

Beauty in the Burn

Fire and rebirth in the forest

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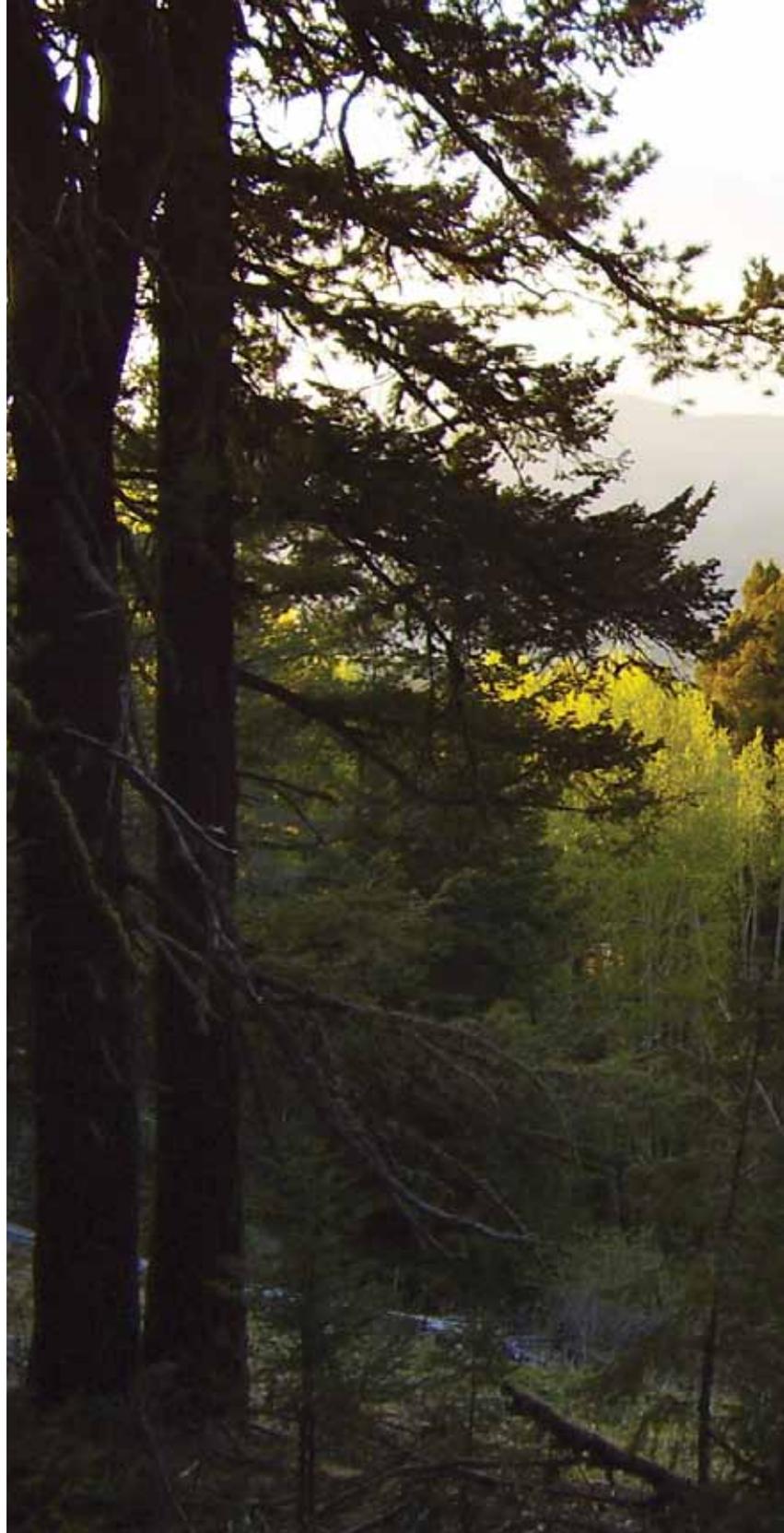
DRY LIGHTNING GAVE BIRTH to the Silver Fire with a strike on a ridge five miles southwest of my lookout tower. By sheer luck I happened to be facing that way, so I saw the bright, hot flash, a silver filament that left its imprint on my eyelids when I blinked.

Given that we were in drought conditions, it came as little surprise when a blue puff rose from the superheated sap of the tree, then dissipated on the breeze. Within a minute, a feather of white smoke signaled that the tree had caught fire. I aimed my firefinder at it, marked the azimuth, and called the dispatcher with my report: single snag, narrow column of light-colored smoke, township 16 south, range 9 west, section 31. It never fails to satisfy, the feeling of being first in the world to note the birth of a natural phenomenon, to have the perfect vantage to see what it becomes. This one looked poised to stick around awhile.

