

Transcript of California Burning Episode 1

Our History With Fire

Matt : California is burning. Okay, not all of it all the time, but the last few years, all over the West Coast, California wildfires have been setting records. Not just in the number of them, but in the size and destructiveness of these fires. Wildfires are burning in the forested lands all over California and they are increasingly happening where we live, where we build our homes and communities, and with that, these fires are destroying thousands of homes and other buildings. Raging through sometimes hundreds of thousands of acres, spewing harmful smoke into the air and destroying lives. And more and more often in these wildfires, people are dying.

News Reporter: The Camp Fire has now claimed the lives of at least 42 people and nearly 230 people are still missing.

Matt : My name is Matt Fidler. I was born and raised in California, but my wife and I spent the years 2013 through 2017 living on the East Coast. When we decided it was time to come back to California, we bought a beat up RV and travel across the country to enjoy the sites. When we finally approached the Sierra Nevada mountains crossing the Nevada desert on Highway 80 we looked to the distance waiting to see the first glimpse of the mountains that we love so much, but as we entered Reno, we didn't get the majestic view that we hoped for because the Reno Basin was filled with smoke. And as we went up and down the state visiting family and friends from Ventura, Santa Barbara, Santa Rosa and Redding, we only experienced more smoke and more stories of fire.

News Reporter: Take a look at this map. We now have 61 uncontained large fires in 15 western states. It's an emergency.

Matt : We eventually settled down in my old college town of Chico, California on the northeast part of California's Central Valley and within a year, just 15 miles away, erupted the most deadly fire in California's history—the Camp Fire, which destroyed the Town of Paradise and ravaged many of the communities in the surrounding foothills.

- News Reporter: On November 8th at about 6:30 a.m. the fire is first reported.
- Fire Survivors: It felt like apocalypse, like something really, really horrible was happening ...Nathan was sending me pictures at like 8, 8:30 I think in the morning of this plume of smoke ... the massive fire has burned through 117,000 acres ... this community completely destroyed more than a hundred people are still missing 10,000 plus buildings just reduced to rubble like this one, just absolutely gutted and many of those buildings were people's homes.
- Matt : This is why I partnered with North State Public Radio and Sierra Nevada Brewing Company to do a deep exploration of California wildfires: Why they're so much bigger and more severe than before, what we can do about it and how to live smarter and safer in a place that regularly burns. Join us on this journey because despite the name of the series, this is more than just a California problem. You're listening to California Burning.
- Matt : As a resident of Chico, my life has been heavily impacted by the Camp Fire. I started working on this project in the summer of 2018 but it turned personal on November 8th. This problem needs solutions and everyone with a stake in this game is invited to participate because this problem affects us all. Not just Californians, but all of us humans who like to eat good food, drink clean water, and breathe clean air.
- Matt : We're going to be learning a lot about forest ecology and how fire works as we go, but briefly, and this is an accepted fact by everyone from environmentalists to outdoorsmen and hunters to ranchers and timber harvesters. Most West Coast forests are overgrown. There are too many small trees growing right next to each other and overly dense tree stands. The forests in California, pre-European settlement had trees much further spaced apart that grew much bigger. Think of the Yosemite Valley or Avenue of the Giants, which have these great old trees that you can easily walk under the canopy of. Well in most forested land now, except for well-managed areas of some national parks, you couldn't even crawl through the canopy. It's dense with small trees, brush and what we call forest fuel: leaves, broken branches, dying and dead trees, dense chaparral. These conditions, among other negative effects, spread fire fast and burn extremely hot.
- Matt : So what is forest management, you may ask? Well, anything to do with the forest that alters it is a management decision. From building a road to cutting a tree, but also planting new trees, changing the trees that live there, dredging or damming rivers or doing a controlled or low-intensity prescribed burn like what the Native Americans did. This is all forest

management. Like I just said, the forests in California were kept open and healthy by the Native Californians for thousands of years by occasionally starting low-level fires on the land. More on that in the next episode. Then the Spanish explorers and European settlers moved in and they outlawed this use of fire. They wanted to save trees for timber and they went to great lengths to put out other wildfires that started from natural or other reasons. Later in the 1960s and '70s, ecologists and forest managers began to understand the nature of these fire-prone forests, that these forests needed occasional to remain healthy and resilient to catastrophic wildfires. But the idea of starting a fire in the forest or even just letting one burn is the exact opposite of what most of us have been taught.

