

ANNE YONCHA

stretch-rift-graft-lift





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graphic scores

in collaboration with the orchard at Moon Randolph Homestead

by forty 130-year-old apple trees
in collaboration with Anne Yoncha

supported by the Open AIR artist residency program
and homestead caretakers Katie Nelson + Caroline Stephens

Missoula, Montana
Summer 2025



About the score book:

These compositions engage trees as agents and composers, and humans as performers.

This is meant to reposition ourselves, humans, as the ones reading and interpreting information from the tree. The trees are acting, and we are responding.

These songs play with the idea of performing data rather than storing, keeping, collecting, and analyzing it. The data happens in time, momentarily, and then is released.

Many of these pieces are made in response to Pauline Oliveros' Sonic Meditations, and explore how listening to actual tree sounds, responding to them, and imagining potential or future tree sounds may help us expand our perceptions of our non-human neighbors. Many of the instructions use Oliveros' words exactly or paraphrase them closely - these sections are italicized.

These pieces also respond to Oliveros' idea of quantum listening: the act of listening impacts the character of the sound. Our bodies exist in the same space as sound waves. The sound contacts our bodies. Our bodies contact and change the direction of sound waves - a sonic shadow. Some of these pieces are made with a contact microphone, translating physical contact into audible vibrations. I am curious how other types of human to more-than-human contact are embodied, or could be embodied, in the process of making and performing these compositions.

The scores also engage with complexities in the act of pruning in an orchard, caring for trees in their new post-human landscape by wounding them.

These pieces are not intended to require a particular level of musical training, though some have preferred instrumentation. Anyone can perform them and there is not one correct way to interpret each score.

Score 1: Storm Song

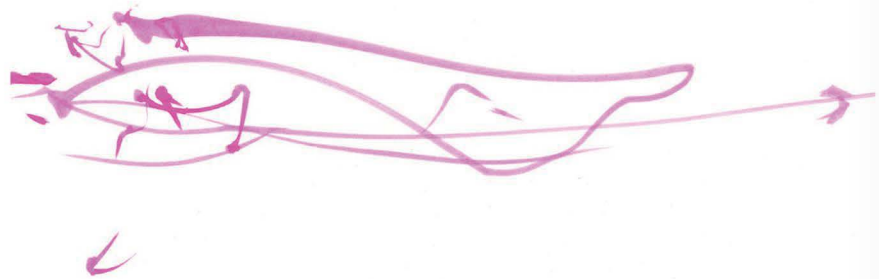
For solo musician and dancers, on or off-site

Suggested performance time: 10-15 minutes

About the score: The hot pink lines were painted by an apple tree in the time between two afternoon thunderstorms. A paintbrush on a string, clipped to a branch, recorded the tree's response to changes in wind.

Instructions for musician: maintain one consistent pitch but adjust the sound's volume, intensity, direction, length or other qualities based on the lines present in the score. This is based on Oliveros' explorations of drone meditations, the shifting partial tones which can emerge from one sound, and the ambiguity of an apparently static phenomenon. Here a tree is the *single tonal center*, the constant presence responding to shifts in air movement, pressure, direction, speed, and humidity.

Instructions for dancer(s): choose a part of your posture to maintain consistent, echoing the drone tone of the musician. With the rest of your body, adjust motion, direction, speed, intensity based on the lines present in the score.







Score 2: Improvisations with Trees - 12 drawing, movement, sound, and taste explorations

For any number of performers, in the orchard or at another site with trees

Suggested performance time: 1-2 hours

About the score: these exercises were first performed as a workshop with the artist and trees at Moon Randolph Homestead, June 21, 2025.



Instructions for performers:

- a. drawing exercise: with dye, brush, wind, allow the tree to make the first marks. make 3 or 4 drawings this way. then, respond on one.
- b. wind exercise: sit with your back against the trunk of the tree on the leeward side. draw only in the direction the wind is blowing - your pencil going the same direction. draw only when you are also exhaling.
- c. sun exercise: try to find a place to rest on the ground under your tree where you are in partial shade and hold your paper overhead. Look up and draw what you see. when the sun touches your face, draw with your eyes open. when your face is shaded, draw with your eyes closed.
- d. shadow exercise 1: rest one sheet of translucent paper under the tree canopy in dappled shade. spend a few minutes filling in the shaded areas. rest another sheet of paper on top. repeat the process and see how the shade has moved.
- e. shadow exercise 2: rest your sketch pad under the tree canopy in an area of dappled shade. fill in your paper entirely with a charcoal ground. erase the areas touched by the sun. continue until your drawing is mostly blank again.
- f. walking exercise: stand at the edge of your tree's shadow. walk in a line determined by the shape of the shadow until you've returned to your starting point. for each step you take, make a small mark on a page of your sketchbook. determine the direction of your marks by the direction of your feet.
- g. standing exercise: while standing in one place, look up and focus on one branch in your tree's canopy. echo the movements of this branch with your body.
- h. touch exercise: work in pairs, with one person making contact with the trunk of the tree, and the other holding the sketchbook. while in contact with the tree, walk the circumference while keeping one hand or finger on the bark. you can try this at foot, hip, hand, and head heights. with the other hand, make a drawing which responds to the changes in the surface you feel. then switch.



