PART I

The public lands of the United States are a hallmark of our democracy and harbor some of the greatest resources of our nation. Federally managed lands—owned by all Americans—total 623 million acres, or more than 25 percent of the U.S. land base. There are four major federal land agencies—the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), the National Park Service (NPS), and the U.S. Fish and Wildlife Service (USFWS). State agencies and other government departments oversee millions of acres of additional public land.

The vast majority of the federal public lands are in the western United States, where they serve as sources of clean water, recreation, scenic beauty, and inspiration. The public lands are wildlife habitat and in many cases provide the only remaining suitable environments for jeopardized species. On the large blocks of acreage provided by the public lands, restoration and maintenance of landscape-scale ecological processes—such as wildfires—are feasible and desirable. Elsewhere, the prerogatives of commercial enterprise and other human needs usually dominate.

Unfortunately, resource exploitation of various kinds has driven public lands management for many decades. Mining, logging, oil and gas drilling, and even farming have occurred and continue to occur on public lands. But the most widespread commercial use of western public lands is livestock production. Nearly all public lands that have any forage potential for livestock are leased for grazing. This includes 90 percent of BLM lands, 69 percent of USFS lands, and a surprising number of wildlife refuges and national parks. This land—your public land—is frequently managed as if it were a private feedlot rather than the common heritage of all Americans.

Next time you go out to visit your public lands and encounter a fence you must cross, a gate you must open, a campground fouled with cow manure, a trout stream trampled by cows, a hay meadow rather than a natural wetland, weeds instead of native grasses, cattle and sheep instead of prairie dogs, remember, this is your land. Do you like what you see?

xvi–xvii: St. Mary's Valley, Glacier National Park, Montana.

xviii–xix: Cows on Bureau of Land Management land, Trout Creek Mountains, Oregon.

xx–xxi: Elk along the Gibbon River, Yellowstone National Park, Wyoming.

xxii–1: Bull elk.

Opposite: Livestock-free grasslands, Arches National Park, Utah.

This land is your land, this land is my land
From California to the New York Island
From the redwood forest to the Gulf Stream waters
This land was made for you and me.

—Woody Guthrie

PART II

Today, "myth" is commonly understood as something opposed to reality—a fallacy. Such a definition applies to the use of the term in the preceding section of this book. However, a myth is also something much grander: a story, ostensibly tied to historic events but functionally an explanation or expression of a people's worldview. A myth reveals what a society believes about itself, its origins, its proper relationship to nature, and the manner in which individuals should behave. In the United States, there is probably no greater myth than that of the cowboy.

Myths can be pervasive and inescapable, and their powerful influence may not even be recognized by most people. To challenge them can be dangerous and, at the very least, may draw a great deal of skepticism. Thus, to take up the matter of the damage done to public lands by the cowboy's cow is no simple project of laying out facts and statistics. Nor is it enough to employ the direct, nonverbal power of photographs, though we do so abundantly throughout this book.

Before there can be an honest discussion of what has happened to the native species and ecological systems of the West because of the influence of livestock production, we need to confront the cowboy myth. In this section, Christopher Manes and George Wuerthner dissect the roots of the cowboy myth, including its relationship to cultural beliefs about meat, manhood, leadership, and nature. Thomas Fleischner relates the manner in which cattle came to dominate the landscapes of the American West, and how stockmen—in no small part because of the high degree of societal deference paid them—have wielded enormous control over western land use policy during the last century and a half. T. H. Watkins takes a closer look at the laws and policies regarding public lands ranching that developed during the Great Depression and Dust Bowl era. Relief provided to ranchers during that dark, desperate time was rapidly institutionalized into a system of subsidies that stands today. "Welfare rancher" is a term at least as valid as "welfare mother," if not vastly more so, yet public lands livestock producers enjoy much greater success at opposing welfare reform. The resilience of the American myth of the cowboy has much to do with this success. As Andy Kerr and Mark Salvo explain, even in national parks and designated wilderness areas—set aside for their aesthetic and conservation values—ranchers' economic interests have prevailed over the public interest. Livestock grazing continues in some of America's most treasured natural landscapes.

