A bold conservation vision calls for a return to the South's once-vast longleaf pine forests. (Carlton Ward Jr.)

Can the World Really Set Aside Half of the Planet for Wildlife?

The eminent evolutionary biologist E.O. Wilson has an audacious vision for saving Earth from a cataclysmic extinction event

By Tony Hiss
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"Battles are where the fun is," said E.O. Wilson, the great evolutionary biologist, "and where the most rapid advances are made." We were sitting in oversized rocking chairs in a northwest Florida guest cottage with two deep porches and half-gallons of butter-pecan ice cream in the freezer, a Wilson favorite. He'd invited me here to look at what he considers a new approach to conservation, a new ecological Grail that, naturally, won't happen without a fight.

Wilson, 85, is the author of more than 25 books, many of which have changed scientific understanding of human nature and of

how the living part of the planet is put together.

Known as the father of sociobiology, he is also hailed as the pre-eminent champion of biodiversity: Wilson coined the word "biophilia" to suggest that people have an innate affinity for other species, and his now widely accepted "theory of island biogeography" explains why national parks and all confined landscapes inevitably lose species. He grew up in and around Mobile, Alabama, and has been at Harvard for over 60 years but still calls himself "a Southern boy who came north to earn a living." He is courtly, twinkly, soft-spoken, has a shock of unruly white hair, and is slightly stooped from bending over to look at small things all his life—he's the world's leading authority on ants. Wilson has earned more than a hundred scientific awards and other honors, including two Pulitzer Prizes. And perhaps his most urgent project is a quest to refute conservation skeptics who think there isn't enough left of the natural world to be worth saving.

SOURCES — HIGHSTEAD REGIONAL CONSERVATION; HARVARD FOREST; NATIONAL LAND COVER DATABASE / WILDLANDS AND WOODLANDS.ORG; U.S GEOLOGICAL SOCIETY; GLOBAL FOREST WATCH; AMERICA'S LONGLEAF RESTORATION INITIATIVE; WILDLANDS NETWORK; MATTHEW ARESCO. NOKUSE PLANTATION

Throughout the 544 million or so years since hard-shelled animals first appeared, there has been a slow increase in the number of plants and animals on the planet, despite five mass extinction events. The high point of biodiversity likely coincided with the

moment modern humans left Africa and spread out across the globe 60,000 years ago. As people arrived, other species faltered and vanished, slowly at first and now with such acceleration that Wilson talks of a coming "biological holocaust," the sixth mass extinction event, the only one caused not by some cataclysm but by a single species—us.

Wilson recently calculated that the only way humanity could stave off a mass extinction crisis, as devastating as the one that killed the dinosaurs 65 million years ago, would be to set aside half the planet as permanently protected areas for the ten million other species. "Half Earth," in other words, as I began calling it—half for us, half for them. A version of this idea has been in circulation among conservationists for some time.

"It's been in my mind for years," Wilson told me, "that people haven't been thinking big enough—even conservationists. Half Earth is the goal, but it's how we get there, and whether we can come up with a system of wild landscapes we can hang onto. I see a chain of uninterrupted corridors forming, with twists and turns, some of them opening up to become wide enough to accommodate national biodiversity parks, a new kind of park that won't let species vanish."

I had also begun to think about such wildland chains as "Long Landscapes," and Wilson said he liked the idea that they could meet climate change head on: Those that run north-south, like the initiative in the West known as Yellowstone-to-Yukon, can let life move north as things warm up, and those that run east-west may have the benefit of letting life move east, away from the west, which in the future may not see as much rain. "Why, when this thing gets really going," Wilson said, "you'll be so surrounded, so enveloped by connected corridors that you'll almost never not be in a national park, or at any rate in a landscape that leads to a national park."

Is this Half Earth vision even possible, I wondered, and what might it look like? The question would send me across the States, to a bison ranch in Montana and to emerging wildlife corridors in New England, but according to Wilson, the pathway to a planet permanently half-protected—something he thinks we could accomplish in half a century—begins right beyond our cottage near the town of Freeport, Florida, in a forest being created by M.C. Davis, a multimillionaire who grew up in a Panhandle trailer and as a young man raised his first stake playing poker.

