Fade-in (00:00)

Ashar (he/him) (00:04)
Hi everyone, it's your host Ashar here and welcome to the Ecologies in Practice podcast series. We're so excited to finally launch this month and share our first group of interviews with you. This season we're sharing conversations that are connected across a handful of themes. We're beginning with water, a theme that touches every aspect of life, but also connects us to where we are in a very local way. In this opening series, we take a deep dive into water, starting with a local lens. Our guests over the next few weeks are folks who are working directly with their local waterways, restoring habitats, advocating for policy change, and engaging in creative responses to environmental challenges.

We'll explore how water shapes communities, ecosystems, and creative practices by thinking broadly about water significance on a global scale. We'll explore topics such as activism and advocacy for water protection, conservation efforts, the cultural narratives surrounding water, and the ways in which climate change is intensifying water-related crises from flooding to scarcity.

At the heart of these discussions, our questions are focused on how artists, scientists, and activists work together, fostering a more reciprocal relationship with water, providing a space for reflection and perhaps inspiring action, inviting listeners to consider how we can better steward our local waterways and appreciate their importance in sustaining all life. Over the coming weeks, I'll be joined by an inspiring group of voices.

Our journey began last summer with our first interviewee, Brendon Samuels, who's an ecologist and activist dedicated to the protection and restoration of southwestern Ontario's waterways, with a focus on biodiversity and habitat conservation. In the following episodes, I'll be in conversation with Katie Lawson, a curator exploring how contemporary art can illuminate urgent environmental issues and challenge us to rethink our connection to natural resources, Julie Rae Tucker, an artist and curator whose work engages water as both a material and metaphor, weaving together ecological concerns and artistic interventions, and Tom Cull, a poet and conservationist whose work is rooted in the rivers and streams of southwestern Ontario, using storytelling and activism to advocate for water stewardship and ecological justice.

For each episode of Ecologies in Practice, you can find the full transcript on our website ecologiesinpractice.ca, along with further information about our guests and links to relevant projects and organizations. Be sure to subscribe and stay connected with us as we continue to explore the intersections of ecology, art, and activism in the weeks ahead. Until next time, take care, stay curious, and let's keep the conversation flowing.

Intro Music (2:35)

Ashar Mobeen (he/him) (02:51)

Alrighty, it is July 26, 2024. Today we are joined by Mr. Brandon Samuels. Brandon Samuels is a PhD candidate in the Department of Biology at Western University, where he studies solutions for bird conservation. Brandon is a community organizer who is interested in solutions for mitigating flooding, conserving biodiversity and adapting to climate change. Brandon organizes litter cleanups in London, Ontario and is interested in public education about strategies to reduce pollution, promote environmental stewardship, and protect natural spaces. Thank you so much for joining us today, Brendan.

Brendon Samuels (03:28)
Thank you for having me.

Ashar Mobeen (he/him) (03:30)
Can you tell us a little bit about yourself, your current role and how you work with or think about water?

Brendon Samuels (03:37)
Yeah, I'm currently doing my PhD at Western, which you mentioned. It's funny doing this work in community. I sometimes feel like I learn more from the kinds of experiences I have off campus and in community than I do from being a grad student. I think a lot about water because water is a vital element of a lot of the work I do, whether that's bird conservation or climate change adaptation or trying to make communities more livable. And I've got a lot of personal experiences with water, currently actually paying off some damages to my basement from flooding. Spent a lot of time around water bodies growing up. I have, I would say a pretty meaningful relationship with the river that flows through London, Ontario, where I live. And so water is a figment of my day-to-day experience and it informs a lot of the work that I do.

Ashar Mobeen (he/him) (04:39)
Sorry to hear about the flooding, I actually went through a similar experience last year, so I can resonate with what's going on, but wishing you all the best with that. So you mentioned that you work with communities both on campus and beyond. Can you talk more about the significance of community-minded approaches or community engagement to your projects?

Brendon Samuels (04:58)
Yeah, so I appreciated you mentioned that I do research on strategies for bird conservation. What I study is how we can prevent birds from crashing into windows on buildings. I'm interested in other aspects of bird conservation. I approach it kind of holistically in the sense that there's a number of different threats that imperil wild birds, especially urban threats that are caused by people. And as I've learned more about my area of expertise, I've come to appreciate that really, not just for birds, but for biodiversity and for climate change and for environmental justice, we actually have the solutions already. We know what the problems are, and we know enough about how to solve them. What we lack is the political will to implement these things and a lack of strategy around who is going to do that work, where the work is going to happen, and what it's going to require.