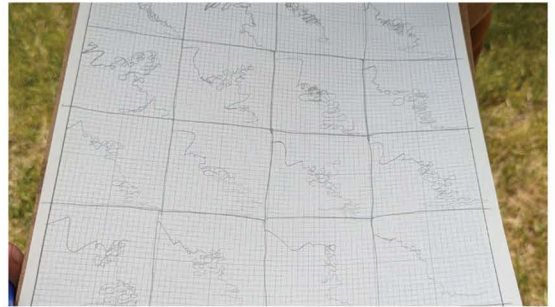
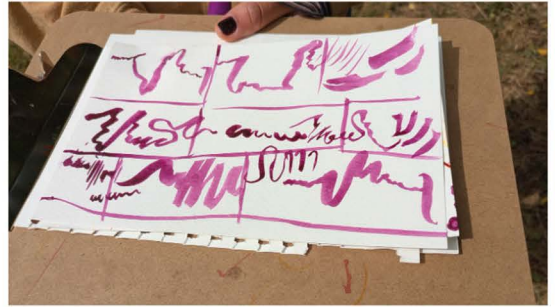
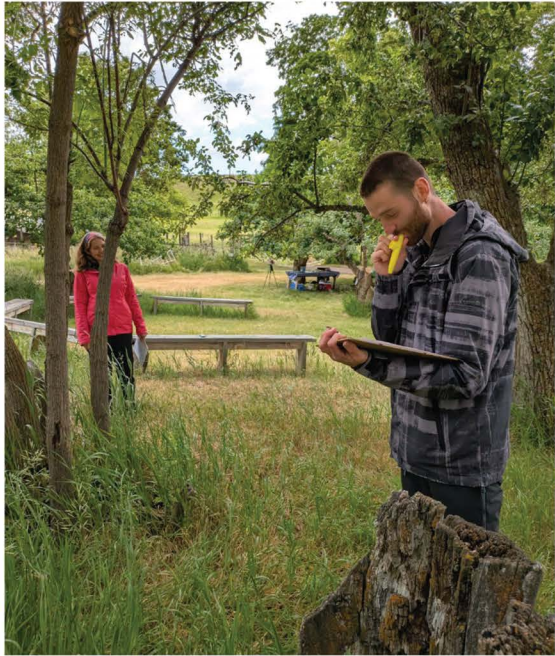
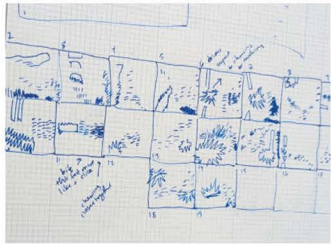
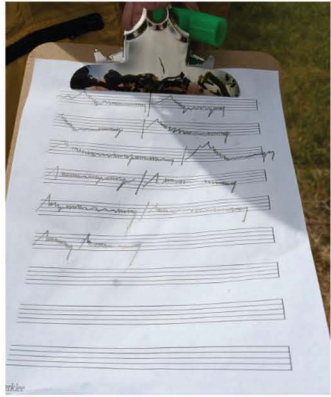
i. leaf-to-sound exercise: work in pairs, with one person making contact with tree leaves and playing a kazoo, and the other making a drawing. begin the drawing with a grid with one square per leaf you'd like to sonify. when in contact with each leaf, trace the edge with your index finger, and simultaneously translate the shape you encounter into sound with the kazoo. on the gridded paper, map the sound you hear onto each square. then compare if you wish with the leaf. listen for the sound of the shapes of the leaves across the orchard. At some point, switch.

j. listening exercise: sitting beneath your tree, listen to the found sounds around you. list or draw them in order of height, volume, or time.

k. taste exercise: slowly eat an apple beneath your tree. have with you a blank sheet music score paper, or sketch paper, on your clipboard. for each bite, draw what you taste. this becomes one measure. your composition lasts as long as the apple does. consider a code - does a round taste lead to rounder sounds and longer notes, and sharp taste to staccato notes? does a crispy part of a bite equate to a higher pitched sound, and a chewy part of a bite to a lower pitched sound? how much time do you take between bites and is this marked as silence? What aspect of taste affects volume? you can mark this in your score as traditional or experimental music notation.

l. apple tasting orchestra: perform your apple tasting scores with a kazoo or other instrument, antiphonally - each standing under your own tree.







Score 3: Branch Translations

For choral, instrumental, or electronic ensemble of any size, to be performed off site

Suggested performance time: 6-10 minutes

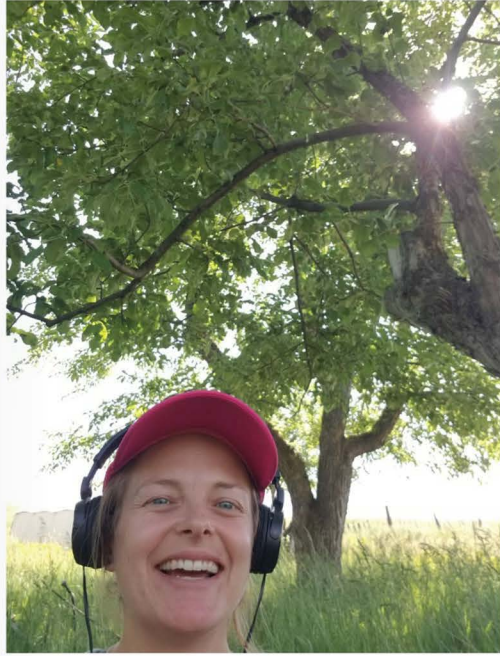
About the score: the three 2-minute video components of this score look at tree bark, leaves, and shadows from the canopy with the camera held too close to focus. In some cases the camera contacts the tree as it makes the video. The sounds are collected with a contact microphone strapped to an outer tree branch. Recognizable sounds - a bird landing on a branch, leaves rubbing against each other in the wind, raindrops on the tree - are altered as they resonate throughout the body of the tree. The instructions are based on Oliveros' Lakeside Orchestra performed by New Hampshire Festival Orchestra, focused on extending found sounds on site. This piece investigates extending the sounds to the orchard to another site.

