CHAPTER 15

There are some who can live without wild things, and some who cannot.

—ALDO LEOPOLD

My friend Rain took me to find grizzly bears in the Wapiti Valley, where the sage steppe gives way to the timbered Absaroka Mountains on the east side of Yellowstone National Park. It was May 2017. We were fifty miles west of Cody, not far, as it happens, from where Echo the wolf was first radio-collared before she set out on her doomed journey to the Grand Canyon three years earlier. Inauspicious, I thought.

I recounted Echo's story to Rain, who replied, "Wolves and bears share the same fate"—to be shot if they wander too far from the national park zoos. "That's what white people do," he said.

Rain is a member of the Cheyenne, for whom the grizzly is beloved. In the mythology of the tribes of the Plains and the Northern Rockies, the grizzly is more important even than the bison and the wolf. The Crows, for example, have grizzly bear songs, grizzly dances, grizzly names for their children, grizzly lullabies that women sing to infants. The grizzly to them is a distant relation, an ancient member of the family of man. Plenty Coups, the Crow chief, visited the Bronx Zoo in 1913, where he saw a grizzly in a cage and spoke to it. "You and I," he said, "are both confined now." Ecocide and genocide for the tribes were not separate events.

Rain, a busy tribal activist, had in recent years spent much of his time and energy trying to counter the falsehoods and obfuscations issuing from

the Fish and Wildlife Service to justify the grizzly's delisting. In 2017, the leadership of 125 tribes—among them the Cheyenne, Crows, Sioux, Arapahos, scores of tribes across the West and dozens more in the East—signed their names to a collective statement of demand that the federal government continue ESA protection for the species. The demand took the form of a treaty, the Grizzly Treaty of Cooperation, Cultural Revitalization, and Restoration. It was the most widely signed treaty among Native American nations in recorded history.

To walk in grizzly country is a wholly different experience than walking anywhere else on the public lands. This is the only habitat in the West where humans can assume a small probability of being killed by a large powerful animal, perhaps to be eaten afterward. In 2015 in Yellowstone National Park a female bear mauled to death an experienced hiker named Lance Crosby, who knew the park's perils but lucklessly surprised the bear and her two cubs on a backcountry trail. The mother fed on Lance's meat, and so did her children. Satiated, she cached the cadaver in forest litter for a later snack. She was hunted down and killed for her offense. While we lament the loss of Lance, we cannot lament the extra meat for hungry grizzlies, which, unlike most Americans, really do need the food. Meat is meat, *Homo* or otherwise, and in the Northern Rocky Mountains the bears offer a lesson for the majority of mankind who have forgotten the fact of the primordial food chain. Typically you won't be eaten or even mortally wounded in an encounter with a bear that decides to attack. You'll just be clawed at and bitten and ripped open and a lot of blood will flow and the most horrid result, in the long term, will be the medical bill.

Walking where you know there are grizzlies thus demands care, wisdom, restraint. No more of the blithe barging along that you're accustomed to. You need to be present totally, awake to your surroundings. Go slowly. Watch the woods. Wait. Listen around corners on the trail. Listen for the activity of birds—they will stop singing when a bear is near. This can be consciousness-altering, so that a few minutes in bear country feels like an hour, and smell, sight, and hearing are sharpened to a level of rapt

attention. I'd venture to say that hiking in grizz country is a means of achieving Buddhistic mindfulness.

You might also carry pepper spray. Or a gun, though shooting a grizzly without an instant kill only serves to enrage the beast. The ideal thing to do in a bear encounter is be cool, don't run. Realize you are in the presence of the lord of these parts. "An ambling bear concentrates the space around it into something essential. They contest the pathologic obsession we humans seem to have with dominating everything," writes Dr. David Mattson, the premier expert on Yellowstone's grizzly bears. "If you are scared, if you are walking around outside of yourself, you will probably radiate your fear to the bear while doing something stupid. If you are walking around settled in your gut, in the center of your body, you will probably do the right thing, which will vary from one encounter to another. There is no single pat formula for emerging unscathed."

Mattson's advice was not reassuring. One longtime explorer of bear country told me to "reason with the animal," which I thought was a joke. But no: speak in soft tones. Humbly say hello. Rain advised to look for cues of friendship. If it stands on its hindquarters, rising to its full height, seemingly a tower of power, this is not aggression. The bear is scanning about, merely curious. If it's on all fours, with head low, ears back, grunting, you're in trouble.

I was with my friend Viva, a New Yorker like me who had never seen a grizzly, as Rain gave us these instructions. We were both, needless to say, terrified. He slung a can of pepper spray on his belt. Yellowstone National Park, where we'd have the best chance of finding a bear, was closed to the public until the fifth of May, and Rain had only a few days to spend with us. We decided to roam the bear range in the national forest outside the park.

We did this day after day in that first week of May. We walked the willow mazes along the North Fork of the Shoshone River, which carved the Wapiti Valley, and Rain hushed us when the birds stopped singing. No bear

in sight, but intimations of bear everywhere. We went into forests of pine and fir up winding, mystery-laden, blind-curving paths along rushing whitewater creeks, maneuvering over blowdown trees. Rain would hush. We listened and watched and waited. The path went briefly into the creek, then up a stony sandy hillside, and debouched along a high point overlooking a wide parklike island around which the stream split and the cobbled bed was ajumble with prodigious piles of logs that flash floods and mudslides had deposited over the years. Beyond the log-tangled park was a line of fir trees, dark with shade, so dark we could not see what lay within. It was midday and getting hot. "Bears are probably out there in day beds," said Rain. "Males. We need to be careful." I like the term *day bed*. It conjures lazy loafing summer afternoons, drifting naps in green meadows after a bottle of wine. Surely grizzlies have their hedonistic equivalents. A male grizzly shocked awake while relaxing in a day bed, however, unlike the wino, is deadly.

Onward up the trail. At last we found sign, a palimpsest in the mud. "One bear, two bear, three bear, four," said Rain, pointing to the prints, hopping them, not wanting to stamp them out—it would be a desecration, he said—marveling, laughing, finding treasure. His delight was infectious, and it made Viva and I forget that we were afraid. "Cat here—a cougar. Oh, and a wolf there. Holy shit, good toes," he said, standing over a bear forepaw cast immaculately in the mud. "And look at this back foot!" A size 25 shoe or thereabouts. It looked human. "Yes, they do look human. From this track I'd say this bear is six hundred pounds." In other words, a bear of mighty proportions, almost certainly male. Most male bears in the Greater Yellowstone Ecosystem top out at five hundred pounds.

