Redefining National Parks and Family Farms in a Changing Climate

https://www.climateone.org/audio/redefining-national-parks-and-family-farms-changing-climate
Recorded on July 20, 2016

Greg Dalton: From the Commonwealth Club of California this is Climate One, leading the conversation about America's energy, economy and environment. I'm Greg Dalton. This year marks the centennial of America's national parks. On the show today we will look back at the struggle to find a balance between a growing population and economy and preserving our natural heritage. We also will look ahead and discuss the future of land conservation in the era of climate disruption. We'll talk about the future of family farms and parks and whether they can continue to coexist peacefully in West Marin and other parts of the country. Joining our live audience we're pleased to have with us two authors with deep knowledge of America's efforts to preserve and manipulate nature.

Jordan Fisher Smith worked for 21 years as a Park Ranger in California, Wyoming, Idaho and Alaska. He's a narrator of a documentary about Lyme disease titled Under Our Skin. He's author of Nature Noir about plants and dams, the North, the Middle Forks of the American River and most recently, Engineering Eden, the true story of a violent death a trial, and the fight over controlling nature. John Hart writes prolifically about beauty and nature in Northern California and beyond. He's author of Walking Softly in the Wilderness, The Sierra Club Guide to Backpacking and An Island in Time: 50 Years of the Point Reyes National Seashore. He has won the California book award from the Commonwealth Club for two of his books: Farming on the Edge: Saving Family Farms in Marin County and Storm over Mono. Please welcome them to Climate One.

[Applause]

Welcome to both of you. Jordan Fisher Smith, let's begin with you. You were actually climbing with John Hart one time when you were both young. So tell us how that sort of helped shape your careers and the things we're going to talk about today.

Jordan Fisher Smith: I think John had a, you know, he's an older guy. And I think when you're in your 20s a few years is kind of a big deal. And I was actually only 19 I think when I met John and if I remember right, around the practice rocks where climbers go in the Bay Area.

Indian Rock –

John Hart: That's probably right. It was before the climbing gym.

Jordan Fisher Smith: Yeah, and we were both probably in the – yeah, before climbing gym that's right. We were in the Sierra Club rock climbing section together and started doing trips together.

Greg Dalton: You came across some people that were doing something you thought was wrong and you intervened.

John Hart: We did.

Jordan Fisher Smith: Well, I tried to. And that was the beginning of my education –

[00:10:48] **Jordan Fisher Smith**: That's right. So John and I, we're on our way up to do a climb called the Dana Couloir which is an ice climb in the Dana cirque. And those of you who have been up there know these beautiful white bark pines that grow at tree line and they are sculpted by the wind and by this heavy weather and, you know, needles of wind driven ice all winter in these really curvaceous beautiful forms. And we were sort of kind of moving uphill, clanking with equipment; we were loaded with ice screws and ropes and stuff like, you know, that makes a clanking sound that's very romantic at that time. And we heard some banging noise, yeah we heard this banging noise and we came uphill and we saw these two guys with a hatchet hacking the heart out of this 400-year-old white bark pine. And I was seized with a desire to give them a campfire talk. They had a big fire there, it was an area that fires weren't allowed, and they were destroying this tree to feed this fire.

The hearts of those trees is really – they're pitchy and they burn really well. And so I kind of launched into a talk and thought that I would just, you know, through the force of my personality and my missionary zeal would convince them to stop. And what they said to us I can't repeat because we're going to be on TV or something. But it wasn't very friendly and they basically said, you know, get out of our camp and leave us alone or we'll beat you up. And we had these, you know, ice axes and they just had their fists but it wasn't going to go that way. So we just kind of slunk out of there and I remember that very well being the first moment I thought man, if I only had a, you know, a Ranger uniform and a ticket book I would put an end to this right now.

Greg Dalton: And you had another incident where you had that ticket book or you encountered with someone where you did apply those tools that you later acquired.

Jordan Fisher Smith: I did and it didn't go well, you know. You know, I was at that time I thought, you know, I was so impressed myself when I see these Rangers these men and women, with the gold badge and a beautiful uniform and their flat hat and everything. I would think just the sheer authority of this person would be likely to win everybody over without any violence or anything. And so I, you know, I think I was now three years later, I ended up in the Tetons with such a uniform and a little, you know, I still had this idea this little pink piece of paper you tore off this thing and hand it to somebody, would stop everything that was going badly.

And of course I walked into this camp full of these fundamentalist, you know, anti-federal government Sagebrush Rebellion guys in Idaho. And a shoving match ensued and I was getting shoved a lot and not doing much of the shoving. And they later complained that I have brandished an axe at them, which I didn't do, but it didn't go well and I realized that, you know, you really couldn't necessarily enforce the law with just this uniform. And that was the beginning of my dissent into this inferno that I described in Nature Noir.

Greg Dalton: One of the characters, let's talk about one of the key points in that book in Engineering Eden. Tell us about Harry Walker and what happened to him?

Jordan Fisher Smith: Harry Walker was this wonderful young guy. He was a farmer from Alabama

who more or less walked into the middle of a great controversy in American National Park and Wilderness management with unbeknownst to him. He was 25 and he left home on the Great American road trip and he wound up in Yellowstone National Park in the middle of the hundredth anniversary of the park. And unfortunately, right in the middle of festivities he was dragged away screaming into the woods and eaten by a grizzly bear.

