8 Natural Landscapes That Will Restore Your Energy – Emma Loewe – #926

Dave Asprey:

You're listening to The Human Upgrade with Dave Asprey. Today on the show, we're going to talk about nature. The guest that I found for you today is a senior sustainability editor at mindbodygreen, and she's an environmental journalist. She's done a lot of research in how nature, human health and helping the climate actually interact with each other. It'll be a very, very interesting time to chat. Her name is Emma Loewe and, with no further ado, Emma, welcome to the show.

Emma Loewe:

Thanks so much for having me, Dave. Excited to be here.

Dave:

You actually wrote a book called The Spirit Almanac: A Modern Guide to Ancient Self-Care. That, plus a book on nature and the environment. Are you the ultimate hippie? Is that what's going on here?

Emma:

I mean, I'm trying to get that title. Yeah, of course. I mean, what can I say? I love nature. Who doesn't?

Dave:

How did you get the interest in ancient healing modalities? I mean, you go pretty deep on some of the stuff you talk about, ancient spiritual practices, ritual, things like that. And you went from there to the environment, but I wonder how'd you get into that side of more esoteric bio-hacking?

Emma:

Yeah. I've been at mindbodygreen for about going on seven years now. In that time I've had the pleasure of speaking to people on all walks of wellness, including a lot of yoga teachers and people who come from different spiritual images and things of that nature. So they sort of piqued my interest in the ritual self-care side of things.

Dave:

Okay. So you got into it that way, you learned about it and you decided that it was worth writing a book about nature landscapes. We've had several guests talk about forest bathing, about benefits of times in nature. It's in my book, Game Changers, as one of the 46 things that high performers do. But I've not come across anyone who's really thought about, okay, this environment creates this state. I think that's a unique way of thinking about it. When did you realize that different environments were creating different states?

Emma:

You mentioned forest bathing. I think that research was really instrumental to me to start thinking about landscapes in this way. A lot of times, when we refer to getting out in nature, we sort of use the word nebulous, like "Oh, we're going out in nature," but there are obviously so many different sorts of landscapes we can experience and ways that we can interact with them.

So I was curious if there was a way to compile the existing research into different sort of buckets, depending on what landscape someone might have access to or be interested in visiting. I was pleased to find that the research does exist. It just hadn't been put together in quite this way before.

Dave:

What percentage of time does the average person spend in nature now? What percentage of time does the average person spend in nature now?

Emma:

Oh, gosh. The most recent data is from, I think, the late 1990s, but it was something like 6% of every day, which I think is maybe even high in a post-COVID world, so not enough, for sure.

Dave:

Well, that's definitely the numbers that I came across was 87% of the time indoors, the rest of the time is in cars. Other than that, 6% or you might be outdoors, but being outdoors doesn't mean you're in nature. If you're in a typical city walking between skyscrapers in Shanghai probably doesn't count as nature. In fact, it's probably worse than being indoors. At least that was my last experience in Shanghai because of air quality.

So how did you go about putting together the research for your new book, called Return to Nature? Well, in fact it launches the day that this podcast comes out and we share a publisher, but how would you know? Where did you find this information? Because I haven't come across it before.

Emma:

I think any sort of journalistic project, you start by reaching out to people who are really spearheading the research and ask them, who in the space should I be talking to? Who is doing interesting stuff right now? So that was my first avenue into it and I would say there are two main, maybe three main clusters of researchers who are doing this, that I think about it. It's people who are study green space. So that's the sort of more typical health benefits of getting out into parks, for example. Then you have blue space researchers. There are a fair amount of those in the UK, specifically, and then forest bathing researchers who are obviously over in Asia and researching forest landscapes specifically.

Dave:

So, when you're exposed to nature, where do you see it first? Is this a physical wellbeing? Is this a mental wellbeing? Is it spiritual? To kind of break down the percentages of each. I know it's not quite that rigid, but kind of which one's bigger or smaller?

Emma:

I think a really big one that is probably obvious to people right away is just that getting outside in nature, we tend to also be moving. When we're outdoors, we go and walk in a park for, example, and there's obvious benefits in moving your body in any landscape, indoor or out. But there is some pretty interesting research to show that, when people do what they call green exercise, it actually does tend to be more beneficial, in the sense that people report less exertion so it feels easier to them than perhaps if they were doing it inside. Their blood pressure also tends to return to normal and sometimes faster after outdoor green exercise, which is kind of interesting. So that's a definite avenue.

There's also sort of the cognitive benefits of getting outdoors seem to be very interesting. A lot of research finds that, once you return inside from a trip outdoors, you score better on things like working memory tests. You tend to have less brain activity in certain regions that are responsible for things like negative self-talk or rumination. So that's a definite component.

And then the emotional part of it, I think that it's across the board. People report less stress when they get back from time outdoors. It also shows in their physiology. They have lower cortisol levels, lower blood pressure, lower heart rate. So I think all these things really come together in a formative outdoor experience.

Dave:

So there's no way to really say you get more mental benefits or more spiritual benefits or more physical benefits, because I mean, moving is moving. You can do that on a whole-body vibration platform in a basement on a space station if you want to. But I think it's more than that.