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Like Wilson, M.C. Davis is a tireless, elaborately courteous Southern charmer. But Wilson himself is quick to point out a difference: "I only write about saving biodiversity. He's actually doing it."

Davis' idea has been to revive the "Piney Woods," the signature ecosystem of the American Southeast. The longleaf pine forest once covered 90 million acres, or about 60 percent of the land, in a virtually continuous 1,200-mile stretch across nine states from Virginia to East Texas. That forest has been reduced by 97 percent, and there are about three million acres of it left. That's more catastrophic than what has happened to coral reefs (10 percent to 20 percent destroyed) or the Amazon rainforest (more than 20 percent). The longleaf pine forest's "Big Cut," as it's still known, began after the Civil War and left behind what commentators referred to as "a sea of stumps." Much of the land has since been reforested, but de-longleafed, and is now planted with row after row of faster-growing pines raised for pulpwood.

Davis, a commodities trader in timber and oil and gas rights, who grew up 65 miles west of his forest, is jovial, folksy, forceful, slightly rumpled-looking, unassuming ("I'm a dirt-road, Panhandle guy"). But for the past decade he has been spending half a million dollars a year planting longleaf pine trees and another half million on other parts of a longleaf forest.

Davis remembers his awakening. He got stuck in a big pileup on I-4 near Tampa, saw a high-school marquee with the sign "Black Bear Seminar" and walked in the door: "There was an old drunk, and a politician who'd thought there'd be a crowd, and a couple of Canadians looking for day-old doughnuts and coffee—and, up on the stage, two women talking about saving black bears. They were riveting. The next day I gave those ladies enough money to keep going for another two years, which I think scared them, it was so out of the blue. Then I asked them for a 100-book environmental reading list for me, for my education. I spent a year reading Thoreau, John Muir, Ed Wilson. Then I started buying up land to see what I could do."

If you were going to save Florida black bears, it was clear from the start, you'd have to save longleaf forests, their preferred habitat. An adult male black bear roams across perhaps a hundred square miles of land. North Florida already had some good-sized clusters of publicly owned longleaf—national forests, state forests, wildlife management areas and, in the western Panhandle, Eglin Air Force Base, a huge facility that back before World War II had itself been a national forest. If you could add in enough territory to put these pieces together, they'd amount to something greater than just a "postage stamp" of the natural world, as conservationists had started calling the national parks. The problem was that 70 miles separated the first two protected longleaf forests—and it was another 95 miles to the third.

As he dug deeper, Davis realized that the coastal Southeast is a "hyperdiverse" biological hotspot with up to 60 different species in

a single square yard—though you might not think so when you see it, since a mature longleaf forest looks clipped and kempt, more like a big city park. Without any human intervention, here is a forest with tall, straight trees that are rather widely spaced, plenty of sunlight and lots of open, grassy meadows. Longleaf branches out only after it's high overhead, where glistening needles up to two-and-a-half-feet long are arrayed in pomponlike sprays. Below the branches is empty space a hawk can glide through.

Davis' plan was to buy up and re-longleaf the "in-between" open space east of Eglin and west of a protected river corridor. The available land was close to people, just a few miles inland from the sugar-white sands and high-rise condos of Gulf Coast beach towns. These tourist-driven communities used to be known as the Redneck Riviera, featuring attractions like the Snake-a-Torium, but more recently have been marketing themselves as the Emerald Coast (with slightly confusing slogans like "White Sand, White Wine, White Necks"). There was nothing, however, even remotely upscale about the land Davis had his eye on. It was dismal-looking rather than dazzling, a series of abandoned peanut farms and unproductive pulpwood forests with low asking prices.