His parents were induced by an animal rights and environmental activists to sue the federal government. And these Alabama farmers who had never so much as contested a traffic ticket wound up facing the federal government in this great lawsuit over what you do to make nature natural again when it gets unnatural. I thought that was kinda interesting. And their side of the suit was that essentially maintained that the government had killed Harry Walker by trying to restore the grizzly bear to naturalness.

Greg Dalton: John Hart, what does the story say to you a lot of this is about predators and how predators, apex predators in parks. How the parks have done in terms of their relationship with apex predators, trying to contain them, suppress them, bring them back?

John Hart: Well, I think probably everyone here agrees with the idea of preserving nature. When you unpack that it turns out to be a very, very complicated thing to do with many different ideas about how to do it. In the early days, the hoped-for approach was simply to draw a line around something and keep the bad stuff out and assume that all would be well. And sometimes it worked. But because of all the other things we were doing simultaneously to the environment, notably urbanizing large parts of it, turning large parts of it into industrial scale farms, breaking up habitats, building roads, et cetera. You were dealing with fragments of a broken system and trying to make each fragment stand on its own as something whole and perfect. And you ran into all kinds of trouble, of which the prey/predator balance problem is a prime example.

Jordan Fisher Smith: And may I say I think it’s also worth noting that, you know, the first national park, Yellowstone, 1872 was made sort of before the science of ecology was made. So here, you know, the science of ecology becomes itself, becomes a discernible field with its own professional association around the same time as atomic physics becomes a science. That's kind of late in history for human, for the good of everything. And I think that was part of what happened to the national parks.

Greg Dalton: And you write about there's this tension between hands-on human manipulation and hands-off exclusion of human interest. So John Hart, let’s hear you in that and then we’ll hear from Jordan in terms of that tension back and forth. This managing nature is just sort of to kind of hands-on, bring it back or totally hands-off?

John Hart: Well Jordan brings out a famous statement by Zahniser is it?

Jordan Fisher Smith: Howard Zahniser.

John Hart: Yeah Zahniser.

Jordan Fisher Smith: Executive director, Secretary of Wilderness.

John Hart: Who was a leader in the act to create the law called the Wilderness Act, saying that we should be guardians, not gardeners. And I think that encapsulates a tension that runs through all of these fields, all of these struggles. And some feel or hope that as I say, if you just exclude the bad stuff, nature even damaged nature will repair itself. Others say no it's not going to work you have to actively manage everything. And I think my personal, I’ve struggled with this stuff for years and

years and years as a wilderness advocate also favorably inclined toward sustainable agriculture.

Being aware that after all 90% of our land is never going to be wilderness again, we have to live in it we have to manage it, we have to work with it. I've just realized that perhaps both gardening and being a guardian are appropriate at different times and places. And that they both are components of what we can simply call stewardship, stewardship being sometimes to back way off, and sometimes to wade in.

Greg Dalton: Jordan Fisher Smith, you write about Starker Leopold and he presented for the first time a unified theory of modern ecological management. And fire is a big part of that.

Jordan Fisher Smith: Yeah, Starker was, he was Aldo Leopold's oldest son. Aldo Leopold died rather young and didn't finish some of the things that he was interested in doing. Notably bringing back predators and bringing back fire. And Starker sort of seamlessly continued his work and realized a lot of what he was trying to do. .

And so, he set out to bring the management of parks up to modern standards. And he said look, you can't abandon these things sort of spiritually to the forces that shape the continent because there are tiny shreds even Yellowstone 2.2 million acres isn't a complete ecosystem. So like it or not, we are going to have to do stuff to keep it lively and to keep things alive to save things and to keep it functioning as naturally as possible.

John Hart: It's interesting if I may cut in there, there is a new countercurrent of writers who are saying the important thing about wilderness and parks is not to manage them, and we don't care what happens. Let nature sort it out an evolutionary time. What we want is to be in a place where humans are doing nothing. And if it takes over and if it turns into a broom plantation or if velvet grass takes over Point Reyes, so be it, that's what the evolutionary gods want.

Greg Dalton: Let nature take its course. If you're just joining us at Climate One today we're talking with John Hart, the author of Farming on the Edge and Jordan Fisher Smith, author, most recently of Engineering Eden. I'm Greg Dalton.

Let's talk a little bit more about fire. Fires have been ravaging the American West lately. We now have a year-round fire season and is that, Jordan Fisher Smith, partly because of this suppression of fire that this is coming home to roost?

Jordan Fisher Smith: It is partly but, you know, we're also seeing climate extremes that are driving the fire process. And, you know, it's bigger than we are and it's ultimately bigger than our management, than any kind of management that we've got. We see a lot of efforts right now being made along the roads and there's actually some going on in Point Reyes and other parks around the Bay Area to reduce fire hazard. Along the roads you'll see underbrush cut out, you'll see some mastication where, you know, the things that were growing there the brush has been chewed up into wood chips.

