

# Indigenous Fire Ecology with Amy Christianson

## Ologies Podcast

### August 17, 2021

Oh heey, it's that incense that reminds you of your freshman year so much that you can only smell it sometimes because you don't want the nostalgia to fade, Alie Ward, back with a follow-up-as-promised episode of *Ologies* that serves as a companion piece to last week's Fire Ecology episode. So perhaps listen to that one first, come here for more context. Or don't. Ultimately, none of my beeswax.

So, just a little behind-the-scenes on this one's format. The format is a little different than what you're used to. I spoke with this ologist while she was up in the wilderness of Canada on vacation and the internet was spotty. So the first ten minutes or so, it's not the finest quality audio we've ever had on *Ologies*. But we did our best, and then she sent some standalone recordings answering more questions. And then after the break, we're featuring excerpts from her own Indigenous Fire Ecology podcast, *Good Fire* with Matt Kristoff, making this a real community effort and a fire mosaic episode indeed.

This ologist got her Master's and PhD in Hazard Management and Fire Science and works as a Fire Social Scientist for the Canadian Forest Service. She is a Métis woman from Treaty 6 Territory on land now known as Canada, and has authored papers such as, "Social science research on Indigenous wildfire management in the 21st century and future research needs." So, she is well-schooled on this, and then I saw she has a podcast called *Good Fire*, recorded with Matt Kristoff, who also hosts the *Your Forest* podcast.

This ologist was on vacation; I desperately wanted to chat with her the one week she was trying to relax. But she luckily was very up to take a little break and chat amid spotty internet and some tech diffs. Huge thanks to Matt for getting us in touch and for lending us excerpts from *Your Forest* and *Good Fire* to feature.

Thank you to everyone at [Patreon.com/Ologies](https://patreon.com/Ologies) for making this show possible. This episode was informed by the questions you left about Indigenous fire stewardship. And thanks to everyone who rates and reviews the podcast. It matters more than you will ever know. I read them all so I can prove it with a fresh shout out for one left this week, such as S@r@lB, who wrote:

*I started listening to this podcast and got to the gynecological episode and decided to make my first OBGYN appointment after. Turns out I have endometrial cancer. I've had a hysterectomy and am currently doing radiation therapy. Thank you DadWard for your informative podcast!*

Sara, What?! WHAT! Sending you the biggest, biggest hugs and the best vibes for a speedy defeat of that, and thank you for getting checked out.

Okay, onward to the episode. The etymology is simple. Indigenous means 'native', fire has a root meaning 'fire', and ecology is the study of where we live. So we'll be covering cultural burns, drip torches, forest debris, healthy trees, the legality of Indigenous fire stewardship, fighting fires with strategy, napping on the fire line, evacuations, and more with fire scientist, advocate, podcast host, Canadian Forest Service employee, scholar, and Indigenous Fire Ecologist Dr. Amy Christianson.

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**Amy Christianson:** No problem at all. It's great to have so much attention on this topic as well.

**Alie Ward:** It's wonderful to have you. Now, are you at the top of a mountain right now trying to get cell service?

**Amy:** No, I'm actually at my parents' cabin, but they do not have great internet. Does it sound okay?

**Alie:** Yeah, it sounds great so far.

**Amy:** Literally, they're at the very north end of a lake called Shuswap Lake, and currently we're actually surrounded by three fires as well, so...

**Alie:** Oh my gosh. And is that an area that you're pretty familiar with? Has your family been there for a long time?

**Amy:** Yeah, my parents have this cabin that we've had in our family for, I think, about 30 years now.

**Alie:** Have you seen a change at all in how the summers go, in terms of, say, being surrounded by fire?

**Amy:** The area that we're in is actually kind of a rainforest area. We always kind of jokingly refer to it as that, and we used to get so much rain out here in the summer. In, probably, the last ten years, we've noticed it's been getting warmer in this area and we've been getting less rain. Even the cedars are really starting to not look as healthy. And then the last, probably, five years we've had more summers of smoke. So it's really been... Yeah, I've really noticed a change just even in my lifetime.

**Alie:** And how long have you been studying fire? How long have you been a fire scientist?

**Amy:** I grew up in Northern Alberta. There was always fires around. My family, although we didn't have the connection... We were disconnected from cultural burning practices, but my family was, kind of, always a bit involved in fire. My husband's a wildland firefighter. So yeah, growing up it seemed like kind of a normal thing in the north.

When I moved down south to an urban center, that was when I really realized, you know, that other people didn't have that or weren't so used to that. I started actually as a geologist, but I always loved hazards, but it was more volcanic hazards and things that I was interested in. So I did two years in New Zealand where I did my master's on volcanic hazard management.

But you know, I always feel, like, bound to the forest in Alberta, so I ended up coming back. I even said to my PhD supervisor, like, "I'll study anything but fire. I don't want to have fire in my life," [laughs] because I was around it all the time and wanted something different. But yeah, slowly got pulled back into the field and I've been at the Canadian Forest Service now for about 10 years. [*Just when I thought I was out, they pull me back in.*]

**Alie:** Oh my god. What is your work like, and have you grown to appreciate it at all? Or are you still like, "[sigh] Fire. Here we are again, you and me, Fire."?

**Amy:** [laughs] Yeah, it's kind of one of those things you have to realize, that maybe you're just... I don't know... I don't want to say destined to be, but I think that living in the north, I think you have that experience with fire and seeing it around you. That's one thing I always find interesting, is when I meet other fire scientists who aren't from areas that experience fire. I think sometimes it may be hard for them to relate, especially when we're talking about fire risk and how people act during a fire event.

**Aside:** One of Dr. Christianson's areas of research and work is studying evacuations: when to leave your home with just a few possessions, and your life, for what might be the last time. It's something that she says fire scientists who haven't grown up around fire and had to, themselves, evacuate might not understand.

If you listened to last week's episode, I mentioned that my parents lived in the remote Sierra Nevadas for years and coercing them to evacuate during the King Fire was not easy, even with the promise of a night or two at the Fantasy Inn with a mirrored ceiling.

