Bret and Heather 44th DarkHorse Podcast Livestream\_ The West...

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**SUMMARY KEYWORDS**

fire, women, point, fact, problem, drought, long, film, west, increase, forest, set, hyper sexualization, portland, hypothesis, agriculture, plot, early, burn, amazon

**SPEAKERS**

Bret, Heather

**Bret** 00:19

Hey folks, this is a test of the audio video system that is associated with the Dark Horse podcast. Can you at least establish for us that there is audio and there is video? Second level are the two things in sync third level.

**Bret** 00:36

Can you hear me at a pleasant amplitude that is not driving you crazy should you be wearing headphones?

**Bret** 00:42

These are the details we need to know from you as we hurtle towards the 44th Dark Horse podcast live stream in just a few minutes. We have evidence everything is working. We will see you in a few minutes. Ciao.

**Bret** 06:18

Hey folks, welcome to the Dark Horse podcast live stream our 44th. My correct about that number? You're correct. All right. Up front today we have to talk about a couple of caveats and anomalies. One is, as we will talk more about later in the broadcast, we are facing an incredible inundation of smoke and if you hear us coughing and gagging during the podcast, that is what is taking place.

**Heather** 06:45

This won't be any gagging. Well,

**Bret** 06:47

alright, we'll try to resist gagging. But nonetheless it is people call us now they, you know, no, we live in Portland. And they ask well, what's it like? How are you doing? And the only analogy I have come up with is that it is something like living inside of a bomb, a bomb a bomb. I mean, I've never lived in a bomb, you have this. In Portland, it looks like what it must look like from inside of a bong, looking out, frankly, just as unpleasant, unpleasant and no fun whatsoever. So it's, you know, maybe water pipe would be a better way to say it. But anyway, it's not it's not very nice out. And I will. I will say it's awfully after so much COVID locked down. The loophole in COVID was of course outdoors. And now going outdoors is hazardous to your health. And so I must say I'm feeling more locked down that I have maybe ever

**Heather** 07:39

now apps. Absolutely. It's even driving the animals crazy at this point. Yep.

**Bret** 07:43

All right. The other caveat that I have to mention is you may notice some video glitches during the stream. And I raise it because we are in the following bizarre situation. So we have a little bit of a complicated podcast set up here. We started noticing glitches on on our camera. And we went about troubleshooting and we went through. At first we have three cameras that are identical, they all showed the same glitching we substituted in another camera, it showed the glitching we have swapped out the computer, every other piece of hardware, we have run everything off of batteries to see that it is not our wall power causing the problem. It happens when we are not connected to the internet. So in short, we have eliminated every possible cause of the glitching. We have falsified every hypothesis save one

**Heather** 08:38

may have mentioned in one of your interventions, your index interventions, or should I not know you may Yeah, you literally built tinfoil hats for the cameras.

**Bret** 08:47

We did wrap the cameras in tinfoil. So this is the problem is the one remaining hypothesis that could possibly explain the glitching of all of our cameras. And we are now by the way, this is our fifth camera that you are you are seeing through at the moment. And it is also glitching those slightly less than the others. The only hypothesis left standing is interference from something external. Now

**Heather** 09:10

oddly, which could be thwarted by aluminum foil could

**Bret** 09:15

be and in fact, we saw some effect if we put the aluminum foil, but it's not complete. We can't protect any of the cameras completely by wrapping them in foil, at least by any technique that we have used. Now if we take the cameras out of this room they stopped doing. So I don't say they start functioning again, they start functioning normally and we can't reproduce the problem. So I don't know what to make of this right it it certainly triggers my tinfoil hat side because you falsify every hypothesis. And what are you left with is, you know, either so

**Heather** 09:46

at least convenient that it triggers it both literally and metaphorically so that you don't have to keep track of that two narratives.

**Bret** 09:51

Right? Exactly. It's very it is narratively convenient in that resource. Money is in its own way, in a way that conspiracy theorizing rarely. But yeah, so I don't know, I don't know what to make of this. Maybe somebody out there in our audience will have I've been searching for the answer that would connect the smoke or the fires, you know, in some ways the smoke interrupting cell signals so that they've turned up the amplitude on them in order to compensate in a way that might be intruding. But frankly, we're not all that close to a cell tower, you know? And why

**Heather** 10:24

would the problems not persist when you just move the cameras to two rooms over something, right?

**Bret** 10:30

So this is a it's a head scratcher. But anyway, if you see color bars show up, we are aware of the problem. But having falsified every hypothesis, we got nothing.

**Heather** 10:42

Yeah, yeah. All right. So we're gonna talk about fire and sex today. Fire and set. Yeah, but not at the same time.

**Bret** 10:49

Not but in that order. Yes. All right.

**Heather** 10:51

I believe so. Fair enough. Yeah. So many, many people will know that we are in Portland, Oregon, and Portland, Oregon, is experiencing as all of Oregon. In fact, all of the West Coast is experiencing extraordinary wildfire situations. Portland itself does not have any active evacuation orders, although the evacuation orders are are close to to most people in Portland at this point, including us. And apparently the air quality in our city right now is the worst in the world, and has been for about 48 hours. And it certainly feels that way. When you walk outside. Of course, I've never been to Delhi or Beijing or, you know, but it's it's far worse than what I remember Los Angeles being like in the 70s, when we grew up when the sky was reliably yellow, with smaller, right with particulate matter that was suspended in the air. And this is this is far, far, far worse. So I thought we'd talk a bit about what fire is what humans history with fire is, including on the west coast and elsewhere. And you know, what, what might be causing these fires and what the effects might be.

**Bret** 12:03

So at first, I feel a little bit like defending Portland against this claim that it has the worst air quality on earth. And I must say, I'm a little skeptical of this, because I'm not even sure that what we've got here qualifies as air at this point. I sense to solid, right? Yeah, right. So you know, it's, it's it's air in the same way that styrofoam is air. That's an extraordinary defense. Well, it's the best I could come up with.

