Transcript | Episode 5 | March 17, 2026

The Appalachian Mosaic: Linking Landscapes for a Resilient Future

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BARBARA CHARRY: The Massachusetts Turnpike, Interstate I-90, is one of the busiest roads in New England. Carrying tens of thousands of vehicles every day, it's not really a haven for wildlife, and yet, in Beckett, Massachusetts, this federal highway crosses the Appalachian Mountains, which are exactly that. The Appalachians make up a 2,000-mile-long region that acts as a highway for wildlife, where animals travel to find food and water and mates and new homes and habitats—just as people travel on our human-built roads for the same reasons.

HEATHER FURMAN: Our birds and butterflies move across the landscape and migrate from, you know, the northern climates of Canada all the way down to Mexico or the Caribbean. They're moving up and down the Appalachians. The habitat that exists right now within our eastern forests is what is supporting that migration and that movement.

BARBARA CHARRY: But the landscape is changing. As temperatures rise, tree ranges are shifting—10 miles north and 11 miles west every decade—disrupting ecosystems and degrading habitats. And so, what happens when a living, wildlife highway meets one that we built and natural and constructed systems collide? And how do we keep our people safe on our human roads and protect wildlife movement and keep the landscape connected? And why should it be connected in the first place?

HEATHER FURMAN: The Appalachians is already performing this vital function for species and our job is to ensure that we can sustain that. That it stays connected, that it continues to perform on behalf of a healthy, vibrant landscape and a healthy ecosystem.

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BARBARA CHARRY: You're listening to *Nature is The Solution*, a podcast from The Nature Conservancy. It's a show about how nature could solve some of our biggest challenges for nature and people. Because doom isn't the whole story.

I'm Barbara Charry, director of rivers and lands for The Nature Conservancy in Massachusetts, and that was Heather Furman, director of The Nature Conservancy's

Appalachians program. She's speaking about something important, connectivity. Too much wildlife habitat is isolated or fragmented.

HEATHER FURMAN: So, all of our infrastructure—our roads, our development—it contributes in some way to fragmenting that landscape.

BARBARA CHARRY: Habitats are cut off by neighborhoods, office parks and roads. Those breaks make it harder for animals to find food, mates and safe places to travel. And when they do travel across roads, both people and animals are at risk.

HEATHER FURMAN: So, when land is fragmented you end up with, maybe, isolated populations of species that can't interbreed with other populations of that species, and over time that leads to a lack of genetic diversity. It diminishes the health of that species over time, and in some places where habitat has been fragmented to smaller and smaller pockets of land, that species will blink out in that place and you no longer have that species in that place. And so, what is needed for species to be able to persist through the effects of climate change, as well as all of the other impacts, is a lot of adaptability in their landscape.

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BARBARA CHARRY: What's remarkable about the Appalachian Mountains landscape is how much protected land remains linked, allowing animals to move freely across the landscape. There are long, linked corridors where forest and meadow, rivers and wetlands remain continuous enough for animals and species to survive across seasons and generations. Still, even in the Appalachians, obstacles persist that interrupt those routes and limit movement.

JAY FEINSTEIN: Oh, there's the Pike. We were right on top of it.

BARBARA CHARRY: Our team spends a lot of time at obstacles like the Mass Pike.

JAY FEINSTEIN: It's only gonna get noisier from here.

BARBARA CHARRY: Because these are opportunities to restore connectivity and all the benefits that come with it for people and wildlife.

DAVE PAULSON: So, we're gonna follow Route 20 along the road shoulder then cut in on the official Appalachian trail, as you can see, there's a lot of traffic in the area.

BARBARA CHARRY: Our podcast producer, Jay Feinstein, went to this particular obstacle to meet up with Dave Paulson from the Massachusetts Department of Transportation, MassDOT for short, to talk about a partnership between The Nature Conservancy and the state to improve an existing crossing there built for people.

DAVE PAULSON: So, on one side of the Mass Pike here is National Park Service land and on the other side is state forest. So, being able to connect and preserve these open spaces for people and for nature is really important.

