
FIGHTING FIRE IN A TRANSFORMED WORLD
WHEN IT ALL BURNS
JORDAN THOMAS

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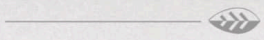
Fighting Fire in a Transformed World



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About the Author

This book is for the hotshots.

For all the people on the front lines of the climate crisis.

And for Kathy Supple.

AUTHOR'S NOTE

WHEN I BEGAN WRITING THIS book, I wanted to write about climate change and wildfires. I quickly realized, however, that it wouldn't be accurate to write about this topic without chronicling the historical factors that shaped the landscapes climate change now disrupts. This history includes the ways Indigenous people in California used—as many continue to use—fire to shape the land. It also includes the violent processes by and through which governments have attempted to take the use of fire away from Indigenous people through time.

As a white anthropologist and writer, this presented me with a dilemma. Any account of the megafires of today that does not centrally acknowledge Indigenous burning perpetuates an erasure of Indigenous people—including their histories and contemporary movements for cultural sovereignty. If a story of fire is to be told, it must not only include but also elevate the lived realities of Indigenous people and, ideally, be a voice from these diverse communities. This, however, is not me. And outsiders—often external anthropologists such as myself—have a disquieting history of narrating Indigenous stories on their behalf. This has often led to a failure to reflect people's lived realities and, at times, has perpetuated dominant systems that undermine Indigenous cultural sovereignty.

It is a fraught space in which to write. Honestly, I don't believe there is a clear resolution to this dilemma of erasure versus narration. Nor do I think there could or should be. Like many dilemmas, this one begs a constant revisiting, reflection, and attention.

In this book, I've done my best to draw from Indigenous sources when detailing their histories and current perspectives on fires. This includes using primary sources in the historical literature, interviewing Indigenous fire practitioners and activists working to revive cultural burning, and attempting to forefront the work of Indigenous scholars who provide critical perspectives on wildfire management.

The end result is far from perfect, I am sure, and I humbly request patience from my readers as I do my best to craft a story that is both accurate and ethical.

WILDFIRES FOUGHT BY LOS PADRES HOTSHOT CREW IN CALIFORNIA IN 2021

INTRODUCTION

ONE AFTERNOON IN SEPTEMBER 2021, as a megafire burned through Sequoia National Forest, my hotshot crew marched into a grove of its ancient trees. In the crisp air of high country, the sounds of creaking wood and swishing pine muted our footsteps. Sequoias towered through the smoke. Their canopy closed hundreds of feet above. We moved between trunks the size of cabins, the bark grooved and red. Small squads dropped off from our crew of twenty, spreading along the ridge to prepare for the megafire hurtling toward us.

My own group peeled off near the top of the ridge to await orders. After fighting this fire for the past week, my knees ached, my blisters stung, and my head hurt. I was tired. I knew the other hotshots felt the same. They were chewing tobacco and sharpening their tools—hybridized shovels, axes, and hoes with macho names: the Rogue, Pig, Chingadera. I set my chainsaw on the forest floor, removed my gloves, and, for the fifth time that day, pricked my thumb on the chain's teeth to make sure they were sharp. The grove made me restless.

In the past two decades, wildfires have been doing things not even computer models can predict, environmental events that have scientists racking their brains for appropriately dystopian terminology: firenadoes, firestorms, gigafires, megafires. Scientists recently invented the term "megafire" to describe wildfires that behave in ways that would have been impossible just a generation ago, burning through winter, exploding in the night, and devastating landscapes historically impervious to incendiary destruction—like the sequoia groves of California. Sequoias are among the

oldest organisms in existence, with fire-resistant bark several feet thick and crowns that can recover when 90 percent is scorched. They even rely on fire to reproduce, as flames crack their cones so seedlings can germinate. Now, the same ecological force they once depended upon is pushing them toward extinction.

Sequoias' lives are monuments of deep time. Their death would signify something else. If we could not hold this ridge against the megafire, the sequoias would become the largest torches on earth, carrying flames higher than the Statue of Liberty. After three thousand years of life, they would become charred monuments to a passing era, symbols of a violent future. By holding the ridge, I felt we were holding back a new, altered world. As I waited on the fireline with ash in my lungs, I still hoped this was possible.