**Amy:** When I first started at the Canadian Forest Service, there was, like, no interest really in Indigenous fire management, or cultural burning practices, or Indigenous firefighters. So, I would say it was a very lonely first five or six years. Most of my colleagues are international folks; mainly folks from California and Australia who are in this field as well. But I think pretty much since we started having the big fire events in Canada, that's really what's forced people to look at maybe a different way of looking at fire on the landscape.

My interest in fire is also tied to my own family's history. My family is Métis, so we're from Northern Alberta, the Cardinal and Laboucane families, and we kind of had a weird disconnection from culture which most Métis families in Canada actually experienced during colonization. So, it's basically that we weren't allowed to practice any of our traditions and other things. It's interesting to me because it almost parallels fire in a way.

When settlers first came to Canada, one of the first things they brought with them was actually fire suppression, and as they moved west across Canada, they basically just put into place fire suppression policies wherever they went. The big reason for that was, you know, that they saw the forest as this wilderness, this natural place. But really, now we know, and lots of scientific studies now are pointing out that that wasn't natural. Many of those areas were actually stewarded by Indigenous people to look that way.

Actually, the first fire suppression campaign was in 1610 in Newfoundland in Canada. That was the first enactment of, you know, "Thou shalt not light fires on the landscape."

**Aside:** Amy says that she's from northern Alberta and there were only two fire rangers for the entire province, so...

**Amy:** So, even though they had, like, a fire suppression policy, those guys couldn't be everywhere, obviously. So, there was still a lot of cultural burning that went on. So, I would say that where I'm from, it really only kind of stopped or halted around the '60s or the '70s, where fire really stopped being allowed on the landscape in the north. What we've seen with that, you know, is just a massive increase in fuel loading and also these, like, monoculture forests where the stands are all one species, all similar age, and they're really vulnerable to pests. There's other disturbances like fire, so we're getting these massive, big fire events that have come through.

So, for Indigenous people, my family and others... My family were actually buffalo hunters and they used fire in the buffalo hunt but also afterwards to improve the habitat for buffalo and other things to help them in their hunting.

When the settlers started coming across and saying, like, "No, you can't do this. You don't know as much as us," it really devalued Indigenous people and their knowledge. And then when you add into that... you know, we had residential schools in Canada where Indigenous people were sent and basically told, you know, that they were savages, that their way of knowing, their family way of knowing the Earth, wasn't proper and that they had to learn this new way that was much better.

So, like my colleague, Faisal Moola, he was telling me that they call that a cultural severance activity, where basically you're just told that suddenly you cannot practice your culture anymore. So, the impacts of that are just massive on people; not only on their ability to use fire, but also just on who they are as a person, their pride, and their family, and other things. So, I too, like even now I still have a lot of anger about that and how I wasn't able to learn from elders about landscape stewardship and other things because of that dominant Western worldview.

**Alie:** Do you know, or has there been research into how much of that knowledge is lost?

**Amy:** Yeah, actually Henry Lewis, who is a researcher, he actually started in California but then was at the University of Alberta.

**Aside:** Dr. Henry T. Lewis, aka Hank, was an anthropology professor at the University of Alberta and was one of the first researchers to really document Indigenous fire stewardship and its role in shaping the landscape. He wrote the paper "A time for Burning." It was published in 1982 and a PDF of it is linked on my site. It's typewritten on a typewriter; it's wild. It details all the different biomes and how Indigenous cultures shaped them with fire.

And if you're like, "Hm. No reading. Need visuals," he also made a 16mm documentary titled *Fires of Spring*.

[clip from documentary: "All of this was managed by people who had developed a complex technology of fire to assure a continued successful adjustment to the northern boreal forest."]

Somehow this ended up on YouTube. (t)Hank god.

**Amy:** He went up and worked with the woodland Cree and Dene people in northern Alberta, so actually kind of where my family is from as well. And he was saying, in the 1970s when he did his work, that he thought that between 90-95% of that knowledge had been lost. That was... Now, it's hard to believe it; almost 50 years ago when that was happening. So for me, I often hear people say in meetings like, "Oh, well Indigenous knowledge isn't inapplicable to today and cultural burning practices because now we have climate change. Now there's more values on the landscape," in terms of thinking about structures and other things.

But I always argue against that because, for me, it's not about... Indigenous people, we're alive today. We're part of society. We see all these things. Indigenous people are on the front lines of climate change; of course we know that's occurring! And Indigenous knowledge, the most beautiful thing about it is how adaptable it is to the local environment because, you know, you're living in the environment, you're dependent on it.

**Aside:** So, Amy's internet cut out again so we tried a new way of recording just via the phone and her laptop, and it sounds much better! Which is great. So clear, in fact, you may even be able to discern the pitter-patter of children's footsteps on the cabin stairs as her family vacationed around her.

**Alie:** Hi! Maybe this'll work! I can hear you great.

**Amy:** At home, it's funny because I have a pretty good setup with a podcasting microphone and headphones. And of course I'm like, "Oh, it's *this* week when I'm gone." But no worries.

**Aside:** Where were we? Yes, that Indigenous fire knowledge is starting to get more attention as climate change worsens and larger fires erupt. And as a fire scientist, what is her workday like?

**Amy:** Yeah, so with my job, with the CFS, most fire research scientists, I'd say, kind of do the same thing. We have our research projects that we run or that we're part of, so a lot of my day is actually meeting about research and other things that are going on. So, really similar to an academic researcher from a university. But then as well, we also have the policy or the government side. I sit on a lot of national or international committees or working groups, looking at fire and trying to direct policy. We just recently in Canada finished the Blueprint for Wildland Fire Science for 2019-2029. So, looking at topics that we should really be spending money and time doing research on, and one of the themes from that was actually on Indigenous fires.