Emma:

Definitely. And I think it just depends so much on the experience. If you're in a landscape that really, for example, makes you feel an emotion like awe, I think there's a reason to believe that that will sort of stick with you longer and it might be more beneficial to your body than if you're just taking a walk around the block, the same walk around the block that you've taken every day of your life.

Dave:

So there's some differences there. One of the things that impressed me about your work is you had 30 pages of references to what you're saying. I think everyone listening has heard me and countless others say, "You should spend time outdoors. It's good for you." So we all kind of know it. Also, you should eat healthy and you should exercise. But how exactly can you exercise to get the most benefits? Well, I'm working on that with Upgrade Labs.

There's a lot of new knowledge about these things. Do you understand the mechanism of action for nature? I mean, is it because you're getting natural light? Is it that you're seeing green colors? Is it that your eyes are relaxed? What are the big things it's doing, physiologically? Do we understand that?

Emma:

We don't have a super clear picture of it, but people obviously have some, some guesses as to what's happening. I think one theory that's sort of the main accepted one is called the Attention Restoration Theory and it sort of posits that when we're indoors doing things on screens or focusing on the task at hand, it's very cognitively draining. But, for whatever reason, when we get outside, it sort of gives our brains, they call it soft fascination.

So something to sort of rest your attention on in this landscape. That's obviously a very visual interpretation of it. But then there's also this interesting research that I walk through in the book, to show that everything, from the sounds of ocean waves to the smell of certain trees can also sort of build upon that initial restorative effect. So I do think it's kind of a culmination of a lot of different pathways.

Dave:

It seems like it's not one of those things you can get down to one variable or even maybe stack rank what it's doing, because we have this concept of poly-pharma research, like what happens if you take two drugs together? Well, I'm working on, we'll call it poly-exercise theory, with data at Upgrade Labs. It

says, what if you do this and this? What order? How do you combine them? And it seems like when you're getting a prescription for nature, it's a bunch of different things that are all happening simultaneously that are doing it. And I would call out the visual field stuff you talked about.

One of my regular practices is I'll work in my computer and I have different depths of vision for that. But I also make sure that I turn and I look out at a vista, which I have out my window, so I can see Salt Spring Island. And when I worked as a venture capitalist on Sand Hill Road, because I was the lowest guy on the totem pole, they put me and a couple others in, they called it the fishbowls. It's this kind of dark room in the middle with a couple windows where you people could see in, but you could see no natural light.

And I'm looking at the first Mac I got, this was a while back, but with a real bright screen and bad fluorescent or LED lighting, or whatever it was, but after an hour or two in there, it was just like zombifying, so I'd go outside and get some sun and see at a distance and then your eyes would relax and then your body would chill and then you'd go back in and do the work.

So it maybe wasn't the best working environment, just physiologically. But I found I couldn't go eight hours sitting in there because I would just kind of zombify and it's that visual relaxation that you get from being outdoors, unless you're in a dense forest and then you can't see far, but you can see detail. And it seems really important, way more than we give it credit for. Any specific research on that?

Emma:

On the forest side of things?

Dave:

Or just on the relaxation of the brain because of what you see.

Emma:

Yeah. I mean, I think there's some really interesting research that sort of talks more about what you were experiencing in that job where you sort of got out and saw this and you're like, oh, my brain is restored. In terms of things like creative thinking and problem solving, there's research to show that actually helps to look out onto more open, expansive space, than focus in on your computer for example. So I think that's another reason why getting up and taking breaks, looking out the window, even looking at a blank wall, if you don't have access to a window, can be helpful to sort of help your brain make those more creative connections.

Dave:

Where do you live?

Emma:

I live in Brooklyn, New York.

Dave:

I was guessing. You have the perfect New York apartment set up behind you.

Emma:

Thank you.

Dave:

How the heck do you actually get nature in Brooklyn?

Emma:

I mean, one of the chapters of the book is the Urban Landscape chapter, so it's definitely something that I think about a lot, is how can I live in a city that, like you mentioned, New York isn't as bad as other places, but you have things like air pollution, you have things like noise pollution, you are surrounded by concrete. I live in a high rise. So I wanted to think about how I could experience nature in this place. And, thankfully enough for me, the research really does show that it doesn't have to be some sort of grand forest getaway in order to really change you on a physiological level.

Access to things like pocket parks or even street trees, they are finding that can have a really similar effect if you let it. If you, instead of getting outside and just listening to going on a phone call or just sort of tuning out your environment, I think it's important to really make that outdoor time your outdoor time and just look up at the trees, see what you can spot, take out your headphones, smell the air, just let it sort of sink in. I think that's especially important for city dwellers.

Dave:

That is kind of sad though, because at least when I'm in cities, there's that one tree, but it's the dog's favorite tree. It feels almost worse than no nature. This one poor sad tree. I mean, isn't that maybe not good for you?

Emma:

I mean, it makes me sad sometimes, and then the trash obviously drives me insane. But it's funny. I actually went on a walk for a story that I'm working on last week with a naturalist who works in New York City and I asked her the same question. Do you feel deprived of nature in this place? And she said, "No, never." And I think she said it's because she thought she was always looking for it and she was always attuned to it. So I thought that was a powerful example.

Dave:

Came up with eight different landscapes that do different things. Can you tell me what those eight are? We've mentioned one, which is city and built environments, which is a kind of landscape. That actually has a specific effect. But tell me about the other seven.