We twisted and turned with the path as it wound along the creek. Viva picked the needles of junipers and the leaves of mountain sage in the bright warmth of the sun, rolling them in her fingers, trailing behind her a sweet incense that made me want to spin her around and kiss her on the lips and celebrate: here were bears and cougars and wolves, the last of the big aboriginal predators, and for a brief moment we shared their path.

Ursus arctos horribilis arrived from Asia across the Beringian land bridge in a series of waves beginning as early as seventy thousand years ago. Humans marched alongside the second great bear migration in the late Pleistocene around thirteen thousand years ago. The Greeks called the bear *hrktos*, "of the north," and it is believed that proto-Germanic peoples of Europe considered them so horrible that pronouncing *hrktos* aloud would conjure the beasts into their midst. These primitives opted for *bar* and *baren*, meaning "brown thing" or "the brown one," whence we get the term brown bear. In North America, the grizz, runt bear of the Ice Age, had a hard time of it vying with saber-toothed and dirk-toothed cats, and American lions, which by all indications were operating in mighty prides, and dire wolves, each several hundred pounds and moving in packs, and giant short-faced bears, which were fourteen feet tall and over two thousand pounds. Grizzlies slummed at the margins eating nuts, seeds, moths, and worms, grazing the meager grass, and digging up rodent burrows in a cold forbidding arid wind-swept world where the mega-predators lorded over the gut piles of the mastodons and giant camels and giant sloths only they were capable of taking down. Grizzlies thieved when they could for a meal of flesh, carrion pickers.

Over time they were terrifically adaptive, prospering in mountains, forests, steppe, plains, tundra, and along coastlines. This is perhaps why they survived the Pleistocene extinction that wiped out their supersize competitors. A grizzly's hibernation sleep is itself a kind of evolutionary miracle. Hibernation lasts as long as six months, during which time the bear will not urinate, defecate, eat, or, incredibly, take any water. In preparation for the long sleep, bears eat the way humans would like to eat, an obscenely rich diet, storing up tremendous amounts of fat in adipose tissue, but suffer no consequences, no sclerosis of the arteries. Obese and healthy and beautiful.

In Eurasia across the entirety of the boreal forest, from Europe to the Bering Strait, from Romania and Sweden through Siberia to Hokkaido in

Japan, there were brown bears. But they did not have a similarly wide distribution in North America's boreal forests. Grizzlies remained a peculiarly Western animal, most likely due to competition in the Eastern forests from black bears, a North American native, and the pressure from large prehistoric human populations in the East who killed them. There are four clades of brown bear. There's the polar bear clade, the European clade, the Siberian clade, and the North American grizzly clade. The latter, known as clade 4, with distribution in southern Canada and the Lower 48, is distinct for the terrible suffering it bore at the hands of modern man, its population across the continent extirpated by as much as 90 percent. Clade 4, the brown bear we call the grizzly, is a unique genetic legacy for the simple fact that we nearly wiped it out.

Like wolves, grizzlies were persecuted in the Lower 48 with such fervor that by 1910, from a pre-Columbian population of as much as 72,000, they were reduced to less than 4,300. By 1970, perhaps 1,600 grizzlies in total survived in the contiguous United States. Put this another way: grizzlies in 1800 ranged on 740,000 square miles across sixteen states west of the hundredth meridian. A century and a half later they had a range of about 37,000 square miles in three states. They fled to the remotest reaches of the Rocky Mountains, in Wyoming, Montana, and Idaho, where they hid out and dug in. In 1973, concerned about the bears' slide toward extinction, the Department of the Interior established a special task force within the National Park Service called the Interagency Grizzly Bear Study Team (IGBST). Two years later, in 1975, the Fish and Wildlife Service officially placed *Ursus arctos horribilis* on the endangered list. The survival of the species, per the mandate of the ESA, became the subject of the national democratic interest.

Federal and state governments invested tens of millions of dollars in the IGBST to bring together scientists and wildlife professionals from the Forest Service, the National Park Service, the U.S. Geological Survey, the Fish and Wildlife Service, and the wildlife agencies of the three grizzly states. There were three remaining bear redoubts: in the Selkirk Mountains

and the Cabinet-Yaak Ecosystem in Idaho and Montana; the Northern Continental Divide Ecosystem in Montana, which includes Glacier National Park; and in the Greater Yellowstone Ecosystem, which encompasses Yellowstone National Park in Wyoming and the surrounding national forests. The story offered today from the IGBST is that the bears in the Greater Yellowstone Ecosystem, or GYE, where the study team concentrated its research, recovered faster and healthier than anywhere else.

By the mid-1990s, the Fish and Wildlife Service under Bill Clinton began looking for examples of wildlife that had recovered enough to be delisted. It found in the GYE grizzly a prime candidate. The idea was to show detractors that the law worked. According to this line of thinking—which sounded compelling but had little in the way of evidence to back it—the more you presented the Fish and Wildlife Service delisting species, the greater the political support you'd be able to squeeze out of those who hated the ESA. The idea was especially attractive to a veteran bear biologist named Chris Servheen, who was appointed in 1979 as the director of grizzly bear recovery to represent the Fish and Wildlife Service in the IGBST.

More than any other federal official, Servheen was responsible for the momentous decision in 2017 to delist the population of grizzlies centered in Yellowstone National Park. In 1975, about four hundred bears roamed the Greater Yellowstone area, and by 2017 that number had almost doubled, to around seven hundred. Delisting of a powerful charismatic carnivore was to be a moment of triumph for the Endangered Species Act, a scientific but also a political victory. "We have to signal a touchdown has been made," Servheen said in 2013. "The ESA needs success stories," Servheen told me in a phone conversation four years later. "There are many people who still want to destroy it. Grizzly bears are an example of a success story, where the populations were in desperate straits. When difficult species like the grizzly are delisted, it takes the wind out of the sails of those who say the ESA doesn't work."

The draft delisting plan came out in the final year of the Obama

administration, in March 2016, and Servheen, sixty-five, satisfied that it was the crowning act of his career, retired from public service that April. Then came the backlash. When the Fish and Wildlife Service, as required by the ESA, made available for public review its 675-page scientific "rule" justifying the delisting, the document received a record 850,000 comments from concerned Americans. More than 99 percent opposed delisting and favored continued protection. The American Society of Mammalogists and the Society for Conservation Biology concluded in a joint letter that the rule was "premature," dealt with only a fragment of the species' range—the grizzlies of the GYE—and was "flawed by misinterpretation of the population genetics literature and by overly optimistic and unfounded predictions about the population's resiliency." A former Fish and Wildlife Service special agent named Samuel Jojola, who worked for the service for twenty-three years investigating wildlife crimes and ESA violations, wrote that the delisting was based on "misguided priorities and biopolitics trumping science." Jojola warned that "wildlife managers are trading in their professional integrity for political expediency." Dr. David Mattson, who worked with Servheen as a lead investigator on the Interagency Grizzly Bear Study Team for ten years, submitted a seventy-three-page dissent arguing the delisting rule amounted to "scientific malpractice." Mattson told me it was "a hurried incompetent product, just egregiously bad—Servheen dumped this piece of crap on the public and fled into retirement."