Davis' approach—"M.C.'s folly," conservationists called it, because it seemed too ambitious—was something that emerged from Wilson's mid-1960s demonstration that islands of habitat lose species over time. "Ed set the course," Davis told me, "by showing us that doing something huge is our only hope. We're all marching under his umbrella, and he's so inspirational he makes people like me take action."

Davis bought 51,000 acres of degraded farms and forests, a swath of land up to five miles wide that included barely 1,500 acres of longleaf pine in scattered patches. Basically, he'd be starting from scratch, and would be "rewilding" his property. Davis named his bedraggled purchase Nokuse Plantation. Pronounced "No-GO-see," Nokuse means "bear" in the language of the Muskogee people who once lived there, but their written alphabet doesn't have a hard "G." Nokuse is the biggest private preserve and the biggest restoration project east of the Mississippi.

To honor Wilson, Davis built the dazzling, $12 million E.O. Wilson Biophilia Center at one edge of Nokuse, where thousands of fourth through seventh graders from six counties get free classes that let them hold real baby gopher tortoises and clamber and pose for pictures on a giant ant sculpture.

Wilson regards Nokuse as part of "the final stage of conservation." Back in 1871, the United States electrified the world by inventing the national park, setting aside 2.2 million acres, an area larger than Delaware, to create Yellowstone National Park as a public "pleasuring ground." (The world now has 5,000 national parks among its 200,000 protected areas.) Half a century ago, the vision expanded. Fifty years ago this month, President Johnson signed the Wilderness Act, which for the first time permanently protected land for its own sake, establishing a National Wilderness Preservation System of areas where "the earth and community of life are untrammeled by man, where man is only a visitor who does not remain." This was hailed as securing the "freedom of the wilderness"; Wilson would call it "the conservation of eternity." The 9.1 million acres of American wilderness protected in 1964 have since grown to 109.5 million acres (4 percent of the country), thanks to citizen groups working on behalf of the rest of life.

The new challenge, as Wilson sees it, is to link up national parks and wilderness reserves and restored landscapes to "protect in perpetuity entire faunas and floras." He has high praise for several such projects out West—especially the Yellowstone-to-Yukon initiative to join vast areas of the U.S. and Canada, and the even more extensive Western Wildway vision, a tri-national arc of land along the length of the Rockies from Mexico to Alaska sponsored by the Wildlands Network, a consortium of biologists and activists headquartered in Seattle.

In early sketches of some proposed "cores and corridors" systems, the connecting corridors look thin and spindly, like brain cells yoked together by the wiring of narrow, protruding axons. Even the word "corridor" sounds restrictive and unwelcoming, conjuring up images of school and hospital hallways, non-places for hurrying along or skulking through on the way to where you're really going. Davis' new longleaf corridor had to be more than just a pass-through place. In a hotspot where so many species are so densely crowded together, each rewilded acre had to be a stopping place, as well—a haven and a highway.

Although, frankly, much of Nokuse is still scruffy. A longleaf reforestation turns out to look a lot like a construction zone, as Davis acknowledged while driving me over bumpy trails in a golf cart. "Well," he said, "I tell people we're in Year 13 of a 300-year program. I could easily make 1,000 acres look beautiful, but the extinction clock's ticking, so I decided to take on the bigger challenge."

At Nokuse, Davis and his crew of workers have thinned 22,000 acres of pulpwood pines and planted eight million longleaf seedlings. He's brought flames back to the woods after a half-century absence, setting carefully controlled fires on about 10,000 acres every year. For the past 25 million years, a prominent feature of the weather in this coastal environment has been violent summer thunderstorms and strobelike lightning strikes. What grew here, uniquely, was a fire-and-rain forest, one that to stay healthy and keep its open glades, thirsts as much for scorching as it does for drenching (the one starts seeds germinating, the other

lets them grow). Longleaf itself only thrives because it has evolved a slow, intricate fire dance that lets it evade being burned: An infant longleaf looks like a clump of ground-hugging grass, and it keeps that humble shape for up to 15 years before entering a "rocket stage" and growing four feet straight up in a single burst that takes it beyond a ground fire's lethal reach.