Emma:

Yeah. So the first one is grasslands and parks. Then we have forests, mountains, desert, ice and snow, rivers, and I'm missing one. Did I say mountains?

Dave:

You didn't say wetlands. No. You had parks and gardens, mountains and Highlands. Okay.

Emma:

Yeah, [crosstalk 00:13:49]

Dave:

So how did you end up... Oh, ocean, of course there it is. Oceans and coasts stuff, more like where I live. I get forests and trees and oceans and coasts and not much else. Why did you end up with those eight buckets?

Emma:

I think that, just given the research that's out there, they made the most sense. I should also say that there's been a lot of studies in places like parks, especially considering a lot of this research is done on college campuses, so they've been green spaces on college campuses and things like that. There is a lot less research on the tops of mountains or in desert environments.

So just sort of seeing where the research exists and also seeing if there are any sort of cornerstone experiences that people might have in different environments, like a mountain, for example, and sort of teasing out like, okay, well there's this really expansive research on awe and that's something that people do tend to experience on mountaintops so that probably belongs in that chapter. So making those sorts of those sorts of decisions. I also just thought they were places that a lot of people could identify with.

Dave:

One of the reasons that, until recently, California was a state where people wanted to live, and you can figure out why until recently, depending on whether you're paying attention to either economics or social policy. That's a different podcast. But people like to live there because you could get all of these environments within basically a two-hour drive. And that was one of the really special things about whether it's northern or southern. There's just so much available. But a lot of the world, and I'll probably localize this to the US just a little bit, because we have most of those environments.

I remember talking to a friend from Kansas and she was taking her three-year-old and they went for a drive and it was the first time he'd seen a tree and he goes, "Look, Mom, giant broccoli." Because he'd never seen a tree. So there are people who live in places where there are no mountains, there are no coasts, half these environments just aren't accessible. What does that mean for them? There are people who live in places where there are no mountains. There are no coasts, half these environments just aren't accessible. What does that mean for them?

Emma:

And that was something that was another sort of jumping off point for the book. I wanted to explore or I wanted to make this book accessible and actionable to anyone, no matter where they lived. I think that, to answer your question, in my mind, it's like a public health crisis that so many people, especially city dwellers, really don't have access to green space and there's research to show that it actually has an effect on things like mortality. If you don't have a park within walking distance of your house, it might really affect your longevity. So I think that it's a huge area of concern and it's something that I try and be very cognizant of and I try and share practices that really anybody can use no matter where they live.

Dave:

Okay. So let's say you're in Kansas and you read your book and you're going, "Wow, I'm deficient in coastlines." Is this like mandatory vacation sort of things?

Emma:

No. And I mean, in every chapter, too, there's also a section on how to bring that landscape to you. So with coastlines, for example, there's actually some cool research to find that even listening to the sounds of waves on YouTube, or what have you, kind of elicits a similar relaxation response, if you have a positive association with the sound of waves. I know that's sort of a trigger for some people. So that's one example of it is possible to bring some of the benefits of these places to wherever you are. Obviously, it's not quite the same as getting out there, but I still think it can be helpful.

Dave:

I have a super high resolution, I think it's like a 60-inch monitor I'm looking at you on right now. And when I'm not looking at anyone in particular on it, the background is a picture of Big Sur. And interestingly, I have it set up so that it changes with the time of day. So if it's at night, I see stars over Big Sur. If it's sunset, you see sunset. At sunrise, you see sunrise. Because I think that actually really does tie in with your circadian rhythm. Is there some value to having pictures of nature or having a TV set up like that, that lets you see the stuff that isn't in your environment?

Emma:

Absolutely, yeah. I think it's telling that a lot of the preset desktop backgrounds are of Yosemite or wild, natural places. Yeah, there definitely is. It's funny. I actually interviewed awe researcher who is doing a lot of interesting stuff on studies on the top of mountains, for example. And when I asked her how she experiences awe, she, like a lot of us, spends a lot of time at here computer and she said, "Oh, I have an awe folder on my desktop," which is photos of things that elicit awe in her that she'll open when she needs some inspiration. So I definitely think there's something to that.

Dave:

There's something to that. I think so. And even if you just have an Apple TV or something, they have all these amazing nature shots that just randomly show up as a screensaver. My kids for years have been playing a game, if they're looking at that because the things gone to sleep and whenever the same picture comes up twice, they get excited and see who's the first one to call it.

So there's something it's talking to, I think, in our very low-level operating system, things that we're not really conscious of, where our bodies like that, even if we're not necessarily conscious. You might think, "Well, that's kind of dumb," cognitively, but your body's like, "No, I like seeing a picture of the sun, even if I'm not seeing the sun."

And there's actually studies showing changes in people, just from looking at their brain waves, from looking at a picture of the sun, even though the sun isn't in the room. So I think there's deep level communication happening. And I want to get into what the eight environments are and what they do for you and we're going to touch on probably a couple of those in detail and we've already talked about what the eight of them are. But do you think that people have their environment? Like, are you a tree person? Are you a coastal person? Is that something that's set by where you're born? Where does that come from? Or is that not a real thing?

Emma:

Yeah. I mean, it's interesting. I started this book, I'll admit, sort of thinking that, in doing this research, I'd find the ideal landscape or the place that seems to be most restorative and beneficial to the largest group of people. But I really did find that your past experience, your memory, it really does play a role in the types of places that you are you most drawn to.