BARBARA CHARRY: Angela Sirois-Pitel, watershed conservation manager for The Nature Conservancy in Massachusetts, was also on site that day.

ANGELA SIROIS-PITEL: So, I would say where we're standing right now is very much at the intersection of wildlife and people because I can see the cars zooming past through the tree line on the Mass Pike—I can hear them, I can see them—but then I also hear the bubbling, beautiful little stream that's to our left, coming down this little slope and meandering next to the road. And so, we're in this place where we see leaves falling, it's beautiful fall foliage, we feel like we're in nature, but then when we listen and we look in the distance, we know we're not that far from people.

[music]

BARBARA CHARRY: The Appalachian Trail is a continuous hiking path that covers 14 states, from Springer Mountain in Georgia to Mount Katahdin in Maine. It's one of the oldest and longest trails of its kind and thousands of hikers cross this section every year. And where the Appalachians meet the Mass Pike, the current crossing takes the shape of footbridges designed to carry hikers across.

JAY FEINSTEIN: I feel like a lot of people might be surprised to know how close it is to the road and that's part of the reason why MassDOT is involved here.

DAVE PAULSON: Absolutely. MassDOT is very much involved in multi mobility—from a bike path to safe streets to highways improvements—and here we have a national scenic trail right along and across the Mass Pike, which sees 30,000 trips per day, so it's a busy road and we want to make sure people and wildlife are safe crossing it.

JAY FEINSTEIN: It's a busy road and a busy trail.

DAVE PAULSON: Absolutely. Absolutely.

BARBARA CHARRY: The crossing in its current form is narrow. It spans one side of the highway, then turns around where it reaches the median, and then crosses the other lanes of the highway. Designed with hikers in mind, it serves them well, but the same can't be said for the animals that also use that route. And wildlife vehicle collisions are common on this section of the Mass Pike, posing a hazard for people and wildlife.

DAVE PAULSON: Right where we're standing, we have evidence of coyote, bobcat, [and] porcupine all using the existing crossings [which] were never designed for wildlife.

BARBARA CHARRY: In 2021, Congress passed the bipartisan Infrastructure Investment and Jobs Act, authorizing $350 billion in Federal aid towards infrastructure projects. It included the Federal Highways Wildlife Crossings Pilot Program, which is a grant program aimed at improving safety for the traveling public and wildlife. MassDOT applied and was awarded a grant, so now we have the opportunity to think about how to redesign this space with hikers and wildlife in mind.

ANGELA SIROIS-PITEL: And this is one of those places that we knew that because of the Appalachian Trail, there was an opportunity here. So, I feel like it was this concept we threw around a lot of us for many years and it wasn't until the Wildlife Pilot Crossing Program came around that we actually had some ability to see if there was something there for a real project.

BARBARA CHARRY: This design process is informed by wildlife tracking research. There are cameras on site to monitor how animals currently use the crossing. Jay talked to a MassDOT team member who works on the project.

LINDSEY FORG: My name is Lindsey Forg, I am the co-op for the Wildlife and Endangered Species Unit at MassDOT, and I am a master student in environmental science and policy at Northeastern University.

JAY FEINSTEIN: Are there any fun things that you've seen on this camera?

LINDSEY FORG: Yeah, I think it's cool to see bobcats and some raccoons—other nocturnal animals—'cause I'm not really getting to see those during the day. But bigger stuff, we're not seeing so much on this camera. But we have another camera in the woods and we've seen bears and a lot of deer and other stuff on that camera, which is really, really fun to see.

JAY FEINSTEIN: What triggers the camera?

LINDSEY FORG: Movement. So, we're getting photos of us taken right now.

JAY FEINSTEIN: Really? Okay, so if I'm sitting right here in front of the camera, there's a photo being taken of me?

LINDSEY FORG: Yes. Yes.

JAY FEINSTEIN: So I can pose, I can say cheese?

LINDSEY FORG:Absolutely.

JAY FEINSTEIN:Okay.