Smokey Bear Fans: It was 'Only you can prevent forest fires;' it was this big, nice fuzzy bear kind of thing. You know, it's like a Disney character that you would grow to love ... Smokey the Bear says 'only you can prevent forest fires,' right? That's what he says ... they taught us about Smokey the Bear in school, I'm thinking kindergarten, first grade, second grade ...the commercial that was on TV there was always something where he would take water and pour it over the ashes of your campfire and then stir it to make sure that the fire was out and that was, he did like a little demonstration.

Smokey Bear Song: Smokey the Bear. Smokey the Bear. Prowlin' and a growlin' and a sniffin' the air. He can spot a fire before it starts to flame. That's why they call him Smokey. That was how he got his name.

Matt : Yes, Smokey Bear, 'Only you can prevent forest fires,' was the first lesson I ever learned about forest fires and forests in general. It was a strong message that taught me that fire was the worst enemy of the forest and very likely you had the same message pounded into you if you've ever visited a national forest or park because Smokey Bear is huge and has been around for decades, arguably the most effective advertising campaign ever.

James Lewis: I'm going to go on record as saying Smokey, more popular than the Beatles.

Matt : This is Dr. James Lewis of the Forest History Society. He's published numerous books on the National Forest System and is the editor of Forest History Today and recently he published an article about the rich history of the most effective advertising campaign of all time. And while it may not be the first thing that pops into your mind, when you think of a favorite ad gimmick, I can't think of one slogan as memorable and effective as 'only you can prevent forest fires.' So how did Smokey get to

be so popular? To answer that question, we've got to go back to the end of the Great Depression in the late 1930s when people because of the depression were rightfully traumatized with economic insecurity.

James Lewis: A lot of people both in and out of government saw advertising as wasteful. People were in dire straits. How could you be promoting these consumer items that really are quite frivolous?

Matt : Which is why advertising wasn't very well regarded, but after the Pearl Harbor attack got us into World War II, the advertising industry saw that they could fulfill a need as a way to get back into the public's good graces, they created for free an advertising campaign promoting conservation for the war effort.

Old Newsreel: All metal scrap in the basement and attic has gone to war. All old newspapers, magazines, and paper cartons are bundled up and tied for the local salvage drive.

Matt : Then on February 23rd just a couple of months after the Pearl Harbor attacks, a Japanese sub surfaces just north of Santa Barbara, California.

James Lewis: And they surface long enough to fire about two dozen small artillery shells at an oil refinery. It didn't really do much damage physically, only about \$500 worth of damage. But what it did do was strike a huge emotional blow for Americans, and particularly Californians, because now suddenly the war is literally at their shore.

Matt : And in California at this time, one of the resources the government is most concerned with protecting is timber. And they see it as being vulnerable. Santa Barbara has forests surrounding it that tend to burn. What if they were lit on purpose? So advertisers volunteered their time to come up with a campaign promoting forest fire awareness and relating it to the war.

James Lewis: When you look at those first few posters, what you see is a caricature of a Japanese soldier holding up book of matches and it's, it's less about the fire and more you can interpret it as it's more of a fear of the Japanese, and it's for a couple of reasons. One is the submarine incident, but there's also a very large Japanese-American population in California. I'll remind listeners of the Japanese internment camps that had already been coming into existence very rapidly.

Matt : And while these posters were plastered all over the West Coast for a couple of years, they had similar ones with caricatures of Germans

setting fires on the East Coast. But it turns out that children get scared when they're shown menacing characters that are trying to burn down their country.

James Lewis: Schools rejected them so they wanted to put them up in schools and the feedback came back these are scaring the kids.

Matt : So the ad agencies get together to make a more kid friendly campaign, perhaps some sort of friendly forest creature. Then, by pure coincidence, the Disney animated classic Bambi comes out in theaters.

James Lewis: There's that amazing climatic scene in the film where some hunters accidentally start a forest fire. They leave a campfire unattended and the next thing you know, Bambi and his family and friends are fleeing for their lives from the forest fire.

Bambi Movie: (Clips from the movie Bambi playing.)

James Lewis: And so they went to Disney, to Walt Disney, and asked him about using Bambi.

Matt : Walt Disney agrees to let Bambi be the spokesperson for the National Forest and children love it. Perhaps even giving the movie a boost, which was not an overnight success, but the contract with Disney is only for one year.

James Lewis: And towards the end of that, the Ad Council and the Forest Service began discussions to figure out what they were going to do next. "We know we want to use an animal, what animal do we wanna to use? "

Matt : And they go through a bunch of animals, but pretty quickly settle on a bear. I mean, it's the most powerful, cool human-like animal we have in our forests. The first artist to design Smokey is Albert Staehle, who draws a bear looking like the grizzly on the California flag, almost. So a little more realistic, but that was short-lived, so hoping to get a message out to children they hire an artist named Rudolph Wendelin to draw the more cartoony character that starts to attract the attention of children. Then, years later in the 1950s, firefighters in New Mexico save a bear cub stuck up a tree trying to escape a wildfire. They rescue this bear and when word gets to Forest Service Headquarters in Washington D.C., they decide to name him Smokey and keep him at the zoo as a real-life incarnation of Smokey Bear.