What the fire became was foretold by the conditions of the forest where it occurred—or, as we say in the business, fuel structure aligned with weather to offer “high spread potential.” Thousands of dead white fir trees, killed by beetles a decade earlier, sprinkled the southern Black Range of New Mexico’s Gila National Forest. Fuel moisture in the living trees had been sapped by years of substandard snowpack and a long run of above-average temperatures. The country had been starved of fire for at least a century—every new start suppressed as quickly as possible—making for an unnaturally dense and uniform canopy. The forecast called for hot, dry, windy weather in the days ahead.

All the smokejumpers—parachuting firefighters used for getting into hard-to-reach places—had already been dropped on two fires earlier in the day, so none were on call for an initial attack. The country was too steep and thickly forested for helicopter landings, so a crew would have to walk a mile and a half uphill from the end of a bad dirt road to reach the fire, a trip that took four hours, drive time included.

For two full days I had a grandstand seat as my Forest Service colleagues performed their ritual suppression efforts, with



ground crews scratching a containment line, and air tankers dropping fire-retardant slurry. The containment line didn’t hold because big old conifers kept toppling and rolling downhill, starting new spot fires below the crews, who had no choice but to flee around midnight of the first night. The slurry didn’t hold be-



cause the fire grew too hot too quickly, actively burning through the nighttime hours when the planes are forbidden to fly. The next morning, they offered an impressive spectacle, flying low over the ridge, the red-tinted slurry drifting into the treetops like a poison mist. All for naught. It was the old game, putting out

fires with military toys and money, but the old game was no longer foolproof, not in the age of global warming.

On the fire's second night, I stood in the meadow on top of my peak and watched the flames rise into the dark like lava bubbling from a fissure in the earth. The fire had spread to seventy

acres; the question now was whether the entire mountain range would burn or some portion would be spared. I looked hard at the shapes of the nearby ridges and peaks, aware they were the only thing guaranteed to remain unchanged in the wake of the fire. The life of the place was up for grabs: the flora and fauna, what would burn and what wouldn't, what would grow back afterward, whether parts of it would ever again look the same.

Late on the morning of day three, a running crown fire took off in the canopy as the wind pushed the flames upslope. A couple hundred acres burned in the span of an hour; trees torched like Roman candles in flame lengths of one hundred feet. Mesmerized, I stared at the black smoke rising like a muddy geyser, until the order to evacuate came just after lunch. I was told I had half an hour to grab the possessions dearest to me, turn off the propane line to the cabin, lock the lookout tower, and board a helicopter for the ride to the trailhead, where my truck was parked smack in the path of the fire.

It was a humbling and even sort of sickening feeling to abandon post. The whole point of the job is early detection: the sooner you spot a smoke, the more options you give firefighters to manage a fire. When you're airlifted by the whirlybird, that means firefighters' options have dwindled, and so have yours, to none but run.

I BECAME A LOOKOUT in the summer of 2002. My job, I thought, was to help keep the forest green by detecting fires early, allowing crews to jump on them, contain them, and put them out. No one had given me a primer on the necessity of burns for maintaining the health of fire-adapted ecosystems. No one had told me that the Gila was on the leading edge of an experiment to re-invite fire into fire-starved forests, allowing some lightning-sparked burns to roam unchecked, though I would learn soon enough. The big news that summer involved the Rodeo-Chediski Fire, across the state line in Arizona, where two separate fires blew up and merged, burning 468,000 acres. No one alive had seen a smoke plume like it in the American Southwest. To this fire rookie, the numbers—more than seven hundred square miles torched—sounded apocalyptic.

Then I met a biologist who told me, "There's no such thing as a bad fire, only the interplay of fuels and weather and ignition sources." And a Forest Service fire manager who said, "Every big fire is a birthday event for the next forest." These were viewpoints I hadn't encountered before, but they soon became a two-part credo I could use to make sense of the wilds over which I kept watch.

I couldn't find in our literary tradition many lyrical celebrations of a piece of the sylvan world reduced to stinking charcoal; most of the writing about American forests tended to accentuate their timeless qualities. Nonetheless, I began to see that a burned

forest has a beauty of its own. Almost every fall and winter, I would visit a burn scar somewhere in the 3.3 million acres of the Gila, poking around in the char, imagining the composition of the forest that might come next.

Year by year the fires got bigger. In the autumn of 2012, ten years into my education in the combustible realities of the Gila, I hiked into the southern fringes of the Whitewater-Baldy Fire, which I'd watched burn for several weeks in May and June from my lookout tower thirty miles east, inhaling its downwind smoke. At nearly 300,000 acres it remains for the time being the biggest fire in New Mexico state history.