But you can't really do this to whole forests and what we're about to see and what we're seeing right now is a sort of change in state. It's going to be something other than what it is now. And we probably can't stop that, other than to do everything that you've been trying to promote about controlling our carbon output as soon as possible. But this transition in forests species are generally going to be moving up in the ranges. Some things that grow in a place now if they burn down might not grow back there. We're seeing a great change in state and this fire is part of that process. It's going to happen.

Greg Dalton: You were in Yellowstone for a long time. The big fire in Yellowstone late 80s I think it was? People were really upset, but now you go to Yellowstone, a lot of it's back that was a natural thing, was that –

Jordan Fisher Smith: Well and there is concern that the whole thing can happen again. Because at one time we think that these – and this is a case where fire suppression has something to do with it. That you know one time the woods were very patchy. You had these different, you know, a lightning strike here in damp conditions which smoldered and burned a couple of acres another one over here a big fire over there. And one thing fire suppression did do is – and the kind of forestry we've been practicing where we plant, you know, we were planting even aged stands of single species like the Douglas-Fir plantations of the Northwest one season, you know, in Northern California, Oregon and Washington. What you see is a kind of unification of the landscape, which is does have a tendency to go big in fire and the patchiness actually helps.

Greg Dalton: John Hart, do you think that, how would you change fire management? Would you let them burn? Obviously it gets political and dicey when there's structures and human property value. That makes it difficult, otherwise we could just let them burn, but people's houses are on the way.

John Hart: Well, I'm no expert on this but the Yellowstone bear example and also what you tell Jordan about fire management in Sequoia reminds us that it can be tricky to make abrupt changes, to simply decide, okay now we're going to stop feeding garbage to the bears. Now we're going to stop putting out any fires. It's trickier than that but obviously getting back to a more natural fire regime over some period of time is one thing we have to do. It's one of the many things we should've done already and now it becomes even more imperative.

Greg Dalton: Jordan Fisher Smith.

Jordan Fisher Smith: You know, there's a kind of, in the book there's something about prescribed fire, about the process of intentionally setting fires and burning under conditions that are closely regulated. And, you know, when we had the Rim Fire west of Yosemite that burned up through the Stanislaus National Forest. I think what a lot of people don't know is what happened when it hit the park. In this book, I talk a little bit about Starker Leopold's initiative to get fire back in the parks and to bring the forests back into shape by intentional burning. Well, you know, the National Park Service had been doing this since 1968. And in that big Yosemite fire when the fire got up into Yosemite close to the Rockefeller Grove, Yosemite actually benefited from all the fire work they'd done. And they went out there; they did a little more burning and prep. And when that fire came in it just died right down as it hit some of the work they've been doing.

I'd like to see the Park service having a greater commitment right now to continuing the prescribed fire. But that is something that can be done. It is, you know, experts almost universally say that the prescribed fire has a definite role to play in adapting for us to face this great threat that we're seeing.

Greg Dalton: We're talking about national parks and climate change and other topics with John Hart and Jordan Fisher Smith. I'm Greg Dalton. We're going to pivot now to something mentioned earlier, Point Reyes. For decades, the establishment of national parks was about setting aside beautiful, remote places like Yellowstone, Yosemite, far from urban centers. But as examined in the documentary "Rebels with a Cause," that started to change in the San Francisco Bay Area in the 1950s. Take a listen to environmentalist Huey Johnson and narrator Frances McDormand.

[Audio Playback]

***Huey Johnson**: Not many cities in the world that have such remarkable landscape near a great urban center like this. Free to use and you don't have to own a ranch in Northern California to enjoy walking in the wild.*

***Frances McDormand**: How did they do it? Between the 1950s and the 1970s when California was the nation's fastest-growing state and cities were gobbling up nearby forests and fields, ordinary people in the San Francisco Bay Area saved a vast stretch of coastline north of the Golden Gate Bridge for parks and farms. Their efforts fostered a national movement to preserve open spaces near where people live.*

Greg Dalton: That's the documentary Rebels with a Cause. John Hart, you wrote a book about the creation of, creation story of that area, Point Reyes National Seashore. So a lot of it was some deals between ranchers and environmentalists. And so tell us that story and also how it set something larger in motion.

John Hart: That story goes back in a way to the U.S. Army in the last century, but one because the cornerstone of the vast green belt was actually set around the Golden Gate in military set-asides.

And there were several other phases that preserve the possibility of the green belt we have. The one we're talking about is the big addition of Point Reyes.

Greg Dalton: And that was, got started under President Kennedy, President Nixon moved it along.

John Hart: It was first proposed in the Roosevelt era, nothing happened. It was revived in the late 50s a local congressman Clem Miller is the great hero of that story. And for various reasons it was decided that it would be best to leave the best ranch lands in place within the boundaries of the park as working ranches. There were several reasons for this not all philosophical. One of them was money. They didn't plan to buy them at first. And one of them was political; it blunted one of the sources of opposition.

But nonetheless, the ranches stayed and later were fully incorporated into the park. And there was quite a feeling at a certain period in history that this problem had been well-managed; that the farms belonged in the park, that there was a symbiosis and that everyone was reasonably happy. That would decay somewhat later. But it left Point Reyes as an anomaly in the National Park System. It wasn't technically a national park. There were several varieties of system members, but it was nonetheless in the system.