James Lewis: He gets to his new home at the National Zoo and folks start sending letters, especially children, they start sending letters and jars of honey

and you know, get well gifts and things and the, the volume of mail is so great that they eventually gave Smokey Bear his own zip code.

Matt : Smokey Bear brought more attention to the Forest Service than ever. From Smokey came the Junior Forest Ranger program that kids could sign up for and kids would get a Junior Forest Ranger kit with a badge and Smokey's face on it. And those kids eventually grew up, and some became forest rangers.

James Lewis: There's a generation or two of Forest Service employees who, if you ask them why they joined the Forest Service or when did they get interested in the outdoors, they will point to Smokey Bear in that campaign in the '50s and '60s.

Matt : Perhaps Smokey's message was too successful. The lesson that I took away from Smokey Bear when I was a kid was that forest fires were bad, period. But Smokey Bear certainly wasn't the first to imply fire was the enemy of the forest. The first call to suppress all forest fires came from a man named Gifford Pinchot, the first Chief of the United States Forest Service. We're gonna take a short break and come back to learn about Pinchot and how he got things so hopelessly wrong despite his undying love of nature.

Char Miller: In the midst of the Civil War, he's writing about a future that has yet to come and saying, "You know, the Civil War thing as, as bloody as it is, it's actually not the real issue. The real issue is whether the United States will survive its own economic aggression on nature."

Matt : This is California Burning. We'll be right back.

Matt : You are listening to California Burning. I'm Matt fiddler. All episodes of this series are available as a podcast wherever you get your podcasts or at californiaburning.net. On this first episode of this five-part series, we're exploring the early days of U.S. forest management. If you've been following the coverage of any of the large wildfires in California over the last couple of years, you've probably heard people say this: California's forests are mismanaged, leading to both overgrown forests and a lot of dead trees, which gives the conditions to make wildfires burn hotter and more destructive, but no one wants dead trees and deadlier fire conditions. So how did this happen? Let me introduce you to Professor Char Miller.

Char Miller: I am a professor of environmental analysis and history at Pomona College and I've been studying the U.S. Forest Service for way too long.

- Matt : Char says that part of the mismanagement of the forest came from legitimate attempts to save them from complete destruction. In the 1890s, when the Forest Reserve Act was passed, most Americans only had a romanticized view of the West from pictures or maybe writings from someone like John Muir.
- Char Miller: John Muir, the great naturalist is romanticizing this Sierra, which he called the 'Range of Light,' as if once you hike it, you would be close to the divine. The notion that Yosemite is this extraordinary place, which it is, penetrated American consciousness long before more than a thousand white people had seen it. And so some of the romanticization is about that, right, being tourists in a place that was wild. Some of it is predicated on the dispossession of native peoples, which is also part of what's going on. The sort of quote passing of the native populations meant that we're going to replace them and that becomes part of the romance of the West also.
- Matt : Yes, the genocide of the native peoples of California who took care of the land was the first step in mismanagement. And we're going to talk much more about that in later episodes. But the point is, is that well-off Americans, including members of Congress, started to have an infatuation with the idea of the West and started asking questions about the future of these beautiful landscapes and abundant natural resources.
- Char Miller: So even at the moment those questions were being raised there was a scholar by the name of George Perkins Marsh who wrote this extraordinary book called, "Man and Nature: Or, Physical Geography as Modified by Human Action."
- Matt : This was a revolutionary book at the time when most people thought of any resource on any piece of land as a gift from God to be used and exploited for your own purposes. But "Man and Nature" suggested something a bit more profound.
- Char Miller: And so it's Marsh who says, look, human beings modify the earth; they spoil it, change it, radically alter its circumstances and some of that is necessary for an economy to grow, some of that is actually deleterious to that very economic growth across time. So Marsh is actually interested in sustainability, he doesn't use the term; the term he uses is stewardship.
- Matt : This may not sound revolutionary now, but this was during the Civil War and he's thinking about what we might call environmentalism.

Char Miller: In the midst of the Civil War, he's writing about a future that has yet to come and saying, "You know, the Civil War thing as, as bloody as it is, it's actually not the real issue. The real issue is whether the United States will survive its own economic aggression on nature."