**Heather** 12:30

So let's just start with just a paragraph from the draft of the book that we're writing, which, which we're talking about fire a little bit in service of talking about the human innovation that is cooking specifically, but fire is is early and critical in every human evolution story. So over a million and a half years ago, our ancestors were already controlling Fire. Fire brings many advantages. Of course, it provides warmth and light, a warning and protection against dangerous animals and a beacon to friends. A little later on in our relationship with controlled fire, we began to use it to boil water and make it potable, to eradicate pests, to dry our clothes, to temper metal with which to make tools. With Fire, we can see each other on our work at night, and we may gather around at telling stories or making music. There are no known human cultures without fire. Although early reports from anthropologists, missionaries and explorers often make claims to the contrary. None other than Darwin suggested the art of making fire was quote, probably the greatest discovery accepting language ever made by men. So that goes into our deep history. I thought we might also Why is this not working? It's fun. Zach, can you show this, my screen here. And so this is this is a figure from a book called Iowa fire, the political ecology of landscape burning in Madagascar by Christian call. So regular viewers and listeners will know that I did my graduate research in Madagascar and Brett and I both spent a fair bit of time there, I've actually written a book about my experiences there. And this is a book that proved useful, though not directly relevant, obviously, to my exploration of the sex lives of poison frogs, which is more of what I was focused on. But Madagascar being the fourth largest island in the world, bigger than California, off the east coast of Africa. And there is a long history of the use of fire, both for landscape modification and for protest by people among most of the 13 or 14 tribes of Madagascar. So, this, this book, early on, discusses some of the causes or goals of fire, and some of the effects and because many of these are relevant and discussion of what's happening in the American West right now, I thought I'd go through just a couple of these of course there are non human causes like lightning and Other sources, and then a whole lot of things that you might do. Here human caused purposeful, on on this figure that are constructive, maintaining pasture, preparing crops, as in the traditional method in many tropical tropical regions of agriculture called swidden. Or often called slash and burn, which is actually an effective mode of agriculture at low population densities, but it becomes ineffective at high population densities. And that's one of the things that we will talk about here I think management of pests and, and cleaning up of detritus, all of these things are understood to be constructive, purposeful reasons to set fires. And of course, there are these destructive reasons as well. And in this figure, Christian call says, revenge or personal gain. Alright, so the the odd sociopath or psychopath, or simply very angry person, or protest. And of course, it can be hard sometimes to tell the difference between those two things. And then finally, just in terms of categories, human caused accidental fires exist, where a campfire gets away from you, cigarette butts get thrown out of windows,

**Bret** 16:16

somebody whose gender is a bit more explosive than one imagines. Or instead, for example, is military strategy on here. In other words, denying your enemy or resource or corralling your enemy to someplace where you have an advantage,

**Heather** 16:31

I my guess is that that's gonna fit under other other constructive, you know, so so depending on how you view it, you know, what side of the interaction you're on, you might view as destructive, and therefore, it's revenge or personal gain or, you know, statewide gain or other under constructive So, you know, successful military strategy. Yeah. And, you know, maybe, maybe, maybe that's enough to start for those of you just just listening to this, we have not described the full the full figure, but but definitely some of it. So. Yeah, so there's a lot to say, but I think probably beating a conversation, as opposed to me just, you know, going on and on about the various things that are true about fire throughout human history. But maybe maybe one more thing first, before we start talking. Fire has been a feature of the American West for as long as we have records, which given that we can go back and look at pollen cores from, you know, several 100,000 years. That's a long time. Also, the West is not just one place, there are at least four distinct regions, the Pacific Northwest, where we are now the the coastal West, farther south, the inland West, and then the inland Southwest, really have different different species compositions, different fire regimes, different seasonality with regard to when it's dry, when it's not how cold it gets, how hot it gets all of these things. But at least Yes, several, several good pieces of research. And there's certainly several, a lot of bad research as well. But significantly significant amounts of good research. Find, for instance, that at least since 1400, bad fire years have been consistently associated with summer drought. The drought years and this, this seems obvious when you say it, but actually by looking at basically fire scars and trees from a database across 350 sites in the American West, they find that fires are reliably predicted by drought earlier in the summer, not as reliably predicted by temperature in some parts of the West. That's true, but unless actually the Pacific Northwest. And that there have of course, been mega droughts in the American West before, we are probably in the middle of one now or getting into one. This this one appears to be the worst in the last since. Boy, I don't have it written down maybe since the 1500s. I think. And most of the models that I see and you know, whenever we say models, I want to put an asterisk there and say, Okay, this is this is a model, this is we have now gone outside the realm of the directly measurable suggests that 30 to 50% of the explanation for increasing drought is due to climate change. And so that's not 100%. It's not even close to 100%. But there is certainly an explanatory component here of increasing fires in the American West. That has to do with increasing number of droughts and the drought seemed to be have a 30 to 50% roughly explanation due to climate anthropogenic climate change.

**Bret** 19:46

So there are about a dozen things in there I want to respond to of course, one is interesting that it is summer drought and not winter drought that is predictive, it could be either and so the fact that one of these is more, is contributing more strongly Interesting.

**Heather** 20:00

And there, it's more complicated, right that there is some stuff around snow reduce snowpack in the California in California, not so much up here in the Pacific Northwest. But in California reduce snowpack, which is going to be about winter drought can increase the risk of, of summer fires, summer and fall fires, right.

**Bret** 20:16

And so, you know, some effect on agriculture, for example, is typically going to be about winter drought, because it's about snowpack, which fill refills, aquifers, and reservoirs and things like that, which is a very different phenomenon that we're talking about here. So, you know, so drought isn't one thing, it's at least two things. And they will both have a contributory capacity. So

**Heather** 20:41

just to be clear, you're saying the two things in this case, I think it's more are just the seasonality of the drought, right? winter drought versus summer drought,

**Bret** 20:47

right, you can imagine having a, you know, a normal summer and a dry winter, and that would affect agriculture, but at night might not affect fires, etc. So anyway, there's that I also wanted to just point out this story, I don't know where you're going. But I have a feeling that this story is one that is just going to be haunted throughout by equilibria. And their disruption. Exactly. So I wanted to say you mentioned that swidden agriculture, the burning of an area in

**Heather** 21:16

which most people are familiar with a slash and burn, slash and burn agriculture

**Bret** 21:19

is very effective at low density, why? Now it's effective at low density, because fire takes nutrients that are stored in above ground plant matter. And it returns some of them to the soil as ash, effective labor, and it liberates some of them into the atmosphere where they no longer contribute to the growing of plants. So you can grow crops there with the burst of nutrients that you released with the fire, but a lot less than the biomass that once stood. So effectively, in a tropical situation where you don't have a big buildup of resources, you have to keep moving. Right, exactly, which is why low population density is a limiting factor on that one.