A lot of the research that I refer to in the book is done in English-speaking countries, because I speak English, and more in Western civilizations, but there has been some really interesting work to show that, for example, indigenous populations actually have different landscape preferences than the Western college students that they were compared to. So I don't think that it's an ideal nature across the board. I think we all sort of have our own space or spaces. I think that those are flexible, though. I think it can over the course of your life as you get out there and explore more.

Dave:

I have a theory and it's certainly not one that's in your book, but it's worth just discussing. So there's a couple of billion eggs that your mom could have chosen to mature. And the ovaries are the only part of the body that has 100,000 mitochondria per cell. Your brain has 15,000, your heart has 15,000, the rest of you has a lot less. And we think mitochondria are power plants, but they're actually environmental sensors and manufacturing plants that also make power, if they want to.

And they're the ones driving the selection process to pick an egg that's going to survive best in the environment that the mother was in for three months or the three months before that egg came to the surface. So I think that there's a wonderful symmetry and just evolutionary design for survival that way. And then the egg selects the semen. And it's not that it's the first to get there. We have lots of videos of dozens trying to get in, but then one gets in, that's clearly selected by the membrane on the egg.

So there's all kinds of cool intelligence going on around conception. And if you live within probably 10 degrees, plus or minus, on a latitude away from the equator, you're going to be wired for that. So if you are conceived and born near the equator and you go to the far North, you're probably not going to like the dark because your body was actually selected for more of a bright environment. And I've often asked myself does that correlate to the environment that just feels best at a low level in your body?

I was conceived and born in a desert and every time I go to the desert, I'm like, ah, man, this feels so much better than all these damn trees. They're everywhere. I can't get away from them. But other people go there and say, "It's a dead landscape." I'm like, "You don't know where to look." Do you think there's anything to maybe it's not just what affects all people, but it has to with where you're from, maybe where your ancestors are from.

Emma:

I think that it's funny, I actually had this conversation the other day with someone who, she was describing a certain landscape and she said it did feel like sort of a homecoming. And she had a conversation with her father who had had a really transformative experience in a similar landscape and he had never told her that. So I think that idea that it sort of somehow maybe passed down is really intriguing. I also just think it's pretty obvious that a place that you grew up in would have a certain resonance with you, but just sort of thinking about what more there could be to it, I think is interesting and could be a cool place for some research, for sure.

Dave:

I'm watching the comments from our live audience, from my mentorship group. And they're all saying, "I'm a coastal person," or "I'm a desert person" or "I'm a tree person," and most people I know who spend any time in nature, kind of know that one kind of nature is better for them than another. Did you find that in your research, that different people are just like, "That's the one," or is it that we really need all eight of them in some kind of ratio?

Emma:

Yeah. I mean, I think that people can definitely identify as liking one over the other and I don't think there's anything wrong with that at all. One of my intentions with the book was sort of to challenge folks to consider why that is and maybe what is sort of in that landscape that they feel kind of repelled by, or don't necessarily want to go in, that they might actually need, to sort of borrow a spiritual idea. So I think that that was a fun sort of thought exercise for me, too, just to consider why do we feel drawn to these places and what is there to see in the places that we don't necessarily think of ourselves as being thriving in, for example.

Dave:

Your last book was about some of the more esoteric stuff, including astrology and whatnot. Do you think that there's a new truth to "I'm a water sign, my astrological sign, Mars and Aries, were having a dinner party when I was born so something special happens"? Any correlations there that you've heard about?

Emma:

Between astrology and the nature stuff?

Dave:

Yeah. I mean, you've written books on both. You're the one person on earth to ask this question of. You might go in on a limb here, but-

Emma:

Oh, well, I mean, in astrology, every sign is associated with a certain element so you could say that maybe something to do with what you feel what you feel, what you hold on to.

Dave:

Have you seen any evidence? Have you like seen anything, do you think, come together for you as you're writing the book?

Emma:

No, but I also wasn't necessarily looking for it. I mean, I think this book I really wanted to focus in on a very specific type of research, and astrology did not fit the bill for it, but I think that whatever people feel drawn to, it's more power to them.

Dave:

Okay. And I would support that. If a certain kind of environment makes you happy, then you should probably spend some time there, at least on occasion, and have a picture of it or something. I think that's an important part of changing the environment around you so that it makes your body work better, even if it's really not that easy to explain.

I'm just thinking about it. Yeah, give me a desert or high mountains that are mostly desert and I'm just way happier than if I'm hanging out in the wetlands somewhere. So, speaking of wetlands, it looks like about 40% of Earthlings live within 50 or so miles of the coastline. So what is the deal with humans and coastlines? Why do you think that is?

Emma:

There has been some really cool studies, again, mostly out of the UK is where a lot of this research is based, specifically the University of Exeter is a big hub for it. But they've essentially found that people who live within five kilometers of the coast tend to have less self-reported depression, anxiety, things of that nature. And there are a few theories as to why. I mean, again, it's this idea that the beach tends to be a place where we go to exercise or walk or kind of get moving in that way.