Finally, Edward Abbey offers his own sort of antimyth. His barbed humor and outrageous rhetoric may offend—"sacred cows" of any sort were always the target of Abbey's sharp mind. What lies at the center of his raucous and unmannerly language, however, are his own fiercely felt loyalties: to wildness, to beauty, to truth. In the long run, the Marlboro Man hasn't got a chance.

18–19: Marlboro cigarette ads capitalize on and help perpetuate the American cowboy mythology.

Opposite: The cultural lineage of the modern-day rodeo can be traced back to the bull-worshipping ceremonies of Mesopotamia and other ancient Western civilizations.

PART III

One of the most problematic obstacles for those advocating an end to public lands livestock grazing is the subtle nature of livestock abuse. Unlike the clearly visible damage to the land in a clearcut forest, the effects of livestock production on rangelands are far less obvious to the untrained eye. While someone with no ecological background can be moved to tears by the destruction of centuries-old trees and the loss of a forest ecosystem, the equivalent devastation of a grassland or shrub ecosystem engenders no remorse, no sad commentary, no outrage. "Overgrazing" to most people may conjure up images of a Saharan wasteland. Yet only in the very worst situations does livestock grazing create a barren landscape, devoid of all vegetation. Rather, most changes wrought by livestock are gradual, with the effect on plants being the replacement, over time, of more desirable species (for wildlife habitat and food as well as, often, for livestock consumption) with less desirable plant species.

But the alteration of plant communities is only the beginning of what livestock grazing does to the land. Other, even more subtle effects include compaction of soils, leading to lower water infiltration and greater runoff; loss of hiding cover for small mammals and birds; and removal of flowers, seeds, and leafy vegetation that are food for such species as butterflies, birds, and herbivorous mammals. Other problems caused by livestock production are fencing that hinders wildlife movement; disturbance of plant communities that favors weed invasion; dewatering of streams that reduces the width of riparian areas; draining of wetlands to create hay fields; trampling of stream banks and degradation of fish habitat; development of springs and removal of water on which frogs, birds, and other native species depend; and other effects that are not apparent to the uneducated observer.