A figure appeared through the smoke, huffing toward us. I stood, worried our superintendent, Aoki, the leader of the Los Padres Hotshots, would catch us sitting. I relaxed when I recognized Jackson.

"Jack!" someone called.

"What's the word?" another asked.

"Fellas," Jack greeted us, loosening his pack to catch his breath. His face and beard were caked in dirt. "Cancel your plans, boys. We're gonna be up all night." Word had traveled down the chain of command that we were going to burn our line that evening.

We had spent six days building that line, working from sunrise to sunset, cutting a path through brush and hills, up a mountain ridge into high timber and finally to an old logging road. Wildfires cannot burn without fuel—grass, bushes, and trees—and our line formed a fuel break, a continuous barrier of dirt that snaked around the megafire. When the conditions were right, we would set fire to its edges. The flames we lit would move toward the megafire and consume the fuel in its path. This is the fireline—a dirt band that holds fire back from the world.

Now, we only had a few hours before the megafire would hit us—a few hours to finish the line and set fire to the ridge.

“It’s gonna be a shitty burn,” Jack relayed. “We’ll be chasing spot fires all night.”

I asked if we had any safety zones, defensible spaces like meadows where we could survive if the fire got out of control.

Jack hedged, chewing the corner of his mustache. “There’re some bulldozers trying to plow one near the peak,” he said. “The thing is, we’ll be going downhill. So, if this thing gets away from us, we’ll need to run to our vehicles and get out of here.”

“It’s a forty-five-minute drive out of the forest,” I noted.

“Yeah, hopefully we’ll get out.”

A radio crackled. Through the static came a gruff voice. Márlon was reporting from his lookout position. “The fire seems a *little* more extreme,” he said. “Three-hundred-foot flames coming at us.”

Aoki’s laughter cut into the radio traffic. “Hoookay! Let’s get the rest of the line pushed through and get that burn goin’.”

My group huddled in the trees in smoke and radio silence. We didn’t know where Aoki was or who he was telling to push the line. We often joked that he was a mountain spirit. Tall and willow thin, with black hair that fell to the small of his back, he moved with the smoke, drifting and reappearing through the trees. Aoki had turned fifty that season and was widely considered the most experienced hotshot in California—a state that claims the most skilled firefighters globally.

Now, the megafire was throwing embers ahead of its advance, starting smaller fires, spot fires, like raiding parties for an approaching army. Axel, a squad boss, called us toward one that was smoking in the valley below. If we let it grow, it would rush up and cross our line, igniting the forest behind us and trapping us in the path of the megafire. “If the fire gets behind us,” Axel said, “we’re fucked.”

Scrambling down loose rocks into the valley, we followed Axel’s shout and found the spot fire. It had grown to the size of a football field. We cut around it, choked with smoke. In the ringing silence that follows a

chainsaw's scream, I realized that the silence was becoming a roar, and the roar came from the megafire. It was close.

The dark understory of the forest began to glow, a vibration emanating from its depths, rising to the sound of a jet engine. The treetops groaned with wind created by the force of the megafire.

On the fireline, I rarely felt adrenaline. I experienced danger more as a pressure, a weight that never fully disappeared. As the danger grew, so did the weight. With the megafire roaring through the trees, I'd dropped my chainsaw and begun filing the saw's teeth to new points. Now, the chainsaw shook in my hands.

"Listen." Axel cocked his head with wild eyes and a feral grin. "You hear it? *Let's get out of here.*"

Axel led our escape, men sweating as the moon rose like a counterweight to the setting sun. A radio crackled, Aoki warning that the fireline was no longer safe and we should hurry down the ridge to our vehicles. I shouted to Axel, several headlamps ahead, that we were throwing away the past week of work. "It's part of the job," Axel replied. "You'll get used to it." His reply evoked a hotshot adage: *You learn to let go of hope, or you get crushed.*

As we walked, our headlamps cast beams through clouds of smoke and dust, illuminating the trees around us like pillars supporting another world. Forced to retreat, I felt like we were abandoning that world. Just before reaching our vehicles, I stopped to look back at the megafire. It was a billowing column of shadow and light. Briefly, I doubted what I'd seen: through a gap in the trees, a lone flame rose and flickered above the rest.