BARBARA CHARRY: In designing a new crossing, planners studied this area carefully looking for pain points for wildlife. One pain point is that the current crossing is made up of two separate bridges instead of one.

DAVE PAULSON: The current design is two offset bridges, which requires hikers to hike a short section of the median to connect from one bridge to the other. By eventually removing that equation from the design, it removes the need to even be on the highway itself. From there, from a wildlife standpoint, how do you increase the level of use by wildlife?

We're talking here about maintaining the genetic diversities of this local population, so you're not gonna have—you may not have—every animal that crosses, but you're increasing the number of animals that cross safely. And you can do that by providing a structure that is most representative of the natural landscape. It's hard to create nature, but at the same time, you can make design features like natural substrate [and] vegetation.

These elements can get incorporated into a stream crossing, or in this case, a future overpass to really allow for wildlife to feel comfortable and to safely use this crossing versus trying to maneuver somewhere else on the highway itself.

ANGELA SIROIS-PITEL: Yeah, I think the idea is that it feels less jarring, it feels more like maybe walking into a meadow from the edge, but not out onto a road and not out onto like a footbridge that an animal is gonna see it as kind of transitioning to just a different type of natural habitat and not going onto a human structure that they might be more hesitant from.

BARBARA CHARRY: The new grant will get this project to 75% design and permitting. Once this is completed, there's a permitted project on the shelf, ready whenever there is funding for implementation. Community engagement, alongside fundraising through grants and with conservation and recreation partners, will be a needed next step. Funding for this project does not come out of the normal transportation fund, it will require external funding. Dave and his team are optimistic that it won't be long before we see this project in action, where it can be a model for other states to create crossings of their own.

DAVE PAULSON: What's really fascinating too is that you think about the crossings out [in] western Canada, other states have built a lot of these overpasses. In the Northeast, it's uncommon, it really hasn't been done. So, we're really [on the] leading the edge here of science and practice, of having an overpass design in a northeastern landscape that incorporates people and wildlife into the design.

So, I'm hoping once we're successful on the design front, and eventually on the construction side when funding is available, to really be a national model, like,this can be done. And think about every other road crossing on the Appalachian Trail, if you can enhance the connectedness for people in wildlife, you're improving safety and connecting these really important habitats.

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JANE WINN: I am Jane Winn, I was formerly the executive director of Berkshire Environmental Action Team and I retired [a] month and a half ago.

JAY FEINSTEIN: Congratulations.

JANE WINN: Thank you!

[laughter]

BARBARA CHARRY: The Berkshire Environmental Action Team is another partner of the project and a member of the Berkshire Wildlife Linkage partnership, a group that The Nature Conservancy has been convening for 10 years to improve wildlife connectivity and public safety in the Berkshires region of Massachusetts. And former executive director Jane Winn was so excited when she first heard this was moving forward.

JANE WINN: We're asking for this and we're really stunned when MassDOT really was pushing for it with us. It was great. We have very good folks at MassDOT.

JAY FEINSTEIN: So, you've been thinking about this long before MassDOT even had it on their radar, probably.

JANE WINN: Yeah, I think I've been thinking about it all my life as I was driving the Mass Pike [laughs].

BARBARA CHARRY: She says that while connectivity is a science, it's also common sense. If human neighborhoods weren't connected, there wouldn't be any way for us to drop kids off at daycare or get to work, and the same logic applies to animals.

JANE WINN: So, animals need the same sort of connectivity for their daily, seasonal and dispersal needs, and our roads interrupt all of that. Especially for things, like, if you think of a salamander, even a small dirt road can be disruptive, but certainly for things like moose, trying to get across the Mass Pike is still quite a challenge.

BARBARA CHARRY: And in the face of climate change, a connected landscape is more important than ever.

JANE WINN: It has a tremendous impact, especially as animals are changing their ranges. So, typically we think of animals moving north as the climate's getting warmer and warmer, but sometimes it's moving uphill to find a cooler climate, sometimes they're moving east, west and who knows why, but things are definitely changing.

BARBARA CHARRY: But if animals are moving so much, why don't we see it happen? We're not necessarily watching stampedes of bobcats cross our neighborhood streets on a day-to-day basis.