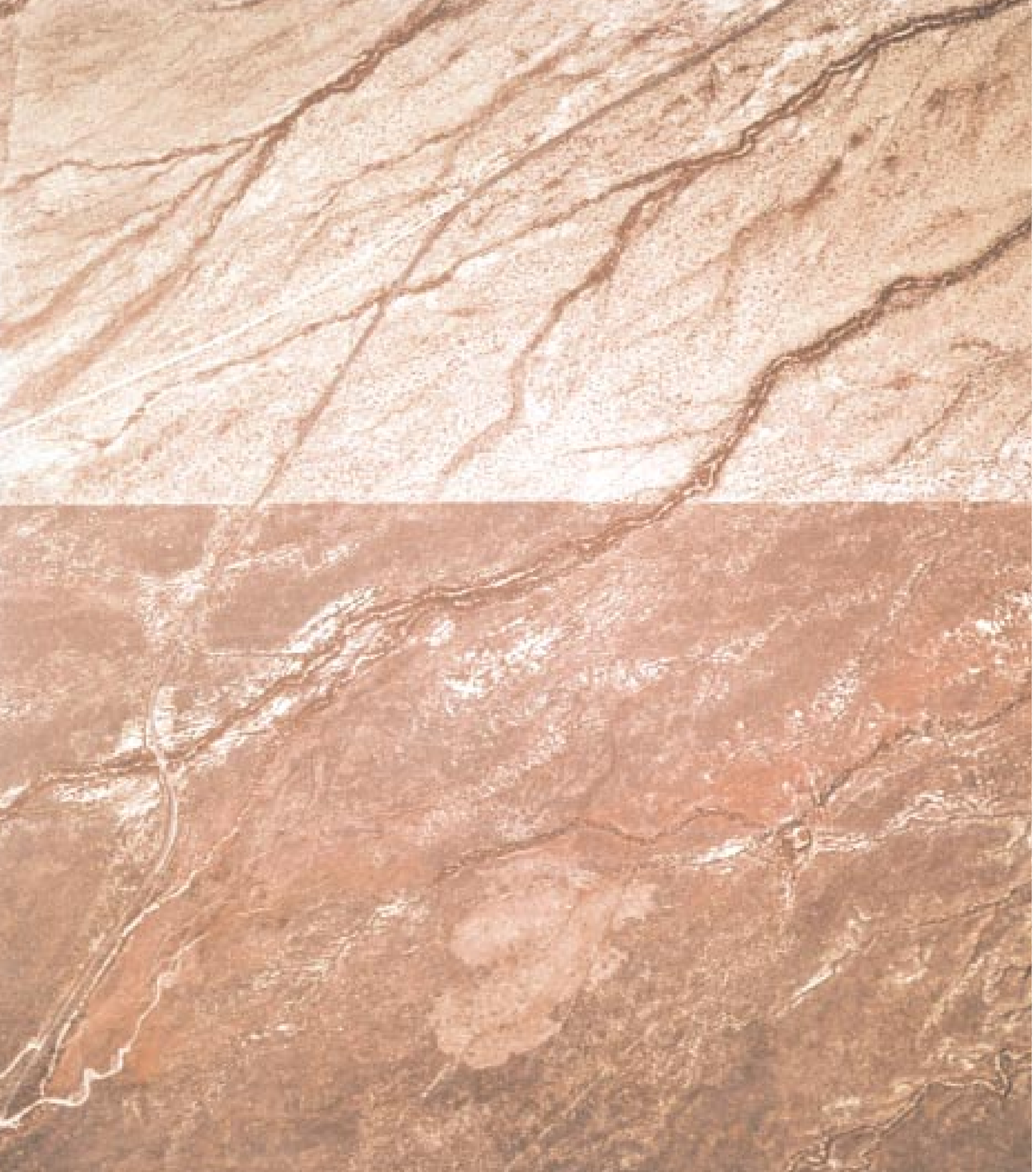
Yet for someone trained to "read" the landscape, the ecological wounds caused by livestock production are clear and abundant. George Wuerthner first presents a critical analysis of range management techniques, especially traditional rangeland health evaluation methods. His essay helps to explain why so many range managers tend not to perceive fully the damage caused by livestock. The photographs and text of the following "How to Look . . . and See" section amply illustrate, and will begin to train your eyes to see, what is happening on the West's arid lands. Once you can start to read the "unnatural history" of the West—a tragic tale of greed, ignorance, and malfeasance—you will see it is sadly ubiquitous. The story is written in the eroding gullies, the fishless streams, the river valleys converted to hay pastures, the dried-up springs, the crumbling riverbanks, the silent and abandoned prairie dog colonies, and the countless Grizzly Creeks, Buffalo Meadows, and Wolf Mountains, the names of which are the only reminders of the vibrant life that once graced our lands.

62–63: Land grazed by livestock, New Mexico.

Opposite: Beaverhead County, Montana. Looking at fencelines is an easy way to begin seeing differences between land grazed by livestock and land that either has not been grazed or has been given time to recover (as on the left side of this photo).

One of the penalties of an ecological education is that one lives alone in a world of wounds. Much of the damage inflicted on the land is quite invisible to laymen.

—Aldo Leopold, *A Sand County Almanac*, 1949



PART IV

At the heart of this book lies the heart of our concerns: the land, the rivers, and the wild things that inhabit them. Here are the species for which public lands grazing policy may truly be a matter of life or death. Here are the rivers drying up, the water tables dropping, the soils washing away. Three hundred million acres of public land are at stake in the public lands livestock grazing debate. In this section, you will see and read in detail about what is to be found on these 300 million acres, and what has vanished from them.

The following essays attempt to redress the ways in which the harm done by livestock in the West have been obscured. Livestock-induced change tends to be visually subtle (at least, in comparison with other types of environmental alteration, such as clearcut logging or urban sprawl) and incremental. Throughout the arid western United States, livestock production is nearly ubiquitous (with the exception of a few protected areas and places extremely inhospitable) and has been going on for a century or more. Even areas ungrazed by livestock are affected because they have become islands in a sea of livestock production as well as other types of human use. They are subject to the problems typical of fragmented habitats, such as edge effect and genetic isolation. Altogether, the prevalence of livestock production means that most people accept the present look of the land as the norm and regard the diminished populations of many of the West's native species as "the way things have always been."