Something's going right at Nokuse—bears have reintroduced themselves, having ambled in from Eglin Air Force Base next door and then stuck around. Davis is planning to bring back red-cockaded woodpeckers, and, one starry night out on the guest-cottage porch, he also started talking to Wilson and me about finding a place for bison (the area's last known woodland bison was shot just before the American Revolution).

"Oh, now you've got me dreaming," Wilson said about the bison. "You've set my imagination on fire!"

So far, though, Davis' proudest accomplishment has been an intense statewide recruitment for a seemingly uncharismatic creature, the foot-long gopher tortoise. Nokuse Plantation director Matt Aresco, a biologist with a PhD in turtle studies, has retrieved 3,500 otherwise doomed gopher tortoises from all over Florida. These "ecosystem engineers," as one conservation biologist calls them, have the kind of transforming influence on their surroundings that beaver families do—although it's unseen. Only two-thirds of a longleaf forest ecosystem is visible (trees and ground cover), with the rest underground, and 360 animal species take shelter in the 40-foot-long, 10-foot-deep burrows excavated by shy and dusty gopher tortoises. They retreat down these paths to where fires and hurricanes can't penetrate, and where temperatures never sink below 55 degrees in winter or get above 80 in summer. The Florida mouse digs side tunnels, and a tiny, tiny ant lives on the eggs of a spider found only in these burrows.

The tortoises, guarantors and guardians of longleaf abundance, have suffered badly at the hands of both rich and poor: During the Depression, they were dug up and eaten (known back then as "Hoover chickens"). Now they're buried and left there. The sandy soils they dig through are the same soils that developers build on, and gopher tortoises can't dig up, only down, so to kill a gopher tortoise you only have to stop up the tunnel entrance.

In the luminous glow of intense orange Florida sunsets, Davis and Wilson would sit on the porch, planning. They pored over maps of nearby industrial timberland that if acquired and re-longleafed, could link Nokuse to the protected half-million-acres almost due east, thereby summoning a Long Landscape—more than 160 miles of continuous longleaf in a grand biodiversity corridor. Then there'd be room enough, Davis pointed out, for even the widest-ranging species, like red wolves and panthers.

Davis kindly offered Wilson and me a ride to Boston in his Cessna Citation jet, which had a black bear, the Nokuse logo, emblazoned on its tail. (He has since sold that aircraft.) Wilson, who is indefatigable, had suffered a slight stroke during our April 2013 visit, but he bounced out of the hospital two days later and by the following day was holding his hospital-issued walker over his head like a barbell. He has made a complete recovery, and this year, on our return visit to Nokuse, he spent a morning chasing butterflies. On the plane we talked about a park within the longleaf corridor in Mobile, a project that Wilson is working on with a horticulturist named Bill Finch, who, Wilson says, "is one of the two best naturalists in the world—and the other's in Mozambique." The Mobile Delta is a vast and diverse wilderness with over 300 species of birds. You'd think you'd returned to the early 19th century—it has been called "America's Amazon." But this would be an urban park, too, since the wild lands begin only 200 yards from the courthouse in downtown Mobile.

Looking out the window as we flew along the Appalachians, I told Wilson that I saw some Long Landscape parallels with the interstate highway system down below. A wilderness Appalachian corridor could run up and down the East Coast. The great, unbroken forests across all of northern Canada could be another. Together with the Western Wildway and a resurgent longleaf forest, this pattern would almost completely enclose the edges of the continent in a sequence of interlocking Long Landscapes bordered by the Atlantic, Pacific and Arctic oceans and the Gulf of Mexico. From sea to shining sea and then some. With, of course, additional and more inland routes to be added later, such as the sweeping grasslands of the Great Plains, which cover parts of ten states just east of the Rockies.

It all sounded within reach, from high in the air.

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New England would seem to be a Half Earth slam dunk, a landscape on the upswing of a yo-yoing transformation. The region was 90 percent forested when the Pilgrims arrived, but almost 200 years later farmers chopped down all but 20 percent of the trees during a "sheep fever" that can in part be blamed on Napoleon and the first stirrings of globalization.