**Heather** 22:00

And I mean, and additional additional reasons that swidden works at low population densities is that it's going to work only at low at low spatial scale, because a fire that's out of control is going to release almost all of its nutrients into the atmosphere, which is what we're seeing here right now. And it's it's making it very hard to breathe for a lot of people and a lot of other organisms as well. Whereas a low slow burn allows that the moldering to go back into into the ground, basically. And so you end up within these swidden plots are they're small, they tend to be surrounded by at least three sides by Intact Forest, which means that they can then be repopulated once you know you grow on them for 468 years until you've used the nutrients that you'd released from the slow low burn. And then you let the forest grow back in at which point you cycle through, and you come back to that original plot 20 years from now. But that means that you've got I'm just making up numbers here. But you know, 19 out of 20 of your plots in any given moment, are not actively under agriculture. And you can't do that in any kind of intensive agricultural regime,

**Bret** 23:00

it's crop rotation on a very different timescale. And, you know, before you ever label it as such,

**Heather** 23:08

one more thing that you mentioned, that won't be obvious to most people is that, unlike in, for instance, the Central Valley of California or the Great Plains, and sort of Upper Midwest, of, of the United States, like Iowa and such, that are that are, that have been such rich fertile crop lands, where the the, the nutrients really do live in the soil in the low and wet tropics, and the nutrients live in the biomass, excuse me, not in the soil. And so what you're doing what you have to basically Cluj is such a system, if you're trying to do agriculture, in these very poor tropical soils, to get the nutrients that are above ground into the soil,

**Bret** 23:49

right. So actually, it takes a fair amount of sophistication, the forest that grows back after you have done swidden agriculture in the tropics is not the same for us. So this is another one of these lessons is that you're actively taking over the management of an ecosystem. And so even things that look like virgin forest, like the Amazon, it turns out, are tremendously affected by you know, many 1000s of years of intensive agriculture, the evidence of which has mostly been buried. So at first people didn't, you know, the West did not understand that it had taken place at all right.

**Heather** 24:19

And that's, I mean, that's a huge part of the story that, you know, where, where is wild nature, you know, to what degree does, and we as people who desire to spend as much time in as untrammeled nature as possible, we have to recognize that actually, almost everywhere on the planet at this point has been managed by humans at some point to some degree, and it's harder and harder to do, the greater population density gets.

**Bret** 24:44

Yeah. And there's this. I mean, I guess we'll get back to it, but the naive Tay at the point that you, you know, at the point that Europeans show up in the new world, and you know, for one thing, many of the populations that were in the new world, that is the Americas When Europeans showed up were hunter gatherers, not all of them were large civilizations here. But nonetheless, hunter gatherer populations are less troubled by the burning of a particular piece of habitat, because they're not as wedded to it, right? So at the point that you, you know, take a settlement approach, then you view fire as an enemy. And you your temptation is to suppress it. But the problem is this interrupts a different equilibrium, right? Yes. Which I don't know, if you want to, you probably have a lot to say on the subject. But the the equilibrium in question is the accumulation of fuel. So there's some tendency as more and more fuel, that is to say, dead wood and other above ground, dead biomass is accumulating, there's a higher risk that any given Spark, like from lightning will trigger a fire. And then the point is, the amount of fuel goes to a very low level and unusually low level at which point fire becomes much less likely to happen again. And so anyway, there's a natural equilibrium that is chaotic, but nonetheless maintained by the fact that there's a certain amount of ignition from things like lightning, and a tendency to burn off the fuel. And so as soon as

**Heather** 26:14

a single giant fire in most of the American West that happens as a result of those things, we still live Zach. Okay? Yep. It's apparently a single large fire is recovered from relatively quickly from the plant and animal and fungus perspective, and bacteria and everything but get two or three in rapid succession. And it's it's both harder for the ecosystems be they forest or Savanna, or prairie, or whatever it is, some of which, of course, were created by human management in the past. It's harder for them to grow back, in part because a second fire coming rapidly on the heels of a first say one or two years later, has all of that now fallen wood to burn. So just like we were talking about with regard to swidden, agriculture, you know, successful slash and burn, agriculture leaves a lot of sort of coal sitting on the surface that can be dug in, right. So the equivalent of the of the wood that is partially burned, that is that is sitting on the surface, the next fire comes through, well, that fire is going to catch more quickly and burn hotter, and destroy even some of those plants that actually need fire to, for instance, set seed in the first place.

**Bret** 27:27

So you have two things that work this way, you have the positive feedback that comes from the initial fire, freeing up more fuel, basically rendering wood more likely to burn. And the other thing is that the accumulation of the fuel in the first place that comes from intensive fire suppression results in much higher, hotter fires in the first place. Yes, and because the fires are hotter in the first place, they tend to kill things that otherwise are adapted to withstand them. So you know, things like, sequoias are so long lasting that of course, they have to live through fires. And you'll see the evidence that a given tree, you know, has been burned multiple times. And it survives, it's part of and in fact, you know, the germination of seeds of many species actually require fire. So at the point that you naively think fire bad, and you start suppressing it, you're setting in motion, the things that make fire much rarer, and much worse.