There was one cool study that sort of compared how people move in green space versus blue space on the coast. And they found that, while people tend to exert more energy in green space, people stay in blue space for longer and tend to report it as more enjoyable. So, in that sense, they actually, by the end of the experience, have burned more calories or whatever. So that was sort of interesting. And I think that the beach definitely tends to be an active place for a lot of folks.

I think there's something in the pattern of the waves. There's a really incredible author who, in his book, called Blue Mind. Wallace J. Nichols is his name. But he sort of equates the pattern of the wave and the sound of the wave to the womb and says that there's maybe something a little bit more primordial there, which is an interesting theory. I think just sort of the visual wave pattern is something that a lot of researchers think might have something to do with it. Things like the sounds, I think are very calming for a lot of folks. But again, it does have a lot to do with your memory in that landscape.

So I can hear the sound of ocean waves and say Barbados or something. And it might resonate with me the same way that the waves growing up in Connecticut did just because it's like, I don't see them. I just hear the sound and it sounds similar. But at the same time, if someone doesn't really have any beach experience to go off of, that sound isn't necessarily going to bring them anywhere. It's not going to be transportive for them, and therefore it actually might not be as restorative for them, is what the research is finding.

Dave:

Do you believe in the aquatic ape theory of evolution?

Emma:

Can you tell me more about it?

Dave:

What the heck are you talking about? There's a group of people who hypothesize that humans were water-dwelling apes, if you go way back in time. And yes, we'll probably never know any of this stuff with absolute certainty, but the reason they're saying that we are poorly adapted to land and that, if you cut our skin, it splits open in the way it would in the ocean, in all the ocean mammals, and we have a lot of subcutaneous fat. All the other animals, when they get cut, they're a lot more lean and they handle injuries very differently. And we're also almost entirely hairless or just tiny bits of hair. Like, there was such a thing as whale hair, too, but it's just very little bits.

So we're the least hairy of them and we have this kind of soft skin with a layer of fat underneath it that would be way more suited to being semi-aquatic than it would be to, say, living in a desert where you have to wrap up and cover things up and all. So I often wonder if that's why people live near the ocean, because... And there's other things you talked about. I agree with the womb theory. But I'm just wondering, maybe there's an ancient calling to that because that's our home, and that's like a subcellular calling, not an "I thought about the ocean, so I wanted to be there."

Emma:

Right. What's their explanation for not being able to breathe underwater?

Dave:

Well, it turns out that whales and dolphins can't breathe underwater either. I mean they can drown, they just take a deep breath and go under for a while. Right? I've been working on growing a set of gills, but it hasn't worked out so far. But that's right in line after these are eyeballs. Give me time.

Emma:

One day you'll get there.

Dave:

Yeah. Aquaman is kind of cool. Although, I think Wolverine has one up on him. But it's an interesting thing because that might explain why so many of us are just like, we got to be near water, plus we like to drink it, so there's that. And that leads us to the next part of the next part of this, or at least one of the other areas, is around just rivers and streams. What do rivers and streams do for us specifically when we're around those?

Emma:

Yeah. So rivers and streams are interesting. I sort of think of them as an amalgamation of a few different landscapes. You have the grass, the green space, you have the water, it might be running water, so you have that sort of element of it. They usually tend to be surrounded by pretty fertile, or they can be surrounded by fertile soil and be surrounded by forests. So I think they're interesting in that way, in that they're sort of the "Model landscape."

It's interesting, the theory that I mentioned earlier, the attention restoration theory. The couple of environmental psychologists who thought of that, the way that they describe sort of an ideal landscape for having that sort of cognitive restoration, it really describes rivers, to a T. There's an element of mystery, so you can see off into the distance and not quite know where a river's leading, but you have some sort of sense of, oh, that's going to continue on. Vastness, openness. And also just a sense of being away, was a really important thing for them.

So rivers, it's like, when you're there, you're there. It's something that's not in your everyday sort of purview, unless you live on the river. So I think they're interesting in that way. This is also the chapter that I get the most sort of spiritual in that, when I was doing a lot of this research, when I'd ask people about experience they had at rivers, they would really talk a lot about returning to rivers of their past and having that moment be sort of a reflective time with the river.

I think that there are a lot of things to talk about there in terms of how this landscape, I think, encourages self-reflection in a way that a lot of others don't. There isn't as much research to show that. It's more anecdotal, but I think it's unique in that way, for sure.

Dave:

You have Henry David Thoreau and people building houses over rivers. There's definitely a really strong desire to do that. And there's also waterfalls too, which are tied to those peak experience. A lot of people just have that sense of awe. I think it may be from that really deep rumbling sound of a big waterfall. I think that has, in fact, I know it has environmental and just biological impacts on us. What did you find about waterfalls in particular?

Emma:

I didn't look into waterfalls particularly, but I would agree with you that I think the sounds of it can maybe maximize on those water sounds and just give us those sort of benefits on a larger scale. But again, I also think waterfalls, if you're someone who isn't familiar with them, can be very scary. So I think that might be another one that it sort of depends on the perspective that you bring to it.

Dave:

Yeah. It could be overwhelming, especially for kids or something, but usually it's awe. But it could also, just that deep sound is probably tied to some kind of predator thing.

Emma:

Right. I also I think about things like white noise and pink noise, and I think waterfalls are often described as being a really good example of pink noise, which can be a very, very familiar thing to fall asleep to, for example.