And it was the only large area in the system where the continuation of commercial agriculture was contemplated. And that has been a source of tension and frustration on some parts ever since.

Greg Dalton: And there's current litigation going on about that. So tell us what's going on there.

John Hart: Well the, as we were remarking earlier, the environmental movement is anything but a monolith. It has many, many strains, many, many opinions about everything. And one area in which it is sharply divided is on whether agriculture has any place in places that are labeled parks, and specifically at Point Reyes. For decades this controversy simmered kind of under the surface. People would say, well we are really for the ranches, but we think the practices aren't right or we think there should be more study. Recently, however, and I think healthily the fault line has broken to the surface. And it's now clear that there are environmentalists who support the continuation of agriculture here and others who are suing the park service who really would like it gone. So perhaps an adjudication and a real decision will come out of this, political and judicial.

Greg Dalton: Thank you John Hart. Jordan Fisher Smith, what's at stake here in terms of having a

local food shed, we hear environmental –

Jordan Fisher Smith: You know, I think there's something even bigger at stake and that's what is the human place in nature. And I think what pushes so many buttons in this park is that it is a very unusual situation. Normally, you know, at one time the first – Hutchings and some of the first people who secured a freehold in Yosemite Valley were growing hay down there.

And, you know, and crops too; they're running a little farm down in Yosemite Valley. That was later done away with. The Lamar Valley at Yellowstone, which is one of the great places to watch wildlife at one time also had I think about 350 acres of hay fields that they were growing hay to feed the animals in the winter to bring back these great herds of bison and elk and so on.

But by and large, you know, parks are considered natural areas and the presence of a, what amounts to a historic landscape of, you know, almost 19th-century agriculture through the 20th century, these old ranch buildings and these cows that have been there since 1850s represents a real anomaly in the national parks. And what this thing boils down to in a way is, you know, do human activities belong in parks or do we want to see, do we want to drive out of San Francisco and see a kind of perfection, a kind of, you know, blank slate, a tabula rasa that amounts to what you know what it looked like before we were here. And I think that at the bottom that's where the fight is, is you know, do human beings belong in this landscape or should we see something without human beings.

Greg Dalton: And that's a common strain that you write about is making landscapes like it was before the white man came here. Even in the Presidio in San Francisco there's a move to get out indigenous, you know, get rid of the eucalyptus trees and get things before the Army came, et cetera. To make it before man messed with it, is that –

Jordan Fisher Smith: And yet, you know, the National Park Service engages in landscape management of various kinds like the balds in Shenandoah and some of these beautiful sort of high country meadows that sit up on top of the landscapes are being maintained as open areas to make sure that they resemble the historic landscape there.

So boy, this place is just there's no end to trouble about Point Reyes. I think a lot of you know this. We're almost afraid to talk about it.

John Hart: Yes. Well, there is one other park where there is considerable agriculture by and intentionally but Point Reyes is very close to unique. And if this lawsuit prevails I think it will be clear that there will be no further such experiments in national parks. And the identity of the national park as a place that is partly wilderness and partly visitor serving development with no other commercial activity will be solidified. I personally think it would be a loss, but it would be clarifying.

Greg Dalton: We're going to go to our lightning round with Jordan Fisher Smith and John Hart. This series of true or false quick questions for our guests today at Climate One. So Jordan Fisher Smith, true or false, park rangers are more likely to be assaulted on the job than agents from the drug enforcement agency?

Jordan Fisher Smith: As of 2000 it was 13.9 times as likely to be assaulted or injured on the job.

Greg Dalton: John Hart, true or false, preserving the Point Reyes National Seashore and surrounding lands help to drive up home prices in Marin County?

John Hart: False.

Greg Dalton: Gary Giacomini said yes in the film.

John Hart: I know he does.

[Laughter]

Greg Dalton: Jordan Fisher Smith, in 50 years, national parks will be very different than they are today.

Jordan Fisher Smith: True.

Greg Dalton: Follow-up. They will have cell phone chargers attached to the trunks of giant Sequoia and redwood trees for people needing to power their smart phones?

Jordan Fisher Smith: No, we'll all be running around wrapped in skins again.

Greg Dalton: John Hart, winning two book awards from the Commonwealth Club is a highlight of your career?

John Hart: True.

[Laughter]

Greg Dalton: Right answer. Jordan Fisher Smith, you have considered engaging in civil disobedience to protest destruction of America's parklands?

Jordan Fisher Smith: Wow, you do a lot of research don't you? I did consider that if they built the Auburn Dam I might have to leave the law enforcement officers and walk over, leave my gun and everything and walk over to the other side and sit down with the protesters, you're right.

Greg Dalton: John Hart, true or false, climate change is worse than even your Bay Area liberal friends realize?

John Hart: True.

Greg Dalton: Jordan Fisher Smith, if you were a president for a day where would you create a new national park?

Jordan Fisher Smith: I think I would have the national park of meaning and you know, actual discourse. It would be a national park that would elevate the idea of language and you know, can anybody believe what's going on right now?

[Laughter]

Greg Dalton: So you'd found the Commonwealth Club, okay.