We also have an evacuation database, actually, with the Canada Forest Service where we've tracked wildfire evacuations in Canada since 1980. So, during the summer that's one thing, that we have lots of our staff working on that, doing data entry into it. It's a big job this summer. In 2020, I think we only had 20 different evacuations in Canada, but this year I think we're already at 125 different evacuation events. So, it's a huge job.

**Aside:** So this Blueprint for Wildland Fire Science in Canada 2019-2029 outlines, in its own words, "a business case to increase investment in wildland fire science." It is 57 pages of really great strategies, covering themes like understanding fire in a changing world; recognizing Indigenous knowledge; and enhancing knowledge exchange mechanisms to improve the ways in which wildland fire science and technology are shared, understood, and implemented. So, Amy's team had been working on that, and for the curious, I will link to the full PDF on my website.

Now, as far as the increasing evacuations, that issue gets more personal as this episode unfolds. Even more personal than my parents in an hourly motel in Reno.

**Alie:** This is something I think a lot of people have trouble wrapping their brain around, and maybe there is no good answer, but is it climate change, is it human ignition and carelessness, is it not letting the forest burn as it naturally would? How do scientists come up with plans to tackle this issue if it's, like, a tri-fold problem?

**Amy:** Yeah, I agree with you. It's such a complex issue. There's also the fact that people are just building more in areas that are of higher risk to fire. As communities get larger and expand out into what some people call the wildland-urban interface, it's really increasing fire risk.

I think that's the hard thing, too, that there's no magic bullet solution, right? Even with cultural burning, you know, I'm such a strong proponent of getting that back on the ground, but that doesn't at all tackle how vulnerable some homes and other things are to fire at the moment.

**Aside:** Climate change, she said, is also a pretty big frickin' deal.

**Amy:** But you know, the one thing that I think locally, like in our towns and stuff, that we can control is the fuels that are available to burn. So, that's why... I think cultural burning, or landscape-level fuel management, as well as the community wildfire mitigation is so important to do in combination.

Lately, I've been seeing... I don't know if you're seeing it in the States as much, but in Canada there's a bit of a movement to just, kind of, fire-proof communities, or keep homes or structures safe from fire. But to me, that's really missing the point of the landscape around your home. For me, I don't want to be living... if my home is standing in the middle of a blackened landscape... And in Canada it can take a long time for the forest to regenerate.

Sometimes 20, 30, 40 years. And even then, they're finding up north in the boreal forest, the burns are just so hot that they're basically killing the soil and any vegetation around.

So yeah, it's quite a complex issue, but I think as an Indigenous person, when I look at the forest, I don't just see it as trees, or timber values, or other things. You see it as part of who you are, like your relations. So you want to be able to steward it and protect that area as much as you do your own home or structure.

**Alie:** And can you describe a little bit about prescribed fires and Indigenous fire stewardship versus cultural burns? I think a lot of people maybe want to lump them in together, but can you describe a little bit about how they work or what they are?

**Amy:** Yeah, so there's a bit of a danger of that. This whole thing where we're seeing prescribed fire and just kind of throwing cultural burning into that. Prescribed fire is... Generally what agencies do, where they're setting fire on the landscape, but in many cases they're setting high-severity fires, [*"It's burning really fast."*] and they want to burn a lot of land in a little bit of time. So we see, like, lots of aerial ignition of fires. We see them using, basically, helicopter ignition. And in Canada, lots of times, people put that together as being a crown fire, being these big, bad, out-of-control fires that are burning up mountainsides. That's generally the media that we see in Canada about prescribed fire.

But it really differs from cultural burning because cultural burning is more about achieving a cultural objective around the forest, around where you live. So you don't really want to have these big, large, stand-replacing fires that go through and can kill everything in a prescribed fire event that sometimes is what happens in Canada.

For cultural fire too, the thing is that most fires are actually pretty low intensity. In Australia, they call them slow burns or cool burns. They generally move through the understory, and they're done at certain times of year where the potential fire behavior is very low risk where you're not getting potential of crown fire. There's lots of natural fuel breaks around the fire. In Canada that's usually snow still on the ground. For Indigenous people, cultural burning, too, is like a family/community activity. So when I'm doing burns and things, I take my daughters; my mom was on the last one that we did.

**Aside:** There's a great photo that's run in a few news articles about Amy's work. She's standing in a golden, grassy field. It's hazy with smoke as a cultural burn grass fire she's overseeing lurches behind her. And there's a husky-wolfy dog sitting to her right, staring off, and Amy's wearing black leggings and a red flannel shirt and is pregnant with what would be her second daughter. So the mood is very calm, unlike what most people's experience of "Land on Fire" might be.

**Amy:** Lots of times, we don't wear personal protective equipment, like the kind of Nomex that you usually see firefighters wearing because usually the fires are, honestly, just so slow. And most people find them, I think, a bit boring too because it can take a really long time to burn a really small piece of land. So for agencies, it doesn't really work well, right? Because that for them means more staffing dollars and other things to achieve a smaller area burned.

**Alie:** When it comes to how much fuel is in some of the forests now, that would be too much for, say, a prescribed burn maybe to tackle? I'm reading that there's so much dead timber and fallen timber because we've suppressed fire for so long. Where does fire management even begin to kind of tackle that issue?

**Amy:** Yeah, it is a big issue. And I think people often get overwhelmed. I hear all the time, "It's so complex. There's so many things and so many people's competing values." But I think that

we often lose the focus on local communities. In Canada, our First Nations have reserves, so if you go onto a reserve, many times when you speak to the elders and other people, they know what needs to be done in their area. They know if certain areas are too fuel loaded and they want to go in there and mechanically treat the forest by using machines and labor to go in and do thinning and other things before they can burn to keep the fuel load low in those areas. So, I think for me, the biggest thing is that we really need to go back to these local solutions to fire. And that's really what our research is showing, that local people want to be involved.