Matt : And basically this is one of the reasons why the Forest Reserve Act was passed and the National Forest became a thing. And it also was a major influence on the first Chief of the United States Forest Service, Gifford Pinchot. Gifford Pinchot was born wealthy in rural eastern Pennsylvania. He spent most of his childhood out in nature fishing, hunting, and getting to know the natural world.

Char Miller: His family had a phenomenal estate in Milford, Pennsylvania and it's still there, it's called Grey Towers National Historic Site. But it was just being opened in 1886 they had just finished completion and at that opening, which was set on August 11th, 1886 because his parents are real stage parents, it happens to be Gifford's 21st birthday, and what do they give him but a gilt-edged copy of George Perkins Marsh's book "Man in Nature."

Matt : Now this is interesting because Gifford's family had clearcut the forest around them, ravaging the landscape while making themselves rich, which was the way things were done back then. But by giving Gifford this book on his 21st birthday, his family was sending him a message.

Char Miller: So the family is arguing through this gift, "Look, we're going to clean up this place, we're going to actually regenerate the landscape." And for folks who might get a chance to go see Grey Towers, it worked. They actually did what they said they were going to do. But the really interesting thing is their ambition for their son was to do that work for the nation, which is why they give him Marsh's book.

Matt : And Gifford's family was pushing this idea of forestry to him, but forestry isn't a practice in the United States yet. So after graduating from Yale, he goes to Europe to learn from British foresters.

Char Miller: But once he got to Europe, he started talking with German foresters who were working for the British in India, so already forestry as a global construct. And one of them said to him, "Look, you know French, go to France they have a great forestry school in Nancy. Go there and study." He went, "All right, what the heck? I know how to study." So he spent about six months in Nancy, he traveled with German foresters all over Europe, he tramped all over the place to get a feel for what it meant to be a forester.

Matt : Pinchot is so passionate about doing this, he donates a large portion of his inheritance to Yale to start the first forestry school in the country.

Char Miller: And the moment that Yale announced this school, Harvard said, "Okay, we're in the game too." They started their own, because of course Harvard and Yale are rivals, and the moment those two did it every land-grant university in the United States said, "What do these eastern Ivy schools know about forestry? They know nothing. They've got no forests there." So they started. And so by 1920 there's like 20 schools of forestry that have developed all of whom are producing young men, it's all men at this point, who enter into a field that 20 years earlier didn't even exist.

Matt : So Congress creates the Division of Forestry with Gifford Pinchot as the first head of the department.

Char Miller: And by 1905 he had done what many would have thought was impossible. He managed to get a president, Teddy Roosevelt, who was really interested in what Pinchot was doing; he managed to get a greater and greater budget out of Congress that hadn't initially been interested in what he was doing. And so in 1905 when the Forest Service is created, it's now managing 150 million acres. It's an extraordinary political achievement that basically turns Marsh's ideas into political reality,

Matt : Which is ironically the next big step of mismanaging these forests. The first misstep was the killing of the native people and their culture, which took care of this land. But to take it to the next level of mismanagement was this new idea of forestry that Gifford Pinchot learned from Europeans and brought to America.

Char Miller: One of the chief worries that foresters had, whether they were practicing in Europe or India, and ultimately in the United States, was how do you protect the economic resource of timber? Because if timber is timber and therefore is an economic asset, your goal is to protect that asset. One of the most dangerous things they had to wrestle with, its fire. And so one of the things he learned in Europe was you've got to suppress fire.

Matt : As a passionate forester, Gifford Pinchot sparked the imagination of those in Congress who had never ventured out West before, but sparking the politicians' imagination was different from actually getting money appropriated to fight these fires. To do this, it took a series of deadly fires like we've never before or since experienced. Just for a comparison, 2018 was the worst fire season in California's history with almost 1.8 million acres being burnt. The fires of the "Big Burn," which you're about to hear about, ravaged over 3 million acres,

Steven Pyne: 1908, 1909 they're running like \$35,000-\$40,000 a year, which is serious money at that time, but in 1910 it would go to nearly a million dollars.

Matt : And it was so much more than just the size of the agency that was to be forever changed by the events of 1910.

Steven Pyne: It was a great saga. I mean it is a founding story. It is a creation story for American wildland fire.

Matt : That is Steven Pyne. He's a professor emeritus at Arizona State University.

Steven Pyne: I'm basically a fire guy and a historian.

Matt : And Char Miller is also sticking around to help with the story.

Char Miller: And I've been studying the U.S. Forest Service for way too long. I actually dream about it at times.

Matt : And yes, these two guys who study forest fires are named Pyne and Char. So let's get back to where we left off. In the early days of the Forest Service where their main job was to protect natural resources like water and timber.

Steven Pyne: The first years were difficult. There was one fire guard for roughly every 670 square-miles of national forest. You wonder that, you know these people are delusional. What were they imagining?