Dave:

It's pretty weird because some people have different new water experiences that can be positive or negative. But if you listen to any one of, like going back over the last 30 years, there's been endless relaxation soundtracks that come out and there's always babbling brook, there's always waterfall, there's always thunder and lightning, which you actually would see more of in a desert, usually, when you get really good lightning and thunderstorms. And then you see ocean wave.

And then if you have something that has all of those, you just kind of naturally, "Oh, that's the one that makes me relax." But it feels like it is kind of a personal decision, but some of them are definitely more effective than others. And if you're tracking brainwaves, you'll see this person responds to this kind of environmental sound. And probably even more interesting, there's a company, I have no relationship with them, I was just intrigued. It's called Sonic Bloom.

And what they found was that, if they play the sounds of nature, like birds chirping, and insects whirring, and all that sort of stuff, in an orchard or around crops, that the yield of the crop goes up dramatically. And there are other studies, these are in the ocean, where they play the sound of a healthy reef, the underwater sound, on a sunken boat or something where they're trying to build a reef and then all the fish get attracted because it sounds right. So there's definitely auditory cues from nature. But when you're in New York, I don't think you can get that in Central Park. I mean, there's the hum of the city that's everywhere. You can't really get away from it. Do you think that's harming nature?

Emma:

The sounds of the city are definitely harming nature, yeah. There's reason to believe that it's shifting things like bird calls because they have to be heard over taxis and what have you. So I think noise pollution is a huge issue. But I mean, I would agree with you. I think sound is a really, really important part of it. And I think that another theory that's very popular is the stress reduction theory and it sort of posits that, since humans did evolve in nature and, to this day, when we're in an environment that might feel like it has the resources we need to survive, doesn't have any notable threats, our stress system automatically calms down. And I think noise, hearing things like calming birds' chirps and things of that nature can definitely get us there for sure. But I mean, birds do exist in New York too, so that's good at least.

Dave:

The good news is that back when everyone carried a Nokia cellphone and they all had the same ring tone, before we got custom ring tones, there were a couple species of birds that started using the ring tone as their call. This actually happened. So now if you're in New York and you hear a cell phone ring, you could just pretend it's a bird call and there you've got your nature.

Emma:

Yeah, I don't know if that would have quite the same effect, but it is very sad.

Dave:

You're breaking My heart. Okay. One of the things that's interesting in your book is saying, look, you could be in nature, but you could also be listening to Tom McDonald on your headphones. You could be looking at Instagram while you're sitting in a forest or you actually could do mindful meditation, and you talk about specific mindful meditation exercises. Can you walk listeners through one or more of those different short exercises that you could do in nature? Or just tell me how it works?

Emma:

Yeah. I mean, another really fascinating field of research that's going on out of Sweden right now is it's called, the shorthand for it is REST, so it's the REST program, but it's essentially this researcher who is curious if meditating outside might, for some reason, be easier than meditating indoors or be easier to drop in. And, through his research, he found that that seems to be the case. Comparing people who were in a traditional indoor meditation training program. So people who did the same program outdoors, and I believe it was a garden setting, were more likely to complete the program. They completed it faster on average and they still got the same benefits out of it, even though they did complete it faster.

So I think that's a really interesting idea and it harkens back to this notion that nature is a place that it's very easy to have soft fascination or our brains sort of naturally rest when we're in these environments, which might make it easier to drop into a meditative state. So I think that just getting outside is step one and trying out a meditation in a natural environment.

Try and find one with minimum distraction, just so you can sort of ease in a bit easier. And then I would say one practice that I like to do is sit spot meditation. I'm not sure if you're familiar, but you essentially just choose a spot on the ground. You can do this in a beach environment, you can do it in a park, whatever. Just observe what there is to observe there and gradually sort of work your way out until you're taking in the whole scene in your vision. I think that can be a nice way to just hone in some of those details of nature that you might otherwise miss, while still giving your brain a chance to rest and recover.

Dave:

I think I know why that research is out of Sweden.

Emma:

Yeah. Freddy Lamaze?

Dave:

It comes out of Sweden because, in Sweden, it's so damn cold and dark half the year that they don't really have normal insect life, other than mosquitoes. So I'm assuming he wasn't meditating during mosquito season in Sweden, but the rest of the time, there's no snakes, spiders, scorpions, centipedes, or the other things. And it's funny, for a desert person like me, I know how to move. You mentioned how to move in an environment. I had to move in the desert, so cactus doesn't get me. But it did when I was a kid and I know how to not step on a rattlesnake and it's built into my system.

My kids grew up in a rainforest so they know how to step over a mossy log that I'll probably fall on, because it's built in. But I took my son to Las Vegas to go shooting and to go destroy an old car with a tractor, which was great fun. But he goes to sit down on an old tire and the instructor was like, "Stop!" Because he doesn't know to look for the snake in the tire before. Because we don't know how to move.

I think that might be part of why we feel comfortable in some environments, because you know how to be there. But if you grow up in Brooklyn, let's say, you know how to be in a city environment and you can be calm and you can cross the street instinctively. Whereas, my kids are probably not safe to stand near a busy street because well we don't have that here.

