



Branching Songs

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In cities, trees are seen predominantly as entities that beautify streets, parks and gardens. Often they're regarded as obstacles to urban development, where their importance to ecosystem health plays a secondary role to economic growth. How can multispecies art offer new perspectives on trees and their crucial contributions to urban life? *Branching Songs* is a project with old trees in the Vancouver area, including the '1308 Trees', urban forest sites where trees are being cleared for the Transmountain Pipeline expansion. The intention is to bear witness to trees who are supporting the well-being of human and nonhuman life. The project combines new technologies, such as 360° photography and video, ambisonic and geophonic sound recording, biomidi data, and contact mic recording, with approaches from acoustic ecology, multispecies creativity, and performance. The *Branching Songs* team produced methods for working collaboratively with trees and composed a collection of soundscapes and accompanying 360° photos and videos. The soundscapes present the complex biophony and anthropophony of each site, weaving in soundings from electromagnetic fields produced by the trees and our touch interactions with the tree bodies. The touch gestures are improvisational, responding to the emergent sounds heard on site, and the specific features of the participating tree. Multiple microphones allow us to listen to varied perspectives refracted across the tree body. Our video article includes an introduction to the project, the methods we developed, two soundscape compositions and accompanying visuals with the trees in the collaboration.

Keywords: trees; ecologies; forests; urban development; anthropocene; acoustic ecology; soundscape; multispecies; interspecies; touch; perception; sensing; biophony; anthropophony; biophilia



VIDEO ARTICLE

Available to view here: <https://doi.org/10.16995/jer.9016>.

Available for download here: <https://doi.org/10.16995/jer.9016.mp4>.

STILLS FROM THE VIDEO ARTICLE





Branching Songs team recording at Lost Creek.

VIDEO ARTICLE TRANSCRIPT

[Please note: This is a transcript of a video article. Some metadata elements may appear more than once in the document, in order to be properly read and accessed by automated systems. The transcript can be used as a placeholder or reference when it is not possible to embed the actual video, which can be found by following the DOI.]

[0:10]

Branching Songs

A multispecies art project

2021-ongoing

authors

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keywords

Trees, ecologies, forests, urban development, anthropocene, acoustic ecology, soundscape, multispecies, interspecies, touch, perception, sensing, biophony, anthropophony, biophilia

For the next four minutes you will hear “Cedar at Stoney Creek”, a soundscape documenting the wooded area surrounding Stoney Creek in Burnaby, BC (Canada) including an old cedar on the frontline of deforestation for the Trans Mountain Pipeline expansion project.

Recorded in March 2021 using a variety of microphones and touch interactions with the cedar, biophony, anthropophony, and physical characteristics of the site are brought together to represent this urban forest ecology.

Wearing headphones is recommended.

[3:27]

Abstract

In cities, trees are seen predominantly as entities that beautify streets, parks and gardens. Often they're regarded as obstacles to urban development, where their importance to ecosystem health plays a secondary role to economic growth.

How can multispecies art offer new perspectives on trees and their crucial contributions to urban life?

Branching Songs is a project with old trees in the Vancouver area, including the ‘1308 Trees’ urban forest sites where trees are being cleared for the Transmountain Pipeline expansion. The intention is to bear witness to trees who are supporting the well-being of human and nonhuman life.

The project combines new technologies, such as 360° photography and video, ambisonic and geophonic sound recording, and contact mic recording, with approaches from acoustic ecology, multispecies creativity, and performance.

The *Branching Songs* team produced methods for working collaboratively with trees and composed a collection of soundscapes and accompanying 360° photos and videos.

The soundscapes present the complex biophony and anthropophony of each site, weaving in soundings from electromagnetic fields produced by the trees and our touch interactions with the tree bodies. The touch gestures are improvisational, responding to the emergent sounds heard on site, and the specific features of the participating tree. Multiple microphones allow us to listen to varied perspectives refracted across the tree body.

Our video article includes an introduction to the project, the methods we developed, two soundscape compositions and accompanying visuals with the trees in the collaboration.

TRANS MOUNTAIN PROPERTY

ANY PERSON WHO OBSTRUCTS ACCESS TO THIS SITE IS IN BREACH OF AN INJUNCTION ORDER AND MAYBE SUBJECT TO IMMEDIATE ARREST AND PROSECUTION.

