

# Following Fire

**An interview with project founders David Paul Bayles and Fred Swanson, and BEF's Kayla Seaforth.**

*All photos by David Paul Bayles*

*Photographer David Paul Bayles and Ecologist Fred Swanson have taken a special interest in the post-fire landscape adjacent to the McKenzie River following the 2020 Holiday Farm Fire. Their project seeks to capture the resilience and resurgence of life in the forest after large scale disturbance.*



*Nine months post fire much of the landscape was filled with Fireweed growing to heights ranging from 4-7 feet tall.*



*Among the needlecast two pyrophilia are thriving in the early months post fire. The goblet fungus begins with filamentous fibers growing in the soil within weeks of the fire. It is important because it can help prevent erosion. The fruiting bodies emerge above the soil about the time the neon green fire moss appears.*

Fire-loving plants called pyrophilia provide the first colorful signs of hope following a fire disturbance.

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To see more images featured in this project, visit [www.followingfire.com](http://www.followingfire.com)

**KAYLA SEAFORTH:** Could you tell me about each of your backgrounds and how you came together to work on this project?

**DAVID PAUL BAYLES:** I fell in love with photography after a class in community college, but the school that I wanted to go to was private and very expensive. I was looking for a way to earn tuition money that was also adventurous and different from anything I've ever done. I went to the Sierra Nevada mountains to visit my sister and mother and I met my sister's boyfriend. He was a third generation Norwegian American timber faller, and he got me a job. I loved the

work. That experience has led to a lifelong inquiry into our relationship to trees and forests.

**FRED SWANSON:** I was trained as a geologist and have worked at the H.J. Andrews Experimental Forest, which is property of US Forest Service, Pacific Northwest Research Station on the Willamette National Forest. We've had an ecosystem research program going on there with funding from the Forest Service and the National Science Foundation since I started working there in 1972, during a period of active logging on federal lands. I've long been interested in the arts and the

humanities, but not as a practitioner. I've also worked at Mount St. Helens. As a geologist I'm interested in physical processes that beat up the ecosystem: fire, floods, landslides and different types of volcanic eruptions. I've also long wanted to facilitate access for creative writers and artists, but didn't get around to it until the year 2000 at Mount St. Helens, which was 20 years after the eruption. That was a very exciting opportunity for me to go up there with the poet Gary Snyder, who had influenced my own thinking since I was an undergraduate. Beginning in 2002, I began interacting with Kathleen Dean Moore and others in the Spring

## Introduction to Chronosequence

Repeated photography of the same scene over seasons and/or years has long been used by artists and scientists to document landscape change. This technique is especially relevant after major scene-changing events, such as wildfire, volcanic eruptions, and human land use activities. For this project, we selected 42 distinct photopoints that represent different forest conditions. During the first two years we photographed each photopoint 12 times in order to record the changing landscape following the fire.



*This view is looking through a young riparian forest toward the McKenzie River flowing to the left. A logging camp occupied this site into the 1970s. The fire quickly burned down the valley, but left fire smoldering in the crotch of the large bigleaf maple tree, eventually causing collapse of three big stems — to the left and away and toward the camera.*

Creek Project for Ideas, Nature and the Written Word, and we have facilitated more than 100 writer/artist residencies at Andrews Forest. This work with David has been the first time that I've actually participated in the creative process, not just facilitated it. It's been so much fun and so stimulating and interesting. I've been retired for 11 years so I can go out there freeform. I'm not trying to be a scientist, I'm just going out there to learn from the forest through repeated visits with David, who looks at it in different ways than I do. He looks at forms and colors and I look at geological and biological processes and history and think about the future. We've really resonated because we both love forests and share curiosities.