I talk mostly about Indigenous peoples, but you know, ranchers, farmers, other people who use the landscape for their livelihood, they also really want to have a healthy forest and environment around them, and they know the areas too. Even forestry companies... The one nice thing about cultural burning is that because we're doing these low understory burns... We don't want to burn the nice, big, healthy trees, right? Those are so important for cultural activities and for our relations, other animals. It actually really nicely works together because you can get cultural burns going through, and removing some of that deadfall, and promoting those healthy, big-tree growth that the timber companies love.

**Alie:** And, obviously, this is something that is a family issue for you too, being married to someone who is a firefighter. At what point did you decide to spread the word about good fire? And the term 'good fire' is something that I just learned too. Can you talk a little bit about what good fire is?

**Amy:** Sure. 'Good Fire' comes from the idea that... you know, it's very obvious that we *can* have good fires on the landscape, that fire is something that is helpful to the environment and to people. So, I think Indigenous people, lots of times, see fire almost in a dichotomy, so these "bad fires" and then the "good fire" that we can use as a tool.

Before colonization, Indigenous people would use fire on the landscape in good ways, but then also we did have lightning fires, obviously, back then. But they would come across the landscape and enter into this mosaic landscape that these Indigenous burns and other lightning-caused fires... as they would enter them, then the fire behavior would change. So, as it entered a meadow, the fire intensity might decrease, and then it would go back into the forest, and then it would increase, and then it would hit a deciduous stand of trees and go down again.

So, this mosaic or patchwork on the landscape was actually really helpful for fire to, kind of, decrease the intensity of these fire events. But what we're seeing right now is, because we've been suppressing those fire events, there's just so much fuel in the forests that we're seeing these bad fires. I'm thinking of the Dixie Fire in California right now, or we have multiple fires in Canada at the moment that are bad fires. Lots of times we look at it and say, "Fire's natural. There's good ecological benefits," but for me, there's nothing good about these current fires happening right now.

**Aside:** So at this point, our FaceTime call cut out because of spotty internet, so Amy recorded a clip answering a few more questions because she is the best and knew that we only had a few days until this went up and she's – once again – the best.

**Amy:** [*via recorded message*] I also just wanted to mention the importance of Indigenous people in fire, in Canada but also in other countries. We often think about Indigenous people and fire management as something that happened in the past, but we have a lot of amazing Indigenous firefighters in Canada, Indigenous fire managers, and other people who are really

on the front lines trying to bring back good fire and Indigenous fire stewardship, really out there every summer protecting our communities from these bad fires. Especially in Canada, a lot of times we don't give enough attention, I think, to those Indigenous firefighters. Lots of times, they're kept from progressing in their careers because they might not have the appropriate Western education levels, a degree, or a diploma, or something. But they might have 20, 30, 40 years' experience of being on the fire and be so knowledgeable and incredible.

I think we need to look at where Western science as well got some of its ideas. I've spoken to many elders who've told me about drip torches and how they would use tree limbs and sap to create their own drip torches – that's what their ancestors did – and how they would spread fire across the landscape was in doing that. Now, you know, it's a metal canister with fuel in it, but it's kind of the same idea that Indigenous peoples had about how to use fire properly on the land.

Just this incredible knowledge base. People in the communities had roles. In Canada, some Nations actually had families that were fire keepers. There were many people who knew about fire and had knowledge about fire activity.

**Aside:** After the break, you'll hear a clip from *Good Fire* podcast hosts Amy Christianson and Matt Kristoff talking about Indigenous firefighters' experience on the fire line. And I admit I found this discussion hilarious.

But before that, remember Henry T. Lewis, Hank, the anthropologist who wrote *A Time for Burning* and made that *Fires of Spring* film? The retro 16mm film aesthetics are far from the coolest thing about his fire-works.

**Amy:** [via recorded message] One of the coolest things, I think, from Henry Lewis's work was when he was speaking to woodland Cree and Dene elders about how they would use fire to melt the frost in the ground. And I've seen a few Western science studies lately on that, but that's actually an older technique that the communities would use. You get, kind of, all the dry grass on top of a meadow or something, and they would go and burn that in the really early spring. That's the most important thing about Indigenous burning, is the time to burn; when it's safe to do a good fire.

That would then turn that grass black. The black would absorb the heat of the sun and then start to melt the frost out of the ground in the early spring. That would give you much earlier green shoots and green grass coming up that then moose, deer, other things could come in and eat in that area. So, it would make your hunting or other things a lot easier to do. [“That's genius”]

So yeah, I think those are things that... There's probably so much more out there that we don't even know, that communities use and how they would use fire in a good way. If people are interested, Frank Lake, I think is probably one of the first fire ecologists who is also an Indigenous man, who saw very early the importance of Indigenous fire knowledge and bringing it. He's written some really great publications that I think, for people, are eye-opening about how we can use fire in a good way on the landscape.

**Aside:** And to hear an earload of other incredible Indigenous voices in fire ecology, you'll want to subscribe to *Good Fire*. It's a podcast series by Amy and Matt and we are featuring audio from a discussion as they launched *Good Fire* in 2019. They were gracious enough to let us steal some clips to round out the conversation amid our tech issues this week.



As it turned out, Amy and I had further trouble connecting because those three fires that she mentioned around her family cabin got bigger and they were forced to evacuate from their vacation. So yes, her work is timely and personal and she literally wrote the book on this; a volume titled “First Nations Wildfire Evacuations - A Guide for Communities and External Agencies,” alongside Tara McGee and First Nations Wildfire Evacuation Partnership. I’m going to link to that in the show notes as well.

Now, in her name we’re donating this week to a cause of her choosing, and she asked that it go to the Indian Residential School Survivors Society, [RISSS.ca](http://RISSS.ca). For over 20 years, they’ve assisted First Nations people in British Columbia to recognize and be holistically empowered from the primary and generational effect of the residential schools by supporting research, education, awareness, establishing partnerships, and advocating for justice and healing. The society assists survivors with counseling, court support, information referrals, workshops, and more. You can find out more at [RISSS.ca](http://RISSS.ca). There’s a link in the show notes. And in Canada, consider participating in Orange Shirt Day on September 30th. It’s also known as National Day for Truth and Reconciliation.