[05:10]

Context

[voice] Julie Andreyev

co-investigator

Branching Songs takes place in the greater Vancouver area, which is situated on the unceded territories of the Coast Salish people, including the Musqueam, Tsleil-Waututh, and Squamish nations.

In the past few years, there’s been tensions between industry, the federal government, the provincial government, local citizens, and indigenous land defenders who are

working to preserve the wild pockets of land in Vancouver's environs. One of these sites, called 1308 trees was the focus of activists whose objectives were to stop the Trans Mountain Pipeline expansion project through Burnaby.

"1308" refers to the 1,308 trees that are scheduled to be cut down for the Trans Mountain Pipeline expansion project.

Some of them are hundreds of years old.

The Trans Mountain expansion project will twin the existing 1,150 kilometer long pipeline, increasing the amount of petroleum it carries from Alberta to Burnaby from 300,000 to 890,000 barrels per day. This, despite regionals and global calls for *reducing* fossil fuel consumption.

So driven by these concerns for these sites and the trees, the *Branching Songs* project focused on a research question: How can art play a role in generating public awareness, leading to care for our wild and urban forests?

How can art play a role in generating public awareness, leading to care for our wild and urban forests?

So the team explored these sites by documenting their unique biophony which showed the diversity of nonhuman life in these areas.

Biophony refers to the collective sound that vocalizing non-human animals create in a given environment.

For instance, we recorded the Anna's hummingbirds and other bird calls alongside the *anthropophony* of trains, construction, and traffic.

Anthropophony refers to all sound produced by humans, ranging from spoken language to traffic noise.

[07:43]

Intention

It's increasingly recognized that wild and urban forests have positive effects on mental and physical wellbeing of humans and nonhuman life, and contribute to the health of the planet. British Columbia is known for its forests that play a crucial role in the health of the province, but ongoing deforestation by industry and development has affected habitats and biodiversity and climate. Over the last decade, this has led

to the province's forests no longer functioning as carbon sinks; they're now carbon sources. Wildlife habitat is shrinking at an alarming rate, urban trees are being removed, and extreme environmental conditions such as drought, wildfires, mudslides, and flooding are accelerating in the province. So with this entangled crisis of climate and deforestation it's of paramount importance to engage and mobilize people in the movement to care for and protect trees and forests. *Branching Songs* was developed in response to this need.

The overall goal of *Branching Songs* is to collaborate with trees in an embodied way, using art methods.

collaborate with trees in an embodied way, using art methods

And our objective is to raise awareness about the intrinsic value of trees and the role they play in habitat health.

intrinsic value of trees and the role they play in habitat health.

Specifically our aims are: to reach diverse audiences interested in the arts by drawing on multispecies creativity and connection with nonhuman natures; to share knowledge about our innovative multispecies approaches in sound and touch interaction; and to contribute to learning spaces involved in ecological and land-based practices.

Reach diverse audiences interested in the arts by drawing on multispecies creativity and connection with nonhuman natures.

Share knowledge about our innovative multispecies approaches in sound and touch interaction.

Contribute to learning spaces involved in ecological and land-based practices.

So the project really invites people to reimagine their relationship with forests and trees, and help mobilize individuals and groups to advocate for change, with the potential to ultimately influence policy.

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and help mobilize individuals and groups to advocate for change, with the potential to ultimately influence policy.

[09:46]

Influences

The project was informed by the great acoustic ecologist and musician Bernie Krause who originally examined the ecological significance of recording the biophony and the anthropophony of certain sites, and how an analysis of these recordings can be used to determine the biodiversity and, in fact, the loss of biodiversity over time in these locations if they're subject to development.

Bernie Krause

an analysis of these recordings can be used to determine the biodiversity

loss of biodiversity over time

We were also informed by the work of Pauline Oliveros and deep listening and more recently by Hildegard Westerkamp and other listening walk practitioners because we're interested in this idea and practice that listening can be seen as an ecological action.