The fire had been cold twelve weeks when I backpacked up Little Dry Creek, then on toward the highest peaks of the Gila Wilderness, with mountains above ten thousand feet. The landscape seemed to pulse with color under gray, monsoon-season skies. Dead needles on standing conifers shone a brilliant orange. Fire-scorched snags, some on the ground, some still standing, loomed black and eerie through the mist. Here and there green emerged through the char: oak sprouting on south-facing slopes, aspen shoots already hip high on north-facing slopes. Purple, white, blue, red, and yellow wildflowers bloomed in profusion from the bare soil.

Dip into the scientific literature of wildfire and a word you soon encounter is *mosaic*. And here it was, painted on the hill-sides, a patchwork of fire severities, from unburned islands of green to lightly burned areas of ground fire, to stands of skeletal mixed conifer every square inch of which were charred. And the smell: a rich, almost sulfurous, definitely acrid but also slightly sweet stink unlike any other. The smell of transformation, of nutrients cycling through a fire-adapted ecosystem—a birthday cake the forest baked of itself.

This is as it should be, though convincing the public is a challenge. A century of brilliantly successful fire suppression made big fires such as this one so rare that they now feel like a wound, or "scar," not just to landscapes but also to the human psyche. Smokey Bear's message—that fire was to be stamped out always and everywhere—represents one of the most successful public relations campaigns in American history. To now change course and flip the message on its head, convincing people that fire is unavoidable and necessary, is a trick the public-lands agencies have yet to pull off.

It's harder still when you consider the time scales at work with this sort of fire. While stand-replacement fires—the kind that shave the fuels off the face of whole mountainsides—have long been the rule for the spruce-fir belt in this part of the world, they tended to happen just once every three hundred to five hundred years, making them by definition outside the course of normal events in a human lifetime. But it's not as if the land

remained black in perpetuity. Often it doesn't remain black for more than a few days, depending on the timing of the next rain. Devastation for one species of flora is opportunity for another: ponderosa goes away, locust takes hold; Douglas fir burns up, aspen resprouts. Still, several-thousand-acre chunks of old growth gone in an afternoon—it's a stunning act of erasure, and a cause for mourning by anyone with a deep attachment to the particulars of those woods.

That autumn I visited a different burn scar just northwest of the mountain where I work each summer. It, too, had once been the state's biggest fire, a distinction it held for decades: the McKnight Fire of 1951, which burned fifty thousand acres of the Black Range high country. At the time, the fire was judged an appalling and irreversible catastrophe, and many hoped that with rapid detection and overwhelming suppression we would never again see its kind. Sixty years later, with its brilliant display of autumn color, it was a vivid teaching aid for successional ecol-

ogy in southwest New Mexico. Here and there a standing snag hung like an iron spire, a reminder of the forest that was. Huge contiguous stands of aspen and oak in varying shades of yellow and gold painted the top of the range, encircling numerous remnant islands of green conifers. The country appeared to tremble with vibrancy, a technicolor dream coat of autumn leaf color. Little did I know that I was seeing it in its final fall flowering before yet another birthday event—that all those lovely leaves would burn and run black through feeder streams of the Rio Grande before nine months had passed.

OVER THE COURSE of a dozen summers I'd sat in my fifty-foot tower and whiled away a thousand days and nights staring at the country, but to see it from a bird's perspective astonished me anew. As the chopper sent to evacuate me rumbled toward the trailhead, I looked out the window upon a forbidding and beautiful landscape, east-west canyons dropping sharply from the crest





of the Black Range, each of them cradled by shark-fin ridges and imposing bluffs—a forest of Douglas fir and southwestern white pine on the high peaks, ponderosa on the south-facing slopes, aspen on the north, a scattering of oak. Some of the biggest firs were older than the republic. Certain aspens were marked by dendroglyphs carved almost a century ago in their chalky white bark. Scattered here and there were survivor trees corkscrewed by lightning. Others showed the scars of ancient ground fires on their bark. They'd weathered howling winds and hail storms, searing summer heat and bitter cold. Some of them, I'm not ashamed to say, had been like friends to me. I tried to fix them in my imagination, even as I bid them goodbye.

When we landed I removed my flight helmet and watched the smoke rise and spin like a cyclone on the south side of the pass, a pulsing vortex of unimaginable heat. Ash fell like snow on the hood of my truck, and after the chopper lifted off, the guttural growl of the fire could be heard a mile away. I knew that the stretch of country I had watched over and called home was about to be transformed; I reminded myself that the mountain had always known fire, was in fact born in fire, at the center of a great

volcanic explosion 35 million years ago, an event more dazzling than even the most spectacular wildfire. The thought didn't bring much solace. To my surprise, I found myself preemptively grieving. I had always chided those who expressed a wish to see their favorite landscapes remain unchanged when nothing in nature does for long. I hadn't expected to find that attitude in myself.