**Heather** 28:22

Exactly. And yeah, there's I mean, there's so many places to go here, fire is one of the biggest topics that we can talk about, right? And you know, one of the things we don't have this problem up here in the Pacific Northwest, but in California, Eucalyptus has been introduced from Australia and of course, is you know, thrives with fire. And so when fires happen with Eucalyptus around, those fires tend to get extraordinarily hot, and almost the only organism who wins in that situation is the eucalyptus itself. So what you what you just said though, reminds me of this, there's a hypothesis that was first proposed in 1991 that is loosely framed as Pyro diversity increases bio diversity. And that was from a paper that I can't get access to his conference proceedings, but a more recent paper Bowman at all. 2016 summarizes the argument this way. So let me just let me just share this. This is a 2016 summary of Martin and substances. 1991 hypothesis that Pyro diversity increases bio diversity. Human manipulation of landscape fires, whether deliberate or accidental is a powerful ecological force that can influence the conservation of biodiversity in the provision of ecosystem services, and positively or negatively affect the risk of economically disruptive fires. Nonetheless, there remains substantial discussion and disagreement among fire managers, ecologist and conservation biologists over how best to achieve ecologically and economically sustainable farm management. This debate reflects the myriad competing objectives of fire management and the social values that influence them. etc. Martin and sap says firsthand, To use the term pirate diversity in their exploration of the biodiversity consequences of the transition from Native American fire management to 20th century fire suppression by government agencies, they characterize this transition as a shift from a pattern of anthropogenic burning the created to maintain fine grain habitat mosaics to one that reduced fire induced heterogeneity in the landscape. This shift was driven by changes in the spatial extent small to large frequency frequent to infrequent seasonality, an increase in summer, just like you said, and severity, low to high a fires, Martin and subsys suggested these changes reduce the pirate diversity with accompanying losses of buyer diversity, and recommended the implementation of heterogeneous fire regimes tailored to suit particular environments and taxa to conserve biodiversity. Now, this is a hypothesis that is you can't experimentally test it, because that would be immoral at best. But you can you can go back and look at data on fires that have been managed in the sort of the more standard 20th century, let's, you know, let's suppress fires and let them happen on rare occasions in one particular way, versus looking at some of these more heterogeneous techniques that were used in earlier times. And it does seem the pirate diversity does increase biodiversity. But can it be done in a modern 21st century environment where there are economic forces that are different and population density is higher? And people have different considerations about what it is that they're trying to maximize?

**Bret** 31:33

Well, first of all, I mean, it seems almost certain that this hypothesis will turn out to be true, I will I will be a stickler and I will say I don't think it's fair to say you can't do the experiment. A, it's not clear to me in the case that you you don't know the answer that you can't effectively say, well, we will do contest,

**Heather** 31:54

but you that's not doing an experiment that will make you stand up, if we're going to be a semantic sticklers. That's my distinction, I'm

**Bret** 32:00

going to stick right back. Because my point would be actually you can run the experiment and say, as long as we don't know which of these fire suppression regimes is better for us, it actually is moral to deploy them in such a way that we can at least detect the difference. Oh, so I think it is fair to do that one has to do it responsibly. But the other thing is, in the case that you can't do it, because it's declared immoral, right? Let's say that some fire suppression regime is clearly inferior, and then it would be immoral to deploy it over any large landscape. But then you have the natural experiment of where it was done before people knew. So I don't know. The reason I'm stippling is that it is an experiment. But it's what we call a natural experiment, like the Galapagos is a natural experiment, rather than an intentional laboratory or field. And that

**Heather** 32:47

wasn't just an excuse to tell me you were stippling back.

**Bret** 32:50

No, and only the biologists in our in our audience are going to understand stippling back is basically it's like a declaration of war. declaration of fish is it's a it's a very fishy declaration of war. All right, so my train of thought,

**Heather** 33:08

let's say, Well, let me let me say a couple more things. And I'll bet you find your train of thought again. So some of the errors that we find in in thinking. And you know, I would say on sort of both sides of the political aisle, some some of these errors are in one side, some on the other. More on the on the right side of the political aisle, we see imaginings that the environment can just be controlled, they can be mastered that all we have to do is figure out what needs to be done and control Mother Nature and be done with it. And this imagines that the environment is static about over both time and space. And that strategies that will work at small scale will also work at large scale. And you know, all of all of the issues that were mentioned in this original Martin and sepsis paper, that small and large, the same frequent infrequent fires will act the same way that decrease in the heterogeneity of seasonality will act the same way as having fires in both seasons and severity won't change anything so. So you cannot you cannot just come in with a heavy hand as a bunch of humans and control nature. It's not it's not going to work. That said, the sort of the naive error and thinking that tends to be more likely to come from the left is that if we just leave nature alone, it will heal itself and become its original self. And the reason that this is I think this is a less egregious error. But precisely because of what you raised just a few minutes ago that actually there's very little truly wild land left and we would, you know, I would like more land set aside for National Park, you know, rather than National Forests like I would, I would, I would like more of this land that actually can be left to do what it's going to do, but the idea that either the the earth itself will find an equilibrium that suits our temperaments or that the people who lived here before For before us, were doing something that was inherently peaceful and lovely and would work at scale are both pretty naive.

**Bret** 35:08

So I would introduce two concepts here. One is the, the idea of walking into a complex system and managing it from the get go as if you understand what the forces are in play is folly to begin with. And so it's the hubris of the 20th century really, it's it's the hubris of those who have learned well, the lessons of simple systems and then attempt to apply them to complex systems. And so the fact that complex systems are relatively newly well studied means that we are now beginning to understand what we were doing wrong. But in some sense, it was just us and Chesterton's fence all along and at the point that you walk into a system that you know, to be complex, what you know, is that your simple interventions are going to have cascading effects that you can anticipate, right, and we should have seen this coming all along. Yes. So anyway, one thing is, instead of trying to return things to a natural state, which is effectively impossible, not messing them up in the first place is a way better deal. Right?

**Heather** 36:13

So it's tough, though, because we've pretty much messed up at this point.

**Bret** 36:16

We have and the problem the problem is, I mean, a when you tell people, there are no wild lands truly wild lands left, it's a danger problem is they have the sense that what you're saying is it's lost rather than let me tell you a story. The Amazon, as we know, it is not natural, right? There was an Amazon, there is an Amazon, they're two different forests, they've been radically altered by intensive human use. However, it's not like the Amazon is not a fascinating and wild place. It's just not in its original state.

**Heather** 36:51

And we can also say, you know, because because you and I have been lucky enough to be traveling to lowland tropical rainforests for decades at this point, only to the Amazon since 2013. I guess I was there briefly in the Brazilian Amazon in 2003. But we've been going to the same place a couple of times since 2013. And even Since then, the last time we were there was earlier this year, which we've noticed noted before is impossible to imagine. But we were there in January of 2020. And the first time we were there was in June of 2013. And the Amazon that we saw in June of 2013 was it's you know this glorious, jungle wild seeming incredibly biodiverse. In fact, it's understood this particular spot and Ecuador and Amazon is understood to be the most biodiverse spot on earth. And a mere seven years later, we are already seeing a decline in biodiversity. And you know, we we imagine that three of the three of the things that are happening is an increase in oil drilling, and an increase in the insecticides that are traveling down river and killing off the insects which are then affecting the insectivorous birds, which are then infecting the organisms that eat the insectivorous birds. And again, to return to this, the widespread fires that have been allowed to flourish and the Brazilian Amazon especially since bolsonaro, took office which are in part the result of the development that he is encouraging. And you know, basically once you build a road, the the wildness of a place is going to quickly decline.

