



SARAH BECK

You're listening to Garden Futurist, a show about innovative thinkers contributing to a climate resilient future through the power of gardens.

I'm Sarah Beck with Pacific Horticulture, here with Adriana Lopez-Villalobos Hi Adriana.

ADRIANA LOPEZ-VILLALOBOS

Hi, Sarah. Today's podcast is about the future of land management and ecological restoration. Our guest brings us a great example of the challenges and opportunities that are present where a biodiversity hotspot and a densely populated human settlement meet.

SARAH BECK

I interviewed Clayton Tschudy, the executive director of San Diego Canyonlands. Let's listen.

Welcome Clayton. I'm so glad to see you today.

CLAYTON TSCHUDY

Good to see you too, Sarah. Thanks for having me.

SARAH BECK

So Clayton, you described San Diego Canyonlands as an environmental restoration organization, but also as bridging the gap between local communities and urban habitats.

I want to get right into this because on the surface, it sounds like a really nice, perhaps not unexpected idea for a nonprofit, but there is some broader context here. You're doing some work that is citywide, countywide. And honestly, what you are doing is big. It's radical innovation towards a futurist vision for the integration of humanity and nature.

CLAYTON TSCHUDY

Well I agree. I think it is big and I think it is the future of land management in urban environments. But we're learning as we go. We're in a learning bell curve and we're right at the beginning. So we're making, I think exponential progress, but we're at the very beginning of the curve. There's a long way to go.

Integrating urban habitat into urban land management is really going to be a critical feature of conservation in the future. Not just conservation, but it's really about blending conservation and horticulture. Those two things, the human and the wild world that in our Judeo-Christian worldview, we tend to separate. We have to challenge that separation and find a way to fully integrate the way we live with the natural world so that there's room for us and there's room for our furry neighbors and other wildlife friends.

SARAH BECK



Well, let's talk about some of the specifics of where you are. There are more than three million people living in the County of San Diego, almost a million and a half in the city. So you are in a densely populated place that has canyons where you do the restoration work. First of all, let's define what we're talking about. Can you tell me what is a canyon and what does it mean to do restoration there?

CLAYTON TSCHUDY

So I think there are two really important things to understand about the natural ecology of the San Diego region. First, the landforms of this region, at least in the coastal zone, are uplifted mesas. So we have geologic uplift happening and as a result, we have a lot of flat mesa tops that were easy to develop when San Diego first started getting developed in the early 1900s.

So these are often very steep-sided, narrow erosion zones where water from rain events moves through and at the bottom, there are riparian zones, or streamside zones, that support trees and riparian habitat. The slopes support upland habitat. Around here, often coastal sage scrub, but also chaparral habitats.

And because of this interesting diversity of landforms combined with our being in a Xeric Mediterranean climate, Southern California and San Diego and Northern Baja in particular are a biodiversity hotspot, which means that we have a really high level of biodiversity, much of which is under threat.

The biodiversity here always had narrow ranges in many instances, but when you combine that with a huge population explosion and climate change impacts, the risks to the biodiversity are increasing dramatically over time.

So we have this interesting situation where the mesa tops are developed and the canyons were largely left undeveloped except for utility development, the gravity feed for sewer and stormwater utility, as well as corridors for gas and electric power lines. Except for utility use, the canyons have largely been left alone and some years ago, now, a large multiple species conservation program was put into place that protected many of the habitats that remain in these canyon spaces because they do support endangered species.

So we have this phenomenal natural biodiversity that has narrow ranges and is increasingly under threat from human impacts and we have all these canyons, over 200 canyons within the region, that to a large extent are left as open space, that are habitats, and many of them have been protected and are supporting endangered species as well as a huge amount of really wonderful biodiversity. It's a wonderful place to live and a very interesting situation that we find ourselves in right now.

SARAH BECK



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Can you talk a little bit more just about the ecological benefits of the restoration of those specific canyonlands?

CLAYTON TSCHUDY

Yeah. So San Diego has over 1,700 native plant species, numerous different kinds of plants. We have endangered species living in our canyons, including the California Gnatcatcher and the least Bell's Vireo.

SARAH BECK

And those are birds?

CLAYTON TSCHUDY

Those are birds. And a number of endangered plants and some really phenomenal conservation zones in San Diego where we have unique plants that are really only found in very narrow range, like the Tecate Cypress tree, it's a larval host for a butterfly, the Thorne's hairstreak butterfly. And that has a very narrow range that's disappearing because of increased fire regime. We have endangered Mexican flannelbush, all kinds of cool stuff here.