That donation was made possible by some sponsors of the show.

[Ad Break]

So many of you patrons asked about Indigenous fire management. I’ll list you all at once very quickly: Cameron Brown, Doug, potential future fire ecologist Ronan, Jackie, Chris Brewer, Kimberly Hoffman, Ellen Skelton, Thomas N Wyndham, Briana Freeman, Justin Roberts, Anthony Willis, Donnielle O’Neill, and Alexandre Catulle. And because our time chatting was cut short, we’re so honored and lucky to feature relevant clips from a conversation with the *Good Fire* podcast host Amy Christianson and her co-host Matt Kristoff.

Here Amy is talking about fears of fire.

**Amy:** [from *Good Fire* podcast] Even in our Indigenous communities, lots of people are now worried about fire and scared of fire. And I think... For me, when I come across people, you know, that kind of have that tendency to think of fire as bad, I always say, “Well, there’s good fire.” And that’s the name for the podcast. When we’re doing these good fires, it’s not a wildfire. It’s totally different.

Most Indigenous people want to bring back burning and bring that cultural practice to their landscape because most elders, when they look at the forest, the first thing they say is that it’s unhealthy and that it needs cleaning up. When I first started working with a bunch of elders, I’d always hear this ‘cleaning up’ phrase. And you know, it took a while until I realized that meant fire, that they wanted... Because you know, you don’t normally think of that. You think going out with a rake or something, like what Donald Trump thinks we’re doing. But you know, it was actually that they wanted to use fire to clean up all that dead litter on the forest floor.

So, they just want to do that again in their territory. But I think they also realize that because of the fire suppression that we’ve had over the last 50-300 years, depending on where you are in Canada, that it’s not that easy just to bring back our burning practices, right? We burn on intervals, so depending on where you were... if you were burning a meadow, you might burn the meadow every three years. If you were burning an old-growth forest stand, you might burn every 20 years. It just depended on what you were burning or what objective you were trying to achieve. And now we’ve excluded fire, so the litter and the buildup of fuel is crazy.

So now, most of the elders I talk to, they say, “If we went and tried to do this now, we would basically burn down the forest. We’d be trying to start a low-intensity burn but there’s just too much fuel on the floor,” so it would immediately escalate.

**Aside:** So how do Indigenous fire scientists and wildland firefighters approach these really different schools of thought? Amy explains to Matt:

**Amy:** [*from Good Fire podcast*] We call it two-eyed seeing, so that’s kind of the new concept that’s come up. That’s like where, as Indigenous people, or even as non-Indigenous, you’re looking at the world through one eye, through your Western perspective, because we’re *all* trained in that. There’s not...

**Matt:** It’s inevitable now.

**Amy:** There’s very few people that you know are born and raised in the bush and have that kind of only-subsistence lifestyle. But then out of the other eye, you can see with your Indigenous eye. You can see where things could be better. And I think for me, that’s where fire management comes in because I’m trained from the Western perspective but I think, you know, from culture that there’s things that Indigenous people do or know better.

And for me, part of my job is advocating for that and trying... It’s not like saying, “Drop all Western science around fire,” right? We need that too, but then Indigenous people in our cultures also know ways for making the forest healthy. So to me, if you bring those two together, then you have an incredible knowledge base that you’re coming from.

**Aside:** Ah, the firefighter stories I promised you:

**Amy:** [*from Good Fire podcast*] One example is, like, talking to firefighters... There’s this one guy who’s a non-Indigenous firefighter. It’s kind of funny on the fire crews there, there’s 30 or 40 Indigenous firefighters that have been on the fire line a long time, and they say these “new kids,” like university grads, come up and start telling them what to do.

This one guy was actually telling me that he started out of university as kind of a fire boss and went up on the one line, and he had these Native crews. He said he thought they were the laziest people in the world. They would get up in the morning and work a little bit, but then, he’s like, “Then they nap all day in the bush,” and he’s like, “but then they would get up and work all night.” And then he’s like, “But then I started really looking and watching what they were doing.”

And he said that then one of the guys came up and told him, like, “We fight the fire when it’s the weakest because we see fire as a living being, and why would you fight something at the height of its day?” Like at 2pm on a really sunny, hot day with high winds, right? Why would you do anything? The fire can just jump or... But you know, if you fight it in the morning when it’s the weakest, or in the evening, or overnight...

**Matt:** When humidity is high and the temperature is low, so the activity is...

**Amy:** Decreased. Yeah. Well, I should say ‘generally’. Now with climate change, who knows. But generally, fire activity decreases at night, right? So, these guys have got that not from textbooks but from years of being out and watching fires.

So he was saying, this non-Indigenous kid, that it was just amazing to see that because he didn’t learn any of that in school. So for him, he said he learned more that summer working with the Native crews about fire than going to school, basically. Not to say... Like, stay in

school kids. [laughs] That's important too. But there's other ways and other things to learn as well about fire.

Lots of the Indigenous fire guys, they always tell me one of the funniest things is when the fire season first starts... In Cree, the word for white boy or whatever is 'moniyaw', so they say, like, "It's so funny when the moniyaw come on the fire because they're all just doing selfies with the fire in the background, and we're all actually working, and all the moniyaw are just lined up way away from the fire taking selfies." [laughs] And that was funny because then I started seeing, like, lots of people... [laughs]

**Matt:** Yeah, they do well on Instagram.

**Amy:** Yeah, but I think that's just maybe a bit of... It's kind of more of... Like, for Indigenous people it's more of a lifestyle, right? They've been doing that... It's a great career for Indigenous people because they can go out in the summer, make money, be on the land, and then in the winter they can go run their trap lines, or hunt, be with their families, participate in their culture. So, I think that's why it's become a nice lifestyle for certain people.

**Matt:** For sure.

**Aside:** So how do agencies and nations work together? How can ecologists and firekeepers *spark* those collaborations?