**KS:** That is a beautiful partnership. How did the idea for this project come about?

**DPB:** The first time I met Fred was when a group of writers and poets met at the H.J. Andrews for a long weekend. Later, there was an exhibition based on a scientist's work from the Andrews on rotting logs that I was asked to be part of. Fred was very involved in that exhibition, and so our relationship evolved through collaborative work on that project, as well as later through my residency at the H.J. Andrews Forest. So when the Holiday Farm Fire was raging, and we were all hunkered down in our individual spaces, Fred and I independently both started thinking about when we could get up there and

see the forest. We were both monitoring it since it was getting close to facilities at the Andrews. Later, Fred got access to properties nearby, through McKenzie River Trust, and from the very first day we were hooked.

**FS:** The key part of this is that David wanted to work in the forest; he'd done work in his logger days, some decades ago, down in the Sierras, and has continued to work in the forests since. His images have been used in scientific publications, by essayists, on the cover of scientific journals and more, because his images convey a sense of mystery and wonder and all the affective values of old forests. So, he did this work in the green forest, then bam, here comes a black forest. We wandered in that black forest, trying to sort out our emotions and the tension between the beauty we found and our sense of tragedy; more than 400 homes burned in the 173,000 acres of the Holiday Farm Fire that roared down the McKenzie River. David's earlier photo project *Old Growth Dialogue* revealed the green reference system for this work in the blackened forest.

**DPB:** One of the many things that I learned from Fred, that I think necessary for all of us in this period of time, is to shift our thinking about fire toward understanding that the forest is a lot more than what we think it is. So even that burned, skeletal state is a forest. And there is life happening there right after the embers go out, there's life in the soil that's preparing the way for the next iteration of that forest. It's not a dead forest and later a new forest, It's one continuous forest. That realization was groundbreaking for me.

On the drive up the canyon we saw all the burned, leveled homes, one right after the other. It was terrible, and when we got into what became our project site, I thought "this is really beautiful." Eventually, we had to reconcile what we drove past, the human loss and tragedy, with seeing this skeletal forest, where we're looking at the bones and physical structure, and they're elementally beautiful, and how to balance those two. We came to a realization that if we were going to make a project out of this, we were going to focus on the forest and not the broader human part of the story, that was for others to tell.

**FS:** Our overall objective is to try to help people, including ourselves, understand and appreciate forests better, get a stronger sense of their unbelievable resilience despite some of the batterings that they take, but also to raise concerns about the uncertainties of the future. Over my career, I've gone to many sites of forest disturbance; I got into Mount St. Helens on day 10 after the eruption, with a couple other scientists and we flew right in front of the volcano, and I realized later that I had seen life triggered by the eruption. On day ten! Spiderweb-like filaments of burn-site fungi had already ramified through these new deposits laid down during the eruption. To me, that was a profound learning experience. I've worked very closely with ecologists, principally Charlie Crisafulli, a Forest Service ecologist stationed at Mount St. Helens. The vitality of life has been a central theme for me throughout my career. I tend to feature the geophysical processes, but go to these places with people who are doing the ecology side. You have to bring both of those worldviews together on equal footing in order to do the best job you can in science. And now I realize that poetry and art and history and things of this nature should also be a part of the conversation.

**KS:** Where do you think the opportunities lie following ecological disturbance, especially as it relates to the work that you've been doing in a post-fire landscape?

**DPB:** Our project is very site specific. We're not stating that this is the way all forests respond. Part of that site specificity has to do with the human legacies on both project sites, one of which had been a logging camp from the early 30s through the 60s. It became the property of McKenzie River Trust, and there was all this underbrush that the fire burned away revealing all these pieces of metal: leftover car parts, washing machine parts, waffle irons, tea pots, and a dump pile of tin cans and glass bottles. Volunteers gathered the metal which was sent off to be recycled. In this way the fire helped McKenzie River Trust in their overall goal of wanting to allow this landscape to transform into something more natural. Fire actually might have helped accelerate that process. Part of that is the uncertain future, we don't know if it's going to be the kind of Pacific Northwest forest we've had for so long, it



Columbia lily.

may have some other species emerging 50 years, 20 years, 10 years from now. I suspect as we face climate change, we're going to need to do more of this kind of reclamation of land that has been altered by human activity, and let them become whatever natural landscapes they need to be. We need trees and forests in a whole different way than we have in the past.