When Napoleon overran Portugal in 1810, a Vermonter carried off a herd of merino sheep, prized for their soft, premium-priced wool, which until then had been a monopoly of the Portuguese aristocracy. The 30-year wool craze that followed has been called "a mania as powerful as any religious fanaticism." New England's famous stone walls, rocks piled up by hand, like the Egyptian pyramids, and with more stones than the pyramids, are a remnant of that period. Then this vast series of sheep pens was abruptly

abandoned as farmers and herders moved west.

The forests returned, though no one in the 21st century will see anything like those first forests' practically sequoia-size Eastern white pines, trees that awed early settlers. Timbering is common in the newer woods, and even if left strictly alone, white pines need 400 years to tower over everything in sight. The "reforests," if you can call them that, instill their own wonder, though. Self-seeded, they've spread again to cover 79 percent of New England, and a recent report refers to the entire six-state region as a "continental-scale habitat corridor." If the pace of land conservation can be doubled, says this same clarion-call report, "Wildlands and Woodlands," then 50 years from now New England can stay 70 percent forested forever. The area, it says, is something rare in the biosphere: a "second-chance landscape."

Some of the conservationists who toured me around give this outcome no better than a 50-50 chance. Most of the land in New England is in private hands, with, in general, larger tracts up north and much smaller holdings as you move south (100-, 60-, or 20-acre lots). Which means that property maps of New England display a fragmented landscape rather than a reunified one. No one is proposing turning New England into a national park. What you can do, though, conservationists say, is ensure biodiversity on private property by paying landowners to protect present and future forests; in technical terms this is known as a "conservation easement." Approaching thousands of individual landowners about this, one at a time, could defend and define natural corridors so they remain seamless for animals and plants, setting up formal connections between parcels that previously were in a legal sense merely adjacent.

Money is an obstacle—though easements cost less than outright land purchases—and another is finding the people to do the paperwork, which traditionally has been handled by small local groups called land trusts; they're now amalgamating themselves into larger associations called RCPs, regional conservation partnerships, so as to take on bigger projects. Ed Wilson identified biophilia as the innate affinity for the rest of life within us all. How large a force field can biophilia exert within a second-chance landscape?

One of the most mind-opening aspects of the Half Earth quest is that it's a reimagining of the possible, bringing into focus what had been a blur. I found one north-south wildlife corridor, about 200 miles in length, that couldn't be called forgotten because it was never celebrated, although Thoreau wrote lovingly about one mountaintop, Monadnock, up near its northern end. On a satellite-generated nighttime map of New England, now that such things exist, this corridor pops out unmistakably. These maps show city lights as bright white smears separated by a fascinating absence and emptiness, the almost uninterrupted blackness of the "dark landscapes" in between—that dark is where the wild things are.

The column of dark land in the middle of southern New England has a band of light on one side, made by New York and the cities along the Connecticut River Valley, and a splash of white on the other, radiated by Boston and Providence. The dark land itself is a cascade of rolling, wooded hills that course down from the White Mountains through New Hampshire, Massachusetts and Connecticut on their way to the marshes along Long Island Sound. It's a corridor that's never had a name, except for a geological one, "eastern uplands." Its hills are humbler than the Taconics and Berkshires to the west, so it has never attracted a school of painters or their wealth or cachet. But because of its intactness, this potential corridor—White Mountains to Whitecaps, it might be called, or W2W—is the single decisive interruption in what is now a 400-mile-long line of cities from Washington to Boston, the so-called Northeast Megaregion.

W2W derives much of its strength from an act of brute force. In the 1930s, Boston drowned four towns, evicted 2,500 people and moved 7,600 graves to create the Quabbin Reservoir, a huge, U-shaped lake in the center of Massachusetts. Further development was banned on 56,000 acres of woodland around the reservoir to keep its water pure. Moose, black bears and bald eagles, all long gone, returned. Anchored by this "accidental wilderness," as it's been called, three active RCPs lead off from the reservoir, two to the north, one to the south. The biggest is Q2C, the Quabbin-to-Cardigan Partnership, whose goal is to protect up to half of the two million acres between the reservoir and a mountain at the southern tip of the White Mountains.

