

TOWARD WILD HEARTLANDS

It has been 30 years since President Lyndon B. Johnson signed into law the most generous gesture we Americans have made toward the wild nature of this continent. The Wilderness Act of 1964 gave Congress the authority to declare certain unspoiled lands permanently off-limits to human occupation and development. Thus was born the National Wilderness Preservation System, which did the national park system one better. Wilderness allows no roads or vehicles—you enter on your own two feet, as explorers and settlers once entered the greater wilderness that was North America.

The wilderness system stands as a landmark of collective self-restraint on the part of the American people and the human species. Yet three decades after its inception, the most notable feature of the system—aside from the remarkable fact of its existence—is the meagerness of its size. Our subduing of the continent has been so extensive and thorough that all lands designated as wilderness constitute less than 4 percent of the United States; more than half of those are in Alaska. In the 48 contiguous states, the National Wilderness Preservation System amounts to 1.8 percent of our territory. It will grow in years to come, but not by much. Little undeveloped land remains, and efforts to designate new wilderness areas are met, unflinchingly, by fierce and often overpowering resistance from those who have different ideas about the value of land.

Their ideas go back to the very beginnings of our history and culture. Europeans came to the New World not as hikers or nature lovers but as homemakers, community builders, land developers. They took freely of the continent's plenty and turned it to their uses. "In Europe," wrote Alexis de Tocqueville in the 1830s, "people talk a great deal of the wilds of America, but the Americans themselves never think about them; they are insensible to the wonders of inanimate nature and they may be said not to perceive the mighty forests that surround them till they fall beneath the hatchet."

There were those along the way who warned against excess. William Penn ordered an acre of woods left standing for every four cut. William Bartram catalogued the natural history of the Southeast and railed against early plantation agribusiness. Henry David Thoreau envisioned a 500- to 1,000-acre

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wilderness in every township. John Wesley Powell tried to show that the arid West couldn't support large populations or midwestern land-use practices. John Muir declaimed against commercial vandals in the temples of the wild. But those voices, to the extent they were heard at all, ran mostly against the American grain, ran counter to the spirit and even the common sense of a westering people who saw boundlessness before them.

And so we are left with a few hundred remnants of untamed land, most in the mountain West and most very small, which we call the National Wilderness Preservation System. Those remnants aren't nearly as secure as the ringing language of the Wilderness Act would seem to suggest. The act had holes in it to begin with, and its insufficiencies are becoming more evident as pressure builds against the last wild places. The pressure comes most obviously from extractive industries that value the land for what it can be made to produce, but they are only surrogates for a far more powerful force that will not be stopped by a line on a map or a sign at a trailhead. Ultimately, the fate of wilderness will be determined not by Congress or the President or any government agency, but by the way we live.

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Climb Mount Hood, Mount Jefferson, or Mount Washington in the Oregon Cascades, and you will see the situation of American wilderness in microcosm. To the east, on the semiarid steppe that begins the Great Basin, you'll look out on irrigated pasture and alfalfa fields, a few pine-covered hills and volcanic outcrops, thin highways slanting off into distance. Looking west, through a haze of auto smog and smoke from field burning,

you'll see the Willamette Valley, the paradise at the end of the Oregon Trail, bright green with pasture and orchards and fields of hay. You'll see towns and small cities, Interstate 5 with its continual glint of traffic, a network of highways and roads.

North and south along the wavy green Cascades going blue in the distance, you'll enjoy the sight of an occasional solitary volcano like the one you're standing on and a smattering of small lakes. But you'll find yourself staring at something else: an irregular patchwork of sheared ground along both flanks of the range, at some points reaching the crest, with white road-squiggles threading through it. The overall effect may suggest to you what it once suggested to me—mange on the sides and back of a dog. But mange is scraggly, uneven. These clearcut barrens are geometric, made with fine precision. Mange doesn't know what it's doing to the dog. What's working on these mountains knows exactly what it's doing.

Standing on that peak, you should be aware that almost every acre in your view, stripped or still wooded, is land you own. It's national forest land, part of a system of federal reserves we set aside a century ago, or thought we did, for wise future use. You should also know that up to one-fifth of the standing forest you see has been marked with flags and spray paint for timber sales or is planned for marking. The Northwest timber pipeline has been frozen for the past three years by conservationist lawsuits. It may reopen soon, at some reduced rate.

And what of wilderness in the scene before you? Is the mostly intact crest of the range protected as wilderness? Not much. The U.S. Forest Service currently manages the higher country for

recreation and wildlife; but if its fir and lodgepole pine become valuable to the nation, it can be managed differently. The only congressionally protected wilderness within your view is a spare archipelago of little islands around the range's solitary volcanoes—Hood, Jefferson, Three-Fingered Jack, Washington, the Three Sisters, Diamond Peak. Those islands, the Wilderness Act has decreed, shall remain untrammelled by man.