And so my interest is how do we take what science has already taught us, what Indigenous knowledge systems can teach us, and translate that into meaningful boots on the ground action, where we're actually addressing the problems in society today and preparing for those problems potentially to get worse in the future. And I think to do that, you need community-informed approaches because ultimately, this is not going to be the same everywhere. You're going to have to implement these solutions at local scales in communities all over the world. And that means you have to look beyond just what the science has to say and start talking to people and realize that people are the engines that make these solutions possible in the real world. And so that's kind of the ethos I take to my work. I do a fair bit of organizing on Western's campus in the last few years, as well as through the city of London and through the non-for-profit sector. And I try and kind of build bridges between these silos and my communities because I think the university has a lot to offer London as a whole - where I live. And I think there's really important things happening in the London community that need to be taught to the people that come and attend university and tend to kind of stay inside of our bubble. We're just here for a good time, not necessarily a long time. And I think it's really important that people lay down roots and understand where they live and understand their roles here.

Ashar Mobeen (he/him) (07:24)
Wow. So can you elaborate more on your own sort of personal relationship with the waterways around London and in terms of community minded approaches and community engaged work, what draws you to that?

Brendon Samuels (07:38)
Yeah, it's a multifaceted question. Maybe it would help to give a little bit of background of where I come from, because that helps to kind of align where I am currently around my background. I grew up as a city kid. I was raised in a suburb north of Toronto. Parents were business in IT. That was their main stream. And I didn't have a lot of connections to nature, growing up. I certainly got to see parts of the world that I thought were beautiful, and I got to be on beaches and in forests, but I didn't really have exposure to teachings around nature. And it wasn't until I started to get older, I guess in my teenage years, that I became more interested in birds and in animals and wild spaces.

And I also became a lot more concerned about the climate crisis. And I remember as a kid, my parents not really knowing what to do with the questions I'd asked around that. They'd say, well, yeah, the climate is scary. We can help put you in therapy and maybe they can figure it out with you, but we don't really know how you're going to shoulder the world's problems that way. And I kind of felt gaslit growing up actually, because I'm like, here we're hearing everything getting worse and scary and we have to act, and I don't see that materializing around me. I don't see that in my relationships. I don't see anything I can do with that information. And so fast forward a little bit, I moved to London, Ontario to start grad school in 2016. I did a master's degree in the neuroscience program. And when I was here, I was immediately taken by the proximity to green space that we have throughout the city of London.

Unlike where I grew up in a suburb of Toronto, no matter where you are in London, you're always about 10 minutes on foot from accessing the river and accessing the green spaces around the river. And I really appreciated that about being here. I took advantage of it a lot during my time at Western and that continued especially on through the pandemic. And a lot of the time I spend around the river, which is called by settlers, the Thames River, it's also known as Deshkan Ziibi to the indigenous peoples who've lived here and had a relationship with that river for much longer. I spent a lot of the time around the river, I guess, reflecting on my being here and what that means on a longer order of time, right?

To me, like the notion that settler colonialism has only really happened in the last few hundred years and we've like drastically changed so much about this continent. And yet, as I mentioned, people have been here for much, much, much longer before that. That's a crazy abstract thing for me to situate myself within. And yet when you stand beside a body of water or a river that's been here for all that time, it puts things into perspective, right? I can start to think about in concrete terms well, the river flows here because of a dam that was installed upriver by settlers. And we know exactly what year that happened. And I've even seen in my time here developments happen in areas along the river where there were none previously.

And so it makes, I guess, movement of water over time more tangible to think about and relatable for me. I'm also really concerned about the state of flooding in London and what that means for natural communities around waterways and also for a lot of people who have their homes and property around a floodplain, which I think is a really scary predicament that we're going to have to reckon with in the coming years because eventually a lot of those homes won't be insurable. They're going to be contributing to pollution. It's going to be creating safety issues for people. And I think we're now in kind of a period of reconciling the ways that things have been developed historically. And what we now kind of appreciate is coming in terms of climactic conditions changing. And through all of that, there's this dimension of environmental injustice where we know that in London Ontario, as in many communities in Ontario and in Canada, we are actively worsening the problem of water pollution and we are undermining our treaty obligations to Indigenous peoples downriver from us who still depend on their traditional water sources, or at least they would if they could. Downriver from London, Chippewa of the Thames First Nation and Oneida Nation of the Thames have been on boil water advisories for several years because their water source is contaminated by what's going on here in London.