Once the delisting was made official in June 2017, environmentalists flailed the Fish and Wildlife Service with lawsuits for violations of the ESA—violations that now, it seemed, were customary. The specific violation was the usual one. The Fish and Wildlife Service had failed to employ the best available science required under the law. The plaintiffs included the Sierra Club, the Center for Biological Diversity, the National Parks Conservation Association, the Humane Society of the United States, WildEarth Guardians, the Alliance for the Wild Rockies, the Native Ecosystems Council, Western Watersheds Project, and a coalition of Native American tribes. When I asked him about the Humane Society's lawsuit, Wayne

Pacelle, former president of HSUS, wrote me in an email, "Delisting grizzly bears in Yellowstone is a prescription for local extinction."

Something always to remember: the power of the Endangered Species Act resides in its mandate to enforce landscape-level protections, to declare whole biomes in the public lands system off-limits to activity that threatens habitat. After the 1975 listing, any proposed development on millions of acres of national forest across the Northern Rockies—roading, logging, mining, even trail-building for recreationists—had to be reviewed for its effects on bear populations and put on hold if a "biological opinion" found potential negative consequences. ESA protection also barred the indiscriminate killing of bears in trophy hunts, a pastime in the Northern Rockies. Of course extractive industries hated the listing, as did the sport hunting lobby, a big business with lots of powerful friends. Members of Congress in Wyoming, Idaho, and Montana, heavily courted by these special interests, had for decades pressured federal land and wildlife managers to move toward delisting. Elected officials from the grizzly states were always the loudest, the most rabid, the angriest proponents of hauling the grizzly out from under the safety of the ESA.

As the bear recovery team under Chris Servheen began in the 1990s to entertain the possibility of delisting, schisms erupted in the federal agencies over the biological opinions related to grizzly habitat. This was more than bureaucratic infighting. In 1997, investigators with the nonprofit Public Employees for Environmental Responsibility (PEER) interviewed more than a dozen biologists, ecologists, botanists, and hydrologists who worked on grizzly research at the Forest Service, the Fish and Wildlife Service, and the National Park Service, among others. The PEER investigation described "an internal war" between scientists who opposed the delisting and upper-level managers tasked with satisfying "the political need to declare the Yellowstone grizzly a success." According to the report, "The essential problem agency scientists encounter is that their scientific findings conflict with the

direction in which their agency's own bureaucratic wind is blowing. . . . The end result is a bedraggled, intimidated scientific core whose own professional habitat is as tattered and fragmented as that of the grizzly."

PEER found a systematic targeting of "perceived troublemakers" among the grizzly staffs, who, fearful of repercussion, spoke with PEER on background only. These troublemakers were "transferred, removed from sensitive projects, denied promotions or awards." Female scientists were "sexually harassed or belittled." One biologist was ordered to see a psychologist when she defended her research. Upper-level managers rewrote environmental assessments and biological opinions—because they showed logging, roading, and other development to be bad for bears—and demanded the original authors sign "this new contrary opinion as if it were their own." A senior Fish and Wildlife Service biologist described as a "recognized expert on grizzly biology" was stripped of his supervisory authority, removed from all grizzly-related projects, and ostracized by his higher-ups. A Forest Service biologist was repeatedly threatened with poor performance ratings if she failed to revise her biological opinions. Another Forest Service biologist was so harried and harassed by her bosses that she became physically ill. Working in the brutal climate of grizzly politics destroyed her health.

The PEER investigators also discovered that National Park Service officials engaged in "an effort to prevent discordant biological data" from being shared with other agencies. According to the report, "one Park Service manager deleted data files from the office computer of a research biologist, erased all relevant data from diskettes and even removed field notes from office binders." The research biologist was David Mattson, who spent 1979 to 1993 studying grizzlies for the Park Service. In the decade after 1983, Mattson was in charge of fieldwork for the Interagency Grizzly Bear Study Team, logging as much as a thousand miles annually on foot in the backcountry. He tracked radio-collared bears to document habitat use, conducted transect sampling of vegetal foods, wrote and published analyses of diet, demographics, relations with humans and human infrastructure, and enjoyed no shortage of close encounters with grizzlies who opted not to kill him.

In 1993, Mattson resigned from the IGBST under intense pressure. It was Servheen, he alleges, who engineered his ousting. (When I asked him about his work with Servheen, Mattson replied, "He considers me a mortal enemy and nemesis.") The "program of intimidation," according to Mattson, began in the early 1990s when the Forest Service asserted that road building and timber harvest had no effect on grizzlies in the Targhee National Forest, which borders the southwestern edge of Yellowstone National Park. "I concluded that in fact these were harmful activities," said Mattson. "The upshot of that was being brought into a room in an IGBST office in Bozeman to be raked over the coals with upper-level bureaucrats from the Park Service, Fish and Wildlife Service, the Forest Service, and the Montana and Wyoming game and fish agencies."

He took his rebellion a step further when he started contesting demographic analyses of bear populations, arguing that the numbers were purposely being inflated. "All of the people in Fish and Wildlife Service, with the complicity of the Park Service, were promoting the falsehood that grizzlies had recovered enough to be delisted," Mattson told me. The falsified figures, he said, were written into the draft recovery plans that Servheen oversaw (Servheen did not respond to my request for a comment on this allegation). Mattson, in memos and reports, protested noisily, a gadfly who his superiors could no longer countenance. His boss at the IGBST, Richard Knight, walked over to him one day after getting off the phone with Servheen, who was irate, and told Mattson, "Servheen threatened to pull our funding if you don't shut up." Mattson refused. Knight erased his hard drive and confiscated his notes and that was the end of his work at the IGBST.