Matt : Because they were about to face their first real test of their ability to combat wildfire.

Steven Pyne: 1908 a whole wave train of fires goes across the northern tier, U.S. and Canadian border, from Vancouver all the way to Maine, essentially.

Matt : Many of these wildfires were manmade, but there were plenty of lightning ignited fires as well.

Char Miller: Part of what happened with the 1908 fires, if you look at the spread where they blew up, were in areas that were heavily logged or mostly heavily logged.

Steven Pyne: Logging takes the big stuff and leaves the little. Well fire burns the little stuff and leaves the big. So the stuff that logging left behind was exactly the kind of fuel that would drive large fires.

Matt : With these new fires, Gifford Pinchot started creating the first firefighting agency within the Forest Service.

Char Miller: In addition to not having anybody who is actually trained to fight a fire, is that they don't have the resources, the human resources to fight them.

Steven Pyne: They didn't know how much money they would need to spend for fires each year because they couldn't anticipate the size, number and intensity of the fires. So they were given authorization to engage in emergency spending, do what they needed to do to meet the fires, then Congress would provide supplemental appropriations later.

Matt : The 1909 fire season was somewhat uneventful. Then in 1910, a cluster of fires starts around the northern Rockies.

Char Miller: The 1910 fires were mostly lightning. They were sparking off all over eastern Washington, parts of Idaho and Montana.

Steven Pyne: The realm of the northern Rockies. And it was actually a very heavy wet winter, but then Spring came early and stayed, and so it's really the spring season that drove the fire season. The earliest serious fires were in June, a few showed up, but then it's really mid-July that the dry lightning season sets in.

Matt : And there's a sequence of how these big dry fires progress.

Steven Pyne: The fires start, they blow up when dry cold fronts pass through so the winds are driving things from the southwest, then there's a shift and they go to the southeast, and then it would settle down. Well, when they settled, all the smoke would settle into the valleys. So they couldn't see any of the new starts. If they do, there's not much they can do if it's any size except back off to the next ridge or two and then try to burn out that area. So this is a slow, laborious process and it goes on for a month.

Matt : They're clearing brush down to the soil, making fire lines, but they just aren't making significant progress. These bands of laborers with basically no training are being led by foresters with farming tools and horses.

Char Miller: And so it's almost as if they were going to war without having any strategy, without having much of a budget and not having many troops. That's not a recipe for success.

Steven Pyne: Early-mid August, appeals are made to call out the army.

Matt : Because they need more professional teams of people, and for a bit, things seem to get a little more under control.

Steven Pyne: Well, in August 19, things had settled down, but that was the rhythm. They would blow up then settle down.

Matt : And a few firefighters were even allowed to return home.

Steven Pyne: But on August 20th, the winds rose, this time much more seriously.

Char Miller: What many describe is a hurricane level windstorm, 60 to 80 miles an hour.

Matt : No fire crew, no matter how brave or delusional, thinks they can fight a fire with those kinds of winds.

Steven Pyne: The crews looked up and they realize that the sky was being obscured with this giant smoke ball to the west. Sun disappeared, the sky grew dark, and then night's going to come to add to it. You've got debris falling out of the sky, miles ahead, a larger debris as you get closer. People are understandably terrified and then they can see in the distance, where they can see, many of them can't see very far, they see these towering flames soaring up into the sky.

Matt : And the whole time you hear this deafening roar making it all the more chaotic.

Steven Pyne: And one of the survivors described the sound is like a thousand trains rushing over a thousand steel trestles. They're enormously loud and so all of your senses are being removed. You can't see anything, you can't hear anything, all you can feel is the heat.

Matt : The fires spread by this big blow up burned over 2 million acres in 36 hours. Surviving firefighters brought home horrific stories of hellish scenes, ,as well as acts of great bravery. The most famous one was that a forest ranger Ed Pulaski. Firefighters know of him, or at least his last name because of his invention, known as the Pulaski. Kind of a combination axe firefighting tool named after him. Well, at the time of the big blow up, Ed Pulaski was leading a crew of 45 in the mountains near the town of Wallace, Idaho. When those ferocious winds carrying the fires, descended onto his crew.

Steven Pyne: And said it's time to get out, we're going down the west fork of Placer Creek. We're going to try to reach Wallace. And so he's got everybody strung out and they've got their horses, and they're holding onto tales or one another. They've got a few miner lamps that they're trying to use to help light the way.

Matt : Meanwhile, the sound of a thousand trains coming from the fiery inferno.