When we have heavy rains, the sewers cannot handle that and our wastewater treatment plants bypass, they overflow and essentially dump contaminated water with sewage into the river. Those are legacy systems that we have to deal with. Those are gonna be expensive to deal with, but I'm really happy to see that that work is ongoing. I think it helps people to value that work, to recognize that yes, we do need to pay for these things. It is important by having their own personal relationships with the water bodies where we live.

Ashar Mobeen (he/him) (13:20)
Wow, that is such a thought -provoking answer. You brought up a lot of themes there. One thing I really wanted to touch upon, and you mentioned this, was sort of the idea of mental health.

And I want to ask you, how do you balance the fear, anxiety that comes with the impacts of climate change with your own goals of environmental justice and reconciliation?

Brendon Samuels (13:42)
Yeah, honestly I struggle with it. And I think we need to normalize talking about that struggle. We hear language like ecological grief, and I think that's good. That's really changed my perspective. Being able to find a community of people who have the awareness of that to talk about it and alleviate some of it is really important for community building in this space and capacity building.

But I would say that even the strongest of us, the people that have a good understanding and are doing the work should be allowed to have hard days and be allowed to curse and get frustrated and say, we're not doing enough and get angry. What is the role of anger in all of this? I think sometimes we spend a lot of effort trying to placate our anger and calm down and go take a breath of fresh air. And really, if we're talking transformative change, we need to channel that anger into constructive practices like voting and paying attention and showing up civically. And so I think my answer to your question would depend on what day you ask me, frankly. But today's a good day. It's a Friday. So I'd say for me, I balance the fear, again, by trying to situate myself within a longer order of time, right?

So yes, things are going to probably get worse within my lifetime. The problem is far beyond my capacity to fix on my own, but what can I do, right? There are definitely small things and arguably some larger things that I now have the ability to influence. So every gesture counts, in my opinion. It's just a question of at what scale you're looking.

Everything I've planted in the ground during my studies is absorbing water every time that it rains, for instance. It's feeding pollinators. Every conversation I have, like this one, I'm potentially teaching somebody something new that they can then take and adapt into their own life. And so cumulatively, it's hard to wrap our heads around, but when you've got a bunch of people who are like-minded and committed to doing the work in bite-sized pieces, that adds up to a lot, actually. That's how you drive cultural change because you're now talking about more than individual actions. You're actually creating a movement and a deeper resilience that means that people can count on each other, even in those difficult periods, right? So I think my approach to mitigating fear is to try and put myself in perspective of this is a society-wide or humanity-wide challenge.

What am I doing as my tiny little part of it to make it better, to alleviate some harm? And what is the community that props me up when I need it.

Ashar Mobeen (he/him) (16:38)
Wow, I couldn't agree more. Thank you so much for being so honest. I appreciate it. So let's move on to your work regarding flood mitigation, right? So the Ecologies in Practice podcast team has been recently reviewing your recent publication, C*ommunity Engaged Flood Mitigation with Ecological Restoration on a University Campus*, co-authored with Tom Cole and Sandra

Smalser. Congrats. Could you provide an overview of that project, the research team, and how you all came to collaborate?

Brendon Samuels (17:08)
Yeah, happy to. It was a really rewarding project to work on. I never actually conceived of it as being an academic project per se, like the goal was never to write a publication. But it was really more about how do we address flooding in a holistic community integrative way on campus. I mentioned before at the start of our interview that a lot of the solutions already exist for problems in the world.

How do we scale those, right? It's not enough to just implement the solution and walk away from it. We also have to tell the story. We have to make sure that people understand what this is, why we did it, how it is going to last in a longer term, which might require people to invest in maintaining solutions, and how it can be reproduced elsewhere, because of course, flooding is a society-wide problem. And so we were aware of a number of places on our university campus along the river and Medway Creek, which feeds into the river that were quite vulnerable to flooding because of just how conditions at the site had changed historically. In particular, we identified some locations where you had… essentially they had removed the vegetation that was naturally occurring along the water courses.

