this once tree-studded environment. As soon as news broke in 1875 that rich mineral veins were discovered in the Black Hills, President Ulysses Grant issued a cynical, cross-cutting executive order: it reaffirmed that the Sioux reservation

draped across the hills "remained closed to prospectors and settlers while declaring that the military would no longer enforce the ban on entry to the reservation" (p. 17). Within 2 months, 15,000 people had rushed into the area, bringing countless pickaxes, shovels, saws, and plows, as well as horses and livestock. As they mined the mineral resources and chopped down the trees, their national government used their rampaging presence to force the Sioux to leave their ancestral lands in exchange for federal assistance. These two factors were critical to the later establishment of the forest reserves, public lands that remained under federal control and would be managed by a new social type, the forest ranger.

This land manager came with the backing of a new federal agency, the USDA Forest Service. Freeman does a good job identifying the innovative strategies that its first chief Gifford Pinchot and his staff (including Henry Graves) promoted in the Black Hills and elsewhere. Of special note is that even before this agency was created, the Black Hills had been the site of the first timber management plan on federal lands. This forest was also where Pinchot and his agents confronted two other managerial issues that ever since have bedeviled forestry operations in the west: fire and bark beetles. Here too was where some of the initial scientific analyses of these challenges were conducted and some of the early attempts to combat them were tested. The Black Hills were on the cutting edge.

That is not always a good thing, as Freeman amply demonstrates in his subsequent discussions of enduring and complicated public/private/tribal landownership issues, the demands for greater automobile access and recreational opportunities, the loss of prime acreage to a state park and game reserve (and to the Mount Rushmore National Memorial), and the ongoing effort to balance lumber harvests and grazing allotments with the protection of forest health.

The Forest Service's post-World War II commitments of getting out the cut tilted that balance in favor of production and also generated a firestorm of opposition. As on other national forests, the Black Hills' managers were not always deft in responding to conflicting interests or opening up their decisionmaking processes. The passage of the National Environmental Policy Act (1969) solved this particular issue; environmental impact reports and public engagement were now required. Other laws mandated the protection of wilderness, endangered species, and clear water. With these new requirements, the agency slowly modified its managerial strategy toward a more collaborative, landscape-scale approach, an evolution that the Jasper Fire (2000) and the intense bark-beetle infestations expedited.

In so doing, John Freeman concludes, the Forest Service is now managing "for a biologically diverse forest" (p. 224), a goal that would have been impossible to conceive a century ago.

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