**Bret** 38:29

And you get this phenomenon which there's still quite a lot of wildlife in in Yasuni, where we where we go but there's an awful lot of forest on the way to that most diverse place on earth and the really terrifying thing is how quickly you can deplete a piece of forest of its animals or at least its large animals and so you know to a casual observer it looks like oh there's so much for us and the point is no no some of this forest you know you could walk for quite a long way and not encounter any large animal life no vertebrates to speak of we're not many anyway that be some common birds but not much else. And the point is that people especially people armed with modern tools can deplete a piece of habitat very quickly and so this this thing that tropical biologists know but have a hard time compelling others of is that the road is the death knell right if you think well we're just going to put you know, it's one strip before us like relax right? It's one you know, it's you know, how many meters wide is it is a road? It's not that big a deal. It's like no, no, you've just given access to all of these expert hunters who now have access to modern tools to all of this forest that would have been very difficult to access before and it just it empties them.

**Heather** 39:49

And it's stunning and part of and we're far afield from talking about fire directly here but it's the what what was obvious to awesome tipper cheney in in Yasuni. Just Eight months ago is true there even though there is no road there like the last few hours of approach to to get there it's it's an all day trip is by river in fact, you know you go you go over the Andes from Quito to to coca, and you get on the Rio Napo for for a while, and then you get on a dirt road in a truck that was built by the oil companies for a little bit, and then the road ends and you get back on to another year to pettine, both of which are teenis, a tributary of the Napo and an opposite tributary of the I think it's directly to return to the Amazon Fire if I remember correctly. But so there is no road where we are we're where we go, and yet and yet it is happening there too. It

**Bret** 40:47

is happening there too. And it's happening you know, for one thing, this is a field station so there's lots of longitudinal data about various clades longitudinal meaning time. So we know that bird populations are radically decreasing and we know that bat populations are radically decreasing. The one that I didn't see coming was in between our this most recent trip and the one before Caiman had been very common on the river such that if you went you know even a little ways on the river at night with a headlamp you would see came in we didn't see a single becaming no clue how that's connected to anything else why came in populations would have dropped it could

**Heather** 41:26

be stolen the banks and some in some places it wasn't you had like the Cayman areas and the turtle areas and and they were just always a lot and turtles as well.

**Bret** 41:35

Yeah, there are many fewer turtles. So you know, what is it is it that the insect population has crashed, and that this indirectly came in don't eat insects, but they do eat fish, and many of those fish survive on insects that have fallen into the water, things like that. So who knows what the connection is, if you want to see the reverse of this, so basically complex system, how are Caiman connected to whatever is changing in this remote piece of habitat, who knows, the reverse story is told by the wolves that were reintroduced to Yellowstone. And there's beautiful work showing this radical cascade of effects where the reintroduction of the wolves adjusts the the deer population, right the deer are no longer free to forage wherever they want which creates a increase in the diversity of plants anyway you get this cascading beautiful effect from the reintroduction of this you know, top carnivore. So anyway, it's all complex systems and basically stop messing with them and magic happens and you start messing with them and you can't keep up with the symptoms. It's like It's like a body that you're, you know, you're giving him a foreign pharmaceutical for something and then you're treating the side effects and the side effects and eventually That's right, the whole system falls apart.

**Heather** 42:49

Yeah. So um You and I both grew up in LA and experienced fires there. And in fact we thought we also saw I was just thinking about what are their experiences with fires. Certainly in the last two decades, the American West has been experiencing worse and more frequent fires. I remember actually on our honeymoon in Turkey, driving west from Kappa Nokia coming across a wildland fire that appeared to have been intentionally set and it was on boat it was it was in a grassland that was low and it was on both sides of the road and it seemed safe enough we weren't this stupid it seemed safe enough that we stopped the car that we had rented and took pictures of it and sort of stood there watching this meandering line beautiful fire move across this landscape but it was near sunset as well so the colors were extraordinary and felt less apocalyptic than what's going on outside our windows right now. And I don't know we never talked to anyone about there was no one around to talk to about it. But it it certainly I think I'm not sure even we talked about it but I think immediately we both viewed this as this looks to this looks like no one's worried about it. This looks intentional. This looks like management and

**Bret** 44:04

there was nothing he was going to reach their structures or a forest that it was going to get loose and it was that grassland burning

**Heather** 44:10

and you know, grasslands after fires are new growth is prompted and so for people for pastoralists who have animals that graze intentional setting fires does release does does prop new growth of grass and so your animals get more food and it might no in fact, there's potentially regular burning across in many, many places in the world, basically in the fall to fatten up your to prompt new growth of grass to fatten up your animals so that they can make it through the long winter. So what though, if if climate change explains something significant, but probably less than half of the increase in in fires in the American West. We also have this suppressive fire management practice. Which has not allowed, which has been homogeneous at best and simply suppressive. At worst. We have drought, that to some degree is just going to happen. So there's there's there's natural cycles of of drought, and it may just be our time, right? And what else

**Bret** 45:21

sprawl, which is putting people in direct contact with lands that might otherwise burn and you know, burn themselves out with some regularity, we care

**Heather** 45:31

more about every single fire

**Bret** 45:33

we've got, I hesitate to even say it, but we've got people who have lost the plot, and are no longer in on the agreement that once we all held that when it was bad, when things burned, right, when you know, that's not to say that every fire is bad, but there are people who are setting destructive fires with their own purposes, whether it's to make the news or something else. But the fact is, it's right. That fire is a force multiplier, right? So terrorists trade in fear, an organization of a certain size can create a much bigger effect if they can scare you into hurting yourself. Fire is not exactly that. It's not about fear, it's actually destructive. But the point is, one idiot can do an awful lot of damage, they can control an awful lot of resource by triggering these things. And the problem is, there's really not a whole lot we can do to stop it. You wouldn't want to live in the dystopia, in which everything was so well monitored. But you know,