Instructions for performers: in a darkened room away from the orchard, arrange an installation of 1 or 3 video channels and speakers. The ensemble will make a translation of the branch sounds heard in the space by reinforcing certain pitches. *Performers find a place to be, near or far from the speakers and video, and near or far from one another.* Play the three 2-minute videos in succession, with a 30 second or 1 minute pause between videos. The videos may be played all via the same screen or projector and speaker, or each at a different location in the room. *Performers, gradually begin to reinforce sounds or pitches you hear. The reinforcement can be done vocally, instrumentally, electronically, or mentally. To reinforce means to strengthen or sustain - it is distinctly different from imitation. If you are louder than the source sound, decrescendo until you can hear it again. If the source is intermittent, your pitch reinforcement can be continuous until it stops.* Record the environment you create with video and audio. When complete, your audiovisual translation should exist in dialogue with the original set of videos. Both can be played antiphonally in space, or a fourth video channel can be added.

video link: <https://www.youtube.com/watch?v=xGeCn7Q1DI8>

headphones are recommended as many frequencies will be inaudible with conventional speakers.







Score 4: Ripening Song

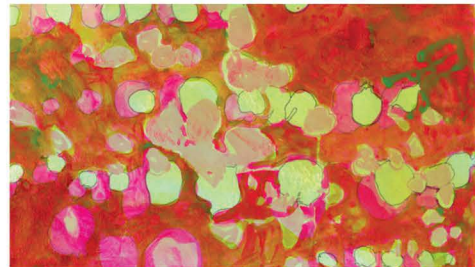
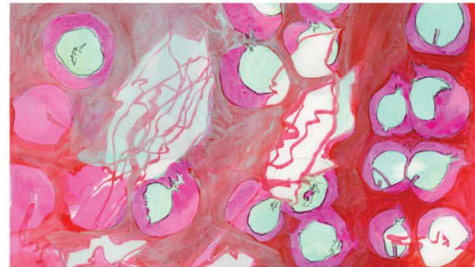
For any number of vocal performers, on or off-site

Suggested performance time: 4 minutes

About the score: This score is based on Oliveros' Tumbling Song. It was made by walking downhill through the orchard and marking the approximate location and size of each apple encountered. I painted the area around each apple, and then repeated the process the next week. The apples gradually get larger and the negative space gets smaller. Red lines in the first layer are made by tracing the shadows of the tree canopy.

Instructions for performer: Each apple representation is voiced with one breath, which equals one measure of music. Make any vocal sound but always move from the initial attack toward a fuller, brighter, riper, rounder timbre, and a louder volume. You may begin at any pitch level. You may change the timbre in discrete steps or glissando. You may move any distance in range, at any speed. The breath determines the maximum time of any ripening gesture. Sounds may be looped and repeated to correspond with visuals.

video link: <https://youtu.be/0a3pfQQAWpo>
this video does not contain sound









Score 5: Too Quiet to Hear Song

For performers of any type and group size, on or off-site

Suggested performance time: 2 minutes

About the score: The images are rubbings of the surface of the orchard trees made with charcoal on digital photo printer paper. The charcoal does not adhere but the pressure leaves a golden-toned residue. The contact microphone recordings paired with the stop motion animation mostly perceive the tree and its responses to external stimuli at levels which are closer to our human scale - birds landing on branches, leaves rubbing in the wind, branches rattling against one another.

Instructions for performers: For the duration of this video, performers should imagine the other sounds the tree is making which our recording equipment is not sensitive enough to perceive. These sounds may include the hydraulics of lifting water against the force of gravity to move it up the trunk, the opening and closing of leaf stomata to respire, reaching out via roots to sense and take up water, the formation of new wood tissue cells, storing energy as starches and fats in sapwood, attempts to balance root and limb growth, attempts to balance static and dynamic mass, the building of relationships with mycorrhizae, the healing of wounds by changing starches into phenols to resist the spread of pathogens, potential internal decay which happens slowly but cannot be healed, the forming of flowers and fruit, the move into dormancy at the end of the season.

video link: <https://www.youtube.com/watch?v=ugb2QnTBzvo>

headphones are recommended as many frequencies will be inaudible with conventional speakers.











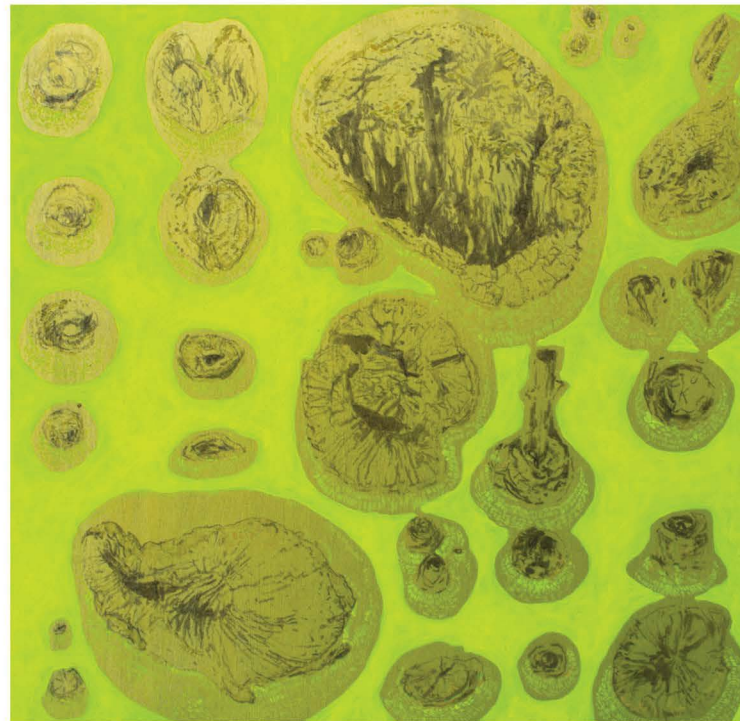
Score 6: Collar Song

For 20-30 players, or 20-30 electronic tracks/layers/inputs

Suggested performance time: 5-15 minutes

About the score: This score is a painting made with charcoal drawings of each pruning cut site on one tree in the orchard on a base layer of vinyl flashe paint. The vinyl material was chosen to evoke the plasticity of the tree as it forms new cells responding to its wounds. Its reflectivity demonstrates the tree's responsiveness to this sudden change. Limbs connect to the trunk at a point called a collar - which pruning expert Alex Shigo calls a *tissue switching zone*. *Branch collars form underneath, moving water and elements laterally from roots to branches and back. Trunk collars form on top, enveloping the branch collars, and move elements vertically, from roots to tissues above. The collar also is the site of the division, or compartmentalization, in a tree after pruning or limb death, walling off the branch core.*