[Laughter]

Jordan Fisher Smith: You're right; this is the national park of language!

[Applause]

Greg Dalton: John Hart, if you are a president for a day where would you create a new national park?

John Hart: Nevada. I'd create a great basin national park which included both the mountain range and an intermountain valley with playa.

Greg Dalton: Jordan Fisher Smith, what grade would you give Sally Jewell as Secretary of the Interior?

Jordan Fisher Smith: Pretty good. Mainly, she stayed out of major controversy and got work done.

Greg Dalton: John Hart, what grade would you give President Obama as a steward of our country's natural heritage?

John Hart: B. No great mistakes, some nice initiatives. Not terribly, not a great deal of oomph behind it.

Greg Dalton: That ends our lightning round. How you think they did? I think they did pretty well.

[Applause]

John Hart: Thank you.

[CLIMATE ONE MINUTE]

Announcer: And now, here's a Climate One Minute.

Smokey the Bear warned us: "Only you can prevent forest fires." But as our guests have pointed out, fire does have a role to play in the natural landscape. Jason Mark, editor of the Earth Island Journal, agrees – after a fire, nature gets a chance to rebuild herself. But thanks to our changing climate, he says, it may not be the landscape we expect to see.

Jason Mark*: With rising temperatures and in some places diminished or changed rainfall patterns, the ecosystem may not come back to the way we remember it. You might see Ponderosa say groves turn into a Pinon-Juniper mix, or a Pinon-Juniper mix changing over to Chaparral. That's going to be hard for people to wrap their minds around. You know, how – and this is I think, again the challenge is kind of wilderness in the human age, is – how do we continue to have an intimate emotional relationship with landscapes, even as those landscapes change before our eyes?*

And I think again it's a big challenge for the conservation community. How do we sustain our love say for Sequoia National Park, if the Sequoias start to move northward or up in, you know, altitude elevation on the range? Or Joshua Tree, you know, what are we going to do if there's no Joshua Trees in Joshua Tree National Park, or no glaciers in Glacier National Park? It's going to make these things a lot tougher.

Announcer: Jason Mark, editor of the Earth Island Journal and author of Satellites in the High Country: Searching for the Wild in the Age of Man. He spoke with Climate One in 2015. Now, back to Greg Dalton and his guests John Hart and Jordan Fisher Smith, at the Commonwealth Club.

[END CLIMATE ONE MINUTE]

Greg Dalton: So let's pick up there John Hart, new parks, Joshua Tree, three new national monuments, 1.8 million acres. A lot of that is additional marine stewardship in the remote Pacific islands not enough, not the right things.

John Hart: No it gets difficult. I think a president is actually terribly limited in what they can

undertake and make stick. And certainly he's face horrible headwinds all the way. What's missing why don't I say A? Maybe being the environmental zealot I am I just wish it fell a little higher on his list than I sense it actually has been.

Greg Dalton: Jordan Fisher Smith, President Obama, you know, sand to snow Mojave Trails National Monument, Pacific Islands National Monument, not enough, not the right things?

Jordan Fisher Smith: Well, you know, this authority is actually in danger right now. The National Monument authority –

Greg Dalton: The Antiquities Act?

Jordan Fisher Smith: – congress, Antiquities Act is, you know, congressmen are gunning for it along with everything else, including the Endangered Species Act. We're living through a very, very oppositional time with Congress. And so I don't think you can assess the president's actions without considering the environment that the political environment right now, it's hard to get anything done.

Greg Dalton: Well I want to talk about the futures of national parks. Pokémon Go is getting people out of their homes and out into the real world. There are now more active users than the mobile versions of Pandora, Twitter and Netflix combined. The National Park Service is actually asking people to use the app in the parks with a little caveat. Let's listen to National Park Service director Jon Jarvis jumping on the Pokémon phenom.

[Audio Playback]

Jon Jarvis*: This year the National Park Service is celebrating its 100th birthday with a campaign called Find Your Park. We got more than 400 places for you to find and we know you gotta catch them all. Just make sure to keep your eyes open and stay safe. We don't want you stumbling off the path or running into some of our real wildlife while you're looking for the flying, swimming and crawling creatures on your screens.*

Greg Dalton: That's National Park Service Director Jon Jarvis. So John Hart, this is clearly there's been a problem getting young people into the parks getting kids off the couch away from the computer games. This appears to have been doing that, is it successful, is that a good thing or is it blasphemy, the idea that you go to a national park and you got your face in a screen?

John Hart: Well I'm not very sensitive to blasphemy if it doesn't hurt something in the land. So I'm not spooked on that score. It reminds me a little bit of another pursuit which is just slightly alien to me, which is peak bagging. In which, you know, I've always been interested in going into remote areas because the remote areas are interesting. But in peak bagging, you pick your destinations because they are say the highest point of a county or a school district or a wilderness or what have you. So I don't, it's not my thing and yet it gets people to wonderful places; it makes a connection. And I'm not going to criticize anybody else's connection.

Greg Dalton: Jordan Fisher Smith, nearly everyone in the San Francisco audience, which skews older didn't recognize Pokémon Go. Is this a good thing for national parks?