And when they do that, it creates other kinds of secondary issues. For instance, you are much more likely to have erosion along a bank of a creek or a river where you don't have root systems from trees keeping everything in place. Those are areas where you no longer have a filter provided by the vegetation to trap pollutants from the surface that might otherwise get washed down river, again, exacerbating those water quality issues.

Of course, it also means we're losing habitat. So there's not going to be areas where riparian dwelling wildlife can live. It means that your surface temperatures are not going to benefit from the shade that trees provide, all kinds of secondary issues like this. And so we approached the university a couple of years ago and we said, look, there's a lot of flooding here. Everybody knows it. There's signs. Park at your own risk on campus. And it's quite scary and dangerous because we know it's also getting worse.

And so when you're looking at floods pretty much on an annual basis and water getting closer and closer and closer to entering basements of buildings, that can be quite a costly thing to have to react to continually into the future. And so we approached the university and we said, Hey, what if there's something proactive we can do? What if we can start to address the root causes of why flooding is happening in these areas and develop solutions that will take some time to really take effect, but that will reduce the risk to your basements, to properties and parking lots and things moving forward. And they said, we're intrigued. That sounds cool. Let's chat more about it. So I became aware of a program, a new one for offering funding through the School of Graduate and Postdoctoral Studies called *Thinking Globally, Acting Locally*. And that name is based on Western's commitment to enacting the sustainable development goals by inspiring our community of researchers and teachers and students to think about global

problems like climate change and flooding and act on those problems through implementing solutions locally. And that's exactly what we did. So we approached the university, we applied for funding through this grant, and we set up what was called a *Campus as a Living Lab* partnership with Western Facilities Management.

And essentially what that did was it empowered us to use space on campus to do research and to teach people, while also creating a framework of accountability for the university to understand exactly what we were doing, what it would look like in the future, and so forth.

And so through these arrangements, we were able to secure permission for a collaborative partnership with our local conservation authority, which is the Upper Thames River Conservation Authority, to have them dedicate staff to come in and help us co-host workshops where we would be teaching people about planting techniques that can help with flooding. In particular, we used a technique called live stakes where essentially it's kind of like propagating a house plant where you can take a cutting-off of your plant, you stick it in water and it grows new roots and all of a sudden you've got a new plant.

You can do that with certain species that grow along watercourses, like willows and cottonwoods are popular for that purpose. We used a species called the sandbar willow, where we actually visited mature trees. We used chainsaws to chop off some branches and sharpened the ends into pointy sticks. And we wedged those into the ground with a hammer. And those secrete a chemical that actually encourages root growth to happen pretty quickly.

And those rooted and essentially become almost like grafted new trees. So we hosted these workshops with the Conservation Authority and we also brought in an Indigenous educator. Her name is Wasezi Deliri as well as her daughter and she has connections to Chippewa of the Thames First Nation and Oneida who I mentioned earlier.

She began our activities in early spring with a water blasting ceremony that helped us to situate the work that we were doing within that lens of truth and reconciliation and getting people to think about water in a different way. We also brought in Brandon Dockstader, who was the environmental coordinator at Oneida Nation of the Thames and has spoken at length and his advocacy for his community about improving water quality by addressing source water protection.

And so by bringing together all these partners, we were able to provide our participants, which were members of the campus community, with a more holistic set of perspectives about water and how the work we were doing on campus had these downstream and upstream consequences. What I was excited to do then, after we held our workshops, was to collaborate with the City of London and with the London Public Library to take what we had learned and package it into information that could then be shared into the broader community.

So we held a couple of different lectures for the public at London Public Library branches that were advertised by the City of London. We took feedback from the City of London about things

that the public really needs to know in terms of flooding. And we embedded that into the messaging around our project. So instead of just being about planting along rivers, we were also talking about things that people can do to mitigate flooding in their basement or with vegetation on their property.