This set of essays on the ecological impacts of livestock in the West is led by a discussion on the nature of science itself—what science can tell us, and what it cannot. We feel it is important to acknowledge the limitations of science, as well as to harness its strengths, because ultimately policy change and restoration of the public lands will depend on much more than science alone. But before action must come understanding, and before understanding, a witnessing of the facts. And so, read on. The facts are here.

162–163: Cattle-battered Bureau of Land Management lands, eastern Oregon.

Opposite: This satellite photo shows Arizona's Buenos Aires National Wildlife Refuge *(top)*, which is fenced off from livestock, and adjacent Bureau of Land Management lands grazed by livestock *(bottom)*. (The grass-dominated refuge is light-colored because of the abundance of dry stems of the previous season's growth. The BLM land is dominated by shrubs, and therefore is dark in color.) Although the contrast between areas grazed and ungrazed by livestock is seen on a landscape level here, such opportunities are rare throughout the West, thanks to livestock's near ubiquity. When studying the effects of livestock grazing, most researchers utilize very small exclosures (an acre or less) as their "controls." This practice is far from ideal for scientific purposes, as the small exclosures are subject to many external influences from the surrounding livestock-grazed land. Nonetheless, research shows, among other things, that where abundant grass cover is retained—as it is on the Buenos Aires Refuge—soils are less subject to erosion and provide better growing conditions.

PART V

Many people assume, since most of the western landscape is given over to livestock production, that ranching must be economically important. But, as economist Thomas Power points out in the opening essay of this section, the livestock industry contributes almost nothing to western economies, even at the local level.

Despite the cowboy's image as a rugged, independent individual, a host of government subsidies keep him propped up in the saddle. The western rancher is dependent on what is, in essence, a welfare program. The much-publicized low fees paid by ranchers to graze federal lands are only the beginning. Other subsidies include taxpayer-supported research at western land grant universities and agricultural exemptions that lower property taxes paid by ranchers. There are handouts to help with nearly every problem: drought relief, low-interest agricultural loans, emergency livestock feed programs, emergency grazing on Conservation Reserve Program lands, to name a few. Even many of the fences crisscrossing the West's "open" spaces are paid for by American taxpayers.

And this is not all. Ranchers are literally mortgaging the public's resources for their private benefit. As Mark Salvo explains in his essay on the connection between the banking industry and public lands ranching, ranchers are able to take out loans based on the "value" of their grazing permits. This questionable arrangement forces government officials to consider the status of a rancher's debt when making range management decisions, rather than focusing on what is best for the land.

Beyond the economic subsidies are the health, social, and environmental costs of the animal agriculture industry in general—the larger context within which public lands livestock grazing is properly viewed. Ills such as heart disease, cancer, kidney disease, and hypertension may seem quite unrelated to ranching on western public lands, just as food security, loss of arable land, desertification, tropical deforestation, urban overcrowding, and poverty may appear unconnected to problems of ecosystem degradation in the arid West. Yet, all these difficulties are linked—directly or indirectly—to an international system of meat production and an increasingly global pattern of meat consumption. Western ranching is a part of these destructive worldwide trends.

Thus, Virginia Kisch Messina addresses the subject of meat eating and health, while Richard Schwartz and Mollie Matteson discuss the connections between industrialized animal agriculture around the globe and a variety of environmental and social dilemmas. In considering the impacts of public lands ranching, we should understand that these do not occur in isolation from the rest of the country or planet, nor are they disconnected from the most personal and serious aspects of our own lives—our individual health and that of our communities, and the well-being and stability of the world we leave behind for our children.

258–259: Range restoration, Arizona style.

Opposite: Cattle exclosure on Road Creek, Bureau of Land Management lands, Idaho. Most fencing and other developments on public lands are paid for in part, or in full, by taxpayers. These are expenses that, collectively, we would not have to bear if livestock were absent from our lands.