Steven Pyne: Pulaski's running his men down the trails. One guy lags behind. He was found days later, burned. They mistook him for a stump originally. He finally tucks into a mine shaft, the Nicholson at it, and tells them they're going to have to weather the firestorm, they can't outrun it, it's bearing down on them. And so they're in this, this relatively narrow canyon, this narrow ravine; they're in a small mine shaft and everything's, everybody's in there, and then the fire comes. And Pulaski's at the entrance trying to keep the timber, there was a seep there and so they were trying to use the water to keep the timbers, the entry timbers, from catching fire. One guy at least, in the back says, you know, "To hell with this, I'm getting out of here;" and Pulaski stopped him by pulling his pistol and threatened to shoot the first man who tried to leave. Otherwise there would be a general exodus and they would all be killed in the flames.

Matt : There, Pulaski stood at the entrance to the mine shaft with a blanket that he kept wet from the water, seeping into the mine entrance. He did this until he couldn't anymore. Eventually the smoke became too much and everyone inside the cave lost all consciousness.

Matt : You're listening to California Burning. We're going to take a quick break and return to the story of Ed Pulaski, and learn about the long-lasting impact that these huge fires had on the forest service.

Steven Pyne: Everything is here. Everything that we know today was all rehearsed, all brought together for the first time in 1910.

Matt : Welcome back to California Burning. I'm Matt Fidler. Before the break, Steven Pyne was telling the story of Ed Pulaski and the catastrophic 1910 fires, and how he led his crew of firefighting foresters into a cave to protect them from burning when the Big Blowup occurred. As the firewall passed over the entrance to the cave, Ed Pulaski and all his crew had passed out unconscious. The next morning after the fire had passed and the smoke was thin enough to venture outside, most of his 45 person crew was alive, if not well.

Steven Pyne: Five men died. They passed out and suffocated or drowned in the muck at the base, but the rest were alive. Pulaski himself was badly injured, temporarily lost his eyesight, had lung damage, which would stay with him for many years, but the rest of the crew survived. And then later he invents this tool, this combination ax and mattock, which we know today as a Pulaski.

Matt : The stories around the Big Blowup, Ed Pulaski's and others, began to be used as political propaganda. Some used it to say you couldn't fight fire with just men. That it was a futile and dangerous gesture that sometimes made things worse. But the characters in these stories, like Ed Pulaski, became legends. They were real life heroes and it's hard to counter heroic narratives. By the time the fires of 1910 burned themselves out and were snuffed out by winter storms, 3.25 million acres of forests and hundreds of buildings in several towns had been burned to a crisp, including a full third of the town of Wallace, Idaho, where the Big Blowup occurred. The Forest Service lost 78 firefighters fighting this blaze. While not really even having a significant impact on it. But the legacy, not the legends of the 1910 fires, shaped our forest practices and policies for the next century. Many of the rangers stationed around Missoula, Montana who fought the Big Blowup, were to become subsequent chiefs of the Forestry Department and carried the scars of that fight with them like a conquering general leading after the war.

Char Miller: It's William B. Greeley who would replace Henry Graves, so he would become the third chief who was on the ground. Ferdinand Silcox was another one who was there who would later become, in the 1930s, chief. And these guys are fighting the fires, but it's so burned into their memory, literally seared into their memory that when they became chief, there's the notion that we have to fight fires and it's going to be Ferdinand Silcox who will be the one that will announce what's called the "10 a.m. Rule" in the 1930s.

Char Miller: The 10 a.m. Rule, so here's how it goes. If you see smoke rising above the tree canopy, so this rule goes onto say, you have until 10 o'clock the next morning to put the fire out. In short, there has to be an immediate response.

Matt : And automatic immediate fire suppression was the rule of the land. Now, if you think about it, this 10 a.m. Rule is ridiculous. How can you make a rule that would sometimes demand the impossible? But this was war for them. Fighting fire is war. Hell, they first fought fire with real soldiers from the U.S. Army and they saw fire as the enemy. And the act of fire suppression is like an occupying force. If there's an uprising, you squash it by putting it out before it has an opportunity to spread. Squash it for a generation, it will never come back, right? Well, no, that's not really how it works. But that's what these soldiers in this defining battle against fire thought was possible. So of course, the ones who came home with awards of bravery and courage from the great fires of 1910 became the future leaders and led based on the experience and lessons from the

catastrophic 1910 fires. In talking about fire like it's war, it's a great way to approach Congress to fund your newly formed department, bringing the firefighting budget, like we said earlier, from \$35,000 in 1908 to nearly a million dollars in 1910.

Steven Pyne: Everything is here. Everything that we know today was all rehearsed, all brought together for the first time in 1910.