And this created a lot of added value for the municipality who is really trying to get this information out there, for the conservation authority who's trying to teach people about these techniques to improve water quality and conservation, for Indigenous peoples who want to build these bridges and relationships to help people engage in the work of truth and reconciliation, and for the university ultimately to keep their basements from flooding in the future. And our paper ties this all together with the recommendation that if we're going to mobilize these solutions for the climate crisis and adaptation and mitigation of flooding, we need to think about the people doing the work. We need to build community partnerships and embed those partnerships into the design of what we're trying to do. In this case, applying flood mitigation on a university campus, we brought in community members, including students, and we said, we're going to let you design this project yourself. You're going to help us choose what species we plant and where we do the planting and the stories that we tell. And by creating those participatory components early, we really improved the overall investment in this project. It became something that people were excited about that they could take pride in. They can come back to the university decades from now and see the things that they planted still growing there.

And we think that this is a path forward for society-wide implementation of these solutions where it's not just up to the city, it's not just up to the conservation authority or up to the university, it's all of us working together in a good way.

Ashar Mobeen (he/him) (25:48)
Wow, that is such a beautiful summary of the text. One thing I do want to ask you is sort of: can you provide updates on new directions for the project or next steps and how do you see yourself engaging with this project in the future?

Brendon Samuels (25:54)
Yeah, I go back and check on that site pretty much every week. It's interesting to see how it's holding up during the flooding that we've had recently. Most of the live stakes that we planted survived. That's an advantage of that technique is it's got a pretty high rate of success. And so what began as a bunch of kind of just weird sticks poking out of the ground now have flowers and leaves and branches coming out of them, which suggests that the roots underground are forming. And it's going to take a couple of years for that to solidify and really help with the erosion piece on the creek bank. In the meantime, we also planted hundreds of shrubs and wildflowers, and those are starting to grow in really nicely. I think by next year, we're probably going to see a lot more blooming happening, which means there's going to be more fruit for wildlife. And it's going to become a nice vegetation community.

In ecological restoration, this is sometimes called succession, where you're going from a landscape that doesn't have a ton growing on it. In this case, it was just turf lawn that transitions

to some understory plants, your perennial shrubs and things, followed by the larger trees, which are going to take a few years. But eventually this area will become a lot more homogenous and it will blend in with the surrounding riparian corridors through campus along this creek with a lot of really good native species diversity that was lacking before. So that's sort of how the site conditions are changing. We also got permission from the university to install an interpretive sign, which I'm really excited about because we haven't had a lot of signage opportunities on campus in the past to highlight the work that's being done. And I think partnerships with facilities have allowed us to be active participants in telling stories in a physical way.

That sign also invites people to participate in the project by taking photographs of what they see living at the site and submitting them to iNaturalist, which is a community science app that we use to keep track of biodiversity on campus. It's a whole separate project. As well as to take landscape photos of the site, we're going to put a post up and allow people to contribute photographs to a time lapse series.

And that will help us to keep track of how the site conditions are changing over seasons and over many years into the future, which I think is inspiring for people to see because even though you might only be at Western for a couple of years, you'll be able to track this in the longer term and see what this looks like down the road. In terms of mobilizing this beyond just the campus, we produced information materials for the Conservation Authorities website. And that has a basic guide of how to do this kind of planting anywhere in the watershed or really anywhere in the world adapted to local site conditions and whatever species are native. We produced a documentary with an Indigenous filmmaker which is also on that website and it really captures the story of what we were doing and those webinars, sorry, the lectures that we gave to the public library were recorded and are now featured as webinars online as well.

So all of these resources are going to be educating people in perpetuity into the future. But I think now it's the work of telling the story. So it's the paper that we published. It's the conversation we're having now and maybe inspiring a listener to do something similar where they have flooding going on in their community and us being able to say, “Here's the proof of principle. We've done it. And here are the resources that we developed to make the work easier for you in the future.”

Ashar Mobeen (he/him) (29:36)
The interdisciplinary and collaborative nature of the project, I think, is very inspiring. As a graduate student that's been at Western for about three years, I think, you know, I've also been able to come across this material and be part of these conversations. So I think the work that you're doing definitely is making a difference in our community. One thing that you did mention that really stuck out was a couple of times you mentioned the phrase, getting permission from the university. One thing I want to ask you is how do you think Western can play more of a role in these projects in terms of a of a pedagogical framework and how we can sort of make sure that we're distilling all this information on a faculty-wide level and that all departments and programs are sort of being part of this collaborative interdisciplinary sort of projects and conversations?