**Amy:** [from Good Fire podcast] People always say, "You need to engage with the Indigenous communities." To me, that's a nice concept. I know that lots of non-Indigenous people or companies get frustrated because they go to these communities and try to engage and nobody turns up, or they can't get ahold of anybody, or nobody returns their calls.

So, I think the thing for people to remember is that, like, First Nations are under the Indian Act, right? So basically, all their resources, their capital for how they're run, all is basically decided in Ottawa, and how much money comes down to them. So, most of the time, even though the communities have high capacity for forestry or other things, it's often very underfunded because of what comes down the stream from Ottawa.

**Aside:** Ottawa is in Eastern Canada in Ontario. And did you know that Ottawa is the capital of Canada? I didn't, until right now. So if you feel the same, it's okay.

**Amy:** [from Good Fire podcast] Basically, there's not enough money, right? So, they might not have a forestry coordinator; they might not have a lands person. Or the chief might be... You know, the chief has to manage housing, healthcare, everything. So I know people get frustrated, but at the same time, there needs to be a bit of patience and understanding there that lots of the nations are trying as much as they can.

And some are great. There's some nations, you know, that have really gone into forestry there. You know the Community Forest in BC? I think those are a really great example of things that are working well. I know there's been partnerships between different forest industries and Indigenous nations too. Most forestry people don't go into forestry because they want to kill all the trees and everything, right? They go into it because they love being in the forest, so they want to sustain that. Most Indigenous people love being in the forest, right? So right there you have a match. So then it almost goes to, "If these are our shared values, how then can we move forward together?"

But I think one of the problems is that there's a real lack of trust because there's been a lot of people that have taken advantage of Indigenous communities; come in, said all the right things, and then ended up taking money and not involving the Nation. So, it can take a while.

I think a helpful thing is employing Indigenous people. When you want to work with a certain Indigenous nation, to employ people from that band and give them a sustainable career. And there's lots of Indigenous people that actually have forest tech diplomas and other things that can do that. And I know it's not easy either. I don't want people to think, "Yeah, you just sit at a table and decide your values and then everything goes away."

**Aside:** Amy explains that over the many years, promises have been made and broken and outside collaboration has seemed to come with a price tag.

**Amy:** [*from Good Fire podcast*] I think you need to recognize, if you want to do this kind of work, that there has to be some kind of benefit for the community as a whole as well. Whether that's monetarily or supporting, like, a recreational forest, or something to come to that. There's not, I think, an easy answer for, "Just do this one step and Indigenous people will love to work with you." But I think that forestry really has an advantage over, say, the oil and gas industry because I think there's many more shared values. I think the worldview of an Indigenous person and a forester are much more similar. So, I think that's exciting almost.

I've seen a bunch of nations now are opening their own sawmills and things, and to me that's exciting... It has to do with the housing crisis we have, right? They want to be able to harvest their own wood to build their own homes. I mean, why we aren't doing that, I have no idea. Instead of shipping in wood, and timber, and stuff.

So, unfortunately there's not, like, a really easy answer, but I would say that the biggest thing is to be genuine, and patient, and understand that history, the situation that you're coming into. Lots of people get, like... I don't want to say 'white savior' because that sounds really bad, but you know, like, "I'm going to go to the community and help them." And I think the problem is that there's a revolving door of these 'white saviors' or people coming to 'save' them. Even if you go to a First Nations conference, there's businesspeople all over the place trying to sell the chiefs on different ideas and different things.

It's almost about just becoming trusted in the community, and then also working long term. That's something our... especially in government, we don't really see support. Because everyone wants to climb the ladder in government, whereas the most trusted people are generally the ones from the community who have been in the community the longest, and that's generally who an Indigenous person would trust. So, it's almost like doing these relationships long-term. I think there's some great examples out there of things that are going really well.

**Aside:** So yes, trust and incentives really matter. As does plain old money.

**Amy:** [*from Good Fire podcast*] I would say lots of that does come from that funding issue. Sometimes they just don't have enough money. And then also, other times we're dealing with lots of issues that have been brought on by colonization, right? If you're dealing with a suicide crisis in your community, you're not going to really care about forestry, right? I hear people say that to me sometimes when I talk about how we're stewards of the environment. They'll say, "Have you ever been on a reserve and looked at..." you know, there's garbage everywhere, and people don't care about their houses, and that's hardly an environmental steward. To me, that's colonization. That's where we've gone and where we've been pushed.

**Aside:** Reminder that cultural burning practices were criminalized but now they're becoming of interest to Western scientists. Amy says that returning to that fire stewardship could be really healing; for forests, for people who love the forest, and for the people who have been kept from doing it for so long.

**Amy:** [from *Good Fire podcast*] Moving forward, it's kind of like regaining our culture back. That's where it's related to burning and those things, because burning, for us, is a cultural practice, right? So, I think by getting fire back on the landscape, by making our forests healthier, then that promotes a healthier community.

Instead of kids sitting inside, they're out on the land. And what kid doesn't like fire, right? So, they're out with their elder, burning. And there's neat things, like even just showing kids how smart their ancestors were. The one elder that I was talking to was telling me how drip torches actually came from First Nations people, which I didn't know. But to me, that's neat because you take kids out there, and you show them, "Drip torches came from your ancestors."

**Matt:** That's super cool.

**Amy:** And even kids had jobs on fires, right? So... Oh man, I actually heard this fantastic quote that almost made me cry the other day, from this guy in Australia. He was saying, for them, burning is such a family affair. And that's what I hear from the people I've talked to here. It wouldn't just be the men that would go out and burn. It's the entire family. And the kids... One thing they would do is pick up, like, pinecones and light them on fire from the fire and then throw them. [laughs] Awesome for kids!

And I know there's fire managers probably listening to this saying, "Oh my goodness. They're going to burn down the forest." [laughs]

**Matt:** [laughs] Please do not do this if you are a kid listening. Don't start throwing flaming balls of fire. Don't do that. Yeah.