Before it was over, the Silver Fire moved across more than two hundred square miles, my peak smack in the middle of its outline; in its final stages it burned over the old McKnight Fire scar. I watched the spectacle for the rest of the summer from a different tower twenty-five miles north. On one particularly active day near the end of June, the fire produced a smoke plume that rose into the lower troposphere. It was capped by a pyrocumulus cloud from which could be heard a rumble of thunder, the fire having created its own weather. Charred oak leaves fluttered to the ground twenty miles away. After dark, spots of open flame burned for miles along the top of the range.

The rains came in early July, tentatively at first, but with enough moisture to calm the fire to a few scattered pockets of interior heat. After weeks of pestering my boss, I received clear-

ance to return to my mountain and take stock. It was a peculiar hike in, that first time back. The burn area was still closed to the public, so I let myself in through a locked gate on the highway near the forest boundary, aware that the country was entirely mine, for a little while anyway.

The first half of the walk to the lookout was almost entirely lacking in living vegetation. The view south, where the fire started, was a stunning tableau of destruction, a ten-thousand-acre patchwork of forest transformed into ash—centuries of accumulated biomass gone overnight. As I walked and gawked, I added everything I saw to my memory's palimpsest of the landscape: the original layer as I'd found it my first year as a lookout, another as I'd seen it after the beetle outbreak turned the needles of the firs first red and then gray, one from the helicopter on my way out, and now the newest and most radical revision as it greeted me in the aftermath of the burn, black as black gets in places. Two-thirds of the way to the top, big swaths of intact forest appeared where the fire had little impact on the canopy thanks to a mid-June rain that moderated its intensity for a weekend. To the north, it would get up and run again, but that little pause preserved my immediate home environs far better than I'd dared hope. Standing in the middle of the open meadow on the mountain, I could hardly tell there'd been a fire at all. The peak still wore a cap of pine and fir, and the meadow grasses were luxuriant from the rains.

Something bright and gently quivering caught my eye in the grass between the cabin and the outhouse: a mountain tree frog. In twelve summers of living there I'd never seen one. I sat near it and tried to remain as still as it did for the next half hour, my compatriot on an island of green.

Despite years of visiting burn scars, seeing how quickly the regrowth came—how soon the grass shot up, how thick the oak and aspen sprouted with a bit of moisture, how gorgeous the opportunistic wildflowers—I had come expecting only the funereal, I suppose because the losses this time were personal. My attachment to the country was deep, cemented by a fondness for certain special places I'd come to think of as sacred. With their particulars reshaped, I had feared losses of the permanent variety.

It's a feeling shared by many of us in this part of the world. Landscapes we've grown to love are being transformed overnight on a scale that's hard to comprehend. For a hundred years we kept the scorch at bay with an all-out war on fire; we came to believe our mountain forests would remain forever dense and green, and we're astonished to find it beyond our power to keep them so. We wished them static and timeless instead of dynamic. And just as we awoke to the reality of fire's necessary dynamism in western forests, the fires became bigger and more intense than any we've ever seen. As an old firefighter saying has it, we weren't putting

out fires so much as putting them off. Scorched earth is now the earth we inhabit if we live in or near the forests of the American West. If your favorite piece of woods hasn't burned yet, it probably soon will. Go see it now if you like it green.

I took some consolation from my encounter with that amphibian ambassador for a cycle of life ongoing since the end of the Pleistocene. It had the feel of an omen, a sign that despite the tremendous changes, the life of the mountain carried on in ways not much different than it always had. For how much longer, who can say: global temperatures continue to warm, the drought deepens, the fuels turn crisp as tinder; the old forests prepare to leave us, poised to become something new. Our scientists will catalogue the changes, tallying what is lost and what is gained. It will fall to the rest of us to work up a sustaining mythology for the unmaking and remaking of our forests, a mythology that at the very least accommodates, perhaps even celebrates, the color black. 🐸

Beehive Huts

Dunquin

Dingle Peninsula, Ireland

Little stone domes
no matrix, no glue,
monk-built, by crevice
and heft, taut little
sheep fold, where men sat
in their sheep clothes,
with woolly tongues,
holding the world up
under stones stacked
to keep the drizzle out;
grizzled, they fingered
their beads, eyeing
sea glint and flock,
hands on rock, feet on
grass, bee buzz hum
on their lips, mind on
mercy, on God like
wind seen in what
it bends, what will lift.

—*Betsy Sholl*