Instructions for performer: Each performer or electronic input should be assigned to one collar drawing. In some places a cluster of pruning sites and their collars may be performed as one group. Begin performing each collar simultaneously. The collar surrounds the pruning site, or the wound in the tree. Attempt to shape your sound slowly around this missing middle. Envelop it softly, protect it, until it is fully closed. Your sound may evoke the tissue switching zone, and the layers of the collar, with lateral and vertical movements. Some wound sites are larger and will take more time to close than others. Not all performers will finish making their sound at the same time.





Score 7: Wound Song

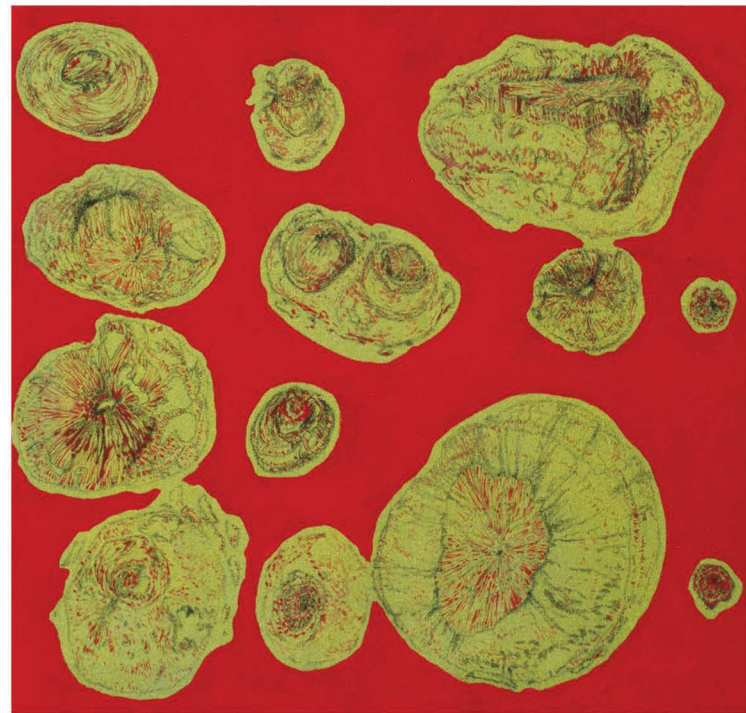
For 14 vocalists

Suggested performance time: dependent on ensemble

About the score: This score is a painting depicting all the wounds I could find at eye level on one tree.

Alex Shigo writes: *Trees stand in place and receive many wounds. Trees cannot restore or heal wounded wood. Trees are generating systems. They survive as long as they can form new parts in new positions faster than old parts are breaking down. You can live while you maintain perfect order. Life is the momentary perfect order of movement within cells. You cannot always maintain perfect order.*

Instructions for performers: Assign one performer per visual wound. Each performer should choose a tone and sustain it. Visual characteristics of the wound, and its size, can impact volume and changes within this tone. Depending on the size of the wound, each performer chooses a time to drop out. Larger wounds were made on a larger branch, and therefore inflicted when the tree was older. When you drop out, move to a new tone and sustain it if others in the group are still making sound. When moving to a new tone you may also physically move to a new place in the performance space. However, maintain a silence between tone changes lasting 10 breaths. The tree survives and the performance continues if all performers successfully generate a new tone before silence emerges.