**Heather** 46:49

yeah, so you, you called them people who've lost the plot. What I've written here is intentional provocateurs. Right as as opposed to sort of human landscape modelers who are trying to do some kind of good. So from that original, that call figure that I, that I showed it's be they, people who have lost the plot, and or individual bad actors or people who have lost the plot, I don't think that fire is a reasonable form of modern protest. arson is actually not a legitimate thing to be engaging in now. And there has been how as as the fires have, have become worse and worse over the last several weeks, there has been increasingly as you would expect, you know, the mainstream media is now saying anyone who talks about arson as a cause of any of these fires is clearly you know, on the right, and doesn't have their their finger on the pulse of reality. And I would say, once again, the idea that, with so much data still out with so much of the story still unknown, the idea that it is impossible that any of these fires were set by arson. And therefore, if you say that any of them were or might have been set by arson, you are making a political point is itself a political point, and therefore we don't have to listen to you Well, actually, at this point, we know for sure that some of them are set by our so we don't know what the political leanings of those people were, we can imagine where there was a man or there was political at all, but we there was good, strong evidence at this point that some, not most, but some of these fires were set by humans with with purposes that were not in anyone's best interest.

**Bret** 48:32

Yeah. And you know, the fact is, we've had tons of arson here in Portland in the last 100 some odd days. Yeah, right. Now, it hasn't been wildfires. But it is perfectly is a perfectly legitimate question. We have ample evidence that there has been arson involved. Some of the fires that were started by arson were then put out by citizens. Yep, immediately. So we know what the nature any of this was, we don't know. But. But nonetheless, we have to look ourselves in the eye and say a couple things. One, you cannot play this stupid game where you tell certain people that whatever they do in the name of some cause that we agree in the abstract is a good one is legitimate. Right? Yeah. cannot set a fire against racism a that doesn't make any freaking sense. And be, it's going to become an excuse for everybody who's looking. I mean, what's really happened is, we've got

**Heather** 49:25

it's the same era though, as racism is a pandemic. It's the same error. It's using the metaphor is using the thing that is actually going on in the physical world and applying that as metaphor to the current social justice issue. And sometimes it works, and sometimes it doesn't, but it's never literal. Yeah, it's never literal. You can't What did you mean that phrase was amazing. What did you just say you can't set a fire against racism or what wasn't quite what you say? No, it

**Bret** 49:49

was it was close. Yeah, something like that.

**Heather** 49:51

And you know, and no, systemic racism is not pandemic and you can't set a fire against racism. And that doesn't mean that we're saying racism isn't real. But yeah, you guys have seriously lost the plot, if that's what you think is the right way to deal with it

**Bret** 50:05

well, or the rest of us have freakin lost the plot because we actually have is the rest of long standing tiny, our anarchist friend that has of late glommed on to a nominally anti racist movement. Right. And the point is what's actually driving this anarchism? And what does it look like? anarchism? Right? That's right. Go figure. You know, they've been telling us that they wanted anarchy. And they've told us why and it doesn't add up. But the point is, we now have municipal authorities making excuses for these people, that is going to increase their likelihood of committing all kinds of crimes, because they've effectively been told, I mean, you know, all of the people who've been released after committing crimes and being arrested for them, and all of the, you know,

**Heather** 50:52

the money that was collected to get them released, right.

**Bret** 50:55

You know, we had Ted Wheeler announcing this week that he's no longer going to allow the use of tear gas to dispel these riots.

**Heather** 51:03

Like that. And right as the fires were getting real close to Portland, kind of like an 11th hour thing that no one was going to notice.

**Bret** 51:11

Yeah, it's preposterous. So I don't know. Are we? where you want it to go? firewise Yeah, there's,

**Heather** 51:17

there's a lot more to do. But I think I think we're probably good for one thing, we still need to talk about sex.

**Bret** 51:22

Oh, right. Let's talk about sex. I won't say should I say no, I won't say.

**Heather** 51:29

So. We watched cuties last night. The Netflix, I guess it wasn't created by Netflix. The hour and a half long narrative film describing a a group of 11 year old girls in Paris, I guess it is who are dancing. I want to put that in quotes, too, and we follow Amy in particular who is the daughter of the Senegalese Senegalese immigrants and she is not feeling at home in her home for a lot of good reasons, in part because her mother is disempowered in life as an observant Muslim and her father has gone back to set a goal to pick up a second wife and this feels to Amy we are led to believe quite horrifying and disempowering as it would be as an in that part of this film. I do I I got it made it made a lot of sense of course that would be awful and there's a scene early on in which she ends up under a bed because she was doing something she didn't want her mom and Auntie to see and so when they come in she just hides she doesn't mean to be eavesdropping but she's eavesdropping on the conversation which I think is the Auntie is telling the mom you need to call all the family members and tell them how pleased you are about your husband's new wife and how you hope that they'll be very fertile and after the Auntie leaves the mom breaks down his cry and it's it's it's clearly an awful situation and you know situations in which polygyny is forced on women are exactly not empowering, and and that's awful. However, however, the idea that this hyper sexualized preteen dance again in quotes behavior by by girls, is an antidote is here we are led to believe now maybe part of the part they were trying to make in the film. But But no, there is so much graphic sexualization of these little girls in this film, that that could have been done differently without actually bringing, bringing all of our attention to their budding sexual bodies. And the fact is that the opposite of female disempowerment is not female, female, hyper sexualization. It's not both of these things. Both of these ways of being are deeply disempowering of women. So

**Bret** 54:10

I'm not sure that wasn't the point of the screenplay. I found that

**Heather** 54:18

the that pointing out that this preteen twerking is spell out what you mean what you're not sure that what wasn't the point

**Bret** 54:28

years ago, I was at one of these ITW events in Sydney, Australia. And I made a point that Eric then quickly jumped in and he said nobody was going to get it but that it was a next level point. And the point I tried to make was that the obvious problem with the way Muslim culture, at least in orthodox sections, deals with women is something that the West is not in a good position. Comment on because as much as you know, a burqa is a troubling thing to inflict on women, the West has created an entirely different problem. And it is this hyper sexualization of girls. And so I thought Actually, I detested this film. Yeah, it was both tedious and disgusting at the same time, right? To the extent that it you know, like the moment to moment plot was like a, you know, it was like Lord of the butterflies like a girl version of Lord of the Flies,