Outstandingly and even improbably, W2W offers an older, slower sense of countryside that's no longer common in the East; it's a Truman-era setting, a seemingly endless landscape, where towns are like way stations or solitary boats bobbing on what an 18th-century geographer called "an ocean of woods." Which is what you see today looking down from a small plane—a few towns, a few farms and the ceaseless woods. "There are hawks in my yard," says Chris Wells, a Q2C coordinator who grew up in suburban New Jersey, studied planning in Manhattan and now lives in tiny Wilmot, New Hampshire. "Bobcats on the front lawn. Some nights you hear coyotes howl—I could be living in the African veld."

Dan Donahue is director of land protection and stewardship at the Norcross Wildlife Sanctuary, which straddles the Massachusetts-Connecticut border not far south of Quabbin. The core of Norcross' 8,000 acres has a remoteness to it, a hushed, back-of-beyond quality that encourages you to speak more quietly. The land was bought in the 1930s by Arthur D. Norcross, founder of the Norcross Greeting Card Company (still remembered for popularizing Valentine's Day cards). His great interest was

"rescue work," relocating plants about to be destroyed—including, as he noted proudly, an entire colony of Hartford fern taken from a doomed Quabbin town just "before the bulldozer and the flame throwers did their work and the area was flooded."

Donahue told me he sees W2W as a fire wall that can dramatically slow climate change. "Mr. Norcross saw this place as an ark," Donahue said. "The truth is you can't make an ark big enough to save species. But you can have arcs instead—arcs of land, like the one we're standing right in the middle of. "

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In Montana's Gallatin Valley one July afternoon, a pickup-truck prowl at the Flying D Ranch, near Bozeman, felt like an instantaneous return to an unrecoverable past, to the "seens of visionary inchantment" that Meriwether Lewis came across when he and William Clark made their way across Montana in 1805. Lewis recorded encountering—there was no spell check in the expedition's equipment—"immence herds of Buffaloe, Elk, deer & Antelope feeding in one common and boundless pasture." We were on the lookout for wolves; I was willing to settle for bison.

The 113,613-acre Flying D, up at the northwest corner of Greater Yellowstone, is a Ted Turner operation, and only a smidgen of the two million acres he owns in the United States and Argentina. The ranch has almost 2,000 elk and maybe 5,000 bison. Before the 1870s, it has been said, it would've been easier to count all the leaves in a forest than to count the bison. After 15 years of mass slaughter, though, there were only 325 bison left in the nation.

Like Nokuse in Florida, the Flying D is a large-scale, long-term experiment in ecosystem restoration. The premise, according to State Senator Mike Phillips (the pickup- truck driver), is that in ranch country, a wildlife refuge can pay for itself if it's also run as a business. The big bison herd, which replaced a cattle operation, is largely raised for sale—bison burgers are available at all of Turner's 45 Ted's Montana Grill restaurants around the country. A few bull elk are hunted annually by high-end outfitters. Other species are welcomed, celebrated: mule deer, grizzlies, cougars, moose, pronghorn antelope, cutthroat trout, the occasional wolverine—nearly all the animals that were present before settlers arrived in Lewis and Clark's wake. Wolves found their way to the D in 2002, seven years after being reintroduced to Yellowstone. The D's wolf pack, called the Beartrap pack, is the largest in Greater Yellowstone—or was until a year ago, when it got so big it split into two separate groups.

Phillips, a biologist and a friend of Wilson's, was elected to the Democratic minority in the Montana Senate two years ago. Since 1997 he has also served as the founding executive director of the Turner Endangered Species Fund (TESF), "the largest and most significant such family-funded initiative that we know of in the world," he says. I ask him what the D will look like a hundred years from now. "Exactly like now," he says with a laugh, "providing we get a good June rain."