Jordan Fisher Smith: Well, this is just a very, very smart audience. It's the Commonwealth Club. But, you know, this nervousness about there not being future partisans of the national parks has been going on for years now. And I've heard Director Jarvis talk about, you know, getting cell phone use into the parks because they're going to have them anyway. And yet, you know, the National Parks are seeing their highest visitation rates; I mean they're skyrocketing. By all practical measures the parks are a huge success right now regardless of, you know, I think there's been this general

nervousness about the ‘last child in the woods’ syndrome for, you know, about a decade, that we’re not going to have future people to tell their congress people to vote for these things. But boy, I’ll tell you, by all accounts they're very successful right now.

Greg Dalton: I want to ask both of you about your climate epiphany. How you awakened to climate change, and then how climate change is going to change America's national parks. John Hart, when did you first have aha, uh oh moment about climate change?

John Hart: Well I guess I was been aware since even the 1960s about the Arrhenius science that said, if you keep on pumping carbon dioxide it would figure that eventually the earth would warm. It was more or less theoretical. There was no sign of it happening at that point. And it's hard to recall now, but there was a period around let’s see, when was the Dukakis, Bush election?

Greg Dalton: ’88.

John Hart: ’88. There was a fellow, there had been a string of cool years and there was a fellow traveling around the country saying that we were headed pell-mell into a new glaciation and that the only solution was – he had big engineering solutions in mind. So at that point it was, you know, it looks like it should be happening, is it. Do we understand the system well enough, but I guess a very, very few years later, the signal was emerging if you were ready to look for it. So ’90, I’ll just say ’90.

Greg Dalton: 1989 Jim Hansen testified before congress. Page 1 of the New York Times.

John Hart: Yeah, June of ’88.

Greg Dalton: It was a very hot summer.

John Hart: And Yellowstone was burning. In the hottest, driest summer of Yellowstone's history.

Greg Dalton: Is that when it broke through for you, Jordan?

Jordan Fisher Smith: ’87, the year before I started reading about climate science and, you know, the Keeling Curve and all those classic things. And I fortunately wasn't reading about climate politics which is still a befuddling thing. If you just stay with the science it's a lot easier to read about, you know.

[Laughter]

Greg Dalton: How will climate change national parks?

Jordan Fisher Smith: National parks, you know, will be a place to watch it. National parks are biological hotspots where we make sure that we have as many surviving species as possible. And so we will be able to assess what's going on better in national parks than just about anywhere else. And, you know, whatever happens, there will be something there. The national parks will be there and something will be there because we've created a container where life will want to be.

Greg Dalton: And so we can watch it unfold. The glaciers melt, the pine bark beetle eat away at the forest. John Hart, how do you think climate change will change the parks in our experience of parks?

John Hart: I like that metaphor of the container. The contents will change, but they'll continue to be richer than most other places. I think the challenges to park managers, which only seem to grow, will also grow for this reason. And these choices we were talking about between intervening and not intervening are going to be omnipresent and harder.

It will be terribly important to have the data to really study what's going on. And I think it may be important to step away from the ideology that says you never intervene or the ideology that says you freely intervene. And make a bunch of difficult choices changing from case to case between the one and the other. So I think farmers goes for farms as well. I think it's simply going to require us to be smarter and more educated and more careful in everything we do.

Greg Dalton: Interesting laboratories and places to go. Go to a beautiful place and watch the end of the world.

Let's go to our audience questions. Welcome to Climate One.

Female Participant: Thank you. And thank you both for your always eloquence. You mentioned that Point Reyes has had ranching ongoing since the 1800s, and you also mentioned that some of the conditions at parks have changed, including record visitation and also climate change. My information is that studies at Point Reyes have shown that cattle at Point Reyes are responsible for 76% of the greenhouse gases at the park. And I'm just wondering what kind of intervention, if any, you think might be taken about that?

Jordan Fisher Smith: Well I hope that's for John Hart.

[Laughter]

Thank you, Susan.

John Hart: Well, cattle do have impacts, agriculture does have impact. And there's no point saying otherwise. There is a countermeasure that is under discussion on rangeland in general. And that is this new climate or carbon reduction protocol called range composting. In which they have learned by experimentation that depositing a quarter to half an inch of compost on grazed land can really transform the soil chemistry and the gases that are absorbed or put out. To the point where conceivably, if this were really widely applied and it's been accepted by the relevant authorities you could zero out the greenhouse gas contribution from areas that are grazed. I think this is an example of the need simply to be smarter in everything we do with the land and look for things other than what seem like black-and-white choices.

Greg Dalton: Problems could be solutions. Let's go to our next – Climate One.

[Applause]

Male Participant: What is Mr. Smith's opinion of CBD's proposal to reintroduce grizzly bears to California?

Jordan Fisher Smith: Oh thanks, that's a great question.

Greg Dalton: Explain CBD, please.

Jordan Fisher Smith: Well, let's just talk about grizzly bears for a moment. You know, grizzlies are, you know, they roam a lot, they move around a lot. And the interagency team at Yellowstone eventually found that a male grizzly had, you know, a range of about 1,400 square miles. I don't think that we have an ideal situation in California to reintroduce grizzlies. I don't necessarily feel that way about wolves. But we've had a lot more human conflicts with grizzlies than we have with wolves, you know, in recent years.