**Heather** 55:40

actually, and that's, that's important. I don't want to interrupt for long. But we also saw this group of four girls, sometimes five, but sort of oscillating group of four girls behaving like a gang of errant boys. Yeah, except that they were using their budding sexuality to get what they needed. But they were being aggressive. And, and they were act they were, they were play acting as boys and as women, and in fact, they're neither their girls,

**Bret** 56:06

right. So anyway, the film wasn't any good. But the very final scene suggested to me that it was not making the point that I thought it was making, which was that this hyper sexualization is the antidote to the other thing, the very final scenes see seems to suggest that it was making a point more like the one that I was trying to make in Australia, which is that both of these answers are absurd. And that that's a problem, right? That basically these are girls, and they should be allowed to be girls rather than be turned into women early. And yet the very final scene is like 15 seconds. 15 seconds long. More than hour and a half. I was surprised to see it because I was already writing my scathing review in my head. And then it was like, Oh, actually, maybe they do have the right point. Now, the film is still despicable. Right? It's still despicable because it was actually filmed with underage girls, which meant that it couldn't avoid doing the very thing that maybe it was critiquing. Right. And somebody made some decisions in the making of this film, to sexualize these girls in a way that would probably increase audience because it will appeal to a certain fraction of presumably straight men, which is despicable. So the point that Tulsi Gabbert made on Twitter yesterday that had her trending about the fact that this is likely to increase things like trafficking, is surely right. And then there's the Ultimate Evil here, which is what Netflix has done with it. Right? So the point is, Netflix, clearly in the way that they are attempting to attract people is not in possession of what this actually was, which is a very questionable art film, right? What Netflix decided to do was turn it into a sensation, either because of the sexualizing of young girls, or because of the controversy that would arise out of doing that either way, my God, right, we're actually going to tolerate Netflix doing this. But the whole thing is sort of tangled because I you know, I don't know whether I don't know what was on the mind of the the screenwriters. If it had been a book, in which there were no actresses, and it made the same point that I think it was making in that very final scene, then I would say, yeah, that's an important point, right? By doing it in this way that for the entirety of the film seems to be suggesting that, you know, this is liberation, totally pollutes that message. And then for it to be co opted by a an economic Goliath, with its own bottom line in mind. Is is cruelly troubling. Yeah,

**Heather** 58:46

it is. And it's not. I don't think there's any excuse for any of the explicit visual sexualization of the children and the film. But it's not even just one scene, it's throughout it, you know, it starts early, and it goes to the penultimate scene, basically. And it is, it's excruciating, and it's at some level more of the same that that you know, Hollywood and Madison Avenue etc have been giving us for decades and decades and decades, except the age range about which it's acceptable is advancing earlier and earlier and if what what kind of a country imagines that sexualizing children is okay, I can't even imagine what's in your head if you think that that's okay. Like you have, again, you really lost the plot on what childhood is and should be and can be and must be.

**Bret** 59:47

I totally agree with this. And I, as I was watching this film, I did have the following odd thought which was Suppose there had been no controversy, right? Suppose that somehow we had encountered this thing and thought, Okay French art film, you know, Senegalese immigrants and watched it without any without any context expectations of what it was, I am sure that I would have found it despicable. But I am not sure that I would have found it noteworthy. In other words, this is part and parcel of what we do to girls. And the thing that was extreme here was how young The girls were. But the fact that we are constantly being bombarded with messages that hyper sexualized girls that play games with actresses who may be a, you know, adults, but are playing younger, right? This whole thing is just how the West functions. And it's, to me, I think it's almost entirely the result of Madison Avenue using female sexuality that's very potent force to sell shit, right? And that in that the fact that it has affected the way women view themselves as almost a byproduct of the desire to raise people's insecurities in order to get them to buy things. But I don't think I would have thought maybe I would have thought to tweet my god that I see a terrible film. Let me tell you what's in it. But I'm not sure that it would have, you know, would have stood out,

**Heather** 1:01:23

I bet there's a good chance we wouldn't have finished watching it. Oh, that's in the context, right? It would just would have started when like, what are they doing? Well, no, nevermind, right, just just just not watching this. I guess I want to just reiterate what I think I said earlier, but maybe didn't say clearly, which is that this is this is being sold to us as a response to the disempowerment and de sexualization of the women in this Senegalese immigrant, Muslim community. And there is then this conflation of sex with power. And this, you know, this is very much in the, you know, critical theories, genre of thinking through post modernism. And post structuralism in such sex obviously, is used as power, as we were just talking about by Madison Avenue by young women bought, you know, in a lot and a lot of places. But the idea that observing that family structure, community structure routinely and frankly, systemically disempowers women, and that probably that disempowering of women is about controlling of sex does not mean that the response to that ought to be all sex all the time as early as possible, absent any any community interaction or commitment or anything, because that is also not going to empower anyone, you are not you're you're not going to simply have power. If you flaunt sexuality at every, at every turn, just because you have observed correctly, that women in your community are decentralized and also have no power.

**Bret** 1:03:03

Yeah, two things. One of these points, I think, is it's going to be very hard to make, but the control that society almost inevitably exerts over female sexuality is not about controlling females per se. It's about society, right? And so this is the point I tried to make in Australia is that in fact, there is a problem when human beings are living in high density, which has to do with the effect that sexuality, the disruptive effect that it has, if there's not some mechanism that keeps some kind of order. And the point I made in Australia was, there are many different mechanisms, some of them are laughable. Some of them are ghastly, all of them, the unfairness of all of them falls too heavily on women, right? But it is society figuring out mechanisms to address an actual structural problem that that results in, in this. And so you know, at some level, the upshot is we don't have a good solution here. We've got lots of bad solutions. But this is the inevitable result, you know, of society in which, you know, it is perfectly natural for cardi B to be talking to Joe Biden in the midst of a presidential election, as if we, you know, why are we shocked

**Heather** 1:04:35

as if that is indicating that he thinks women should be empowered, as opposed to actually, if there's any message there, it's applauding, hyper sexualization and the cheapening of sex of women by women.