Ted Turner was making one of his many visits to the D that afternoon for a private meeting celebrating the 30th anniversary of the Greater Yellowstone Coalition, the ecosystem's biggest advocacy group, and made a point of introducing himself. In jeans and a crisp sport shirt, he seemed quite chipper. "Here's a piece of land," he said, pointing from his back porch to the high, snowcapped peaks behind him, "that could've been a resort—28 minutes from the airport, or downtown, or a good Division II football game. But it's perfectly placed as a beachhead for wildness. Seemed to me the choice was obvious, and it's a good thing we stepped in when we did."

He said the Flying D is the largest private property in Greater Yellowstone—a critically important part of this connected landscape. "It's clear nowadays that to protect imperiled species we need to operate at enormous scales that make sense to nature but that transcend anything people have assembled," he said. "And it's just as clear that no country will ever have the money to buy up all the unprotected pieces. But it doesn't all have to happen on public land, since private ranches like this one can promote ecological integrity. Private lands are working landscapes; they're money-making businesses. And I think we've invented something entirely new here—call them 'wild working landscapes'—where we make a profit and so does the planet."

Large carnivores, Phillips says, are an excellent lens for looking at landscapes. Their movements and migrations define broad corridors that already exist physically. The unanswered question is whether we can develop "socially accepted corridors," as he calls them, along these same routes, so that the people within this now-inhabited habitat can co-exist with the big creatures in their midst. "The GYC folk talk about moving from tolerance to acceptance to appreciation, though I usually substitute 'admiration.'" It sounds like Wilson's biophilia, in bite-size, time-released doses.

The bison weren't thundering as we moved slowly through them, merely standing around massively, impressively, the calves frisky, the bulls larger than our truck. It seemed to take forever to get past the great herd. Then we struck off cross-country and uphill. "Let's go howl at the wolves," Phillips said. A bald eagle perched on a fencepost, a couple of four-foot-tall, reddish sandhill cranes stalked sedately through rolling, grassy slopes filled with purple lupine, white yarrow and yellow blanket flowers. We stopped at a high, sweet-smelling meadow and, once Phillips cut the engine, an enormous silence enveloped us, broken only by the buzzy trill of a song sparrow.

We had to whisper because sounds carried so well in this natural amphitheater. Valpa Asher, the TESF wolf biologist accompanying us, told us some wolves might show up, about a mile away. “You’ll think they’re floating,” she said quietly. “Wolves are all leg.” They’d be at eye level halfway up a steep, rocky slope over on the far side of a deep valley. No guarantees, of course. We were looking at a “rendezvous site,” a kind of aboveground den, where wolf pups that were old enough get brought to learn the landscape.

Farther away, the skyline was dominated by the pointed crests of the Spanish Peaks, snowcapped even in summer. There was a rumble of thunder, and it suddenly started to pour. Wind whistled in our ears. It got colder, and we retreated to the truck, where Phillips broke out deli sandwiches and cans of Jamaican lemonade. Then the sun came out again, and there was a double rainbow to our right. “The D is showing off—this is too cool,” Phillips said matter-of-factly, far more restrained than YouTube’s “double rainbow guy.”

Then—there they were. Dots to the naked eye, but vividly close through a spotting scope. A black adult, a gray adult with a black ruff and six pups, four black and two gray, gamboling, sniffing the ground, chasing each other, dispersing and then regrouping.

Definitely floating. Phillips grinned, threw his head back and howled across the valley. On the other side, the two adult wolves threw back their heads and howled. The sounds were faint but unmistakable. For the moment, at least, Half Earth felt whole.

About Tony Hiss

Tony Hiss was a staff writer for the *New Yorker* for more than 30 years and is currently a visiting scholar at New York University. Hiss is the author of 13 books, including , and . The National Recreation and Park Association's National Literary Award praised his lifetime of "spellbinding and poignant writing." Photo by Michael Lionstar.

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