**Amy:** Yeah, but this was obviously under the direction of elders, and also burning at very low-risk times. This was not in the heat of summer.

**Matt:** Right, this was very controlled.

**Amy:** Yes. But you know, to give the kids a job on the fire. And the one guy from Australia was saying that for his mob, for them, it was bringing children's laughter back to the forest because the trees hadn't heard the children laugh in a long time. They felt that was needed for the trees to be healthy too. I mean, that kind of relates. Obviously, children's laughter does not directly affect the tree, but it's more that people are out on the land stewarding it, right? That promotes the health of the trees. Anyway, that was such a beautiful quote because I think, too often, we kind of remove that or remove the community.

**Aside:** Patron Nikki DeMarco asked: Is there any way we could go back to Indigenous stewardship to help with this problem, or does the red tape make it not feasible?

Moving forward, what are the legalities of it?

**Amy:** [from *Good Fire podcast*] On the reserves, we're technically allowed to burn because that's the band... It's federal jurisdiction, but the band has a bit of control over it so you don't *need* provincial permission to do that. Lots of fire management agencies say, "We're so supportive of Indigenous people and we want to help support their practices," *until* we say we want to burn something.

What I've seen even in BC where I'm doing a lot of work right now because the nations there are so passionate about burning, they're going into these meetings, and it's a really complicated process to get prescribed burning on the ground. It's very Western-based. You have to know the fuel types that are out there...

**Matt:** That's the culture we live in now, so of course there's going to be that kind of bureaucracy.

**Amy:** Yeah, it's like a crazy 12-step process. Most of the communities look at that and say, "Well, screw this. We're burning it ourselves." And even when they want to burn... I've heard lots where somebody sees smoke and calls the emergency number, and then a helicopter will come and just put out their little fire that they're burning without coming and maybe talking to the people or seeing what's going on. So, there's a bit of a disconnect.

And I can see it from both sides, right? Especially in BC, the fires have been so crazy. I think the BC wildfire service there obviously doesn't want out-of-control fires, but the nations there want to burn. So what I'm seeing right now is, because... They're just smashing heads, basically. Like, they're supportive until we want to burn. And because of that smashing of heads, now the nations are saying, like, "Screw you. This is our territory. We're doing what we want," and then it becomes this real conflict situation.

We're trying to work with the agency and, you know, maybe even introduce some cultural burn protocol or procedure that's more Indigenous based; that same thing, like you're kind of getting permission, you're notifying the correct authorities, but it's not as crazy as this existing process.

**Matt:** Right. I think that's... Again, that's another thing we've discussed a bit on the other episodes we did of the *Good Fire* podcast, but talking about that... That's another big barrier to Indigenous burning or cultural burning, however you want to call it, is the Western barriers on it. Because you're right, we don't want out-of-control fires. The Western government, we want to make sure that any fire that is started is not going to become a problem for anything outside of the reserve or whatever, right?

But also, at the same time, recognizing that, like you were saying, Indigenous people have been working with fire for thousands of years and understand the relationship. So how do you make sure that government feels comfortable with this going on, but also ensuring that... because it's entirely possible also... This is something that somebody who's playing devil's advocate would say, right? That, like, how do we ensure that *they* know what *they're* doing? Just because they're Indigenous doesn't mean they know what's going on, right? They have to have that knowledge passed down and collected somehow...

**Amy:** Yeah, I've heard that all the time. "If we allow this, the Indians are going to be lighting fires everywhere." That kind of fear.

**Matt:** Exactly, that fear of, "Will they take advantage of this and just do it for fun or whatever?" That exists, so we have to address that fear. So how do we... There's going to have to be a collaboration somehow to be like, "Okay, we acknowledge that these four people, somehow..." Unfortunately, that's the way, I think, it's probably going to have to go. "These four people in this band have the knowledge..." And this is super Westernized of me to think, right? "These people have the knowledge and understanding of how to do this, so if they're in charge, we're not going to worry about it."

But I also feel like Indigenous communities having to talk to the overlord, the government, about what they're doing on their own land is exactly the opposite of what you're trying to accomplish here.

**Amy:** Yeah, and that's like... You know there's Burn Boss training, right? So there's different levels of that. You can go through... It's the same thing, very Western. I know that now there's Bob Gray and other guys who train on that who are starting to incorporate a bit of Indigenous

knowledge or the importance of Indigenous knowledge in burning. But same; it's very Western, like, "This is how we light a prescribed fire..."

**Matt:** That's all we know. That's the only culture I know, right? So, it's where my perspective is going to come from.

**Amy:** Totally, yeah. We were doing a brainstorm with some of the Firekeepers and we're like, "Well, they do a certification course to get that," so maybe what we need to do is have a cultural burning certification course that people would go through, and once they get that they can go and light fires or whatever. But then we had a lot of firekeepers that were saying, like, "No. That is basically just us trying to fit into a Western system." The one guy, actually, at the firekeepers conference I just went to, the government people were talking, and he stood up, and he just said, you know, "I find this really difficult..." because they were talking about all the procedures you need to go through to get approval. He stood up and said, "For me, this is my Nation's inherent right to steward the land. This is my responsibility. This is why I was put on this Earth. So for *me* to have to go and ask *you* for permission to do what is my responsibility and my right, that doesn't make any sense."

And then he was saying, you know, 100 years ago you guys were telling us we couldn't burn because we were destroying the forests, and now you're saying only *we* can burn because now the forest is destroyed. He's like, "You're the ones whose practices have led to this because you didn't listen to us. If you would've listened to my ancestors, then we wouldn't be in this predicament we're in now, so let us take it over."

