Preface to the Second Edition

Yellowstone and the Perpetuity Business

To those of us who have served in the National Park Service, Yellowstone is the mothership, the golden buffalo, the trendsetter for the rest of the Park Service, and in some ways inspiration for parks and protected areas around the world. When Yellowstone National Park caught fire in 1988, the media carried nightly reports with visuals of raging wildfires, and the world watched and worried (although many of us knew that, ecologically, this was expected and would lead to a renewal of the park's forests). When wolves from Canada were released into the Lamar Valley in 1995, conservationists around the world celebrated both the political courage and the idea that nature could be restored. When the 20 years of political fighting over excessively loud and stinky snow-machine use finally waned, we all gave a sigh of relief, exhausted.

The United States can rightfully claim, with the establishment of Yellowstone National Park, the original idea that land could be designated for preservation "for the benefit and enjoyment of the people"—and not just current generations but future generations as well. The model set by Yellowstone's success was repeated across other spectacular American landscapes, lending protection to Mount Rainier, Crater Lake, Yosemite, Death Valley, and Sequoia National Parks, to name only a few. But when the idea went around the world, as shown in the Legacy of the World's First National Park map in this atlas, it came back in a different form. In other nations, the model of removal of indigenous people in order to create a national park was met with hostility, political opposition, and in some cases violent resistance. New models of national parks were created that embrace the indigenous culture and stewardship passed down through generations. Today, we are learning to incorporate those ideas into national park stewardship in the United States. The Yellowstone idea is coming full circle.

When mountain man John Colter ventured into Yellowstone country in the winter of 1807–08, he was certainly not the first person there. These lands had been actively explored, hunted, named, traversed, and lived in for the previous 13,000 years. Long before the 1870 Washburn-Langford-Doane expedition campfire discussion at which the national park idea was reportedly born (an oft-repeated but incorrect myth), native people sat around campfires, shared buffalo and elk meat, roasted camas bulbs, and told stories of places called Bide-Mahpe or Mick-kaapha. These people were the first stewards of the land and carried out that responsibility with a deep sense of respect. How do we know that? Because, after their thousands of years of management the quality of the wildlife and the landscape was such that it inspired our nation to call it a national park. And one of the first things we did, in the name of national park protection, was to remove the Native people from their homeland. Now we have been in charge of Yellowstone's stewardship for almost 150 years or 1 percent of their time. So how are we doing?

I often said in my public talks as the 18th Director that the National Park Service is in the perpetuity business. This was intentionally stated as a contrast to the boom-bust cycle that has permeated our capitalist economy and the relentless resource extraction from our public lands as if they were inexhaustible. To be in the perpetuity business means we must think and act for the long term, use the best available science, and fight against those who see our national parks only for the short and narrow economic benefit. As the last Kiowa woman looked across the Lamar Valley before her people were forced to leave, I doubt she was contemplating how she could convert her homeland into an economic engine. I do think she saw and knew things that we are just barely beginning to understand.

We can learn a lot from those who came first when their knowledge is combined with the analytical tools of Western science. This second edition of the *Atlas of Yellowstone* puts before our eyes the stunning images, maps, and accumulated scientific knowledge that help us see and understand the beauty and complexity of the Yellowstone region. E.O. Wilson observed that the real problem of humanity is our "Paleolithic emotions, medieval institutions, and god-like technology." Still, that technology allows us to see below the layers of soil and rock into the hot cauldron that pulses below Yellowstone's meadows and forests. With seismic systems we track the cracked North American Plate upon which Yellowstone rides as it moves southwest at the speed of your fingernail's growth. Scientists saw life in the intense heat of volcanic pools and converted that knowledge into the ability to sequence DNA, a process that allows us to find relatives (or serial killers), identify the genome of specific viruses like COVID-19, and create gene therapy treatments that have saved countless lives.

Advanced tracking devices let us trail along with herds of elk, migrating pronghorn, and solitary bears from the comfort of our office or even our living room. From that data, we better understand their "home range," akin to the way your phone is tracking your yearly home range from grocery store, to school, to visiting with friends, to back home. The data gathered as these large animals roam tell us that Yellowstone National Park, at two million acres, is not big enough. It is a porous island in a sea of lands open to big game harvest and hunting, homebuilding, timber harvest, and resource development. It causes us to ponder and challenge why a grizzly bear crosses an invisible boundary line and transforms from the image everyone wants to capture on film to one that a few want to see in their crosshairs, or a wolf transforms from apex predator to persecuted varmint, or a bison transforms from iconic symbol of the West to brucellosis scourge. Such magic this boundary has, drawn by politicians some 150 years ago with poor maps and little ecological knowledge. Our new data leads us to try to collaborate at the landscape scale so that Yellowstone's wildlife can roam across their traditional ranges unmolested, respected, and protected. That same data gives impassioned citizens the impetus to challenge projects that would impact the integrity of the ecosystem or threaten bears crossing boundaries from protected to unprotected lands. Satellites pass overhead and with a myriad of instruments map the ground, the geology, the vegetation, the fires, the hotspots, and the changes happening in our lifetimes. If John Colter had those maps in his travels, he probably would have avoided the area.

The maps, images, and visuals in this atlas are stunning and require study, contemplation, and response. Like the paintings of Albert Bierstadt and Thomas Moran or the photographs of William Henry Jackson, they make us want more—to believe that these places actually exist, to see them for ourselves. And so they come, crowding the roads, filling the parking lots and visitor centers, pulling barely off the edge of the road to see what everyone else sees: a fox, coyote, bison, elk, moose, eagle, and, if lucky, a wolf or bear. They peer over the railing at hot pools and gush with the geysers, gathering with friends or family into digital images captured and shared across social media, enticing even more people to come. I have often wondered why it is that when we meet a fellow hiker on a park trail, they invariably smile and say hello, something that would be considered odd on the sidewalks of New York City. I like to think that meeting a stranger in nature brings out the best of us, a common bond as humans, an ancestry we share, and a call from our "better angels." Along with biodiversity conservation, this is one more power of our national parks, perhaps one we undervalue. The Yellowstone idea was not just that this landscape be protected but that it be shared with all who come, so that they too may be inspired, moved, and motivated to protect the park, as well as the planet and our fellow inhabitants.

And finally, decades of research and monitoring warn us that climate change is happening during our tenure, and we are the cause. Our rapacious appetite for energy derived from the burning of oil, coal, and other fossil fuels is warming the planet to unprecedented levels. The future of Yellowstone is in the balance of our decisions to wean ourselves from a destructive path. The decisions we make, domestically and internationally, over the next few decades will set the course. The first managers of Yellowstone also saw great changes and adapted. The real question of our turn at protecting Yellowstone is whether those who take over the park 13,000 years from now will still think the area merits the title "national park." I hope so.

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