There's the value of the biological landscape. There's also the value of that landscape for human health. These canyons and our conserved spaces that are pervasive throughout the region, even within dense urban areas, act like lungs for the local communities. They host all the plants that can filter the air and clean the air and reduce air pollution.

The fabric of taking care of these spaces is really complicated, but it's full of opportunities, full of opportunities. It's a way of creating nearby nature for under-served communities, where the kids don't have as much access to nature as other kids do. It's a way of connecting people to the natural and cultural history of our region. All of these things have ethnobotanical value and meaning. So it's a way of creating environmental justice, actually, if we can reconnect to the history of the Indigenous peoples who are, who were here and oppressed, the Kumeyaay Nation. Many things.

SARAH BECK

Tell me about your newest initiative, the Social Workforce Program. Is that also an extension of this idea of extending the habitat for humans as well?

CLAYTON TSCHUDY

Canyonlands has launched a new program called the Social Workforce Program where we will be partnering with social service organizations that are focused on providing job training and workforce development for populations that are at risk of homelessness or coming out of incarceration or recent immigrants who are working hard to integrate into local communities and numerous other groups.

EPISODE I:

Integrating Humanity and Canyonlands with Clayton Tschudy

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So the San Diego County Board of Supervisors just launched a Youth Conservation Corps program. It's just coming out at the same time we're doing our Social Workforce Program. And of course President Biden is trying to create a National Conservation Corps similar to what was done in the early 20th century that would focus on green jobs, giving people jobs, taking care of the environment that needs to be conserved.

So I feel like everything is just kind of jelling at the same time. These good ideas are coming together for everybody and I think a lot of it is about climate change. We are together waking up to the fact that we have to fundamentally change how we do things.

We're going to create a Canyon Heroes program where we give people specialized training and then give them special access and ownership over doing certain kinds of things that normally you'd sort of think that only professionals or city employees would be able to do.

SARAH BECK

That is so fantastic. And sounds very satisfying, just the idea that basically your own backyard is this place that you are stewarding, you're monitoring and are connected to. I'm sure it increases quality of life for someone who is touching the edge of that wildland in their everyday life.

CLAYTON TSCHUDY

We recently hired a new field team of 10 people. And we hire from within the communities where we have focus areas. So this team came from the City Heights neighborhood, which is the most racially and culturally diverse neighborhood in San Diego.

They are becoming actual stewards. They will advocate in the little and big ways into the future. I'm not saying that they're all going to end up becoming field biologists, but I do think that they're going to tell their family and friends, Oh no, no. We need that tax because if we don't have the money to take care of that canyon, it's going to become full of trash and be a haven for illicit behaviors. And it's going to become dangerous again, instead of this beautiful resource. They will say that because they understand it.

SARAH BECK

What are they planting in their own gardens? I'm curious.

CLAYTON TSCHUDY

Oh, that's so great you asked that question. That's so great because they actually do that. Now they want to plant natives in their gardens, so we're encouraging them to do that. Because many of these people come from a couple of blocks away from the main canyon they work in, because we intentionally hire from the communities where we're doing work. We have to work this out with the relevant authorities, but they can potentially grow locally



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sourced seed in their yards and then they can produce propagules and seed that can be used in restoration work in the canyons. I mean, that is a phenomenal connection.

SARAH BECK

That's awesome. That's just awesome. Well, I actually want to ask you about something else that relates to that topic. This is a brand new effort with the County of San Diego on a biodiversity landscape ordinance. And I'm curious how that might work?

CLAYTON TSCHUDY

This is just getting off the ground. In order to cover these big challenges we have here, this has to be so comprehensive that whatever we produce, if it's successful, can become a national model, it could become an international model because urban habitat concerns are going to grow as the population of the world grows.

And we are also in this interesting Mediterranean climate here that only 2% of the world's land mass has. And these are all biodiversity hotspots, all the Mediterranean climates. This model could be exported to those places as well, very directly in some instances.

This is meant to imbue private and commercial and public land management in the urban sphere, not conservation zones. It's meant to imbue these land managed human spaces that we normally think of as gardens and somehow separate from conservation. It's meant to imbue them with conservation values, to imbue them with this phenomenal local biodiversity, to imbue them with habitat value for them to become connectors between the canyons and the back country conservation areas as wildlife corridors.