And, you know, I think you have to be, you have to be careful about creating a situation that develop

such a backlash that it sets everybody back everywhere else. We are so lucky that since, you know, this book that I wrote covers, Engineering Eden, covers the sort of hourglass point where we almost lost the grizzly in the Rocky Mountains south of Canada. And now we're in pretty good shape, you know, there's enough grizzlies. We'd like to see them over into the central Idaho wilderness and the Frank Church-River of No Return and we're going to look into that for a long time. I think I would rather see them over there than I would in California. I just don't think even in the Northeast quarter of California that we have the space for grizzlies. Thank you. Great question.

Greg Dalton: Next question. Welcome to Climate One.

Female Participant: I'd like to ask the speaker's opinion of the herbicides that are being sprayed in our national parks for the purpose of eradicating non-native plants.

Jordan Fisher Smith: Another great question.

Greg Dalton: John Hart.

John Hart: I hate to give a one-word answer to that. But I'd have to say that in many cases herbicides are a lesser evil than the waves of exotic species that they're designed to combat. You should use as little of them as possible and you should use them in the context of other methods what they call integrated pest management. But I don't side with the people who are simply against chemicals.

Greg Dalton: Let's go to our next question. Welcome.

Male Participant: Thank you. Do you see the recent decisions about the Drakes Bay Oyster Company as a harbinger of things to come for aquaculture in general in Tomales Bay and the dairy industry specifically in Point Reyes?

Greg Dalton: Who'd like to tackle that one? We knew oysters are going to come up.

John Hart: Okay, I know oysters would come up. Well, during the oyster controversy there was a fear that through a rather complex mechanism I won't trace that – well, maybe I have to. That oysters would be gone, water would test a little bit dirtier in Drakes Estero this would bring pressure to remove manure producing animals from the watershed. This would be a lever against the ranches elsewhere.

What actually has happened, however, was a much franker movement against ranching in general that didn't require any such roundabout route. It simply said that under the relevant park service laws, you should not have such uses in a National Park System unit, period. So I'm not sure that link it might still, I, that might still be a route of argument, but I haven't seen it. I don't see any pressure on Tomales Bay Aquaculture resulting from the Drakes Bay closure. Somebody may know better than I do.

Greg Dalton: Jordan Fisher Smith

Jordan Fisher Smith: You know, I think it's worth being concerned about that but, you know, the Hog Island Oyster Company that has a lovely little place down the Embarcadero here has partnered with the National Park Service and the National Marine Sanctuary in doing a study of shell formation in with ocean acidification. As you know, the oceans are now a third more acid than they were before the industrial revolution due to the them being a carbon sink that essentially makes carbonic acid. And Hog Island is helping the park service and the National Marine Sanctuary study this. So I think there's also some real positive signs, you know, at the same time as the fears we're

talking about. And by the way, I mean I got to give the Bay Area credit, we have these, you know, really acrid controversy over oysters. Everywhere else in the country they're talking about open caries of AR-15s.

[Laughter]

I got to give you guys some credit about your concerns, you know. Here we're about cheese and oysters. It's more peaceful isn't it?

John Hart: It is.

Greg Dalton: Let's go to our next question at Climate One.

Male Participant: I'm tempted to ask about open carry in parks but actually get back to Point Reyes and ask the question of Jordan Fisher Smith. We heard John Hart say it would be a shame to remove the grazing activities in the park and as you look at the top band of the picture that's what we're talking about. That's the pastoral land in Point Reyes and a large part of it, not all of it.

But my question is, is it fair to take enterprises that have been there for over 100 years that are –the dairies at least, are all organic. They're using the most forward thinking sustainable practices that I know of in terms of ranching practices. Is it fair to remove them from what later came, over a hundred years later, apart?

Jordan Fisher Smith: Well, you think I'm an expert in fairness because I was a park ranger, right?

[Laughter]

I think the question, you know, the other uses, other commercial uses have been terminated in national parks. You know, float planes have been told they can't land on the lake anymore because the lake is going more toward wilderness. So I don't, I think that the real cutting edge is the question of whether this represents whether there's an inherent value in this historic way of life in a historic landscape. But there's some other little wrinkles now. One is that the exotic plants that are everywhere now have created a situation out there where if you take the grazing pressure off, we may have basically shrub lands over most of Point Reyes and no more in meadows. That what we have there, you know, would've been maintainable as a northern coastal prairie before all these exotics. We now have a situation where if you take the grazing pressure off it, it may all go back to a thicket. I'm afraid I can't tell you what's fair or right. But I do, as a person who worked in national and state parks for a long time, I have a feeling for the question of that we are preserving both, you know, primeval nature wherever it still exists, but also historic landscapes and ways of life. There are lots of examples in the National Park System of preserved landscapes that have to do with how we live. You know, our historic ships are an example, when you walk on the deck you understand something about how it was to go around the horn in the 1880s. And that's to me where that question lives. I can't tell you whether it's fair or not. Thank you.

Greg Dalton: John Hart.