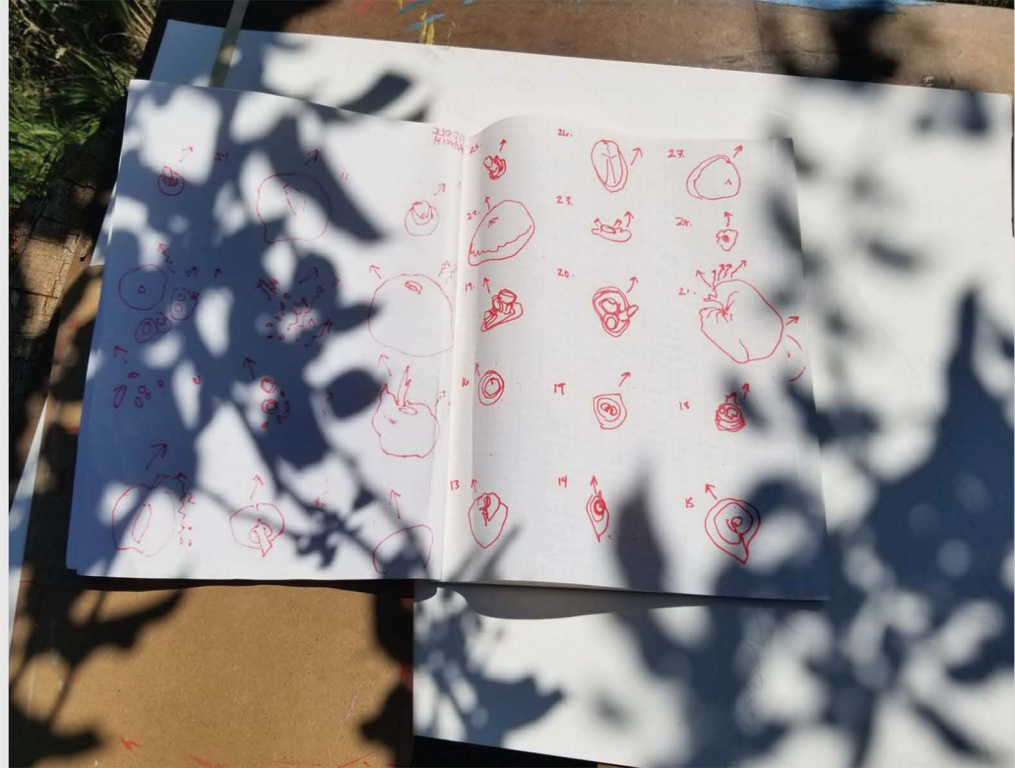
Score 8: Pruning Song

For SATB choir, brass, percussion, and dancers, on or off-site

Suggested performance time: 15-20 minutes

About the score: This score involves circumnavigating each tree multiple times, and codifying prune marks and how they relate to new growth directions of the tree. The score moves from old to young: from the bottom to the top of the tree. I stop scoring at the end of the range of my arm's reach.

According to Alex Shigo, *tree mass and architecture were naturally limited by the tree's place in a forest. Now that we've taken the tree out of its community and brought it into our world, we have changed its growth pattern and created a new condition for it. Proper pruning, Alex says, respects tree beauty, tree defense systems, and tree dignity. Improper pruning destroys those things.* While pruning is done to influence the amount of light and air reaching the tree's branches, and certain best practices have certain intended outcomes, trees have agency and do not always respond predictably.



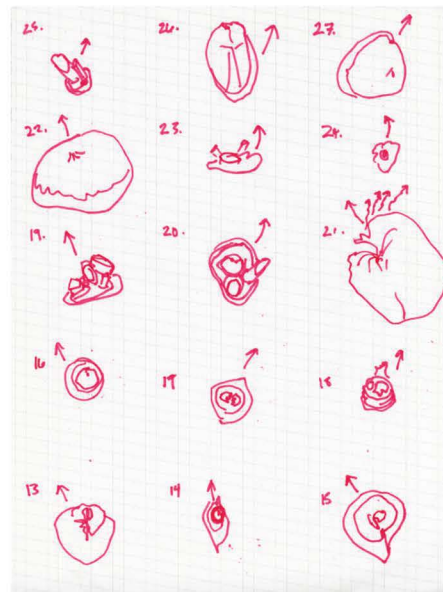
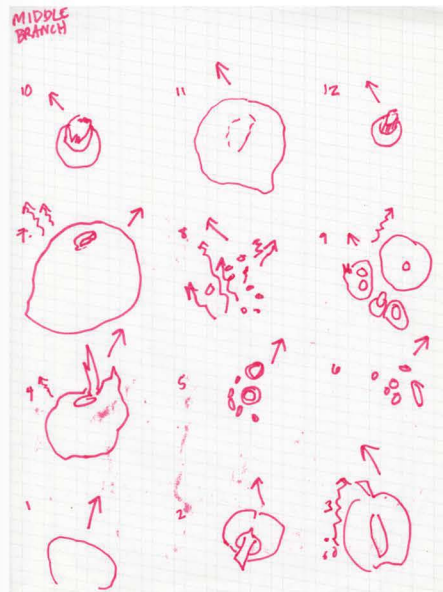
Instructions for performers: Move from the bottom to the top of each page. This represents moving from the bottom to the top of each tree. Each measure corresponds to one pruning site and is represented by one drawing in red pen. Use one breath to voice each measure. One performer should flip the score pad on a large easel visible to the audience when it is time to move to the next page.

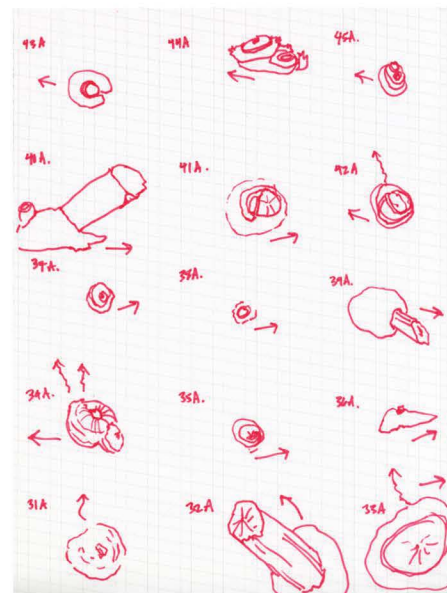
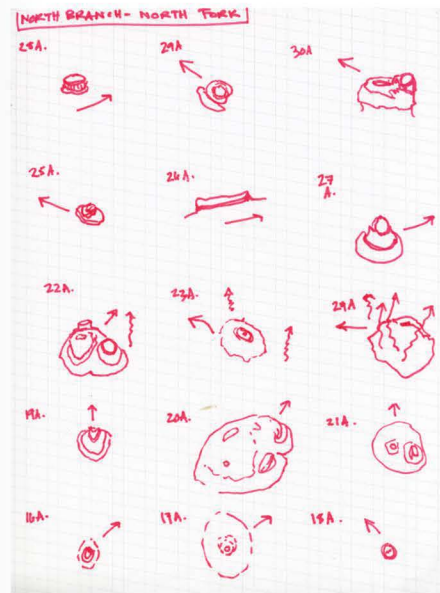
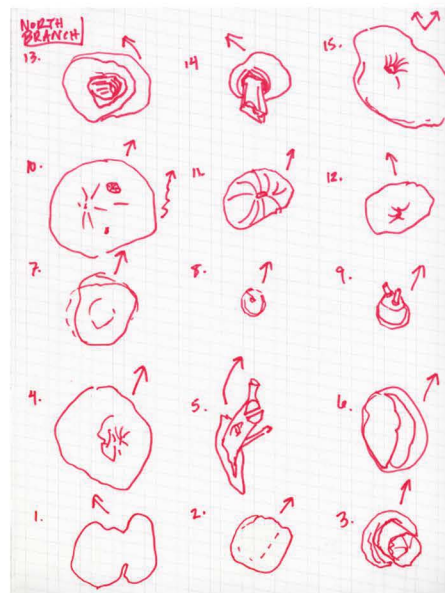
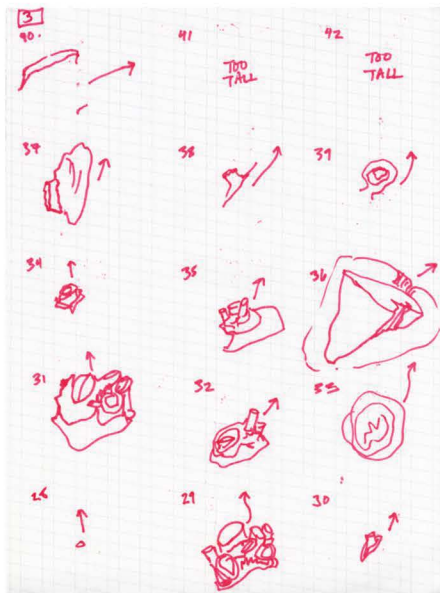
Tenors and basses will voice the cut limb, notated by the inner oval in each measure. Sopranos and altos will voice the collar formed around the wound, notated by the outer rings of tissue around the inner oval. The size of the marked shapes determines volume and the length of the sound. Angle determines the amount of pitch change, and the speed this change, over the time the sound is sustained. The quality of the cut made in the limb determines the timbre of the sound. A healthy cut is notated by solid edges, and the sound should end clearly and crisply. This illustrates the tree's ability to compartmentalize wounds so infection does not spread to other parts of the tree. An improper cut is notated by a perforated, unhealed edge or an extending stub, a weakness in the tree's defense system. In this case the sound should be perforated too, without crisp boundaries and bleeding into the new growth voiced by the sopranos and altos. Pruning impacts on trees are sudden - choose syllables which fade in and then sharply cut out, unless the cut is improper. Pruned areas are linked to static mass on the tree, or tissue with no living cells - choose syllables which are consistent and do not change much.