Pauline Oliveros

Hildegard Westerkamp

listening can be seen as an ecological action

The work was also informed by knowledge from acoustic ecology and soundscape studies with their roots in Vancouver, such as by R. Murray Schafer, Barry Truax, and Hildegard Westerkamp. And more recently there's been an expansion in soundscape studies and listening walks and sound walks with contemporary artists who are working in this field in Vancouver.

acoustic ecology and soundscape studies

R. Murray Schafer

Barry Truax

Hildegard Westerkamp

The project also expands on multispecies collaboration by considering how nonhuman natures contribute to the creation of our soundscapes and visual imagery in the project. It's important to acknowledge that creativity is a phenomenon that happens in relation, including between humans and nonhuman beings; each being, including humans, responding to the emergent events surrounding them.

We demonstrate this view on creativity specifically through our methods of soundmaking using touch interaction with trees.

multispecies collaboration

nonhuman natures contribute to the creation of our soundscapes and visual imagery

creativity is a phenomenon that happens in relation

responding to the emergent events surrounding them.

[11:35]

Techniques

[voice] Sam Street

research assistant

So for the *Branching Songs* soundscapes we used a variety of experimental recording techniques. The main one is the use of ambisonic recording which uses a type of microphone that has several microphones wrapped into one and captures basically a sphere of sound around the virtual listener. So with this we can get the whole entanglement of the soundscape and it's all spatialized around the listener. And then we have several other experimental techniques; one being geophone recording which records very low frequency sounds and can be implanted into the ground. So we would often put those at the roots of these charismatic trees we would be recording with and kind of get the sound, the vibrations that would travel to the roots of the trees and get that sort of listening angle, and we would mix that in. It's mainly low frequency sounds so that kind of goes under the ambisonic.

example of geophone recording

Those are the two main ones, and then on top of that in certain sites we could use the hydrophone on the local water sources. This is just a type of microphone that goes in water and you hear the river flow, rocks moving, things like that.

example of hydrophone recording

Lastly, we only used this on a couple, but it's electromagnetic field recording and that in particular really shows the anthropophony in a different kind of sonic perspective. It's a very electronic sound, and alongside Skytrains being picked up on the geophone or cars passing in the distance on the ambisonic, you do hear this anthropophony moving in amongst the biophony of these sites.

example of electromagnetic field recording

So that is the field recording side of the soundscapes and then there's the more performative which is the contact mic performance. So with those we find in these sites a particular charismatic tree and we use contact microphones, which detect and translate into sound vibrations of a surface or a body. So we place these on the trunk, branches of a tree, using multiple to get a more cohesive sonic image of the tree and its body. And then one or sometimes two of the *Wild Empathy* team would perform with this tree and use touch gestures to create sort of sounds in concert with the tree; so, light stroking, some knocking, the movement of branches. You'd hear this translated through the body of the tree itself, and you get a recording of this interaction between these bodies; between a person and a tree — *heard through the tree*. And it captures this interaction that we so often kind of look over.

So in the end we have those pieces, and then as for composing the soundscapes we then take all the parts we have, and composing, as well as recording, is an act of listening—an active listening. Finding the narrative within your recording. We don't really do a lot of cutting or editing, moving things around, finding little bits; it's listening to hear the events as they occur in this space. A lot of fading, a lot of moving between these different sonic spaces that we capture with the various techniques. And just creating kind of a narrative arc, loosely, that moves the listener through the space and helps them engage with it in a way that they may be haven't before and maybe opens their ears to the spaces around them.

To all employees, contractors and members of public.

No Activity Permitted On-Site

From March 15 to August 15, no activity is permitted on this site that would disturb or destroy the active nest of a migratory bird. Learn more about construction in your area at: transmountain.com/burnaby

In spring 2021, the '1308 Trees' activists and conservation officers found evidence of Anna's Hummingbirds nesting in the area of the Trans Mountain pipeline expansion project construction sites.

female Anna's Hummingbird

The Migratory Birds Convention Act protects nesting birds for the duration of the nesting season, and therefore the trees who house the nests.

However, when the nesting season was over, the construction resumed in fall 2021.

Knowledge about these ecosystems needs to be kept at the forefront of public consciousness to demand governments create more robust protections for wild spaces. Not only birds, but other wildlife (and humans) depend on forests. This is increasingly important with climate change.

[18:33]

The “Hummingbird at Lost Creek” soundscape was created from recordings in June 2021 during the temporary halt in the Trans Mountain Pipeline expansion.