It seemed a fitting end, one that made sense to Mattson. He grew up in the Black Hills of South Dakota, along Hay Creek, near the town of Nemo, the son of a farmer who raised dairy cows, grandson of a sheepman. Around the farm was national forest, mostly ponderosa pine, and it was there in the

woods that he discovered the world as he thought the world should be. The forest was full of secrets, hidden places stumbled upon. What he liked most was the discovery of lone stands distinct from the dominant ponderosa, little temples of species whose names he would later learn. White spruce, aspen, paper birch. Once he found a huge lodgepole pine, a singleton, and it was for him a commanding presence. How had it arrived there? From where had it come? Why was it alone? Nascent questions of the naturalist. With his eye for beauty came an awareness of its violation, and the Black Hills was full of violations, littered with crass tourist-trap attractions. Billboards advertised Mount Rushmore and Devils Tower and Wind Cave and Deadwood. One of his childhood memories was that he had a magical power to obliterate the towns, the roads, the billboards. It was a fantasy that went back to his earliest self-awareness. "Maybe I was five, six," he told me. "I would be in the car with my parents and I would raise my hand and with my power erase all this ugliness. I can't quite explain today why I had that sort of sensibility at that age, except that I think it had to do with all the time I spent in the woods."

When he was seventeen, in 1970, the Pittsburgh-Pacific Mining Company announced plans for an open-pit taconite mine a mile from his house. The community in Nemo organized to stop it. They didn't have a clue how to proceed. A greengrocer in Deadwood, twenty-four miles down the road, who happened to be a member of the Sierra Club, suggested that Nemo's fledgling environmentalists secure an audience with legislators in Pierre. They drove to Pierre, where they discovered that the lawmakers, as Mattson tells it, answered to mining companies and not to people. Mattson and his fellow townsfolk ended up in a hotel lobby with a Rapid City lawyer for Pittsburgh-Pacific, who agreed to meet for reasons that weren't clear. Maybe because he was drunk. "I don't need to be here. I don't need to talk to you," said the lawyer. "You guys don't matter one bit." Ownership of the land in question transferred from the federal estate into the hands of Pittsburgh-Pacific as private property, "proved up" for the company to build roads and

kill the harvestable trees, though for whatever reason the mining project did not go ahead. Perhaps it was simply a cynical ploy to take possession of public land.

"It radicalized me, seeing the place that I loved violated," Mattson told me. "The drunk sleazebag lawyer was right. This thing I imagined was democracy, in which I had a voice and could make a difference, was a sham. That's when I started sabotaging things. Pittsburgh-Pacific left an awful lot of heavy equipment lying around. I poured my share of dirt in gas tanks. I stuffed pinecones into tailpipes until you couldn't stuff any more. I chopped down billboards. That's what people do when they feel betrayed by the institutions that are supposed to represent them."

CHAPTER 16

The wilderness tells us that all animals should be able to walk with man. Like man they are life tenants. So there ultimately comes a point in time when man—immersed in the wilderness and possessed by its wonders—no longer can kill.

—JUSTICE WILLIAM O. DOUGLAS

Mattson survived many brushes with bears in the wild, which over time seemed easier to deal with than the bear bureaucracy. In 1993, after the fight with Servheen that threatened to end his career, he extricated himself from the IGBST, playing hardball with his boss, Dick Knight, warning he would go to the press with a story that the National Park Service was silencing its employees. He continued his research on grizzlies in Greater Yellowstone as a wildlife biologist with the U.S. Geological Survey, got a doctorate in wildlife management at the University of Idaho, taught courses on the intersection of science and politics at MIT and at Yale. All the while he remained a pariah among grizzly managers in government, and when he retired from the Geological Survey in 2013, at the age of sixty, they were glad to see him gone.

In September 2017 I traveled to Montana to meet with Mattson. He lives near Livingston with his wife, Louisa Willcox, a wildlife advocate who runs the blog *Grizzly Times*, which publishes Mattson's disruptive observations and complaints. Mattson looks more the part of the amiable professor than grizzly man. Clean-cut, with tucked-in collared shirts and pressed

slacks. His house, at the terminus of the spectacular Paradise Valley, fifty miles north of Yellowstone National Park, is modest, weather-beaten, and smells of dog and cat. On the windswept hills and montane grassland around his place Mattson has found grizzly tracks, seen wolves, watched cougars come into the valley to kill mule deer. He likes having mountain lions tear deer to pieces near the house.

Mattson's notoriety grew in the run-up to the 2017 delisting and in the months after, as he did not cease to pummel the Fish and Wildlife Service for its slapdash science. First of all, there was the matter of accurate demographics he had been warning about since the early 1990s. A healthy growing population is the critical measure of whether grizzlies can be deemed recovered. The Interagency Grizzly Bear Study Team played so many diversionary games with the numbers that the layperson, when confronted with them, didn't know what to think. The IGBST and FWS claimed, for example, that at the time of listing, in 1975, there were roughly one hundred bears in the Greater Yellowstone Ecosystem. In the nomenclature of species demographics, this was the "minimum population size." Thus the government could trumpet in 2017 that the seven hundred or so bears there represented a seven-fold increase.

Mattson said it was a lie. Advances in demographic analysis, with new and more accurate tools to review past data, continually revised upward the minimum population estimates for 1975. In 1980, the minimum number for 1975 was bumped to 247. In 1997 the minimum was 266. By 2006 it was between 350 and 400. By 2017 the IGBST and FWS, if they hewed to the best available science, could at most say the population had doubled since 1975. But the agencies stuck to the false claim of a seven-fold increase.

What's more, the Yellowstone population remained isolated from the two other grizzly redoubts in the Rockies, home collectively to about a thousand bears. The IGBST and FWS admitted that genetic isolation in the Greater Yellowstone population would lead to inbreeding and long-term genetic decline. At the same time they cited anecdotal evidence that bears would migrate between the areas, infusing and exchanging genes. For

that to happen, the state wildlife agencies of Montana, Wyoming, and Idaho, historically hostile to grizzlies, would need to commit to the protection of bears dispersing across the public lands. The delisting rule, alas, made no such binding requirement of the states. It merely suggested that they do the right thing for bears and let them migrate.

Foremost there was the problem of climate change. The Fish and Wildlife Service, said Mattson, ignored the dynamics of the warmed habitat in the Greater Yellowstone Ecosystem, warming that diminished bears' food supply. The omnivorous grizzly will eat plants, invertebrates, mammals, fungi, birds, fishes, amphibians, and even types of soil, some 266 species altogether. It will eat bees, moths, ants, mushrooms, biscuitroot, dandelions. But Yellowstone's grizzlies until recently acquired a huge portion of their nutritional energy from just four sources: elk meat; army moths; cutthroat trout, a native fish; and the seeds of whitebark pine, the ancient *Pinus albicaulis*, which grows only on high, cold, windswept ridges and peaks in the Northern Rockies. Elk were declining in the GYE, partly due to increased depredations from wolves. Moth populations appeared to be stable. But populations of cutthroat trout in the GYE between 2007 and 2017 dropped 99 percent with climate-warmed stream water and competition from invasive lake trout. Most important was the loss of the pine seeds. Three-quarters of the whitebark pine forests in the GYE died during this same ten-year period, as bark beetles expanded their range with warmer winters, encroaching on the whitebark ecosystem. The fat-rich seeds were critical to female bears putting on weight before hibernation.