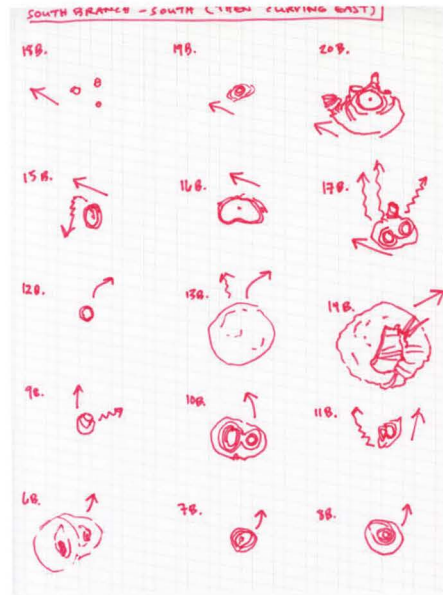
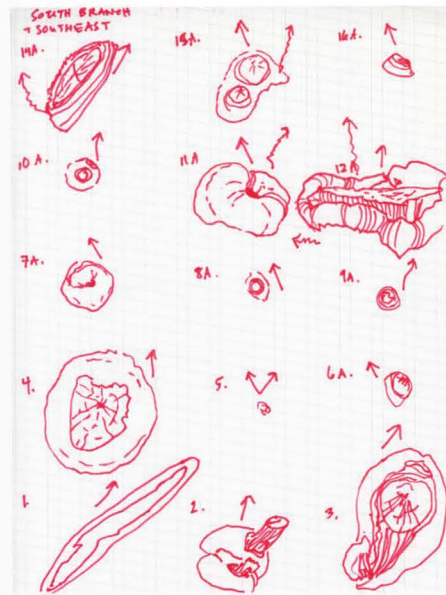
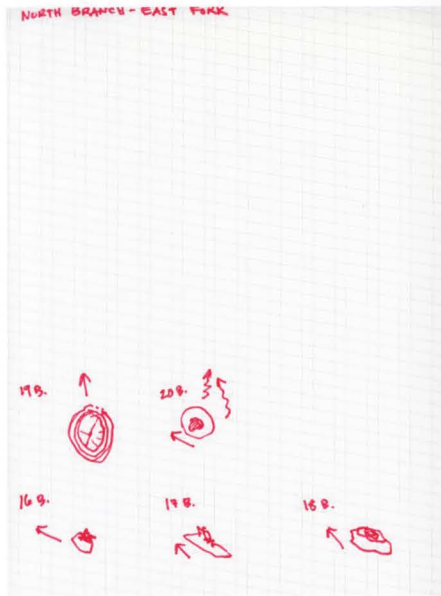
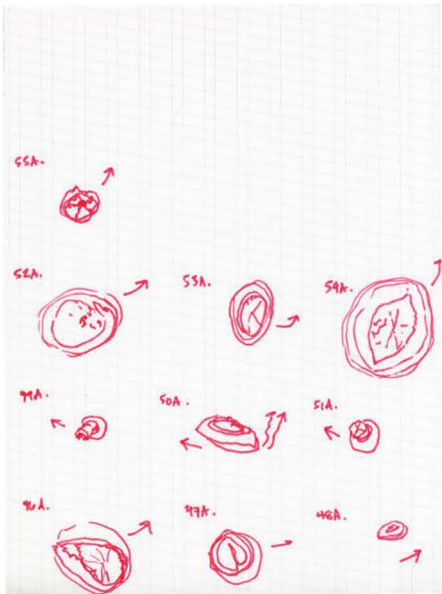
Brass and percussion will voice the new growth of the limb adjacent to the cut, notated as an arrow. Length of the arrow determines length of the sound, and size determines volume - this is based on the size and direction of the remaining limb. Direction of the arrow notates growth direction of the limb left, and determines pitch change, always moving up. The location of the arrow compared to the cut (oval) determines the starting point for each pitch. Respond to where the tenors and basses leave off. New growth is gradual. Choose pitches which join gradually with the vocalists at the beginning, and slowly fade out.