360° photo from cedar at Stoney Creek.

Branching Songs team recording at Lost Creek.

Activist treehouse at Lost Creek in June 2021.

[24:28]

co-investigators

Julie Andreyev,

Maria Lantin

direction

Julie Andreyev

field recording

Cara Jacobsen,

Julie Andreyev,

Sam Street

soundscape composition

Sam Street

cinematography and video editing

Keira Madsen

360° photography

Cara Jacobsen

photography

Leanne Plisic

Anna’s hummingbird footage

Julie Andreyev

Branching Songs also has self-guided listening and art-making workshops available online.

Branching Songs current work involves creating a set of live performances with trees and forests at risk on the Sunshine Coast, BC – an area particularly hard hit by the destructive coupling of drought from climate change and intensive logging.

The performance involves live sound by Julie Andreyev and Simon Overstall with a tree, along with asynchronous loops by research assistant Keira Madsen.

The aim is to listen to trees for the forests, using multispecies art to draw attention to the need to conserve wild spaces for human and nonhuman life.

Land-based tree feeler and ribbon tree material by research assistant Lara Felsing.

[26:54]

Julie Andreyev

Julie Andreyev is an artist-activist, researcher and educator in Vancouver, located on the unceded, traditional and ancestral territories of the Musqueam, Squamish, and Tsleil-Waututh Nations. Dr. Andreyev's multispecies studio practice, called *Animal Lover*, explores more-than-human creativity and ways of knowing. Her book *Lessons from a Multispecies Art Studio: Uncovering Ecological Understanding & Biophilia Through Creative Reciprocity* is published with Intellect Books, UK, 2021. Andreyev is Associate Professor in the Audain Faculty of Art at Emily Carr University. <http://julieandreyev.com>

Maria Lantin

Maria Lantin is the former Director of the Basically Good Media Lab at Emily Carr University. She is interested in space and movement both physical and metaphorical, and this is woven through her work in immersive media and interaction. Her curiosity is currently directed at Virtual and Augmented Reality for art making and communication. Dr. Lantin's current research is in the design of virtual environments from the point of view of objects, incorporating object-oriented ontology into design techniques and implementation. <https://marialantin.com/>

Sam Street

Artist and undergraduate student in the New Media + Sound Arts Major at Emily Carr University, and research assistant on *Branching Songs*.

Cara Jacobsen

Artist and alumnus from Emily Carr University. Bachelor of Media Arts with a major in New Media + Sound Arts, and former research assistant on *Branching Songs*.

Keira Madsen

Artist and undergraduate student in the New Media + Sound Arts Major at Emily Carr University, and research assistant on *Branching Songs*.

Simon Overstall

Simon Lysander Overstall is a media artist and composer from Vancouver, Canada. He is currently a doctoral student at the School for Contemporary Arts at Simon Fraser University. He develops works with generative, interaction, or performance elements. He is particularly interested in computational creativity in music, biologically and ecologically inspired art and music systems, and art and performance in immersive environments. Simon is a doctoral research assistant on *Branching Songs*. <http://www.simonlysander.net/>

Lara Felsing

Lara Felsing is an artist whose current practice involves paintings and mixed media work connecting her Métis heritage to her experiences in Treaty 6 Territory, where she lives. She is a harvester, incorporating medicinal plants, moss and bark into her sculptures and weavings. She is a Masters in Fine Arts candidate at Emily Carr University, and research assistant on *Branching Songs*.

Leanne Plisic

Artist and undergraduate student in the New Media + Sound Arts Major at Emily Carr University, and research assistant on *Branching Songs*.

references

1308 Trees: Raising awareness about the trees being cut down by TMX, n.d., viewed 30 May 2022, <https://1308trees.ca/>

Andreyev, J 2021, *Lessons from a Multispecies Studio: Uncovering Ecological Understanding and Biophilia through Creative Reciprocity*, Intellect Books, Bristol, UK.

Andreyev, J & Lantin, M 2021, *Wild Empathy*. <https://www.wildempathy.org>

Andreyev, J 2022, *Animal Lover*, viewed 30 May 2022, <http://julieandreyev.com/>

Krause, B 2012, *The Great Animal Orchestra: Finding the Origins of Music in the World's Wild Places*, Back Bay Books, New York.

