

The Most Defiant Devil: William Temple Hornaday and His Controversial Crusade to Save American Wildlife. By Gregory J. Dehler. (Charlottesville: University of Virginia Press, 2013. viii + 254 pp. Illustrations, notes, bibliography, index. \$29.95.)

In March 1886, William Temple Hornaday, the chief taxidermist at the Smithsonian Institution's U.S. National Museum, read a troubling newspaper article about the slaughter of the buffalo. Much to his chagrin, he discovered that the museum collection under his charge contained only two dilapidated skins and a motley assortment of bones from this rapidly declining, charismatic, and distinctively American animal. To quickly remedy this shortcoming, Hornaday headed to Montana for the first of two expeditions he billed as the "last scientific buffalo hunt" (p. 61). He returned with the remains of twenty bison and grave doubts about whether the beleaguered species, which he estimated to have once been more abundant than any other quadruped on earth, could hang on much longer. The expedition proved to be a life-changing adventure for the ambitious thirty-two-year-old, resulting in his profound conversion from ardent taxidermist and collector to dedicated wildlife protector. One product of this transformation, *The Extermination of the American Bison* (1889), proved to be the opening salvo in his long battle to raise consciousness about the plight of American wildlife and secure legal protection for numerous native species being decimated by ignorance and greed.

Over the next fifty years, Hornaday achieved numerous conservation triumphs. As founding director of the New York Zoological Society, he proved instrumental in helping to establish the American Bison Society as well as a resident breeding herd of the iconic species that was used to populate several newly established federal bison reserves in the West.

He was also deeply involved in campaigns to protect the Alaskan fur seal, stop the sale of native game in New York State, gain passage of the Migratory Bird Treaty Act, halt the use of imported wild bird plumage in the millinery trade, reduce federal bag limits and open seasons for game birds, and establish federal migratory bird refuges. As an avowed wildlife preservationist, Hornaday was out of step with the more utilitarian-oriented conservation establishment of his day, but his ideas proved influential on Rosalie Edge, who continued the gadfly role that he had pioneered, and Aldo Leopold, who founded the fields of wildlife management and environmental ethics.

Hornaday achieved much, but as Gregory J. Dehler makes clear, he also struggled with personal insecurity, a pugnacious disposition, and a tendency to see the world in highly black-and-white terms, all of which served to alienate him from most of his colleagues. In this deeply researched, nicely balanced, and well-presented biography, Dehler offers a fully fleshed-out portrayal of this enigmatic and now largely forgotten man who played a key role in the progressive conservation movement.

MARK BARROW
Virginia Tech

Gambling on Ore: The Nature of Metal Mining in the United States, 1860–1910.

By Kent Curtis. (Boulder: University Press of Colorado, 2013. xviii + 232 pp. Illustrations, maps, chart, notes, bibliography, index. \$39.95.)

Gambling on Ore is an insightful environmental history of mining that places ore geology at its center. It describes how miners in western Montana dealt with the unpredictable placement and quantity of metal ores as well as the capital- and space-intensive process of turning those ores into valuable commodities. Author Kent Curtis believes that Americans' solutions

to the industry's uncertainties "established a set of approaches to natural resources that have come to define our production practices since that time" (p. 7).

Curtis begins with a look at gold mining. He starts the book by arguing that the almost random distribution of placer gold in western Montana's creeks created spacial and quantitative uncertainties that in turn led to "social and institutional uncertainties" (p. 30). In Curtis's narrative, familiar tales of mining camp violence and vigilantism become products of the deposits' uncertainty. Placer mining was more than a colorful period before *real* mining; it led people to map the West and its lode deposits.

The next two chapters consider Montana's silver and copper booms. Curtis argues that miners could not know what truly lay in underground quartz or sulphide deposits until they dug into them. The large-scale gamble of lode mining, therefore, meant immense capital investment up front. Mine companies kept expanding production in an attempt to both offset these investments and keep up with fierce competition. Hence, western copper mining didn't boom in the 1880s and early 1890s because of electricity's demands; it boomed because producers pushed each other into overproduction. To gain control over the situation, mine owners learned from European professionals, benefited from favorable legislation, and practiced vertical and horizontal integration.

The final chapter considers how western mining shaped America's legal approach to natural resources. Instead of the old common law approach to water use, in which a party could own land but not the water flowing through it, the mining industry encouraged a new system that made water itself a commodity. By the early twentieth century, federal courts had decided that massive ore-processing plants could pollute because their economic benefits outweighed those of smaller economic interests, like the farmers who found their crops and animals poisoned by arsenic and sulfur.

Despite the overall shape of his narrative, Curtis manages to not sound declensionist (well, until the final few pages). More impressively, he spends little time on the nonhuman, organic nature that readers expect to see in an environmental history, choosing instead to concentrate on rocks and the companies that turned them into money. This reader yearned for a little more biography and social life to enliven the densely argued final chapters, but Curtis convincingly demonstrates the mining frontier's importance to later developments.

BRIAN JAMES LEECH
Augustana College

South Pass: Gateway to a Continent. By Will Bagley. (Norman: University of Oklahoma Press, 2014. 325 pp. Illustrations, maps, notes, bibliography, index. \$29.95.)

This book had its beginnings a decade ago when Will Bagley agreed to conduct a South Pass historic context study for a project sponsored by the National Park Service, the Bureau of Land Management, and the Wyoming State Historic Preservation Office. The initial 60,000-word study was completed in 2007. The twelve chapters (including an introduction and an afterword) of *South Pass: Gateway to a Continent* detail the comings and goings through the pass in much of the first seventy years of the nineteenth century.

This book is an excellent study on trail making, human struggles, and overland history. It complements, augments, and draws in part from Bagley's two earlier volumes in the series *Overland West: The Story of the Oregon and California Trails*. The history of South Pass, from its discovery to its demise as a regular overland route after the completion of the transcontinental railroad, is a history of the individuals and groups from both East and West who looked to the pass as a "funnel" they needed to travel through.