We have protected those mountain islands in part because we love alpine scenery. But we love other terrains and biomes too. We love big trees, for instance—groves of centuries-old Douglas firs, their pocked and furrowed trunks as much as 15 feet around and 200 feet tall, their great broken crowns filtering sunlight to a muted clarity. Very few such groves stand within wilderness areas. Very few such groves stand at all. They yield the best and most timber, and so they are gone to clearcuts now, and we in the Pacific Northwest are fighting bitterly over the scraps of old-growth forest that remain. We wouldn't be having that fight, or not so bitterly, if a fair representation of old growth had been included in the wilderness system, but it was too commercially valuable for that.

The wilderness mountain on which you're standing, on the other hand, like most parcels in the system, is mostly rock and ice and straggly trees. It has scant commodity value at present. But the logic of the scraped and battered ground that surrounds you isn't hard to read, and if you love your mountain, it should make you nervous.

You can read the same logic, if not always so boldly written, in most any American landscape. You can read it in California's great Central Valley, for example, where 95 percent of the original

wetlands have been lost to agribusiness and development. In the Southwest and the intermountain West, where little more than a century of stock grazing has set loose more soil erosion than occurred in the previous 10,000 years. In the Mississippi-Missouri river drainage, where half the original topsoil, the best in the world, has gone to sea, and the other half is going at a faster rate. In the ravaged hills and poisoned waters of West Virginia and eastern Kentucky, where coal has been ripped from the ground to give us power. You can read it, too, in skeletal forests and sterile lakes in the Smokies and Alleghenies and Adirondacks, where the coal has returned in precipitation as much as 400 times more acidic than ordinary rain.

This is the logic of the American chapter of the world economy, a living organism composed of us and all that we do. It is a beast more fearsome than any the Pilgrims could have imagined when they gazed on the wild shore of North America four centuries ago. What other creature could have silenced forever the raucous hordes of passenger pigeons that once streamed through the sky for days at a time? Or stripped the continent of 60 million buffalo and routed wolf and grizzly into a few remote strongholds? Or driven the great thunderbird of the California hills into zoos and the merest glimmer of its ancient life in the wild?

All humans exert control on wild nature to feed, clothe, and shelter themselves, but we are especially ambitious and gifted controllers. We take more and more from the land, and not only what we need—we take what our increasingly powerful technologies allow us to take, and what we take we learn to need, and our numbers grow, and we need more, and we take more.

We have begun to see how dangerous we are to the natural world, and so we have enacted a few restraints such as the Wilderness Act. But compromises were required to get the act through Congress. Stock grazing was grandfathered into many western wilderness areas, resulting in cropped grasslands and mucked-up springs and streams. Mining also was grandfathered in, and existing and potential areas were open to new claims until 1984. Claims have been filed in most wilderness areas in the West. And it's perfectly plausible that the Oregon mountain you're standing on may harbor a mineral that will become valuable in the 21st century. Will the stirring phrases of the Wilderness Act save it from harm? Maybe. But it would not be too surprising if the same regard for nature that surgically mutilated those forested slopes someday pushes up the mountain and starts blasting the rock beneath you.

In fact, the invasion is already under way, by proxy. The acid precipitation that is ruining lakes and forests in the East is now occurring in the West too, at lower but rising levels. Auto smog from the urban centers of the Pacific Coast has been drifting into the Cascades and the Sierra Nevada for years, passing freely across wilderness boundaries, disrupting photosynthesis in trees and weakening their resistance to disease. Unless our habits of energy consumption change, these effects will only increase. If we don't consume our wilderness for its raw materials, we may yet poison it to death.

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No wild place will be safe from us until we reconsider our devout belief that economic growth is always and limitlessly good and examine our equally devout belief in the unlimited use of

technology. Taken together, these two articles of faith compose a modern secular orthodoxy that pervades our culture. The object of its worship is the future—a future, we are told, in which our lives will be made safer, longer, healthier, better informed, and far more pleasurable. A new and improved future. And a future—this isn't in the advertising—that threatens not only the wild places of our continent but the very quality of wildness itself.

In the chorus of boosterism for a new technology, little is ever heard of its potential dangers, in part because the most significant dangers associated with any profound tampering with nature can't be foreseen. The nuclear enthusiasts of the 1950s promised that energy would be too cheap to meter, that radiation was containable and virtually harmless anyway. Forty years later, as the downwinders in Utah and Washington State have learned in the cruelest way, the costs and benefits of splitting the atom figure differently.

At this point in our technological history, it can only be naive to expect a different result from genetic engineering, which is currently the most prominent of our manipulative interventions into the life of the wild universe. The paradox of our obsessive urge to control is that we invariably release forces that will not be controlled, or that can be controlled only with great difficulty and at great expense.

