BOOKS: HUMAN ECOLOGY

Pushing Buffalo to the Brink

James E. Sherow

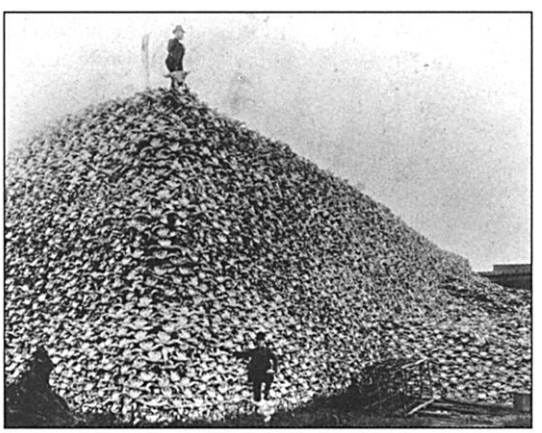
Stereotypes run deep, and into our lives they will creep. During the past several decades, some scholars have depicted Native Americans as the first "environmentalists." But do such notions of Indian peoples and their hunting practices hinder or promote an understanding of the world in which they once lived and, by inference, the manner in which we understand the ecosystems that support our lives today? Andrew Isenberg, a professor of history at Princeton University, offers us an answer. In *The Destruction of the Bison*, he argues that the 19th-century decline from an estimated 30 million to fewer than 1000 bison began with a "nomadic" Indian economy "based on the unsustainable exploitation of the herds." The "destruction" accelerated as Indians and Euroamericans fought for control of resources in the plains. And, keeping Euroamericans on the hook, Isenberg claims that their slaughter of the bison herds "to pacify the plains nomads...did not exploit the peculiar frailty of a primitive society; when they capitalized on the nomads' ecological Achilles' heel they exposed the fragility of all societies, including their own, that rely on the unsustainable exploitation of nature."

The Destruction of the Bison
An Environmental History, 1750–1920
by Andrew C. Isenberg
Cambridge University Press, New York, 2000. 218 pp. $24.95. ISBN 0-521-77172-2.

Isenberg provides what he calls a "history of the interactions among ecology, economy, and culture that led to the near-extermination of the bison, the dominant species of the historic Great Plains." In doing so, he explores the interplay of the diverse factors that reduced the great bison herds on the shortgrass plains. Among the interacting causes of the decline (and subsequent recovery), he discusses the appearance of horses (which facilitated hunting and competed for grasses), the fur trade, changes in gender roles among the nomadic cultures, a varying climate, the ecosystem dynamics of Great Plains flora, the hide trade of the 1870s, and changing Euroamerican perceptions of bison during the 19th century.

Although Isenberg's study points to viable conclusions, the shortcomings in his account often act as detractors. For example, should bison be considered the "dominant" or, as some ecologists phrase it, the "keystone" species of the grasslands? Researchers such as Alan Knapp, Scott Collins, and David Hartnett adhere to this view. But other biologists including Margaret Mary Meagher and Jim Shaw have reservations about labeling bison as a keystone species. Isenberg overlooks this ongoing debate about the character and magnitude of bison's effects on their environment.

Unfortunately, Isenberg leans heavily on two dated studies. Symmes Oliver's classic paper (*1*) from 1962 holds that Indian peoples of the High Plains adjusted their social and spatial patterns to the rhythms of activities of the bison herds. This leads Isenberg to underplay the importance of warfare and disease in shaping the aggregation, dispersal, and migration of the Indian bands. Besides providing proximity to bison and pasturage for large horse herds, the nomadic pattern offered safety from raids and sanctuary from disease. Intense intertribal warfare had ecological ramifications for the bison too. U.S. Army officers called the places where bison gathered "buffer zones," areas where no one tribe could dominate.



Salable parts. In the mid-1880s, Detroit's Michigan Carbon Works consumed thousands of tons of bison bones each year to produce pigment and fertilizer.

Isenberg also relies on Charles Johnson's 1951 explanation (*2*) for the concentration of bison on the shortgrass regions: the higher protein contents of buffalo grass and western wheat grass compared with those of the mixed and tall grasses to the east (such as little and tall bluestem, Indian grass, sideoats grama, and switch grass). If studies conducted on the Konza Prairie Biological Station in eastern Kansas are indicative, bison thrive in a tallgrass ecosystem. This being the case, there was no biological reason for bison to congregate on the shortgrass plains to the exclusion of the tallgrass prairies—which suggests that their 19th-century distribution was shaped by human activities.

In addition, Isenberg's tendency to overgeneralize detracts from his interpretation. To place all grassland peoples into one of two categories, "nomads" or "villagers," grossly oversimplifies the variety of cultures that occupied the region. The Pawnees, Osages, and Kaws were settled toward the east and the Mandans toward the north. But all regularly and frequently raided, hunted, and traded throughout the grasslands just like the "nomads." And these "villagers" had to relocate every six years or so even though they constructed earthen lodges and harvested crops. Isenberg also fails to consider the effects of other farming and hunting cultures—such as the Pottawatomies, Delawares, Shawnees, Cherokees, and Creek—on shaping bison habitat and distribution.

Certainly, bison hunting by grassland Indians inadvertently led to greatly reduced herd sizes. Isenberg seems to attribute more of the decline to subsistence hunting rather than market hunting. But research by Dan Flores (*3*) and by Willie Dobak (*4*) indicates that market hunting was the telling difference: subsistence hunting alone would not have pushed the herds beyond their abilities to reproduce. The question no one, including Isenberg, has answered is, why were the peoples of the grasslands so strongly attracted to market hunting?

The approach and interpretation presented in *The Destruction of the Bison* are a breath of fresh air compared to the stale morality tales of Euroamericans' customary destruction and disrespect for wildlife, and of Native American peoples' proclivities to environmentalism. But the author's generalizations tend to gloss over important nuances that colored the ecological relationships that led to the near extinction of the bison. Nonetheless, Isenberg paves a fresh path for understanding the past and present place of humans in the ecosystems they inhabit.

The author is in the Department of History, Eisenhower Hall, Kansas State University, Manhattan, KS 66506–1002, USA. E-mail: jsherow@ksu.edu

References

1. S. C. Oliver, *Ecology and Cultural Continuity as Contributing Factors in the Social Organization of the Plains Indians*, vol. 48, no. 1 of *Univ. Calif. Publ. Am. Archaeol. Ethnol.* (Berkeley, CA, 1962).
2. C. W. Johnson, *Geogr. Rev.* **41**, 330 (1951).
3. D. Flores, *J. Am. Hist.* **78**, 465 (1991).
4. W. A. Dobak, *West. Hist. Q.* **27**, 33 (1996).