Mattson found that the population of grizzlies declined between 2014 and 2016. The IGBST and FWS, looking at the same data, stated they couldn't conclude any population trend, either upward or downward. Mattson ascribed this either to deliberate obfuscation or stupid incompetence. One reason for the rising death rate, he surmised, was that bears were resorting to incredibly hazardous foods after losing trout and pine nuts. Which is to say they were spending more time around people. They looked for elk in areas where game hunters travel, vying for fresh carcasses, and

hunters who claimed to be terrified at their approach riddled them with bullets. They preyed on cows on the open range, and Wildlife Services swooped in, killing them as problem animals menacing stockmen. Because of hunter and rancher conflicts an estimated 11 percent of the grizzly population in Greater Yellowstone died in 2017—and this was while ESA protections were still in place.

Foods do not exist in a vacuum. Every food has attached to it a certain risk. And all foods are not equal in value. Whitebark pine seeds, which ounce for ounce provide more calories than chocolate, were likely an irreplaceable food source, not least because they were extraordinarily safe to eat. There are few humans in the remote whitebark stands of the GYE, and therefore to feed in whitebark country is to dine in peace. Yet the Fish and Wildlife Service would have the public believe that the collapse of the whitebark ecosystem, a collapse that occurred almost overnight, mattered not at all to the future of grizzlies.

And against all the evidence to the contrary, the Fish and Wildlife Service continued to claim that delisting would increase social tolerance of the animals in the hostile state governments in the Northern Rockies; and that removal of ESA protections for grizzlies would prove to opponents that the law works and forestall attacks on the ESA in Congress. None of that had happened in the past—with wolf delisting, for example—and it did not happen following the grizz delisting. In fact, delisting only emboldened the anti-bear factions. Under the agreement drawn up with state governments, the U.S. Fish and Wildlife Service handed grizzly management to the wildlife agencies of Idaho, Wyoming, and Montana. An early indication of how state managers would fare in their new task came in September 2013, when an employee of the Wyoming Game and Fish Department named Luke R. Ellsbury, who was based in Cody, spotted what he believed to be a black bear trundling along the banks of the North Fork of the Shoshone River, where Rain and Viva and I had walked looking for grizzlies. Ellsbury was no low-level employee at Wyoming Game and Fish. He was the agency's bear specialist, one of its highly respected managers of large carnivores.

Ellsbury's immediate thought was not to observe the "nice black bear," as he later testified in court documents. He wanted to kill it. Ellsbury turned his car around, rushed back to Cody, bought himself a black bear tag, rushed back to the riverside, rifle in hand, and spotted the nice black bear in the willows and chokecherry stands along the river. It was perhaps a hundred feet away. Ellsbury opened fire within twenty-five feet of the road, which is illegal. The bear collapsed. Turns out it was a grizzly. Wyoming's grizzly specialist, one of the people to whom the federal government has entrusted the survival of the species into the future, couldn't tell the difference between a black bear and *Ursus arctos*.

I went looking for bears with Mattson in September as a cold front blew in and dumped snow across the peaks of Yellowstone National Park. We took a walk up Clay Butte Road in the Beartooth Mountains near the park's northeast boundary. The road was at 8,400 feet. Rain in the valley below us, in cloud shroud, but up here it turned to snow, and the wind blew hard. This was whitebark pine country. As it is so remote and high, there are few roads that penetrate the whitebark biome. Where there are whitebarks, we could expect grizzlies.

At the limits of its range, near tree line in the Northern Rockies, the whitebark is stunted, gnarled, wind-bent, and resembles elegantly crafted bonsai. At lower elevations, with less attrition from the elements, it rises to some sixty feet. Most conifers are conical, but the whitebark is rounded, with a spreading shape and wide crown common to deciduous trees, which gives the whitebark forest a welcoming lushness, a sense that here is shade and green comfort. The whitebark is the only stone pine in North America—there are four other species, endemic in Eurasia—and like all stone pines it is slow-growing, long-lived, sometimes surviving more than a thousand years. The needles, thickly bunched in groups of five, catch the wind and whisper in a manner different from other pines. (I've noticed that every species of pine has its own music.) Within the needles you will find pink

ones hard as stones that remain closed unless a direct brute force comes long to open them. Most other pines in North America open their cones reely for their seeds to be blown on the wind. But not the whitebark.

Aesthetic appreciation of whitebark is in no small part informed by an ntellectual appreciation of its formidable age and of the places where it rows, in the wildest, most rugged, most remote heights, in the most inhos-itable environments, in the least expected places, where for centuries it has been bashed with snow and ice and wind and occasionally struck by light-ning and swept with wildfire. This appreciation grows with the understand-ng that every stone pine coevolved with a specific bird whose beak has the necessary strength to open the cones. The tree and the bird are symbiotic, obligate mutualists. In the case of *Pinus albicaulis*, its obligate mutualist is the Clark's nutcracker, *Nucifraga columbiana*, a clever jay with a grating metallic call and a daggerlike bill that flits in the highest branches of the tree where the cones bud. This easy access to cones at the terminal reach of a whitebark is probably an adaptation specific to its relationship with the bird. Clark's nutcrackers, unable to accomplish transoceanic flights, carried the seeds over the Beringian land bridge and moved them southward across North America, to the limits of the whitebark pine range today in the Northern Rockies. Humans, grizzlies, and whitebark: their story on this continent started together in the Pleistocene.

On a typical day in whitebark country the nutcracker races among the crowns of the ancient trees, calling *kraa-kraa*, stabbing away at the bright pink cones, busting open the fat-rich treasure inside, filling with seeds the pouch under its tongue. It caches the seeds by the thousands in soil across the forest. The seeds it doesn't remember to retrieve—and its memory is so exceptional that it retrieves most of the caches—germinate. Thus a white-bark pine forest is born from the singularly random accident of the bird's forgetting. Since nutcrackers are high-elevation birds that prefer open spaces for their caches, the seeds almost always germinate in the coldest, rockiest places. The whitebark pine, via the Clark's nutcracker, is colonizer, tree island initiator, and thereafter nurse tree for other species to populate

the understory. The whitebark, like the sagebrush and like the cryptobiotic soil of the desert, holds in place the land, stabilizes soil, prevents erosion. It captures snow that its broad canopy keeps shaded into the early months of summer, meting out the flow of the melt.