But to judge genetic engineering by its possible effects is to judge it by an insufficient standard. It is necessary to ask not only whether it is wise, but also whether it is right. To revise in a laboratory what evolution has spent 4 billion years making must be an exhilarating experience. But for all our prodigious technical abilities, we cannot

manufacture so much as one gene, one paramecium, one nerve fiber in the brain of a blue whale. We do not know how it happened that this rock-and-water planet stirred in its sleep and woke into sentient life, or how one fertile cell becomes an elephant, or how the uncountable lives we live among twine together in the wild mysteries we call ecosystems. Jack Ward Thomas, the new chief of the Forest Service, put it this way at last year's Northwest forest conference: "Ecosystems are more complex than we think. They're more complex than we *can* think."

We tend to revere technological inventors and interveners as heroes, as modern woodsmen penetrating the frontiers of human knowledge. I think we need a new kind of hero, one whose mission is not to breach limits but to understand them and to show us how to abide by those that are necessary and just—a hero capable of restraining what he *can* do in favor of what he *ought* to do for the good of the entire community. Some scientists, most corporate executives, and all members in good standing of the economic-technological orthodoxy will characterize this idea as a travesty, a capitulation of the questing human spirit. I call it growing up. As a child matures, he learns he is but one rightful member of a human community that sets limits on the satisfaction of his wishes. He then learns, I hope, what Aldo Leopold sketched as the "land ethic"—that his community extends beyond the human and includes other forms of life. And he also needs to learn that his known community opens around him into mysteries both beautiful and sacred, mysteries to which he belongs, mysteries which do not belong to him.

There is something in us deeply intolerant of mystery, something that

drives us to prod and probe the natural world and crack open more and more of its secrets and tinker with its deepest workings. We open darknesses to the light of rationality as relentlessly as the early settlers once opened the eastern forests. We do this in the name of knowledge, but our knowledge is too often a knife—it cuts the world into pieces, wonders where its life and spirit have gone, and cuts again.

I don't mean to indict science in general. Many of the foremost champions of wild nature are scientists, and their work has done much to warn us of the environmental limits we are transgressing. I am arguing only against interventionist science that wants to splice genes, split atoms, or otherwise manipulate the wild—science aimed more at control than understanding, science that assumes ownership of the natural mysteries. When technological specialists come to believe that nature is answerable to their own prerogatives, they are not serving but endangering the greater community.

The same reasoning is evident in our seemingly boundless interest in a kind of pseudoknowledge its devotees call information. The "Information Superhighway" is being readied to convey us into our future, and to travel it, evidently, we need only buy the right machines and connections to machines. I hear little news about where the Superhighway is expected to lead us, and why. Apparently it will take us by means of information into a condition of more information for the reason that information is good for us.

We will have 500 channels of interactive television, it seems. A few of those channels will feed us "information" about weather and animals and

natural landscapes, for which some of us will be hungry. Old proclivities die hard. But if we travel the highway far enough, we are bound to arrive at the condition for which television has been preparing us for decades—the electronic image of a redwood will replace the natural experience of a redwood, and so the real tree with roots in the ground will logically become expendable. In the evermore-real-seeming ghosts that haunt our screens, in the video-game sensory immersion of virtual reality, the new technology promises to complete the procedure of controlling nature, finally, by becoming it.

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The psychologist and writer James Hillman has said that our inability to experience the beautiful is what separates us from the world. We are sick and therefore the land is sick because we no longer know its beauty, and our love for it has withered. His diagnosis may seem unlikely, given that we in America flock by the millions to the scenic splendors of our national parks and other natural areas. But there is something rote and decidedly passionless in our experience of natural beauty. I feel it whenever I stop at a scenic overlook, and I see it in other watchers. I rarely see enthusiasm or even animation, but mostly bored children and impassive parents showing the scenery to their cameras and video recorders. Though drawn to nature, we are still somehow insensible to it. Our lives are so removed from the land that it's become just a scene for us, an image to be captured and taken home. As tourists we don't damage the land as a mining or timber corporation would, but essentially we do what they do—we value the land for one of its extractable qualities. We have reduced nat-

ural beauty to postcard prettiness, another commodity for our consumption.

It's a different beauty of the land, a deeper and far more lively beauty, that we have largely forfeited. To know this beauty requires more than eyes and can't be done at a distance. It takes legs and sweat, hard breathing, and sometimes pain. It requires that we approach the land on its own terms, that we enter it respectfully and yield ourselves to its presence. The beauty I'm speaking of is simply the beauty of the given world—the land as it is, with its particular lives, its various weathers, its dynamic and singular wholeness. All of us feel some stirring for this beauty, some twitch or flood of yearning. Any scrap of nature provides a portion of it; but only our wild places can give us its full measure, and renew our love for it, and show us how it lives within ourselves.