Krause, B 2002, *Wild Soundscapes: Discovering the Voice of the Natural World*, Wilderness Press, Berkeley.

Lane, C 2013, "Hildegard Westerkamp Interview by Cathy Lane," *In the Field: The Art of Field Recording*. Lane, C & A Carlyle (eds.), Uniform Books, Devon, UK.

Oliveros, P 1974, *Sonic Meditations*. Smith Publications, Baltimore.

Oliveros, P 2005, *Deep-Listening*, IUniverse Inc, New York.

Schafer, RM 1992, *A Sound Education*, Arcana Editions, Indian River.

Thompson, C 2021, "Federal inspection halts Trans Mountain logging in Burnaby: Reports of federally protected birds and their nests being destroyed prompted a visit from federal wildlife officers earlier this week", *Burnaby Now*, Apr 22, viewed 30 May 2022, <https://www.burnabynow.com/bc-news/federal-inspection-halts-trans-mountain-logging-in-burnaby-3639276?fbclid=IwAR346hQGhfabFx87x4t-WtmICTjSzq6BIHrkiQaebju2Z5yzZaZLX3Rbm1k>

Transmountain Pipeline n.d. *Transmountain Pipeline Expansion Project*, viewed 30 May 2022, <https://www.transmountain.com/project-overview>

Truax, B n.d., *World Soundscape Project*, viewed 30 May 2022, <https://www.sfu.ca/sonic-studio-webdav/WSP/index.html>

Westerkamp, H & Weaver C 2014, *Canadian Association for Sound Ecology*, viewed 30 May 2022, <https://www.soundecology.ca>

Westerkamp, H, *Inside the soundscape*, viewed 30 May 2022, <https://www.hildegardwesterkamp.ca/>

References

- 1308 Trees: Raising awareness about the trees being cut down by TMX, n.d., viewed 30 May 2022, <https://1308trees.ca/>
- Andreyev, J 2021, *Lessons from a Multispecies Studio: Uncovering Ecological Understanding and Biophilia through Creative Reciprocity*, Intellect Books, Bristol, UK.
- Andreyev, J & Lantin, M 2021, *Wild Empathy*. <https://www.wildempathy.org>
- Andreyev, J 2022, *Animal Lover*, viewed 30 May 2022, <http://julieandreyev.com/>
- Krause, B 2002, *Wild Soundscapes: Discovering the Voice of the Natural World*, Wilderness Press, Berkeley.
- Krause, B 2012, *The Great Animal Orchestra: Finding the Origins of Music in the World's Wild Places*, Back Bay Books, New York.
- Lane, C 2013, "Hildegard Westerkamp Interview by Cathy Lane," *In the Field: The Art of Field Recording*. Lane, C & A Carlyle (eds.), Uniform Books, Devon, UK.
- Oliveros, P 1974, *Sonic Meditations*. Smith Publications, Baltimore.
- Oliveros, P 2005, *Deep-Listening*, IUniverse Inc, New York.
- Schafer, RM 1992, *A Sound Education*, Arcana Editions, Indian River.
- Thompson, C 2021, "Federal inspection halts Trans Mountain logging in Burnaby: Reports of federally protected birds and their nests being destroyed prompted a visit from federal wildlife officers earlier this week", *Burnaby Now*, Apr 22, viewed 30 May 2022, <https://www.burnabynow.com/bc-news/federal-inspection-halts-trans-mountain-logging-in-burnaby-3639276?fbclid=IwAR346hQGhfabFx87x4t-WtmICTjSzq6BIHrklQaebju2Z5yzZaZLX3Rbm1k>
- Transmountain Pipeline n.d., *Transmountain Pipeline Expansion Project*, viewed 30 May 2022, <https://www.transmountain.com/project-overview>
- Truax, B n.d., *World Soundscape Project*, viewed 30 May 2022, <https://www.sfu.ca/sonic-studio-webdav/WSP/index.html>
- Westerkamp, H & Weaver, C 2014, *Canadian Association for Sound Ecology*, viewed 30 May 2022, <https://www.soundecology.ca>
- Westerkamp, H, *Inside the soundscape*, viewed 30 May 2022, <https://www.hildegardwesterkamp.ca/>