**Bret** 1:04:50

And this is another difficult point to make, but the point is actually you know what? female sexual power is power, but Females are in competition with themselves in a sense, because which power Do you want to drive the world? Do you want female achievement to be the kind of female power that women should aspire to? Or do you want their ability to tangle society in knots? Which, of course, fate

**Heather** 1:05:17

so No, and I think this is, this is in fact the key tension between sort of second wave feminism and later waves feminism, that second wave feminism was aspiring to free women from many of the domestic shackles that you know, some of which are simply biologically enforced by anatomy and physiology by the fact that women are who just ate and lactate. But freeing women from the from the inherent expectation that you know, you will have, you will be married and have children early and you will be the ones you will be the one staying home and taking care of them. It's sort of a solo paradigm role, which itself is a novel thing, right. And, you know, in monogamy that tends to be by parental care, not the sort of 1950s housewife version of, of family life, which is, it's a very weird little blip that I don't know why anyone aspires to that. But so second wave feminism was about freeing women from constraints that we could be freed from, and presumably allowing us to make decisions based on what it is that we want to do in the world achievement, and observing that men and women are different, and that women will sometimes make the same choices as men, and sometimes different ones. And those choices may actually help society become a better place as well. And let's actually embrace the kinds of contributions that women can make in the world. That all feels to me like the kind of second wave feminism that my mother and her business partner and the women who I had as role models when I was growing up, engaged with and then we have this third wave feminism come around, which is about using the power that you have as your sexuality to trick men into doing stuff and to you know, pretend that that means that you're in power, and you're not, it's not powerful. A it's, it will end, you know, actual achievement can will grow over time, just like male actual achievement grows over time. Why would you pick the model of power that is brief, that is fleeting, and that is actually disempowering? Well, because you suddenly come into it, when you're 1516 1711. Apparently, if you're in cuties, and it's, it's surprising, it's shocking. And, you know, every young woman has to figure out how to how to deal with it. But imagine that that's the pinnacle of your life. It's like being the dude on the football team at 17. Who's that's his best moment in life. That's that is the equivalent of aspiring to be your only a sexual being. And that is what your value is as a woman. And it's, you know, it has always struck me as anti feminist foe feminist. And of course, it goes by third wave feminism and doesn't seem like anything. Anything empowering of women? Yeah, it's

**Bret** 1:08:00

an inversion of feminism. Yeah. The thing that I would add is that it is also largely arbitrary, you know, like melanin content of your skin, right? Why do we want people judged by the content of their character, rather than the color of their skin? Because it makes for a better world, right? If we do that. And so the point

**Heather** 1:08:20

is mutable characteristics, what you're saying,

**Bret** 1:08:22

it may I don't want to say it's totally immutable, it may be that, you know, a beautiful woman is impart beautiful because, or a beautiful young woman is beautiful, because, you know, she puts effort into being fit or whatever, but, but it is largely immutable. And so then the question is really, you know, we could take a traditional view, and you know, women are sort of playing the supportive role at home. Many of us don't want that, right. We don't want that. But we also don't want a anything that empowers women is good, because of what's empowering you is that you're waving your tits in somebody's face. That's not it doesn't produce, it's not productive,

**Heather** 1:09:00

right? I don't want that any more than anything that empowers men is good. Anything that empowers. Pick your demographic is good is a terrible rubric and will be gamed, and we see that in Black Lives Matter. We see that in me too. We see that in cuties we see it across the board. Of course we do, right?

**Bret** 1:09:17

And so what you want is a system in which the women who are empowered to speak for example, to presidential candidates and things like that are women who have accomplished something that has brought, you know, that's made the world more interesting, has extended our capacity in some way. Right has contributed, right? the mythology of markets is that you get paid for contributing to our welfare by creating things that enhance us. And the problem is if we put too much emphasis on youthful sexuality in females, which you know, there's a biological bias in favor of exactly that. Then what The point is the females who end up empowered are inherently going to be young. And that means the chances that they will actually know something worth conveying are that much lower

**Heather** 1:10:11

right? youth and wisdom are inversely correlated, almost always right. And you can be wise beyond

**Bret** 1:10:15

your years. But you know, you can't be wise as a very young person. Yeah. And so anyway, it's really, you know, these two kinds of feminism are in competition with each other. And when you spot the direction, one of them poles is absolutely anti feminist.

**Heather** 1:10:30

Yeah, that's right. So you wanted to say some things about unity before we, before we stopped, I think,

**Bret** 1:10:39

yeah, just a little bit of an update. We are, you know, at a kind of an interesting moment with Unity. Twitter has, of course, said nothing yet about why it is that it's suspended our account, it has ignored the appeal that we've filed, and it's just now gone silent. And increasingly, I think the only explanation for this behavior is political. We found no evidence of the things that we were rumored to have engaged in. When Eric talked to jack and you know, the things that were spread online, we are not Russian bots, we did not register large numbers of accounts in order to trend a hashtag. So anyway, at some level, I think we are discovering that, you know, Twitter is not the Ghost in the Machine, the ghost is the machine. It has its thumb on the scales, it is adjusting the way democracy works, it is deciding what a legitimate political perspective is and what it isn't and it favors the duopoly which is not surprising, because of course, it has disproportionate influence over how we are to be governed through that duopoly. So what the hell are we going to do? I mean, this is this is this is an impossibly dangerous force. And what I fear is that it is going to prevent any kind of change that is not seen by the duopoly as in its interest, and that that change has become increasingly essential and on a short timescale. So that is roughly where we find ourselves. We are still forging ahead. I am hopeful, we have begun to interact with Joe Jorgensen. I'm hoping he will come on our campfire and talk to us about the possible partnership between libertarians and the Unity movement. He is skeptical, but I believe when she sees what our perspective really is that she might well be willing to partner. Alright,

**Heather** 1:12:36

so Zack is giving us our signal that we are finishing up. Okay, so we'll take a 15 minute break as we do, and answer your Superjet questions from this hour first, as many as we can, and then pick up answering your super chat questions from the q&a hour in the order in which they come in. We do appreciate your support in that regard. You can join either of us on our Patreon is to get access to the private Discord server and me online to get access to our one to one private q&a that I will be soliciting questions for and about a week. What else?

**Bret** 1:13:16

Maybe that's about it.

**Heather** 1:13:17

Maybe that's about it. So we will be back in about 15 minutes.

**Bret** 1:13:23

All right. Let's see and 15 be well