So there is a perfect system of balance, the balance that Rachel Carson described of the sagebrush sea. Into it is added a chattering scrambling manic rodent, the red squirrel, whose survival in the high country also depends on the seeds of the whitebark pine. Red squirrels knock the cones from the trees, and bust them open with minute claws and gnawing teeth, but the cones they don't immediately eat they hoard for winter. Behind the red squirrel comes the grizzly. The bears listen for the chatter of the squirrels, chatter they have learned to interpret to find the locations of the hoarded food. The bears strike at their leisure, raiding the cone treasure, gorging on the seed fat. You can imagine the ridiculous protests of the squirrels, their laughable leaping about, though in a healthy whitebark biome there is enough food for all. It is a system of interdependency: a tree connected to a bird to a squirrel to a bear.

Now, in the Beartooth Mountains, Mattson and I walked among white-barks that were half-alive. The sun broke from the clouds, and the wind shook squalls of snow in our faces. We slipped and groped up a steep drift-thick hill to a recently dead stand. Mattson removed the cracked bark where bark beetles had bored their channels and left trails of frass. Frass is di-gested sawdust and sap the insects defecate during their passage. The beetles kill by cutting off the circulation system of the tree, starving it of nutri-ents and water, and once embedded in a whitebark they can snuff it in less than a month. The beetles produce an antifreeze to survive winter cold. Above eight thousand feet in the Greater Yellowstone Ecosystem the cli-mate in the past produced day after day of temperatures thirty to forty below zero Fahrenheit, sustained cold that killed the beetles. Those winters of deep freeze are no more. It's remarkable today if the high country of the GYE has sustained periods of ten to twenty degrees below zero. "What's hap-pened to whitebark is obviously a climate change indicator," said Mattson.

"It's not just whitebark. We're seeing Douglas fir die-off. Subalpine fir. Engelmann spruce." The future is a dying conifer biome across the high country of the Northern Rockies. One study shows 70 percent of Yellowstone turning to grassland in the next fifty to one hundred years, losing most of its conifer forests. This will be disastrous for wildlife that depend on those forests.

The needles of the dying whitebark had turned rust red. Other trees, long gone, were death spires, pale white, their branches shed. It is ghost forest, a silent forest where the nutcrackers do not call and the squirrels do not chatter. We walked deeper into the ghost forest, snow fell steadily, and I lagged behind. I was looking at the dead trees, thinking of the complex interaction of forces and agents that killed them.

(It's not so complex, I told myself. It's godforsakenly simple. The industrial system is what killed the whitebarks—the system that with no end in sight warms the atmosphere, the system in which we are all implicated and which has made vile coddled dependents of generation after generation born into it with no idea of an alternative. My long fuel-burning drives across the West to meet with people like Mattson killed the whitebarks. All those transcontinental trips by car and plane to research this book killed them. My existence, my work: part of the problem.)

Paralyzing thoughts, and I shook them away as Mattson and I slid down a hillside back onto Clay Butte Road in the blowing snow. We were out of the senescing woods. "Bear," he said, stopping at fresh tracks on the road. "We're minutes behind it. Fifteen minutes I'd say." Mattson listened, watched, waited. I would eventually spend hours, days, weeks wandering the Greater Yellowstone country and never see a grizzly, though the Fish and Wildlife Service claims there are bears galore. We'd been making a hellacious lot of noise, yapping, Mattson fielding my pestering questions, telegraphing our position. And now we were upwind of the animal, so it probably heard us and also smelled us. The tracks disappeared, and then a hundred feet on we found them again on the road. "It's orienting to us,

likely very aware of us, watching us. Probably stopped at our vehicle and sniffed it, *What are you doing in my forest?*"

Driven with the high winds, the clouds broke once more, and the sun lit the valley below, the valley of the Clarks Fork of the Yellowstone River, which in the sudden crashing waves of light through the veils of snow looked immeasurably wide and long. Beyond the valley was the towering Absaroka Range. The usual heartbreaking immensity of the West, the experience of the sublime the Romantic poets attempt to describe, when consciousness falls flat on its face and comprehends what it perceives only as an emotional registering of insignificance. Confronting the sublime, for the poets, was necessarily coupled with the uncertainty that language suffices to represent it.

Mattson was sixty-four years old when I met him. His knees were going; his hips were hurting. A planned backpacking trip together into grizzly habitat for an assignment I'd secured with *National Geographic* had to be cancelled. He had done more backpacking into the wild than any person I knew, and I had done enough of it myself to know how it wears the body down. I got the impression that for the first time—perhaps this was a long time coming but only now he was expressing it in his work—he was getting closely acquainted with thoughts of mortality. A lifetime around grizzlies, unarmed and at their mercy, was a steady preparation for thinking about death. He published brilliant captivating articles at *Grizzly Times*. Anthropology, biology, social history, psychology, behavioral science, philosophy, all fodder for his obsession with the bear. In his writing one heard the echoes of Kierkegaard, Sartre, Camus. He approached the grizzly as an existentialist. He was pondering insignificance. The matter at hand was how to live lovingly and equitably and with justice and kindness for all living things, with generosity, care, patience, humility, in a world that was absurd and ultimately meaningless because it ended in death. It ended, if

ou were lucky, with a bear eating your flesh and shitting you out. "Count
e among those aspiring to be bear shit," he wrote.

He read the work of the existential psychotherapist Irvin Yalom, from
hom he discovered terror management theory. Terror management theory
osits that human awareness of mortality leads to the manufacture of a
rge-scale world of symbolic meaning, a world built out of thin air to dis-
nguish us in the cycle of life and death. Terror management, in other
ords, produces culture, in which symbolic identity outlasts biological iden-
ty, in which we stand separate from and higher than the death-bound ani-
als. Language, art, law, and custom; mythology and religion; the concept
f an afterlife; national and racial identity; the seeking after recognition,
ame, financial success; the economists' ordering of the world into markets;
he politicians' ordering of the world into parties; the claims to literary and
ntellectual posterity; the intellectualization of phenomena, the reduction of
xperience to a pile of words—all salve for a puny trembling existentially
raught creature who wants desperately to be something more than meat.
tripped of illusion in human-nature relations, we are at last, after the many
ies we tell ourselves, trapped in an untamed, uncontrollable, contingent
wirl of universal forces that reveal for the self-aware person an appalling
vanescence.

