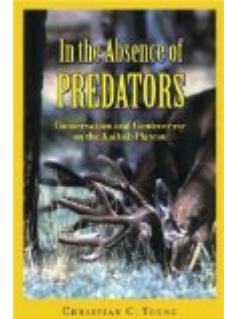


Christian C. Young. *In the Absence of Predators: Conservation and Controversy on the Kaibab Plateau.* Lincoln and London: University of Nebraska Press, 2002. xiv + 269 pp. \$49.95, cloth, ISBN 978-0-8032-4916-5.



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Predators, Parables, and the Limits of Public Environmental Science

There are some environmental stories that have become iconic. The extinction of the passenger pigeon, the spread of Dutch elm disease or "killer" bees—these events transcended environmental history and science to become part of broader public knowledge. Christian C. Young's *In the Absence of Predators: Conservation and Controversy on the Kaibab Plateau* revisits an event that was perhaps less infamous, but just as influential. His book draws connections between environmental history and the history of science, and analyzes how scientists gather knowledge, as well as how that knowledge is used and understood by government agencies and the general public. In the process, Young rewrites a story we thought we knew.

The author examines a series of events that took place on the remote and rugged Kaibab Plateau of northern Arizona. The Kaibab was included as part of the Grand Canyon National Game Preserve created by President Theodore Roosevelt in 1906. When Roosevelt declared the

Grand Canyon and surrounding areas a national monument in 1908, its boundaries included an extensive portion of the plateau. As a result, when Grand Canyon National Park was created in 1919 the National Park Service commenced administration of its portion of the plateau. The rest remained the domain of the Forest Service.

During the 1920s, in one of the most notorious examples of a destructive interplay between ecology and wildlife management, Forest Service officials inaugurated a campaign to cleanse the plateau of mountain lions and other predators. This decision resulted from value judgments made about the relative worth of various animals. Deer were appealing, sympathetic animals, and had both scenic and sport hunting potential. The Park Service, as well as the state of Arizona, believed that a large deer herd would bring tourists and revenue. Predators, on the other hand, were simply bloodthirsty killers that decimated deer and livestock.

The apparent result of this simpleminded view of nature was disaster. In a story retold by textbooks, natural history museums, and most fa-

mously by Aldo Leopold, the deer population experienced an irruption, and devoured all the forage on the plateau. The population then crashed as the deer starved in vast numbers. Photographs of a "deer line," located just above the highest point deer could reach on trees and shrubs, and consequently the only places not stripped completely bare, became "a hallmark for wildlife management disasters for decades to come" (p. 100). Instead of abundant game, as Leopold wrote, all that was left were the bleached bones of the "hoped-for deer herd, dead of its own too-much" (p. 1).

What had happened on the Kaibab played a crucial role in changing the view of predators from villains to integral members of ecological communities. It also seemed to offer a warning about human hubris. No longer just a story of environmental change, the saga of the Kaibab Plateau deer herd became a cautionary parable about the folly of manipulating nature.

The problem with this tragic morality tale, as *In the Absence of Predators* capably demonstrates, is that what actually happened on the Kaibab is far more murky, and perhaps unknowable. By the 1970s, ecology textbooks ceased retelling the Kaibab story, as subsequent research demonstrated that the actual deer population figures for the first several decades of the twentieth century were unknown, and whatever causes lay behind the apparent deer irruption remained unclear. The reason for all this uncertainty was the questionable nature of "scientific" attempts to determine the status of the Kaibab herd. Some attempts to document overgrazing by examining browse lines on vegetation or documenting animals forced to graze at unusually high elevations seem plausible. Yet efforts to extrapolate total deer population figures from haphazard counts of small numbers of deer in limited parts of the plateau were far less reliable.

Yet if the methodologies of scientists were uncertain, the way their data was received and used

by political figures, government agencies, and the general public was even more problematic. Young seems particularly critical of the Park Service, as successive administrators, fretting about visitation to Grand Canyon National Park, insisted that scientific data showed no deer overpopulation, or even that hunting, rather than starvation, had decimated the herd. If some scientists did not validate this view, the Park Service simply turned to other studies, for actual conditions were so unclear that proponents for either predator control or deer population reduction could point to studies reaffirming their views.

The desire for tourist-pleasing herds of deer overrode all other concerns. The Park Service vociferously opposed any efforts at population control, knowing that deer hunts on national park land would appall many prospective tourists. Though Young does not raise this point, the novel *Bambi* had been published in Germany in 1923, and republished in the United States later in the decade. Walt Disney's subsequent animated film version captured the abhorrence growing numbers of Americans and Europeans reserved for the hunting of appealing, anthropomorphized animals. The Park Service instead pushed unworkable plans for deer relocation. Western novelist Zane Grey, whose views were similar to those of the Park Service, even wrote *The Deer Stalker*, a 1925 novel based on a failed "deer drive" the previous year.