I remember the awe. I was like, "Dad, there's five lanes in each direction. I've never seen a highway like this." "Yeah, there isn't one on our island, Son." So you get these things that are just intuitively obvious to you, based on where you live and where you've grown up, that aren't intuitively obvious. Just like people in Africa who are out on the Savannah, like a traditional tribe, I would be a total idiot in that environment. I'd die in probably five minutes. Because they just know.

So there's that knowing that comes from being in nature that is probably somehow calming, but being in a foreign nature environment is more awe inspiring, and it's the novelty of it, the comfort in it. Do you think it's more important to be in novel nature environments or more important to be in familiar nature environments?

Emma:

It's a great question. I mean, I think both hold a lot of value. When I think about going into an environment like the desert or one that can be considered more like a harsh landscape or there are more ways to get tripped up. I think that if you're new to that environment, you might feel sort of hyper vigilant there. You're always looking out for what have you, which might diminish some of the stress response.

So I think it's all about just going in prepared and being aware that, if you are by yourself in a new landscape, it might not have quite the same effect, but that's not to say it's not worth it to explore new places. I think that there's a lot that we can gain from seeing new scenery and also conquering new challenges. The outdoors is obviously such a place where we can really gain confidence in trying new things. I think we see that a lot with things like surf therapy or things of that nature.

Dave:

Talk to me about mountains and highlands. What are the benefits that those provide?

Emma:

As I mentioned before, there is some reason to believe that exercising outdoors can maybe even be more beneficial than doing the same exercise indoors. So there's definitely that part of it. I think we tend to spend a bit longer in mountains when we're hiking than we might on a neighborhood park walk. I think about research that's shown that a walk of around 90 minutes is really a powerful way to decrease things like rumination. So again, that's sort of like negative thought pattern or just a looping

thoughts that a lot of us can really fall into, especially after a long day on the computer. So one of the practices that I share in the book is just thinking about a problem or a challenge you're facing right now, at the bottom of a hike.

Once you get to the top, write about it, think about it again and see if you've come to any sort of new insights just from that mental escape. So that's another part of it. And then awe, which is a really interesting emotion and it's the source of a lot of research right now, but awe is essentially what we feel when we're placed in an environment that is vast or we perceive it as being vast.

And it's interesting in that it's one of the few emotions that really causes us to reconsider our place in the world and it's almost no surprise that it causes us to re-situate ourselves in our environment. So, in doing that, it's been shown that it can increase things like creativity. It can increase curiosity, pro-social behavior, and it also makes us feel like we have more time, which I think is really cool. It just sort of opens up our world in more ways than one.

Dave:

I'm a little bit curious. If I'm feeling a certain way and I want to shift my state, I mean, how prescriptive can we be? Like, let's say you're a therapist and patient comes in. "You're highly depressed. You should go outside." Okay. That's one thing. But "You need 47 hours in a highland's environment to bring you back." Are we close to being able to sort of say, for you, you need this kind of nature for this amount of time to create this kind of a state? Do you think we'll ever get there?

Emma:

I think it depends on who you ask. I mean, there have been researchers who are looking into things like how long you need to spend outdoors per week to reap some of these benefits. One of the most widely accepted figures is two hours. I personally just have such an instinct it's so personal that it's difficult to be that prescriptive with it. However, I do think there are practices that can be universally beneficial for people, things as simple as looking out.

There was one study that I referenced in the book that was about looking out onto green space. So they're looking out onto a rooftop garden versus a just concrete normal roof. And in as little as 40 seconds of looking out onto that was enough to free up some cognitive resources and make them better at working memory. So I think that's kind of a cool figure we can use. If you're stressed out about something or you're stuck on something 40 seconds of just looking out the window onto green or blue or whatever you have access to with your view, even the clouds, I think can be cognitively helpful.

Dave:

That makes a lot of sense. What about looking at cityscapes? What does that do to us?

Emma:

It depends on the city scape. The one study that I could think of for this was it compared people who have a view of literally, just like your experience in Shanghai, no green to speak of, from a high rise, versus one that had a view of a small pocket park, and they did find that the pocket-park view tended to be more restorative, which makes sense.

I think that, I mean, cities themselves can be drivers of all. I think there's so much to see here that is very awe inspiring, so I don't want to discount city landscapes at all. I think about crossing over the Brooklyn Bridge into Manhattan and that view is just spectacular. I'm sure I get some of the sort of cognitive benefits from that, that I would on a mountain top. But it's been less studied, I would say.

Dave:

It's, in my mind, about having a broad variety of experience and I've traveled to Himalaya's, Andes and much of the world. And every time you go into a new environment, it's fascinating because it does different things to you and there's different energies in the Earth that some people can feel.

And there's another guest who's been on the show where we talked about the probiotic. I think it was Zach Bush, actually. We talked about the probiotic benefits of being in different environments, just breathing the air introduces new microbes that take root in your lungs and in your gut. So you tend to have more bacterial diversity from spending time in those areas, which is really cool.

Emma:

Yeah.

Dave:

What about house plants? I see you've got a couple. Are they real?

Emma:

They are really, yes.

Dave:

Okay. Just checking. Is that important?

Emma:

I think it depends on who you are. For me, I like them. I like the little reminders of green. Horticultural therapy is a thing. I don't dive into it super deeply in the book, but just having some sort of aspect of nature indoors, I think it can be helpful for a lot of people.