Brendon Samuels (30:28)
Yeah, great question. I was really fortunate for this project to collaborate with people who have a lot of experience and knowledge about community partnerships and community engaged learning. And my co-authors on this paper are both leaders in those respective fields. And so I think listening to the experts, the human resources that we've got within the university about how to make our programs better on an ongoing basis is a really important way to improve and recognize that our historical approaches have not been perfect. Now is a time to be ambitious and try new things and we can do that by bringing people along and taking in their feedback. I would say that I guess more concretely, there's a couple of things that I think we need to prioritize.

We have the campus as a living lab framework I mentioned before, which is an accountability piece that enables partners to work with the university and use the university's resources and land for projects, which is wonderful. These initiatives have cropped up in different university contexts all over North America, all over the world now. I think Western's model is working really well. A change that I would like to see is to have this be linked more directly with Indigenous pedagogy, because actually the very first project that got permission to do this at Western was an Indigenous-led project, and the Spencer tract which is university managed lands.

This program is great, but it also comes from a place of working with Indigenous peoples and taking advantage of other knowledge systems outside of Western scientific knowledge. And so I think emphasizing those pieces in these programs is really important. I would also say that from my experience, it's really important that when you're asking people to do work, that it is treated as work and it is paid.

I got to lead a team of undergraduate students. I'm myself a graduate student, and for our project, when we proposed what we wanted to do, we requested funding for honoraria for all of the participants so that they would be remunerated for the time and effort and expertise that they put in. And I think for all of the talk that we do about, you know, the green economy, there's so much of environmentalism that's still expected for free. It's still seen as an activity for tree huggers or for volunteers. And I see that as fundamentally unsustainable.

And so perhaps an understated success of this project is that the university said, we're going to put our money where our mouth is, and we're going to pay students to do good work on our campus that ultimately is going to serve the university well for years into the future. That's going to inspire these kids to go on and find green jobs and know what they're worth as people who can fill those jobs. And so I would say in these kinds settings of working with the university and developing projects together, remember to advocate for yourself. Remember that your time is valuable and that wherever possible you should pay people for their contributions. So I'd say those are some advice I would give about how to make this space better.

Ashar Mobeen (he/him) (33:41)
Yeah, thank you for sharing your thoughts. And I guess finally, last question I want to ask you, and if I may, what's next on the horizon for you? Any exciting new projects that you're working on?

Brendon Samuels (33:58)
Well, I've got to finish my dissertation one of these days. I'm working on it. It's hard. I feel a strong solidarity with all my friends who've done PhDs and they're like, "you just got to get through it. We know it's hard." But it's also a matter for me of tuning up distractions. There's so many things going on and initiatives I'm involved with. So trying to finish that up. I am hoping to apply to a postdoctoral fellowship program, fingers crossed.

And I'm interested in exploring in my postdoctoral research, social dimensions of the conservation problem that I study now, which is strategies for preventing birds from crashing into glass. I've done a lot of research into the biology aspects of that and bird behavior and vision. And I'm interested now in figuring out, okay, how do we mobilize our solutions into society through partnership driven research? So I can't say where that's going to lead, but I'm hoping I'll be working on that for the next couple of years. In the meantime, I'm still pretty involved with the nonprofit sector and with the City of London through the advisory committee work that I do. And so it's just about picking off one thing at a time and having fun.

Ashar Mobeen (he/him) (35:04)
Yeah, well, best of luck with all of that. I just want to say, I'm a huge fan of the work that you do. I know you have your hands in so many projects, and I'd mentioned this before as well. It's definitely noticeable, all the work that you're doing, and it inspires folks like myself, other graduate students, to sort of be part of this bigger cause. And I also hope that you're taking care of yourself as well, because that's probably the most important thing.

Music (35:28)

Ashar Mobeen (he/him) (35:33)

Ecologies in Practice is hosted by Ashar Mobeen and produced by editors Elysia French and Amanda White, with music and audio editing by Adam Wiebe. This season was made possible through the generous support of the Sustainability Impact Fund at Western University, in collaboration with Brock University and the Centre for Sustainable Curating. We'd love to hear from you. Visit our website at ecologiesinpractice.ca to get in touch. There, you'll find details about each episode, transcripts, and further information about our guests and links to relevant projects and organizations. The book Ecologies and Practice in Environmentally Engaged Arts in Canada is now available through Wilfrid Laurier University Press.

Outro Music (36:11)