Matt : Because you couldn't have asked for a better way to expand the Forestry Department and legitimize a wildfire fighting force. This was no longer about land management. It was more like a battle cry.

Steven Pyne: Of the future chiefs of the Forest Service, up through 1939, all of them were personally on the fireline in 1910. So this stayed with them. This was a kind of Valley Forge moment or, or Long March. That whole generation would look back on 1910 as a kind of a marker, and they would determine it would never happen again on their watch.

Matt : The 1910 fires also affected congress who watched the budgets of fighting fires skyrocket. So in an attempt to get ahead of the problem, they passed the Weeks Act in 1911. This was to enable the purchase of land to protect valuable watersheds and to help with fire suppression.

Steven Pyne: The Weeks Act, so it also provided for a Federal-State Cooperative Program in forestry, and this would be targeting particularly fire control. So this set up the mechanism to nationalize the forest service agenda.

Matt : Which is really well summed up with that 10 a.m. Rule that we talked about earlier. As soon as you see smoke, jump on it and put out that fire as fast as possible no matter what.

Steven Pyne: Well, the agenda was to remove fire as fully as possible from the landscape. This was academic forestry's argument. The more fire you could take out, the better everything would be. Part and parcel with, you know, eliminating predators or straightening out streams, or all kinds of other things people were doing at the time that they thought was an improvement on nature and it turned out to be misguided. So forestry was, was really ill equipped to deal with fire except as something to attack.

Matt : What did people that worked with fire, like the ranching community for example or the logging community that wanted to burn their slash, how did they react?

Steven Pyne: This was not accepted. It was really something that sort of the educated of the period thought was necessary. Instead, one of the interesting things about 1910, is that the same month as the Big Blowup, August, we have a controversy which spills out in California, in Northern California particularly that became known as the "Light Burning" controversy. And there was a whole passel of people who decided that the Forest Service approach was wrong and that what we should be doing was to emulate the American Indian, lightly burning the landscape under benevolent conditions. And they argued that if we did that, continued that old tradition, we would not have fuels build up that would power very large fires. And if we didn't do it, we would have overgrown forests and they would be infested with insects and diseases, and we would have a mess.

Matt : And that's exactly where we are today.

Steven Pyne: That's right. So all this is not new. This was, you know, this was over a century ago. This was publicly debated, and it was a very hard fight for the Forest Service and foresters to eventually condemn it as a kind of anathema. And it took well over a decade to beat it down and then, but it keeps coming up, and eventually, as we look back on it, we wished they had taken the other choice.

Matt : Yeah, what were the, I mean obviously they argued it successfully. Was it just because they were part of the federal government and they just had the authority or did they make really convincing arguments?

Steven Pyne: Well, there were, it was both. But part of it was that they could claim the nominal standing of science. This is what professional forestry and academic science in Europe announces, and this is what it teaches in universities, and this is the inherited wisdom. And it's not a bad understanding of fire if you're in temperate Europe. It's a pretty miserable understanding of fire if you live any place else.

Matt : And something very similar was also happening in Southern California during this early era of fire suppression. There were constant fires and firefights going on in national forests and the newly created National Park System, but these firefights didn't go very well. They'd manage to suppress fires in one moment and then the strong Santa Ana winds would pick up causing the firefighters to run for their lives in situations that Professor Char Miller describes as being like the Keystone Cops, fumbling around clumsily because they really didn't know what they were doing.

Char Miller:

Native Americans, the Tongva people who have been here for 5,000 years roughly are watching this Keystone Cop-like fire management system, and in 1925 so sort of enraged, not only have they been cut off from their ancestral lands that are now locked inside these national forests and national parks, but they're sort of miffed that this new agency is trying to do stuff that they had managed for millennia. So they actually write a letter in 1925 to Calvin Coolidge and suggest to the President of the United States that he actually turned the management of the San Bernardino and Angeles National Forest back to the Tongva people because as they said, "We had fire up there. We actually introduced fire into this landscape so that it would produce the kinds of goods and services that we needed, but we didn't have these 50 to 60 to 70,000 acre fires that ran out of control. We did it differently." Coolidge responds with a letter, that I suspect was actually written in the Forest Service, in the language of technology and technocratic. And he says, "We have the science, we have the fire management skills, don't worry, step aside, we'll take care of it." And that critique when you couple it with Elers Koch argument later, dovetails into what we now know to be a much more reasonable and I think much more astute understanding of the relationship between fire and forest and human presence. But it was rejected because it was coming from native people or it was coming from this iconoclastic forester, and it wouldn't be until the 1970s and 1980s that it actually will get a fairer hearing inside the agency and within the American public.