Only a sequoia—a tree that had coexisted with fire for millennia—could carry flames so high.

Part I

TRAINING

CHAPTER 1

One Year Earlier

IN AUGUST 2020, SOON AFTER I first signed up to suppress wildfires for the United States Forest Service, a puff of white smoke was reported in Big Sur, California. The blacktop strip of Highway 1 cut along coastal cliffs, speckled with vehicles that seemed to dangle over the ocean. Helicopters approached the ocean in an insect procession, scooping water in big balloons, which they then dumped into a flaming gorge. Within that gorge, clusters of homes, with their carefully tended orange trees and gardens, were evacuated. Redwood trees creaked and groaned in cloaks of moss, hidden in the shadows of late afternoon. Heat distorted the air until the whole land seemed to flutter like windblown curtains.

I stood on a ridge with a young man who really wanted to look like a wildland firefighter. He had grown a mustache, bought a belt buckle, and smeared some soot on his cheeks, perhaps to hide the fact that, a week before, he had been selling kombucha in a beach town to the south. I had no more claim to the job than he did, having taken emergency leave from an anthropology graduate program at the University of California to fight this fire. We were both on a beginner crew, a patchwork of Trader Joe's cashiers, yogis, Zumba instructors, pet rescuers, painters, and fishermen, misfits of all stripes, all hoping to make a name for ourselves so we could rise in the ranks of the wildfire world. And we all stood in the thrall of the largest flames any of us had ever seen, watching them swallow a mountain across the valley.

“Incredible,” said the young man beside me. His name was Finnegan. “All because one guy lit a match.”

I looked at Finnegan sideways, annoyed, not because he spoke like he was on television, or because he was my rival—as a fellow “saw dog,” he was gunning for my position as lead sawyer—but because I envied his simple cause-and-effect explanation for the unfolding destruction. On one hand, Finnegan’s observation made sense: light a spark in the mountains, the mountains burn. On the other hand, the flames were, for me, much more puzzling.

I sought solidarity with another would-be firefighter. He was my age, late twenties, no mustache, a duck hunter who could name just about every plant in California. I pulled him aside. “Hey, man, have you, like, ever wondered what fire *is*?” Before the words left my mouth, I realized how stupid they sounded.

“I know what fire is.”

“You do?”

“Yeah. It’s the exothermic chemical process of rapid oxidation.”

“Mmm.”

I told myself I wasn’t the only one struggling to understand wildfires. We were in the middle of the most catastrophic fire season in California’s recorded history. The redwoods in the gorge below us were torching. The sequoias, their inland cousins, were burning almost to extinction. Four million acres of land would go up in smoke. The entire state was veiled in the red haze of perpetual dusk, and there didn’t seem to be enough explanations to go around. The president at the time, Donald Trump, said we needed to rake our forests like the Scandinavians. Ryan Zinke, a fossil fuel pundit who had formerly been the top official charged with managing America’s federal lands—which comprise around 47 percent of California’s total acreage—passed the blame to environmentalists, claiming they weren’t letting corporations log enough trees. Fox News said, “The fuel for California’s wildfires is the government, not climate change.” Meanwhile, as flames spread within three miles of Governor Gavin Newsom’s commercial

vineyards, the governor spoke against what he saw as attempts to shield the fossil fuel industry from complicity. “This is a climate damn emergency!” Newsom declared.

Did the fires come from climate change or land-use practices, governmental ineptitude or corporate malfeasance? Or maybe, just some guy who lit a match? The swirl of competing explanations reminded me of a common Buddhist parable in which a group of blind friends encounter an unfamiliar creature, an elephant, and begin touching it to discover what it is. One, with his hands on the trunk, believes it is a snake. The other, feeling the ear, calls it a fan. Another, leaning against a leg, believes it is a pillar. While none perceive the whole of the elephant, each believes that their subjective experience is absolute truth, and, suspecting that the others are deceiving them, the friends eventually come to blows. To stretch the metaphor, I felt like the wildfire was the elephant in the forest, and it was on a rampage.

