

♥ The Heart of the Matter

New essential reading on parks, protected areas, and cultural sites

Engineering Eden: The True Story of a Violent Death, a Trial, and the Fight Over Controlling Nature, by Jordan Fisher Smith. New York: Crown, 2016.

Reviewed by Jerry Mitchell

ENGINEERING EDEN TELLS THE STORY OF THE DEATH OF HARRY WALKER, a young Alabama man killed by a grizzly bear in Yellowstone in 1972, and of the trial that followed. In parsing the testimony and histories of the men who testified in trial, including eminent biologists Frank Craighead for the plaintiffs and Starker Leopold for the defense, Jordan Fisher Smith picked at the threads of conflict between influential people, as well as the struggles within the National Park Service (NPS) to redirect and revise its management of wildlife and natural resources. Nowhere were those struggles greater in the decades before Harry Walker's death than in Yellowstone, where the increasing complexities of managing elk and bear had consumed the attention of park managers. *Engineering Eden* is the story of a death, but it is also a story of how wildlife and resource management policy came to exist, and how it evolved, scientifically, ideologically, and practically. Smith followed the threads of conflict and complexity back to where early efforts occurred, in some cases Yellowstone, but in others, Glacier, Yosemite, Sequoia, the Gila Wilderness, etc. It is the story of failures and successes by the National Park Service and other agencies, and it is the story of people—some quite heroic—who tried their best (egos aside) and, through those failures and successes, brought about needed change. Jordan Fisher Smith paints an epic picture of national park management and the scientists—in some cases, families of them—and their bodies of work, and those of their protégées, that led to the creation and evolution of policy and the effective practices that continue today over vast landscapes.

The book begins with the first day of a trial known as *Martin v. United States*, concerning the death of Walker. We get to know Walker, his family, and their Alabama dairy farm, and we learn that Walker left—only 19 days before he died—to find himself. We get to know the attorneys who would face off in court, and we're introduced to the principals who would testify. The author describes the substance of the testimony by Frank Craighead and Starker Leopold, informing us of the conflicts that existed at the time. Then, while he has our attention, Smith takes the next exit, pulls onto seemingly unrelated backroads, taking us back in time, arriving at a place that gives important context to the larger story. I admit, there were

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times early in the book when I thought he'd gotten sidetracked, but he arrived at his destination, and I understood why we were there. Using this approach, Smith painted the policy landscape from the days of George Melendez Wright, through Adolph and Olaus Murie and others, to current times.

From the coming of age of Frank and John Craighead, to their days doing bear research at Yellowstone, Smith captures their character, accomplishments, and the back stories behind their eventual conflicts with officials at the park. Similarly, he describes the influences on Starker Leopold from his father, ecologist Aldo Leopold, and how those influences shaped the guidance Starker would give the National Park Service.

Frank and John Craighead had articles in *National Geographic* magazine at a young age, but they achieved celebrity status in the '60s through National Geographic's television programming covering their bear research in Yellowstone, which had started in the '50s. The Craigheads were confident and accustomed to overcoming challenges—as Smith describes in his history of them. In the years before the trial, their relationship with NPS had become a challenge (an understatement). The Craigheads' recommendations took one direction, while the Park Service's management of Yellowstone bears took another. Following the release of the Leopold Report, which had been written by a committee chaired by Starker Leopold, Yellowstone had wrestled with addressing not just the management of bears, but also of elk. While the Leopold Report gave much-needed guidance to the national park system, there were no easy answers to the issues at Yellowstone. The park staff adjusted and readjusted their management, caught between public expectations and controversy and the various perspectives of scientists—including that of the Craigheads. They eventually came up with a management concept referred to as “natural regulation,” which assumed that the balance of nature was intact at Yellowstone, that you couldn't see it work until you stopped constantly doing things to it.

In the '50s, '60s, and '70s, the consequences of Yellowstone predator control were at their peak. Populations of elk had exploded and range and ecosystem conditions had deteriorated. While many saw the removal or reduction of elk as the solution, all options were controversial. NPS had difficulty finding one the public would get behind, and it might have been under those pressures that the staff began developing, in 1967, their hypothesis/policy of “natural regulation.” Natural regulation supposed that elk herds were self-regulating units, which even in the absence of predation could not grow beyond the limits of their habitat. In the same period, dumps were closed in Yellowstone, in part because of the Leopold Report. The Craighead brothers warned there might be dire consequences if the dumps were closed without weaning bears off them as their source of food. Because of the willingness of the Craigheads to air their grievances publicly, NPS distanced itself from them and eventually revoked their permits for research in the park. Ignoring the Craigheads' advice, NPS developed its natural regulation hypothesis/policy to justify its actions (or lack of actions, to let nature take its course).

While rangers at Yellowstone contended with a growing bear crisis, the science staff seemed pleased with the bear and elk management situations, or so they reported to the likes of Starker Leopold, who at first accepted their conclusions and supported their management

direction. It was during these times that Harry Walker and a friend arrived at Yellowstone. I don't believe Smith considers the Walker case to have been the hinge-pin in the revision/evolution of NPS wildlife management policy (several wildlife-related deaths and other events are described in his book, including at Glacier, Yosemite, and Sequoia and Kings Canyon, which were confronting their own bear issues), but possibly as the best lens through which to look at the implications, servicewide.

I confess that, when I first flipped through *Engineering Eden*, I was skeptical. I suspected it would portray NPS management as being simply hands off, only protection. That was something I contended with over much of my career as an NPS natural resource professional, from co-workers in the '70s to others such as state wildlife commissioners I'd meet at North American Wildlife Conferences. When Smith first mentions the Leopold Report he seems almost circumspect, and I wondered if he intended to indict *it* for agency failings. As a kid, I found inspiration in the Craigheads, but it was with the Leopold Report, I admit, that I found the bearings for my own career. I saw it as telling us not just to protect but to restore and to manage, and that's what I focused on, never considering the words "vignettes of primitive America" to mean a static condition. Primitive America was dynamic, shaped by processes, and over the course of my career I worked in (and fought for) countless efforts to restore systems and to restore processes. While Smith documents that Starker at first supported the natural regulation approach at Yellowstone, he also came to question, and nudge, and expect better science. He also prodded NPS to manage. There is a beautiful scene Smith describes near the end of the book, where the Sequoia superintendent and a small group of his staff—including David Graber, Starker Leopold's last grad student—met with Starker at Berkeley, seeking more guidance (for their already established fire program) than he had put in the Leopold Report. Leopold told them at that point they probably knew more about the subject than he did. In Graber's words, quoted by Smith, "Starker said there would be no second coming." They were in charge, and they needed to make their best judgments based on the best information they had and get on with it.

I didn't know all the people in this book, but I knew many, both scientists and rangers, and I know their accomplishments. I appreciate how objectively Smith treats the personalities. He captures their strengths, even in those associated with failures. We're only human, and we give it our best shot, do our best to use the science available to us, in ways that serve the parks we're responsible for. Sometimes we make mistakes. We work in places the public loves, so the issues become controversial, and complex. Sometimes we think too hard, or seek easy answers. We fail. We succeed. We make our mistakes, but we learn from them—or someone else does. Sometimes egos get in the way. Reputations suffer, as does credibility, but Smith—in this epic portrayal—somehow shows all fairly, even if their failures and conflicts made it necessary for others to bring about the needed change. What is tragic, and made the sober thinking necessary, is that Harry Walker died.