Matt :

Wow. So I'm still just a little bit confused about why they got it so wrong when they were all studying forestry and that included parts of the Mediterranean that did experience fire in the landscape. Like why did they get it so wrong when they were studying? They were, they were looking into this.

Char Miller:

These social institutions, whether it's the U.S. Forest Service or their analogs in the Mediterranean region, did not understand fire in ways that we now understand it, or at least the degree to which we understand it, is that they had a very different approach to what they were trying to do. If you perceive forests as economic assets, the sole purpose of which is to cut woods and put them into the economy, then the things that bother you, whether it's pests, beetles, fire, floods, those things have to be fought so that you can do the thing that you say you need to do, which is to get timber into the marketplace. So they're approaching it in a fairly monocausal way. There's an economic good, we have to protect it and therefore we're going to protect it to the best of our ability. What they're not paying attention to, as social institutions, are the different voices that

are starting to emerge in the South. There were southern foresters inside the Forest Service, inside state agencies, who were beginning to realize that, "Wait, wait, wait, wait, wait, wait. These pineries in the South, they actually need fire to be good forests so that we can actually get the logs out. So let's let some of the timber burn because it's actually going to create healthy forests." That's not a concept that got taught in schools. It's not a concept that was put on the ground and it's not a concept that was publicly palatable because fire was scary, and the 1910 fire scared the living life out of these foresters in 1910. They were emotionally scarred by it. And so there's a kind of rigid response, a rigidity that goes into the curriculum and comes out with the next generations, plural, of forest students who adapt this notion that fire was bad.

Matt : Yeah. So it seems very psychological and kind of twofold thing. Like first as you said, fire is scary and then it's maybe a little bit because the foresters that were logging didn't quite understand the systems they were logging in that if something is against your own self-interest, it's difficult for the mind to take that argument seriously.

Char Miller: Yeah. And I think that's where a psychology and sort of social structure merge: fire is bad, logging is good. So how do you rise in an organization like the forest service to become the chief? You log and you fight fire. And if you look at these Yale school foresters and then their successors, the way they rose through the ranks was to "get out the cut," which means logging, and also to be one of these heroes that blasts his way into a fire. Whether in the 1910 fires, the 1920 fires, the '30s, the '40s, and '50s, in the 60s, that's how you got your stripes.

Matt : Be a war hero, like so many other politicians are back, especially back then.

Char Miller: Yeah. So you're the hero, and one of the ways we sort of tap heroes and ask them to lead us is because they have actually led us, right? So the agency is incentivizing the very social policies that it is trying, struggling to enact. And that's how you became chief or associate chief or a regional forester, which manages the troops on the ground to produce certain kinds of goods, which meant fewer fires and more logs.

Matt : And that works in the short term when there's still lots of old growth forests still intact that have larger trees to down. But when you're regrowing those forests, the trees won't grow them as big and right for timber harvesting if there isn't fire or some sort of disruption to make room in the forest for those trees to grow big. So at first the science was wrong, as Steven Pyne said earlier.

Steven Pyne: And the science eventually corrected itself, and in the 1960s and '70s scientists are, are helping to lead arguments for reform and policy. But by then the damage was done.

Matt : Because once the mindset has been made, that fire is bad, and it certainly can be, I mean, especially as people left the farming life for growing cities. Urban fires are devastating and urban populations eventually start to lose their connection with the natural world. So instead of really solving the issues of wildfire, we tend to politicize them.

Steven Pyne: Fire is so graphic, and so visceral in a way, that people use it to animate some other agenda, so we end up not really talking about fire and how to deal with the fire problem. We end up saying, well this is really a problem but we need to reintroduce logging, or we need to get rid of environmental regulations, or we need to quit building houses in areas, or all these other things which are legitimate concerns but they're not, they're all tangential to fire and at some point we just have to decide this is an issue that it's called fire and we need to take solutions that actually address the fire issue, not trying to use fire to promote something else.

Matt : Thank you Steven Pyne for all your candor on these fire issues that we are currently facing. Also huge thanks to Char Miller and James Lewis. On the next California Burning, we're going to go back further in time and learn about the Native Californian way of managing this land. Join me as I talk with several Native Americans who are trying to bring back a culture of fire, so that we can have fire on our terms instead of catastrophic wildfires when the conditions are worse.

Margo Robbins: Fire is a necessity, not only for the ecosystem, but also for the humans.

Matt : That's on the next California Burning, which is a co-production with North State Public Radio and was made possible by generous contributions from Sierra Nevada Brewing Company. Original music by Stephen Larosa of Wonder Boy Audio. Thanks to our team, Sarah Bohannon, Gregg McVicar and Jill Fincher. I'm the creator and host Matt Fidler. See you next time on California Burning.