Terror management theory, Mattson figured, was one useful lens
hrough which to view the spectacle of public lands conflict in the West,
he battle between preservation and exploitation, and, not least, the ques-
ion of the fate of the grizzly. The primary emotional experience of the
Western landscape, among all the regions of the United States, is an exis-
ential one. The enormity of the steppe and the desert, the mountains and
he forests, the geological time exposed in naked rock, the caprices of
he weather, the vitality of the presence of wild animals, the complexity
of the relationships, say, between a tree, a bird, a squirrel, and a bear who
can eat us—spectacular displays of the sublime.

"My family of ranchers and farmers were in a constant existential
crisis," Mattson told me one day as we took a walk with his dog in the

hills around his house. "A March storm rolls in and kills most of your sheep. You can't control the weather. You can't control your fate. This is a world that abnegates you with death, and you see it all around you in the very landscape. So you displace. The chronic outcome of existential anxiety—the crisis of meaning, the crisis of isolation, the crisis of responsibility, the crisis of death—is displacement onto other people, other beings. My family killed coyotes. They rounded up rattlesnakes and killed them. My grandfather was part of the posse that killed the last wild wolf in South Dakota."

The Mattson clan, pioneer settlers of western South Dakota, managed their terror, in other words, by creating community and meaning around slaughtering wild things while subjugating the land for agriculture. "The culture of domination and use," as Mattson called it in his writing. The cowboy culture. The kill mentality of Wildlife Services. The culture of death that Jon Marvel described. Western culture. "The vendetta against nature," Mattson wrote, "was one of violence and death, but under the putatively ennobling rhetoric of Manifest Destiny—of Taming the Wilderness to clear the way for White Anglo-Saxon Civilization. . . . Thus it was that my ancestors showed up in South Dakota at the end of the 19th Century to lay claim to a seemingly vacant land, emptied of Indians and wildlife," a land "begging to be populated with sheep, cattle, and (more-or-less) God-fearing white people."

It was from this distinct vantage—perhaps a more important one than his training as a scientist afforded him—that Mattson viewed the 2017 delisting in the Greater Yellowstone Ecosystem. Any bear that wandered outside Yellowstone National Park, where hunting is forbidden, was now consigned to the tender mercies of state wildlife agencies, agencies that Mattson considered pathological examples of the culture of domination. Wyoming, host to the largest number of bears on public lands beyond park boundaries, immediately crafted plans for a grizzly bear trophy hunt, to start in the fall of 2018 and continue for several weeks. The last time bears had been hunted was 1975. No matter that trophy hunting was among the

hief factors that so reduced bear populations in the 1960s and '70s that the pecies required ESA protection in the first place.

Supporters of delisting who happened also to be hunters trotted out all nanner of threadbare argument. Bears, they claimed, needed to be culled n order to stabilize the populations, though there was no evidence for this. Apex predator populations, unlike prey, stabilize on their own, requiring no interference from humans. Safari Club International, a bastion of hyper-ich hobbyists, proclaimed that going after the grizzly was an expression of cultural legacy, part of the long hunting tradition in the West. I'd suggest o the men of the Safari Club (for they are all men) that Indians constitute he only true heirs to a hunting tradition on this continent. It's how they ived for thousands of years to survive. The act of killing involved complex elationships at the core of which were respect and honor. A moral universe encompassed the hunt. Nothing like that can be said of Euro-American nunting practices. Theirs is better described as a killing tradition.

After we parted ways in Montana, Mattson sent me a draft of an essay he titled "Entrusting Grizzlies to a Basket of Deplorables." He was referring to Hillary Clinton's ill-advised quip on the 2016 campaign trail in which she referred to Trump supporters as a "basket of deplorables who espouse racist, sexist, homophobic, xenophobic [and] Islamophobic sentiments."

Clinton was pilloried for what seemed a haughty and dismissive generalization, but Mattson thought there was something to it. Psychological researchers, he wrote, "have described a widespread and often strong impulse among humans to fear ambiguity, create hard boundaries, and delineate a small moral universe. All of which leads to a bounded capacity for empathy, and the dehumanization—even demonization—of those who have a different worldview, a different religion, a different ethnicity, a different sexual orientation, ad nauseam. Or, even, simply are of a different 'species.' . . . Unfortunately, it's not too hard for me to populate this profile with real people."

He grew up with them in South Dakota and he worked with them in the state game and fish agencies in the Northern Rocky Mountains. "Ignorant, arrogant, bigoted white men besotted with guns," Mattson told me. "The culture at the state wildlife agencies centers around violence. That's the defining activity. In my meetings with grizzly bear managers, the conversations in the halls were all about killing shit. What they've killed. What they're planning to kill. It's the water you swim in, this culture of killing. And it fuses naturally with the cowboy culture. Go to any meeting of Wyoming fish and game managers—they will show up in cowboy hats and boots, handlebar mustaches. Big belt buckles will be well represented."

Or go to the state game agencies' annual extravaganza, the North American Fish and Wildlife Conference. Mattson was traveling in Milwaukee in 2006, where the conference was held that year, and took a stroll through the exhibition halls to get a view onto these folks he despised. The Rocky Mountain Elk Foundation, a nonprofit hunting advocate that stridently supported delisting of grizzlies, held court in a darkened room of throbbing music. There were milling men drinking free booze, and huge screens on the walls showed films of elk with great racks of horns. The animals clashed, ramming each other, and bugled, and mounted and inseminated females. "It was all about virile male animals jousting with snot running out of their noses and steam out of their mouths, while fucking notably pliant females. I don't seem to remember any women there. Again, the preponderant garb was cowboy boots and cowboy hats."

State wildlife agencies do not represent the broad interests of the American people. They are slaved financially and culturally to the interests of hunters. Eighty percent of the budget of the Wyoming Game and Fish Department, to take one exemplary agency, comes from hunting and fishing licensing and fees. Employees refer to hunters, the consumptive users of wildlife, as "customers." WGFD receives another 10 to 15 percent of its budget from federal excise taxes on firearms redistributed to the states (the more weapons sold, the more revenue for game agencies). The remainder of WGFD's funding comes from contributions from groups such as the Rocky

Mountain Elk Foundation, the Mule Deer Foundation, the National Wildlife Federation, the Muley Fanatic Foundation, and Bowhunters of Wyoming—the agency's customers.