**FS:** The details here are certainly not the story of all forests that have been burning so ferociously across the West. Because this is a wet area, the restorative and resilience properties of the forest are particularly strong. For example, some places where volcanoes erupted in the past, like east of Mount Mazama which erupted 7000 years ago, are still a desert, but in a place like Indonesia they go in and plant banana trees before the deposits have even cooled. In a tropical setting, life can really boom. We don't want to overreach in trying to draw general lessons from one specific case.

A key theme in this project is tensions; we felt a tension between the sense of loss of all these people who lost homes and businesses. But there was also this beauty, and how so much of the carbon capital, more than 95%, was retained on site, even despite us breathing it in smoke down here in the Willamette Valley. How much life had persevered, hidden underground, or under the bark, where it could sprout new stems and foliage. There were many biological legacies from the previous ecosystem that made it through the fire, and are now nurturing the next one that's coming on. So learning can be really motivated by seemingly contradictory or surprising circumstances. We're watching, we're listening, we're pondering, and we were able to bring more specialists out and have them tell us about the details of what's going on in the biological world of the fungi, the biology of plant life. We don't have good words for many of the impressions one can glean out there when you're patient, and repeatedly visit and take your time, and look and listen.

**DPB:** I've always been curious, and that comes to me visually. Through this project with Fred I've shared a level of sustained curiosity that has been like a joyful playground. To be out with this guy with this renowned career who knows

so much, and I can point to this little tiny thing that I'm curious about, and he gets down on his hands and knees. We get curious about it together without any sort of, "oh, yeah, I know all about that," or any hierarchy. It continues to be an incredible life experience for me, for which I'm so grateful.

**KS:** How do you think that human activity has affected the forest that you've been working in?

**FS:** One thing that we saw on all of those trips was an incredible amount of removal of trees that were considered dead or likely to die, that might pose hazards along the state highway. The forest also had a very patchy burn pattern, and there was a great deal of salvage logging on industrial lands. If the timber that burned was big enough and wasn't too burnt, it was logged and taken to the mill. We counted the number of loaded log trucks we saw coming down the highway to the mill in Springfield, and we'd see 42 or so loaded log trucks on a busy morning in that 30 mile drive. We aren't trying to do this work to tell people how they should manage their land, they make their decisions on the basis of their objectives and the conditions they have to deal with. But we do want to share a broader, more nuanced, hopeful story of the forest so they have those views in mind as they make decisions. There's a bunch of intensive industrial forestry going on up there. It was striking as we were there working along the river and highway, hearing this incredible burning of fossil fuels from the use of heavy equipment, helicopter logging, log trucks, all moving biocarbon down to the mill to move into the human use sector. There's a lot of carbon management going on.

**DPB:** I remember my last summer as a logger in the Sierra, just as I left the crew was heading to the Cherry Valley Burn Fire to log what was left standing. They talked about how important it was to get the logs and use them before they were wasted. It made total sense to me at the time, I didn't know anything else. Now I see the question is more nuanced than that. You burn a large amount of fossil fuels to haul those trees to the mill, cut them into boards, transport them to a lumber yard and then to the final project site. It isn't a one to one transfer, which is what I surmised from



*A profusion of Fireweed seeds.*

those early experiences. I never even considered the carbon burned to get the two by four to a site to build something with it, versus leaving that 95% of a forest that's left standing after a fire, slowly releasing carbon and adding nutrients to the soil over a long period of time. I think that's a really big question that we need to work at addressing better as we face climate change.