John Hart: May I chime in on that? Looking at Point Reyes is like looking at one of those Escher diagrams where the perspective seems to reverse in a second. If you look at Point Reyes as a unit of the National Park System and say well, national parks basically don't have agriculture, this is an anomaly in our system; let's get rid of the agriculture, you get one picture. If you shift the focus slightly and look at the Point Reyes pastoral zone as a component of North Bay agriculture, North Bay range agriculture whose loss would be very detrimental to the rest of that food producing belt. It's, you look at it in a different context and the slope of that staircase seems to reverse.

Greg Dalton: John Hart is author of Farming on the Edge is our guest today at Climate One. Along with Jordan Fisher Smith, author of the new book Engineering Eden. I'm Greg Dalton. Let's go to our next audience question.

Male Participant: Hi, thank you both. This question is for John Hart but you can chime in too Jordan if you feel free. During the lightning round you say climate change is worse than your liberal friends realize, John. And the stresses are apparent at Point Reyes with a changing climate and drought being the new normal. Do you think it's wise that the National Park Service is considering an expansion of agriculture on the seashore without any environmental review?

John Hart: The expansion part is news to me. There is a –

Greg Dalton: How about cattle, drought, climate.

John Hart: You know, I don't know, I haven't researched the water situation of the ranches on Point Reyes. I can't answer that one, I'm ignorant. I do know that elsewhere in the county outside the park, ranchers are complaining that their springs dry up earlier in the year and that expensive water system investments are more and more necessary. The other, I'm going to come out from a slightly different angle, which is the Point Reyes has not done a General Management Plan since 1980. And a lot of things have changed since then and I think the plank in The New Center for Biological Diversity, et al pleadings that I find strongest is to say that a GMP should come before the specific plan about ranching which they are now doing. Of course if you decide you have to do a GMP before you do a ranch plan to address these questions everything gets delayed another five years. And the ranchers who are now on year to year rentals so to speak can't make decisions or get financing. It's tough. I would wish heartily that GMP problem had been addressed about 10 years ago and that the debate that's now unfolding had been had back then. One reason that was delayed was to get the oysters out of the way, but it's still delayed.

Greg Dalton: GMP being General Management Plan.

John Hart: I beg your pardon, General Management Plan.

Jordan Fisher Smith: I know we don't have much time. I think you have to remember also that park is a teaching institution. It's not just a place. It's not just a blank wilderness. It's something that tells us something about our place on earth. And I think that, you know, if you look back at the Carter administration for example, there was a period of time and they were putting old-style panels, you know, solar panels on everything and trying to have composting toilets and so on. I think parks have a role to play in getting us through what we're about to go through. And I think that needs to be exploited. I think they need to be seen as universities of human beings in nature.

Greg Dalton: Let's go to our last question. Welcome to Climate One.

Male Participant: So in your discussion I noticed kind of a paradox between this idea of needing to manage nature and parks to preserve that vibrant nature that we see there today. And also this idea of a primordial or pristine wilderness even with like previous use and people on that land before using it. So, do you see, do you really believe that wilderness and it's kind of perfect form that we see that we use today. Do you feel that that term is still useful in today's context?

Jordan Fisher Smith: The word pristine is really not useful in thinking about wilderness. And it's been used by the opponents of wilderness to defeat wildernesses by saying that isn't pristine therefore it can't fall under the Wilderness Act, there's an old road running in the mine. I would say we do away with that what my friend Gary Snyder likes is this word wild, you know, wildness. And

what we need to do to support what's about to happen, the best outcome for what's going to happen, is support wildness wherever it is, wherever it still is. The principle of wildness needs our support everywhere, in the park, in the backyard.

Greg Dalton: Let's wrap up by asking you just tell people in the audience listening what they can do if they care about wildness, natural parks, what can they change in their diet, their lifestyle, what can they do to protect parks in the era of climate change, John Hart?

[Laughter]

John Hart: Learn a lot. That might not be the obvious answer. I bet you're already writing your Congressman. But learn a lot; understand the details of what's going on. We have two problems. One is trying to head things off so global warming doesn't get absolutely out of hand worse than my liberal friends imagine. And the second is to help ourselves, help farmers, help park people to undergo the adaptations that we have to do at every phase; that learning institution model that you mentioned Jordan.

Greg Dalton: Jordan Fisher Smith.

Jordan Fisher Smith: I would say, you know, I had a fan that wrote me about a week ago about my book Nature Noir and said that she had all these formational experiences on the American River. I wrote her back and said, join Protect American River Canyons. They send out a newsletter so you always know what's happening in the river if another dam comes, you'll know about it first. I would say adopt the place that your heart sings for and just be its angel. Be one of those people that always shows up at the Park Service meetings no matter which way you feel about this agriculture thing and adopt the landscape that you care about. And that's a good thing to do.

Greg Dalton: One of the most eloquent endings ever on this stage. Our thanks to Jordan Fisher Smith and John Hart.

[Applause]

We've been talking about national parks and climate change and nature. Jordan Fisher Smith, author of Engineering Eden and John Hart, author of many books including Farming on the Edge in Point Reyes. I'm Greg Dalton. Thanks for listening. You can listen to the podcast online and join the conversation on Twitter using our handle @climateone. Thanks for everyone in the room and online. Thank you all. Thanks so much.

[Applause]