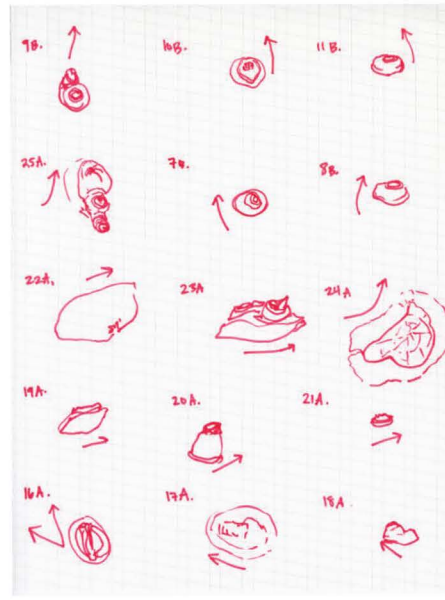
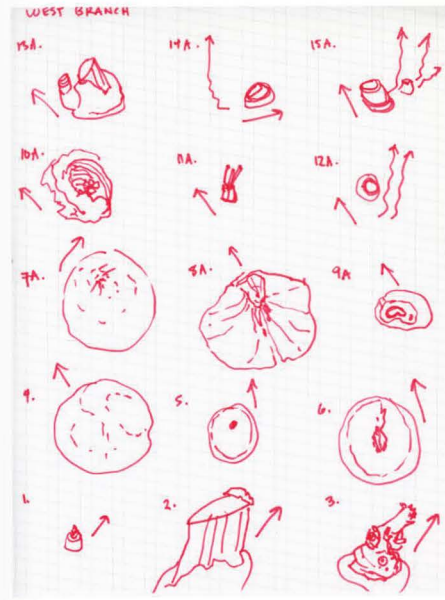
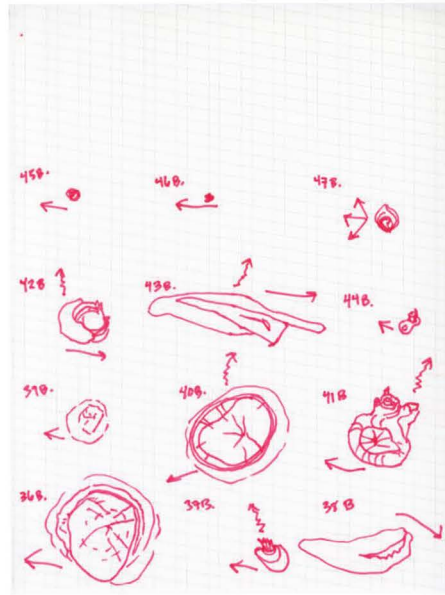
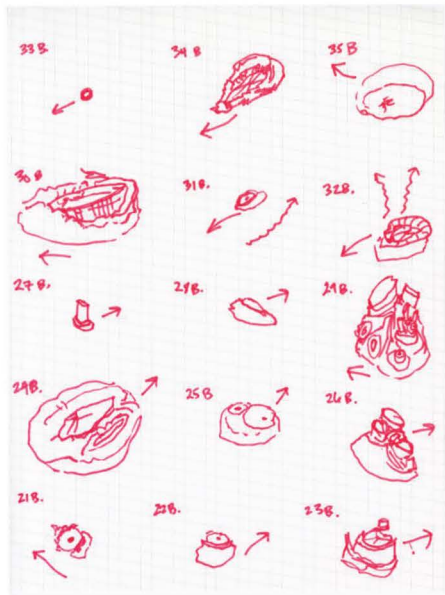
Musicians in this group may start and stop their tones at different times, creating overlapping sounds like the overlapping branch and trunk collar system of the tree. New growth is dynamic mass on a tree, or tissues with living cells. Sounds should evoke this flux and change.

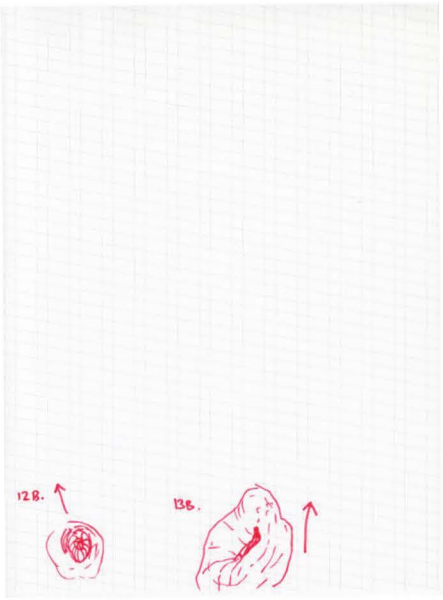
Instructions for dancers: work in a pair or divide into two groups. Keep physically connected to your partner dancer. Dancer 1 should angle their body equivalent to the angle of the pruning cut on the score. Dancer 2 should exert tension on Dancer 1's body in the direction of the new growth as illustrated in the score.













Score 9: Fenceline Song

For performers of any type and group size, on or off-site

Suggested performance time: 17 minutes

About the score: The video component was made on top of the fence at the topmost and easternmost part of the homestead. The sound layer you hear is made with a contact microphone, listening to wind reverberating along the metal fence, and grasses brushing against it, almost like a bow on a stringed instrument.

Instructions for performer: This score engages with Oliveros' meditations on the importance of imagined sound.