**FS:** The forests that we've been photographing are not old growth, but about 450 of the 173,000 acres of the Holiday Farm Fire burned into some of the experimental watersheds in the Andrews Forest, which we've been studying since as early as 1952, some of which is old growth. Those complex older stands with well distributed 500 year old trees seemed to fare better than the dense, young, monoculture plantations with more homogenous structure and closed canopies, which tended to burn more completely.

The burning in Andrews Forest occurred in three of our eight experimental

watersheds, but the forest is constantly being subjected to disturbances of many types — big wind storms, heavy snow events, and now fire. We didn't consider it a tragedy; it's an opportunity for study.

**KS:** Could you share how this project embodies hope for you?

**FS:** I have a couple hopes. I've been working since 2000 to bring artists, writers, scientists and others together to find new ways to learn and communicate. It has been a lot of fun. There's been a lot of interest in this project, as there has been in a lot of the other writing and artwork to come out of the Andrews efforts in conjunction with Spring Creek, which is covered in the [Long Term Ecological Reflections](#) program. This has been a hopeful sign to me that we can do new things, and the world finds interest in it. I've been amazed at how complicated and wonderful and interesting it all is. The resilience expressed by the forest following fire is certainly another reason to be hopeful.

**DPB:** I think about going back to those initial days and standing in that skeletal, blackened, charred forest. Fred has had so much experience with being in this otherworldly, gray landscape and then seeing life come out of it. I didn't know how life was going to come from this. Growing up in San Fernando Valley in a suburb outside of LA, the hills around the valley were chaparral, and every 10 years fire would come through in the fall and the next spring the landscape would green up as if nothing happened. That memory was in me somewhere, but still, I was not prepared for the vibrant neon green of the fire moss in this blackened landscape, the oxalis coming out. By mid summer of the next year, the fireweed was seven feet high and just everywhere; it's that profusion, where all that came from, the mystery of that, to me, represents so much hope. There is so much power in natural processes. Our mistake is not honoring that power enough. I think we need to do more of that to survive on this planet. I was working on our chronosequences the other day, tracking one particular photopoint. I saw the vegetation coming

up in the summer, and then going back down in the fall in the winter, and then coming up again, now through two cycles. It gave me this sense of the earth itself breathing, rising up, taking a big breath, and then going back down. It's not literal, but it was another way of experiencing the vibrance of the earth.

One last hopeful note has to do with the potential longevity of this project, and the potential it has for others to learn from through my archive at the Bancroft Library and the [archive at HJ Andrews](#). I've already had one photographer ask about taking on this project after I'm gone. No one human life can document a forest maturing. If you were to document the areas we've photographed until they reach maturity, it would take several human lifetimes. It's ongoing and to think that the work that Fred and I started here may present some learning opportunities, and may help in some ways is really exciting and hopeful.

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## Bios

**FRED SWANSON:** Fred Swanson has been studying and practicing geology and disturbance ecology since 1972, when he started with the US Forest Service's Pacific Northwest Research Station. Much of this work has taken place at the H.J. Andrews Experimental Forest in the Oregon Cascades, Mount St. Helens, and elsewhere in the Pacific Rim. Swanson has also been instrumental in the development and success of the Spring Creek Project for Nature, Ideas and the Written Word, as well as the Long Term Ecological Reflections Program, both of which seek to increase the scope of resonant science-arts inquiry in wildlands.

**DAVID PAUL BAYLES:** Photographer David Paul Bayles focuses on landscapes where the needs of forests and human pursuits often collide, sometimes coexist and on occasion find harmony. He currently lives and photographs in the Coast Range of Western Oregon. His photographs have been published in numerous magazines including Orion, Nature, Audubon, Outside, The L.A. Times Sunday Magazine and others. Public collections include The Portland Art Museum, Santa Barbara Art Museum, The Harry Ransom Center, Wildling Museum and others. To view more of David's work visit his main website [davidpaulbayles.com](http://davidpaulbayles.com).



*Varileaf scorpionweed.*