It's meant to turn the local population into real wildland stewards because nothing builds a personal connection to a local natural resource better than growing the plants in that resource in your garden, because they become your babies. You know them from itsy-bitsy seedlings to big monstrous shrubs that you have to cut back.

You see what uses them.

[Break for Underwriting]

SARAH BECK

So according to your amazing visionary plan, every one of the Pacific region cities could evolve to this space. Give me the flash version of the ideal future scenario, where this has really come to pass and the level of engagement around wildlands and urban lands comes really comes to fruition. What does that look like?

CLAYTON TSCHUDY

EPISODE I:

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Well, in San Diego, I think it's going to be built around the natural features that are already conserved. I see thousands upon thousands of jobs every day in the conserved canyons and back country areas of San Diego. People caring for the resource, the community valuing that, putting tax dollars behind those jobs.

So creating an economy around conservation that takes care of the resource and also privileges the resource in a way that right now, it isn't. Where it's not just viewed as a recreational space where you can hike and experience something beautiful or you can bike through it and have an adventure, but it's something that people value for its own sake because people really understand it.

Thousands and thousands of people. That's what it's going to take. We have this opportunity in San Diego because we have a pervasive canyon network that didn't get developed. So we have the conserved space already to do this with, but it's going to require that level of commitment and human interaction to reach the fruition of that vision. In other cities, Pacific Rim or really anywhere in the world that where you have millions and millions of people that increasingly have to be living in higher and higher density, I think creating greenbelts intentionally can create the same impact as our series of canyons in San Diego. So this idea can be exported and engineered into urban environments.

And I think this is going to become incredibly important. You know, just thinking about climate change and how every city, every city is going to have to have a managed urban forest to clean their air and sequester the carbon that they're emitting.

You know, having an urban forest in different cities means different things. In a near desert, like San Diego in a xeric climate like ours, it's not that easy to have an urban forest. You have to get creative. And even in places where they have more water, if you're not utilizing that urban forest resource to create migratory bird habitat, if you're not linking in the various goals, then you're missing out on something really important that isn't just a good idea, these are necessary things that we must do in the otherwise bleak future that awaits us from climate change impacts.

SARAH BECK

I love it. I think it sounds like you definitely have an idea of a future that isn't as bleak and maybe it's truly not bleak. I mean, you've got the components there.

CLAYTON TSCHUDY

Every place is unique, Sarah, and has unique challenges and unique opportunities. The solutions will be idiosyncratic, but let's envision that beautiful green future where humans and nature live together in spite of the dense human population that's coming and let's manifest something better.



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SARAH BECK

Let's do that. Thank you for being a garden futurist Clayton. And thank you so much for joining me today.

CLAYTON TSCHUDY

It's really a privilege. Thank you, Sarah. I appreciate it.

SARAH BECK

I'm back with Adriana and wow. That was a really inspiring conversation for me. Adriana, did you find any of that interesting, just Clayton's angle on the human part of the story?

ADRIANA LOPEZ-VILLALOBOS

Absolutely. I think Clayton raises a really important point here, that we're not only interested about bringing the ecology of the species and plant communities, but it's also about like human populations that live with those communities, that biodiversity in the area. It's about human health and social justice.

I think it's protecting biodiversity. It's also about integrating humans into the equation. And one of the things that I found really interesting and inspiring from Clayton's interview is how he works with the City Heights neighborhood and the social workforce program to try to give these communities the tools that they need in order to manage their own land or the land where they live in.

SARAH BECK

Yeah. I thought that was really special. I really liked how there was an increased intimacy that was created for community members, especially when they were able to connect with the plants themselves that were maybe part of restoration, but then they also were able to build sort of a gardener relationship there, which of course, Pacific Horticulture, we really like to connect in that way, too. I love the idea of having a pet plant in my own garden that might be part of a restoration project, but in my own space, I would feel differently about it.

ADRIANA LOPEZ-VILLALOBOS

Yeah. And as he said, it's like your baby, right? Like you're raising it from a little seed and get to see it grow and even trim it. And it's part of that connection of humans and nature that is going to make these programs successful. I think that's really, really cool about the work that Clayton is doing.

Also the way that he's very realistic about like, we're not trying to make every single person involved in this program a ecologist or a horticulturist, we're just trying to give them the tools. It's something that has potential to impact not only the actual biodiversity, which is one of the main focus, but also the people around it.

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SARAH BECK

Oh, so inspiring. Thanks so much, Adriana. It's so good to talk to you.

ADRIANA LOPEZ-VILLALOBOS