Wilderness, the word, shares roots with *willfulness*, the condition of being ungovernable, beyond authority and control. When I ask myself what wilderness most truly is, what its beauty is most made of, willfulness is what I find—a vast, unconscious willfulness that bodies forth mountains from seas of magma, dreams the dark chaos of soil into forests of spiring trees, fashions meadowlarks and black bears from the long weaving strands of evolutionary time. In this willfulness I am something small—rightfully, refreshingly small. In the wild I experience myself and my kind in something like actual scale. And except perhaps for one willful mosquito or one paramount pebble beneath my sleeping bag, I am happy.

In our restless sight-seeing of nature, skimming down the road from one view to another, we see much more than we can absorb. In wilderness, we absorb

much more than we see. We walk to rhythms longer than the conscious mind can know—the rhythm of sequoias rising, the Escalante carving its canyon, the slow titanic stirring of this crust of earth that bears us. The rhythm of the wild carries through shimmering aspen leaves and the blast of Mount St. Helens, through the boom of surf at Cape Perpetua and the hoarse whistle of a red-tailed hawk adrift in the summer sky. Life and death both dance to it—the browsing deer, the cougar that snaps the deer's neck and rips its belly, and the good carrion eaters that ultimately transform the cougar.

First and finally, wilderness is what we are. "Talk of mysteries!" wrote Thoreau. "Think of our life in nature,—daily to be shown matter, to come in contact with it,—rocks, trees, wind on our cheeks! the *solid* earth! the *actual* world!" If you follow the physicists, the actual world is made of willful little particles with names like *quark* and *gluon* that dodge in and out of existence, enlivening a universe born some 15 billion years ago, a form-seeking universe that has organized itself into nebulas, stars, planets, and Thoreau with wind on his cheeks. If you follow others, you find other accounts. There are many good books, but even the book you most believe in can tell no more than a glancing passage of the actual story of being. We want to understand, we want to know how it begins and ends and why, but the story, not our knowing, is what matters most. To be part of this—to rest in a mesa still warm with sun and watch the stars brighten to their fierce glitter, the little wind smelling of sage, while far away a coyote loosens his wail. . . . In this beauty, this mystery, I am glad to be alive. This beautiful mystery makes me whole.

If the sickness of the land is our sickness, its health can be our health. True empowerment comes from membership in the wild matrix that gave birth to us and sustains us even in our distance and contempt. We have much to learn from other members, if we can stop ourselves from destroying them. Much to learn from wild salmon, who leap the rapids with a faithfulness to home we have scarcely begun to imagine for ourselves. Much to learn from old-growth forest, how its diverse and vigorous commonwealth sustains itself through time. We might learn patience from the bristlecones, fortitude from monarch butterflies, the dignity of space and breathing room from junipers and saguaros.

When I spend too many hours reading newspapers or watching television, too many weeks breathing city air and hardening my ears to city noises, I don't believe we as a people are capable of learning anything more than how to operate the next machine. But wilderness, as Wallace Stegner wrote, is the geography of hope. When I'm able to pry myself out of town and let the land inform me, an unreasonable optimism comes over me. The land lets me feel no other way. It's been getting by for a long time, after all, and I expect it will outlive us and the worst we can do.

At our best, there is sanity among us, and it may prosper. There is a passionate caring for the wild in many of our younger people. If, with the help of the Wilderness Act and the system it created, we can nurse our wild remnants a few decades into the next century, we may see the emergence of the new heroism we need, a heroism capable of discerning the rightful and necessary limits of our place on this continent.

The Wilderness Act was a beginning, a momentous first step, but it accepts the premise of our unhealthy culture, fencing off only a few scraps of unspoiled land. The next step is to redefine wilderness according to the premise of nature's health—as entire, vigorous ecosystems and landscapes in the full array of their diversity. To define wilderness, in other words, as wilderness defines itself, and in that way restore and perpetuate the biotic well-being of our homeland.

That step will take centuries to complete. It means withdrawing ourselves a respectful distance, voluntarily closing roads and removing habitations, so that nature can expand and join some of the remnants into greater wilderness heartlands, large enough for grizzlies and wolves and wolverines to thrive, and those members of our own species who require a lot of room to get lost in. Wild heartlands not only of the western moun-

tains, but heartlands of deserts and plains and prairies, heartlands of the southern and eastern forests. Regions outside those wildlands will be farmed and managed for multiple use—not as we have mismanaged our public and private lands, but with regard for the wildness that is the land's long-term health and fertility. And outside the buffer zones of multiple use will be the places where most of us live, in such numbers and economies as the vitality of the entire community will permit.

Maybe we are not capable of such a change. But if we can make that step, if we can find the generosity to give back a fair portion of all we have taken, then we will have a National Wilderness Preservation System worthy of this generous, beautiful, and hard-used continent. Then we may find ourselves members at last of the American land.