MEREDYTH BABCOCK: I'm Meredyth Babcock, I was a puppeteer and performer for a number of years in this area and then started working with the Westfield River Wild and Scenic developing their outreach and projects.

BARBARA CHARRY: Meredyth is also part of the Berkshire Wildlife Linkage Partnership and she's a bit of an expert on this, she tells us that most wildlife crossings happen at night.

MEREDYTH BABCOCK: I would love to see, someday, humans just not travel after a certain time of night [laughs]. We just give the night to the animals.

JAY FEINSTEIN: That's interesting. So, are you saying that maybe nighttime is actually a more important time than daytime for animal crossings?

MEREDYTH BABCOCK: Dusk and dawn are really active times and, unfortunately, it's also when we're hurrying to work or hurrying home. And even as someone who spends my life doing this kind of work, I have to remind myself to slow down even slower than what is allowed in the human world and pay attention to what's happening on either side so that I can reduce my own impact.

And I really do question, can I wait another couple of hours or can I do that trip during the day tomorrow? And I'm trying really hard, not only to share that with others because I think it's something we just aren't good at thinking about. To say we can make these choices, and if we're thinking about when animals are the most active, or on the big night when the salamanders and frogs are most active, we can just not drive on that first warm, rainy day in spring. Just don't drive and you'll save hundreds and hundreds of lives.

[music]

BARBARA CHARRY: Meredyth and Jane have worked with the local communities to spread awareness of how to safely coexist with wildlife.

JANE WINN: And I think in some places, it's been a great tool for getting people who own relatively large parcels of land, who haven't really connected with the wildlife there, to really understand what's moving on their land and being able to see the story in the footprints or the scat that's left behind. It's been tremendous at getting people more connected to their land.

JAY FEINSTEIN: This sounds like a form of citizen science.

JANE WINN: Absolutely.

BARBARA CHARRY: Meredyth says coexistence is second nature for the children she works with.

MEREDYTH BABCOCK: I noticed, as an educator going into schools, that there's this whole group of children that have a different understanding because of them than the adults in the room. And I try and remind the kids that they've been exposed to this concept of shared space and of wildlife crossings much earlier. And so, they're gonna be the designers and the thinkers and the ones that are sitting on select boards. And I had the pleasure of developing a riparian-zone game with The Nature Conservancy and [I] try and bring it in to say, “hey, you know, everyone find a spot”, and they all find a spot on this painted river landscape. And then I let them put roads down, and they wanna put a ton of roads down. Well, actually that's pretty human. And then I tell them that they can't cross any of them, oh because, they're an animal now and they have to stay in that quadrant. And they say it's unfair and how are they gonna play and what if they have to go to lunch? And there's just all this amazing, you know, their clarity with why it's wrong is so easily gained if you can introduce it at a young age.

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BARBARA CHARRY: After our producer, Jay, went out in the field and talked to our partners, I met with him in the studio.

JAY FEINSTEIN: Barbara, welcome to the recording studio.

BARBARA CHARRY: Hi Jay, it's great to be here.

JAY FEINSTEIN: I just feel like I've learned so much on this episode and I really just love the imagery of the Appalachians as a highway for wildlife.

BARBARA CHARRY: Yes, it is. It's just an amazing corridor. We know our animals are moving up and down it, they have to get around on the landscape, and it's a large landscape that's so important for all the people and wildlife that use and live there.

JAY FEINSTEIN: Yeah, and this crossing by the Appalachian Trail, it sounds incredible, but I understand that this isn't the only wildlife crossing that The Nature Conservancy has its hands on in the Appalachians.

BARBARA CHARRY: Well, we're really thinking about how do we get wildlife to move successfully across the entire Appalachians? Whether it's in Massachusetts or in Georgia—the whole length. And so, it can't just be one place, we have to think about the landscape and wildlife moving across these large areas, and there has to be multiple places where wildlife can safely cross and get from one side to the other to do all the things they ne they need to do in life—find their mates and so on.