The other firefighter’s textbook recitation of oxidation and exothermic what-have-you went over my head, but he seemed to have a finger on the creature’s pulse. Fire is unique to our planet because life is unique to our planet, and life, through a strange series of events, creates fire. Some five hundred million years ago, when plants first populated the land, they used the sun’s energy to transform carbon and water into stems, leaves, and roots. Their waste product was oxygen, a highly reactive gas, which they exhaled into the atmosphere. When these same plants are heated by, say, lightning, their molecules break into vapor. That vapor reacts with oxygen to form fire. The flames that catch our eyes are simply particles of soot heated to incandescence.

Ever since the origins of terrestrial life, as forests have spread and shrunk and grown again, fires have moved in their midst, rising and falling and roaring and scurrying with the ebbs and flows of atmospheric oxygen and floral life until every surface has been touched by flames. Over these millennia, flora and flames developed an elegant choreography, a symbiosis of sorts, as some ecosystems grew to tolerate fire, others came to need fire, and some even contrived to produce the kinds of fires they need. Fire is as

woven into the fabric of life on our planet as the rains that wash its hills and the rivers that flow through its valleys.

Yet humans have completely altered the forms fires take by changing the contexts in which they burn: the patterns of vegetation, frequency of ignitions, and, recently, carbon in the atmosphere. Each human society carries a unique environmental footprint. By extension, every society creates a unique fire regime. On that ridge in Big Sur, watching flames chew through redwoods and belch them into the sky in whirls of black smoke, I didn't have an easy answer to the question of what these flames were.

UNLIKE MY NEW COLLEAGUES, MANY of whom grew up watching their fathers rush into the red, glowing night, I had only recently become interested in wildfires. Raised in the Midwest, far from America's explosive West Coast, I had always considered wildfires as a distant, separate problem. I found their portrayal in film and media boring—like a war story, but with less action and worse outfits. When I was young, wildfires rarely covered whole hemispheres with smoke.

It is easy to think of wildfires as a problem unique to the American West. Every year, news cycles follow the cycles of our planetary orbit. In the United States, flames appear in headlines as soon as the northern hemisphere tilts toward the sun. The air warms, the forests dry, and flames inevitably emerge. In recent years, these headlines have been embedded with warnings that our society is out of balance with nature, hurtling toward climate apocalypse. And these warnings are not entirely wrong. Eighteen of California's twenty largest wildfires on record have burned in the past two decades.

But I was approaching wildfires from a different angle. In my early twenties, I had spent seven months traveling from Kansas to South America, mostly on a bicycle. I wrote an essay about the experience, which landed me

funding to research anthropology at the University of Cambridge, in England. I was skeptical of the idea that humans are inherently destructive to our environments, so for my research project, I returned to a Maya community in southern Mexico that had previously welcomed me. Indigenous people in this region have been sustainably managing forests for millennia. When I arrived in that village, I was surprised to see plumes of smoke rising over the jungle.

The Maya farmers, I learned, used fire to tend to the forest much as those in the region had for the past five thousand years. When the conditions were right—the wind was low, the humidity was high, and the temperature was cool—they lit fires that nourished the soil, encouraged useful plants, and enhanced the diversity of the forest. People in southern Mexico have been managing these forests ever since today's warm tropical conditions emerged from the last Ice Age, and their techniques have evolved with the trees. Without carefully tended flames, the Maya farmers told me, the health of their food systems, and of the forests, would be jeopardized.

While I was finishing my graduate degree amid the pointy buildings and dusty libraries of England, I read every book I could find on fire, trying to make sense of the fact that flaming landscapes aren't simply the stuff of breathless media commentaries and militaristic suppression campaigns, but can be integral ecological processes in landscapes as diverse as tropical jungles, African savannahs, arctic peatlands, and the California coast. Nearly every terrestrial area, I learned, has evolved with different kinds of fire—flames catered to each ecological niche and shaped by the people who inhabit the land. What did it mean, I wondered, that so much of the planet was now experiencing continental conflagrations?

This question was on my mind when the English summer skies became pale with smoke. Unprecedented wildfires were burning not just in California, but in Europe, North Africa, South Africa, Australia, Indonesia, the Arctic, and the Amazon. Historically, fire had a natural place in each of these ecosystems, but something had changed. The smoke wrapping itself around the earth was the effluence of infernos that erased forests,