Young is careful, however, not to blame poor choices solely on political expediency. Instead, he asserts that these choices resulted from ignorance: "In the absence of scientific fact, simple estimates and untried actions achieved the status of management goals and principles" (p. 39). When scientists conduct research, they undertake an open-ended enterprise. Their questions often lead to further queries rather than answers. Governments and the nonscientific public, however, do not want questions from scientists—they want answers. More specifically, they want the "right" an-

swers. This desire for the easily knowable and agreeable rarely produces nuanced scientific knowledge in society.

Unfortunately, the same can prove true among historians, whose attitudes towards science are often ambivalent. Some environmental historians continued to use the Kaibab story, either because they were unaware that it had been discredited among scientists, or because it fit their worldview as yet another grim example of humanity's drive to interfere with nature. Historians use scientific data in their research, even though many also accept the assertion that science, no matter what its proponents claim, is rarely objective. Scientists, like all of us, are indivisible from their own self-interests, cultural influences, and place in historical time. Some historians find scientists and their findings highly suspect, portraying them as pawns of corporate interests or wreckers of environmental havoc.

Young argues that historians need to rethink their approach to science. He does not claim that we should abandon our suspicions, but he does argue that we should learn much more about the science we write about. Historians, according to Young, often use science to supplement their analysis of other historical issues or conflicts, rather than focusing on the science itself. As a result, "they seek explanations for unresolved controversies, but they do not adequately examine the content of the science that they claim could have resolved those controversies" (p. 4). As his research demonstrates, some scientists were open about their uncertainty and imperfect research methods. It was individuals and organizations eager for answers from scientists who simplified results and made bold assertions of certainty when the very scientists who had compiled the data were more circumspect.

The environmental and scientific history Young tells is intriguing, and the themes his book focuses on are important. At times, however, his detailed recounting of studies, voluminous corre-

spondence and dueling bureaucrats overtakes the larger analytical framework of his text. The narrative drive of the book sometimes suffers from the same weaknesses. A text shorn of some extraneous material and more closely tied to his most significant points could have alleviated this. The sheer number of personalities involved--scientists, state and federal officials, conservationists and preservationists--sometimes make the book difficult to follow. While Young's discussions of well-known individuals such as Theodore Roosevelt or Park Service director Stephen Mather include some biographical background, many other individuals enter the text without any sort of meaningful introduction. More information concerning their personal histories would have made them easier to differentiate, but also would have made their motives clearer and their individual stories more compelling.

At times the book could also benefit from a fuller context, both local and national. Federal and state officials had already tangled over the creation of national forests and the Grand Canyon National Monument which preceded the national park. As Karl Jacoby demonstrated in his *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation* (2001), creation of the national monument and the designs of local ranchers led to conflict with the Havasupai Indians of the Grand Canyon region, who were forced out of their traditional hunting grounds on the Kaibab Plateau. The degree to which this might have affected deer population growth is unclear. Most scientists ignored the Native American presence, and Young does not fully grapple with the ramifications of the eviction of the plateau's top predator, or with the views scientists and Indians might have held of each other, and their differing ways of knowing nature.

The controversy surrounding the Kaibab also played out on a national level. The conflict between conservationists and preservationists over

predator control was a national issue, as was the conflict between the Forest Service, with its utilitarian view of nature, and the Park Service, which was most concerned with scenic values and visitation. While Young does delve into these issues, even more discussion of them would have brought the events on the Kaibab into clearer focus. So would a broader analysis of attitudes towards animals and nature in American society, which influenced how government agencies acted and how the public perceived events on the Kaibab.

These criticisms, however, are intended only to strengthen an already worthy and useful book. This work is a significant addition to the growing literature re-appraising environmentalism, conservation, and preservation, and contains important lessons for wildlife management and government regulation of flora, fauna, and habitats. Young effectively complicates a story that has been used too often and too easily as a model parable about humans and nature. His effort to connect environmental history and the history of science is necessary and important. Most significant is his insistence that historians, like the broader public, must approach science with a willingness to accept uncertainty and complication along with the knowledge science can bring. Young writes, "We continue to embrace the stories that explain the principles of nature, because just as scientists love to tell them, we love the simplicity these stories offer" (p. 215). Parables may be instructive, but are also seductive. This book urges us to pursue a fuller, albeit more complicated, view of science, scientists, and the history of environmental change.

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