JAY FEINSTEIN: I mean, that makes sense, so with that, The Nature Conservancy, not too long ago, purchased a property in Blandford, Massachusetts. Tell me about that.

BARBARA CHARRY: Blandford is further east than Beckett, where the Appalachian Trail crosses the Mass Pike, and at that site it was an amazing opportunity to buy a piece of land about almost 580 acres, and that piece of land spans both the southern side of the Mass Pike and the northern side. Most of it's in the northern side of the Mass Pike, but it connects them and it's connected to almost 40,000 acres of protected lands. These are conserved lands that have, that have already been protected, and yet, here's a place that will reconnect those lands across the Mass Pike. And at this place there's, I think, two different culverts and what culverts are—for people who don't know—it's a pipe that goes under the road to take water from one side to the other. And particularly in this case, it would be a little stream—getting stream water from one side to the other.

We know that wildlife move along waterways. They either come and find food, they use them as travel corridors, they're finding food and water there, or they're living in that system and they're fish swimming up and down and so forth. So, we know that if we can design structures that go under the road to accommodate the water and the wildlife, we're getting two wins at the same time. So, we've—at this Blandford site—we've got a couple old structures that now that they have protected lands on both sides, are an opportunity in the future to look at would a redesign here be beneficial, both for the infrastructure and the wildlife movement.

JAY FEINSTEIN: So, essentially what we've been talking about earlier in this episode is an overpass, a crossing that goes over the highway, and then here you're showing that you could actually also have separate movement under a highway. Are these different animals that use these different crossings?

BARBARA CHARRY: They can be. Sometimes it may be the same species that would use the overpass or the underpass, but other times there are animals, they prefer the dark, more secluded kind of space, and then there are others that are gonna want more open space for how they travel on the landscape. And so, it does accommodate animals that use the landscape differently.

JAY FEINSTEIN: So, it was amazing meeting all The Nature Conservancy's partners. You really have your hands in so many different things. What is it like convening so many different pieces of this puzzle?

BARBARA CHARRY: You know, Jay, it's really inspiring. You know, these different people have been working for both our roads and for our wildlife and our communities, and they all bring such expertise and passion and the desire to work collaboratively.

You know, nature really is a solution. We can design that humans are part of nature and we influence our environment. We change our environment, we change nature, and we can plan and design our infrastructure in ways that really make it stronger for both people and for nature. And I think that's really an incredible thing

JAY FEINSTEIN: That's the name of the podcast—*Nature is the solution*—and it really is. We're all learning so much here, this is great.

[music]

BARBARA CHARRY: As we consider where wildlife crossings go today, it's hard not to imagine how they'll reshape landscapes tomorrow. If we design with future movement in mind, we could make our roads and habitats support people and wildlife alike.

Heather Furman was telling us what her vision for the Appalachians could be. This is what it could look like.

HEATHER FURMAN: Well, there's a particular story that I really think about when I think about what the Appalachians can provide. A number of years ago, elk were reintroduced to parts of Virginia and where elk had been long extirpated or extinct from the east. And I think about how the elk populations are beginning to expand into northern Virginia and West Virginia and Kentucky and, potentially, even up into Pennsylvania. And the only way that we can bring this species back to inhabit the landscape that they once inhabited from Florida all the way up to Maine, is to have a connected landscape. And so, when I think about success, I think about the elk, the fact that they weren't here 25 years ago. Now they're here and they're slowly expanding their range, moving up north across the Appalachians, and they wouldn't be able to do that unless we have a healthy, connected landscape.

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BARBARA CHARRY: *Nature is the Solution* is a podcast from The Nature Conservancy. In our next episode, we'll dive into indigenous perspectives on caring for the land.

RAMONA PETERS: We’re not above the Earth or other living things. That equality is important and it's not just the equality, but to live in balance with it. Try to stay at a place where we have enough and not too much more than we need.

BARBARA CHARRY: For that episode and more, follow our show on Apple Podcasts, Spotify or wherever you listen. Thanks for listening to *Nature is the Solution*. I'm Barbara Charry.