Dave:

There you go. All right. The final environment I want to chat with you about in our interview today is ice and snow. What's good about that if you're not a skier?

Emma:

Yeah. People who live in cooler climates probably can resonate that, in winter, it can be a bit harder to get outside, you're not as motivated. It's more comfortable indoors, yada yada yada. But again, research is showing that, I'm thinking specifically about research out of the University of Michigan, where it obviously gets very cold and snowy, the participants who took a walk in a snowy environment in January or a winter month did have the same sense of cognitive restoration when they returned, than in the summer.

That's not to say that they rated it as positively. They didn't necessarily enjoy it, but they got some of the same benefits from it. So I think that's sort of important to remember is, getting outside in winter, while it might not be quite as pleasant, it can still be super beneficial. I would say the only caveat is just you really need to be prepared, layer up. Researchers I talked to said, if the environment is so vastly different than what you're expecting, it's not going to be restorative. You need to sort of have an idea of what you're getting into. But I think that winter walks can be wonderful.

Dave:

There's definitely the cold therapy and breathing some cold air that's not too cold, and that it can wake you up, for sure. And there's also the noise, right? When you're in a snowy environment, even the forest sounds are quieter. So you're in a really peaceful, almost like in a cave environment where you just don't hear much and that can be relaxing. But again, that's snow in nature. If there's an airport overhead, it probably doesn't work as well.

Emma:

Yeah. But to that, I would also say I think about when it snows here in New York City, it's really one of the only times where the city gets quiet, when there aren't as many cars on the street, there aren't as many people out, so in that sense, I think it still can be very restorative. I talked to a few acoustics researchers for the book and they were talking about how silence is really a luxury these days, especially if you do live in a city environment. So taking those opportunities to get out into it, after a snow, for example, can be great.

Dave:

It's totally true. There are even studies showing that kids who grew up on the lower five floors of a building in a city have lower IQs, slightly. Part of that is from air pollution and part of that is from noise pollution. A lot of people like to play white noise, but it turns out white noise, for very young infants, probably in the first six months of life, is actually not good for their brainwaves. It's disruptive. They want peace and quiet, or maybe ocean waves or something, but not just straight white noise, but as you get older, white noise or pink noise can be good for you because it masks out city sounds so you get more of a relaxing thing.

So I think if I lived in a big city, I would spend extra money on double drywall with the sound insulator, and triple-pane windows and heavy curtains so that then you can actually have sort of a sound cocoon that's separate from all the hum and all the other sounds of a city. Because you don't need that in the middle of the night. I don't think your nervous system benefits from that.

Emma:

Yeah, noise pollutions. It's no joke.

Dave:

Anything else that you'd like listeners to know about the Return To Nature, about your new book?

Emma:

I mean, we didn't get into the other side of the book, which is just the sort of activism component, but I would encourage people, after they do take these walks and meanderings outside, to consider how to pay it forward to the landscape that they just visited. My book walks through a lot of different mindset shifts, so that might be helpful for encouraging more sustainable action. So I would encourage readers and listeners to pay it forward to our poor Earth.

Dave:

Are you hopeful? I mean, in the future, you think we're going to have enough nature?

Emma:

It depends on the day, but for the most part when I'm asked that question, I say, "Yes." I mean, I think that the human species is so brilliant and we'll be able to work our way out of this mess. I just hope that it's soon enough.

Dave:

I think we've got a pretty good shot at doing that and it is going to require some big-scale engineering and ingenuity, because we used technology to make a mess so we're going to have to use technology to clean it up because it's not going to clean itself up. So just being aware that these spaces are valuable in and of themselves, it's really important.

Going back to John Muir, who really got the National Park system established by getting government leaders from Washington to come out to Yosemite. And once they saw it, they're like, "Oh my God." Their sense of awe was so big that they protected it. Because otherwise right now it would probably be all high rises and dams. So it's pretty cool that we're continuing that tradition of just showing people it's valuable and necessary so that we can protect the spaces that we have.

Emma:

Yeah, absolutely.

Dave:

Well, thanks for writing your book, Return To Nature. It just hit the shelves as this podcast comes out. So if you're listening to the show and you wanted to know, or just be a little bit more aware of which environments are going to do what to me, what can I do in an environment to get more of the cognitive and relaxation and recovery benefits from it? Those tools are all in the book.

You'll find it's crazily well referenced, so it's not like we're just saying, "Oh, nature's good for you because I like going for hikes." This is a little bit more deep than that, where there's actual science that shows this is real. And one of the things about talking about anything that maybe people don't know about yet is you can tell it to them, but they oftentimes just won't believe it. But when you say, "Well, here's what it is. Here's the ancestral set of beliefs about this. And here's the data that supports that the ancestral view had merit."

And then all of a sudden you go, "Oh, this fits into my worldview much better than just hearing it said from someone who may or may not be an expert." So if you want to follow the science in a way that's actually valid, Return To Nature has a lot of science in it for you, as well. So thanks for writing it and thanks for making sure that we all have some open spaces to play in over time. I appreciate you, Emma.

Emma:

Yeah. Thank you. It's a pleasure.

Dave:

And if you guys are interested in learning more, go to Emmaloewe.com. E-M-M-A-L-O-E-W-E.com, and you can find out all about her work. I'll see you all for the next episode.