PART VI

There are few who would baldly deny that the West has been damaged by livestock grazing. Even most ranchers would probably acknowledge that abusive grazing practices were characteristic of the past and still occur in some places today. In response to mounting criticism, supporters of western livestock production have developed more sophisticated counterarguments. This section explains the current leading arguments in favor of maintaining livestock grazing on public lands and methodically rebuts each one.

"Holistic management"—an approach to problem solving as well as a particular set of livestock husbandry practices, popularized by Allan Savory—holds out hope that ecosystem protection and livestock production can occur on the same piece of ground. Among more "progressive" ranchers, holistic management has a strong following. Yet scientists have documented a great deal of damage occurring on rangeland where holistic management is applied. George Wuerthner explains why even "better managed" livestock grazing is destructive in the arid West.

Among many conservationists, there is hesitancy to advocate the removal of livestock from public lands because of an overriding fear that sprawl and urban development will inevitably follow on private lands. In fact, some environmental organizations strongly defend livestock grazing, believing it to be the last bastion against a perceived condo-ization of the West. But this belief is deeply flawed in its assumptions and logic. Read "Cows or Condos" if you are one of those people still of the mindset that ranching is the lesser of two evils.

The "cattle as bison" argument is basically an assertion that cattle fill the same ecological role as bison. Yet, the behavior and physiology of cattle and wild bison differ greatly, as do plants found in historic bison range versus those that evolved in the absence of bison. And most public lands occupied by cattle today fall outside the historic range of bison. Cattle, and their impacts on the land, are unprecedented and unnatural.

Finally, some livestock proponents claim that cattle grazing can be an important "tool" for achieving specific management goals, such as weed reduction. This view is not so much wrongheaded as it is extremely limited. For example, fire can also be used as a tool to control certain plants. Also, in focusing on one goal, range managers may lose sight of the numerous other, negative impacts of livestock.

These essays may seem to be largely about opposition to something—namely, public lands livestock grazing. However, this opposition arises because of things we are fundamentally *in favor* of: effective, long-lasting land protection, wise and conscientious use of the taxpayer's money, and whole, healed natural communities of native plants and animals.

286–287: The Nature Conservancy's Red Canyon Ranch, near Lander, Wyoming.

Opposite: Cattle graze on public lands in the Animas Valley, Malpai Borderlands region, New Mexico.

PART VII

What can be done to address the problems associated with public lands livestock grazing? There is a simple answer: end it. Get the cows and sheep off, let the wild creatures reclaim their native habitat, and send the ranchers a bill for the cost of restoration.

Of course, as a practical matter, this is easier said than done. The goal may be clear, but the way to it is not. A lot of time can be wasted debating which is the "right" answer to ending livestock grazing on public lands, but as believers in diversity—biological and otherwise—we encourage a multiplicity of approaches.

In this last set of contributed essays, we aim to expand ideas of what is feasible—to suggest that "political reality" is, to some degree, what we make of it. We offer the thoughts of two experienced and successful strategists who have worked for years to rescue public lands from the abuses of livestock grazing.

Bill Marlett acknowledges the impossibility of "killing the myth of the cowboy" but suggests that what real cowboys have done to western lands is no longer completely veiled by public ignorance and indifference. He discusses various approaches to the challenge of phasing out public lands ranching; further exploration of their individual merits and drawbacks awaits conservationists, the ranching industry, political leaders, and the public at large. Certainly the field is wide open for other creative solutions.

Attorney Stephanie Parent uses the law to seek protection for public lands. Litigation is often seen as environmentalists' "hard line," yet as Parent points out, it is based simply on the goal of getting government agencies to properly enforce laws and standards already on the books.

Although it is our desire to make the end of commercial production of livestock on public lands as painless as possible for the affected ranchers, we recognize that it won't be pain-free. Change, even positive change, can be stressful and disconcerting. Ultimately, however, it is the natural world that supports us all. And if we wish to behave compassionately toward future generations—human and nonhuman alike—we must not postpone or shirk the work to be done today.

308–309: Beaver Meadows, Rocky Mountain National Park, Colorado.

Opposite: Battered ground around stock tanks, eastern Oregon.