Mattson conducted a study of the iconography of hunting as represented in a single month's selection of popular magazines, such as *Field and Stream*, *Outdoor Life*, *Predator Xtreme*, *Elk Hunter*, *Muley Crazy*, and *Trophy Hunter*. "In virtually all of the hunting magazines dead animals accounted for the majority of animal pictures, in *Trophy Hunter* reaching a staggering 80%," he reported. Bucks and bulls—that is, animals with "exaggerated sex-linked organs"—accounted for as much as 90 percent of all animal images. "Not coincidently, weapons or ammunition showed up on between 20 and 65% of all pages, most prominently in *Predator Xtreme* and *Bow Hunting*."

And what of the people depicted in these magazines? Between 85 and 95 percent were men and only three were of people evidencing any race other than Caucasian: two were of Barack Obama, pictured as part of diatribes against his presidency, and the third was of a black man portrayed as a zombie.

"In short," Mattson concluded, "the iconography of magazines explicitly serving the hunting community features death, iconizes weapons, makes fetishes of sexual organs, and instrumentalizes sentient beings, all of which is consistent with the ethos of domination and use. And, not surprisingly, the faces looking out of these mags are a mirror of the narrow demographic that hunts—mostly white males."

The good news is that it's a vanishingly small demographic, growing smaller by the year. There are roughly 326 million people in this country. According to the U.S. Fish and Wildlife Service's latest surveys, the number of documented hunters nationwide declined between 2011 and 2016 to 11.5 million. That's 3.5 percent of the population. Trophy hunters, also a declining group, constitute an infinitesimal subset of that 3.5 percent. Between 1991 and 2016, the absolute number of hunters in this country dropped 20 percent. During that same period, the number of people who

said they valued animals simply to watch them increased 37 percent, consistently outnumbering hunters as much as nine-fold. Seventy-one percent of Americans polled now believe that trophy hunting is morally wrong. Seventy-six percent say that killing animals for furs is unethical. Yet the hunter minority, via its influence at the state game agencies, sets the management protocols for all kinds of species that nominally are in trust to the vast American public. The game agencies sound off about maximizing the populations of big game animals that hunters prefer to kill, namely elk and mule deer. The agencies employ the language of agriculture. Wildlife is a crop. A hunt is a harvest. Elk and mule deer are the most important crop, and hated are the predators—wolves, bears, wolverines, coyotes, lynx, bobcats, and on and on—that might threaten the harvest. Mattson calls this a "despotic regime."

Suspicions as to the motives behind delisting only grew as bear advocates dug into the administrative record. Native American tribes uncovered communications between Chris Servheen and his boss in DC, Fish and Wildlife Service director Dan Ashe, an Obama appointee, that suggested an internal decision to delist had been made before all the scientific evidence for it had even been reviewed. In a letter to the United Nations Special Rapporteur on the Rights of Indigenous Peoples, Chief Stan Grier of the Piikani Nation wondered why the Fish and Wildlife Service designated Amec Foster Wheeler, a multinational consultancy whose clients include major oil and gas corporations, to manage the scientific peer review of grizzly delisting.

"When you learn that a former Halliburton executive, Jon Lewis, is now CEO of Amec, you start to understand why," Chief Grier wrote. "There are presently 21 oil and gas 'Plans of Operation' for Greater Yellowstone upon the delisting of the grizzly." The Oglala Sioux Tribe called for a congressional investigation into possible conflicts of interest in the FWS delisting process. Congress refused.

To explore for oil and gas—and to bring in loggers, hunters, and recreationists, to establish any kind of profitable exploitation of the backcountry—you need roads, and lots of them. Roading proved one of the most contentious issues for land management agencies during the four decades that the grizzly enjoyed ESA protection, as again and again wildlife biologists attested that roads were bad for the bears. With delisting, bold new opportunities opened up for road construction in the Greater Yellowstone Ecosystem. Roading was the means by which all other industrial development could proceed, the crucial first step in the domination of the wild.

CHAPTER 17

Everywhere is walking distance if you have the time.

—STEVEN WRIGHT

What I want to speak for is not so much the wilderness uses . . . but the wilderness idea, which is a resource in itself. Being an intangible and spiritual resource, it will seem mystical to the practical-minded—but then anything that cannot be moved by a bulldozer is likely to seem mystical to them.

—WALLACE STEGNER, in his Wilderness Letter

Roadless country was terrifying in the summer of 1988, at the age of fifteen, when I fractured my tibia in a canyon of the Green River in Utah. I was cliff-jumping into shallows. With me were my brother Eric and his friend Rob, both New Yorkers, both much older, in their twenties, and with long experience running rivers in the desert. They told me not to jump, warned that I'd hit bottom. But stupid and impetuous is the mind of the fifteen-year-old boy. There was no way out to find help except down the river. There were no roads we knew of that accessed the canyon. This was before cell phones, and we were too poor to own a satellite phone. Even if we did find a road, how might we make use of it without a vehicle? It would be a death march under the desert sun.

The accident came at the tail end of a rafting trip of 450 miles that began at the foot of Flaming Gorge Dam on the Wyoming border and would end at the take-out at Hite Marina in southern Utah, where the river dies

THIS LAND

HOW COWBOYS, CAPITALISM, AND CORRUPTION ARE RUINING THE AMERICAN WEST

CHRISTOPHER KETCHAM

VIKING

VIKING
An imprint of Penguin Random House LLC
penguinrandomhouse.com

Acknowledgments to the original publishers of portions of this book appear on page 387.

Library of Congress Cataloging-in-Publication Data

Names: Ketcham, Christopher, 1973– author.
Title: This land : how cowboys, capitalism, and corruption are ruining the American West / Christopher Ketcham.
Description: New York : Viking, [2019] | Includes bibliographical references and index. |
Identifiers: LCCN 2019002212 (print) | LCCN 2019018042 (ebook) |
ISBN 9780735221000 (ebook) | ISBN 9780735220980 (hardcover)
Subjects: LCSH: West (U.S.)—Environmental conditions. | Public lands—West (U.S.) | Environmental degradation—West (U.S.) | Capitalism—Environmental aspects—United States. | Political corruption—Environmental aspects—United States. | Environmentalists—West (U.S.)—Biography. | Ketcham, Christopher, 1973—Travel—West (U.S.) | West (U.S.)—Description and travel.
Classification: LCC GE155.W47 (ebook) | LCC GE155.W47 K47 2019 (print) |
DDC 333.730978—dc23
LC record available at https://lccn.loc.gov/2019002212

Printed in the United States of America
1 3 5 7 9 10 8 6 4 2

Set in Adobe Garamond Pro

Designed by Gretchen Achilles

Map illustration by Travis Kelly

For my daughters, Léa and Josie,

and for our mother, the earth