So, I think it's one of those... I don't like the term 'wicked issue' where it's super complex, but it is kind of like that in a way, right? Because you're worried the forest isn't healthy right now... I don't personally want to say to somebody, like, "Yeah, go out and burn," and then have a massive crown fire start. But I think the thing is with Indigenous fire practice is that it's... you know, you're burning at very specific times. So, it's early spring before the snow has left in Canada, or it's late fall just the day or two before the first snowfall, right? You're not burning, obviously, in the summer. So, I would think that should still be criminalized to some extent, that you need to fine people that are just going... because that is very high risk.

So, what our elders and ancestors say from the different nations that I've talked to is that our burning that we do is so low risk, that's why we don't need protective equipment. That's why we don't need a burn plan. Because if we're doing it right, there's literally very low or zero risk. I think they would say zero risk to what they're doing, of starting an out-of-control fire or somebody getting hurt.

**Matt:** It's amazing how complicated the situation is to try and navigate this. But I think the only way forward is to come together and have these discussions. It seems like a cop-out to say that, "We need to discuss it." But unfortunately, that's the truth.

**Amy:** Yeah, and on the *Good Fire* podcast, I think that's what's interesting because with the range of people we talk to on there, you go from somebody who thinks it's their right to burn and they're not working with any agency, and then to other people who, you know, are employed, like me, by an agency. Like Frank Lake, he works for the US Forest Service and he's used his work within the Western government structure to bring more fire back to his territory. So yeah, it's really interesting to see all the different perspectives.

**Aside:** That conversation was from the *Your Forest* podcast, which is hosted by Matt Kristoff, who also co-hosts *Good Fire* with Amy. And of course, there's a whole *Good Fire* episode with Frank Lake, and there's so many other great voices in Indigenous fire ecology,

so I'm going to link that episode and the podcast in general on my website and I will also put up a link to the wonderful 47-page book called *Blazing the Trail: Celebrating Indigenous Fire Stewardship*. So many resources, so much learning!

To wrap up, let's talk about some pains in some asses. The most vexing thing about Amy's job?

**Amy:** [via recorded message] I'd have to say, my least favorite thing about my job is the bureaucracy, which I think most people who work in a government agency can relate to. It's sometimes really frustrating when you know something needs to be done or what a solution could be, but then you get held up in all sorts of bureaucratic processes. So I mean, that's my least favorite, unfortunately. It takes up a lot of time that we could be devoting to other things, so that's frustrating for sure.

**Aside:** And the standout best aspect? The most brightly glowing coal?

**Amy:** [via recorded message] But I think my most favorite thing about my job is that I'm able to work with communities and knowledge keepers across Canada, and internationally sometimes as well. I really realize that's a position of privilege that I have and that I'm in to be able to do that. And it comes with a lot of responsibility that often keeps me awake at night. But for me, when I'm able to bring firekeepers or other people to events or other things and just see their pride in finally being recognized and their knowledge being known... Sometimes I've been referring to that as, like, we had this big severance event with fire but now what we're almost seeing is this reunion with fire. Indigenous people are coming back to it.

So, we have the Land Back Movement for Indigenous people, and often I think we need a Fire Back Movement as well where Indigenous people are empowered again to make those decisions on the land. And what I'm seeing right now in Canada especially is that there is a movement where people want to be involved in fire management decisions that are happening in their territories, so I think that's really exciting.

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So ask smart people exciting questions, because sometimes the situation is impossibly complex and they can help break it down for you, like a fungus on a fallen log. For more on this topic, you can get yourself some [Good Fire](#) podcast into your ears. It's hosted by Amy and Matt Kristoff. It's linked in the show notes. Matt's podcast, again, is [Your Forest](#). Thank you so much to him for letting us use so much of his interview with Amy.

You can follow Amy [@ChrstiansonAmy](#) on Twitter. There are more links in the show notes and up at my website [AlieWard.com/Ologies/GoodFire](#). You can follow us [@Ologies](#) on [Twitter](#) and [Instagram](#). I'm [@AlieWard](#) on [both](#). New, full-length, adult-friendly episodes continue to come out on Tuesday, and we're moving *Smologies* releases to the weekend. I think Sundays or Mondays. So look for a new kid-friendly episode next week. Also, I'm sorry that my neighbor's dog is barking. I can't really do anything about it. We gotta get this episode up! [laughs] I'm so sweaty...

Merch is available at [OlogiesMerch.com](#). Thank you to sisters Shannon Feltus and Boni Dutch for managing merch. They host a podcast called *You Are That*, a comedy podcast. Thank you to long-time friend Erin Talbert, we met when we were four, for adminning the *Ologies* Podcast [Facebook group](#). Thank you to Emily White of The Wordary, professional transcription company, for making transcripts for *Ologies*. They're available for free on my website. Thank you Caleb Patton for bleeping episodes. Thank you Noel Dilworth for all the scheduling and Susan Hale, both of you, for helping with social media quizzes and such.



As always, giant thank you to resident editor, and by resident I mean we live in the same bed, Jarrett Sleeper, who helped me stitch all of these audio clips together. And thank you also, of course, to Steven Ray Morris for all the editing help and for working on *Smologies* now too. Nick Thorburn wrote and performed the theme music.

And if you listen to the end, you know I tell you a secret. This week's secret, it's pretty juicy. It's actually not. It's that I prefer dry, pulpy oranges. I don't want a juicy orange. I want the pulp to hold all the juice. I don't want any juice on my hands. I want a dry, pulpy orange. I don't know if it's a certain kind of orange or if I have to just let them sit on the counter longer. But if you are a pulpologist and you know this, holler. Let me know, because every time I open an orange I'm rolling the dice. I'm like, "C'mon, gimme a dry one!" Is it gross? I don't know. I don't care.

Anyway, berbye.

*Transcribed by Emily White at [TheWordary.com](http://TheWordary.com)*

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["Blazing the Trail: Celebrating Indigenous Fire Stewardship"](#)

["FireSmart Guide to Landscaping, Second Edition"](#)

[Amy's book! \*First Nations Wildfire Evacuations: A Guide for Communities and External Agencies\*](#) alongside [Tara K. McGee](#), and First Nations Wildfire Evacuation Partnership

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