Performers should sit where they can see the video and hear the audio, but they may be near or far from those sources. As the video begins, imagine the sound of a tree growing inside the fence - on your side of the video. Or, imagine a tree growing outside the fence, in the field pictured. Imagine the sounds the tree makes, or encounters, above the ground and below the ground. Is the interface between earth and sky a type of fence? What does it feel like to be a tree growing fenced in? Are you protected? What about on the outside of the fence? Alone, or among others in the orchard? Let your imagined sounds be guided by the fence sounds you hear.

link to video: <https://www.youtube.com/watch?v=-gjHBJi9-2A>

headphones are recommended as many frequencies will be inaudible with conventional speakers.



Score 10: Dump Song

For performers of any type and group size, on or off-site

Suggested performance time: 8 minutes

About the score: This score engages with the post-industrial, post-human impacts on this homestead and orchard. The video component is made from the top of the homestead, looking down toward the orchard trees in the middle ground, and the Missoula dump in the distance. The first two minutes of this video include sound collected with an H4N Zoom microphone at the site. The next 6 minutes are silent.

Instructions for performers: Watch the video. Listen for two minutes to today's sound, the sounds of the post-human landscape. Imagine for the next three minutes the sounds of the same landscape 130 years ago, in the apple trees' infancy. For the final three minutes, imagine the sounds of the same landscape 1000 years ago.

video link: <https://www.youtube.com/watch?v=r7tO26KvI00>

headphones are recommended as many frequencies will be inaudible with conventional speakers.





Score 11: Iron Pile Song

For musician and 10 dancers

Suggested performance time: 10 minutes

About the score: Moon Randolph Homestead, like many ranches, is home to piles of iron things, some of which have been repurposed as fenceposts and some of which rest on the ground. Considering the site's history of creative reuse, I made drawings of items in these iron piles with sharpie on yupo (polypropylene) paper. I then sliced these drawings into squares and stacked them, re-presenting the 2-dimensional version of these objects in the way I'd found them originally - in piles. One pile was placed in a mold of resin-bonded sand, and one I tied into a stack with string and placed in a vat of loose sand. Iron was poured over these piles at a collaborative sculpture event on the University of Montana campus, led by artist Jesse Blumenthal. The heat of the liquid iron fused the plastic drawing panels together, erasing the original form of the pen lines but leaving the material of the pigment and paper in a new configuration. The resulting 11 sculptures range from 1.5" cubed to 4x4x4".

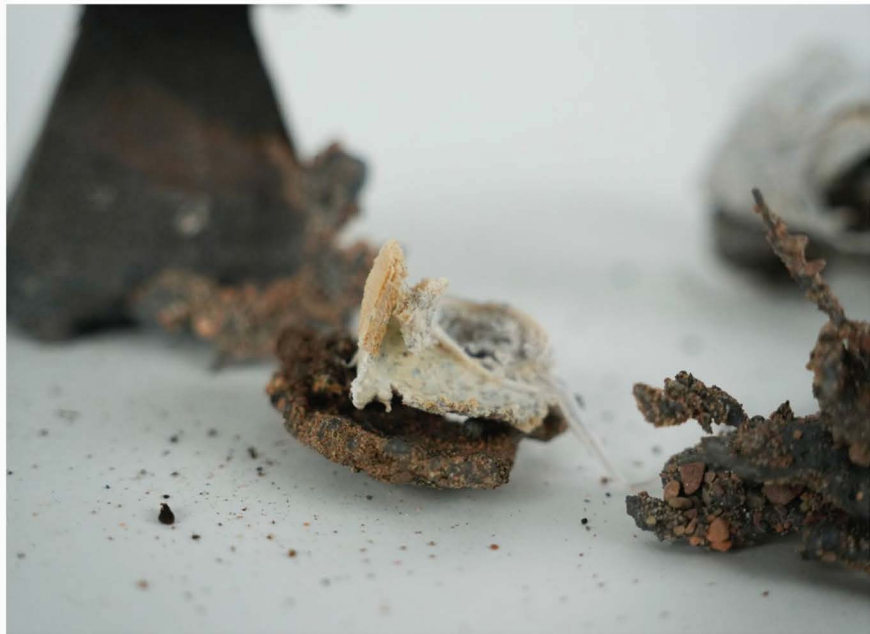
Instructions for performers: Musician creates sound by playing one of the iron cast pieces as a sound-making device. This may be combined with other instrumentation. Part 1: 10 dancers each choose one sculpture and stand anywhere in the performance space. In one hand, hold and rotate the object. Respond to the weight, contours, textures, and edges of the object by creating a line in either sound or movement. Part 2: When all performers' lines are completed, stack the sculptures in a space near the performance. Each performer should note the contact points between their sculptures and their neighbors in the stack, and arrange their bodies in corresponding order. Reconfigure the original lines from Part 1 into a new sonic or movement composition, focusing on contact points with their neighbors' performances.













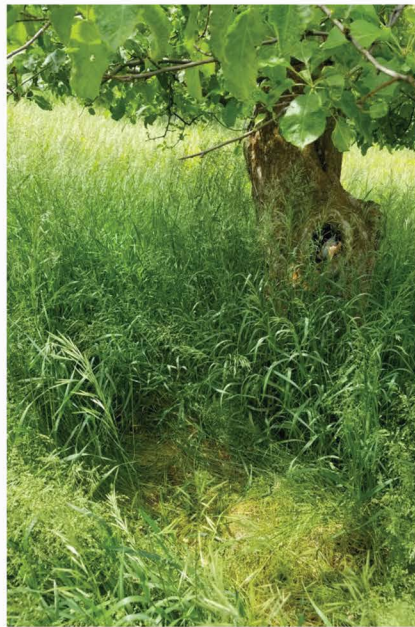
Score 12: Orchard Body Song

For wind instruments and dancers

Suggested performance time: 7 minutes

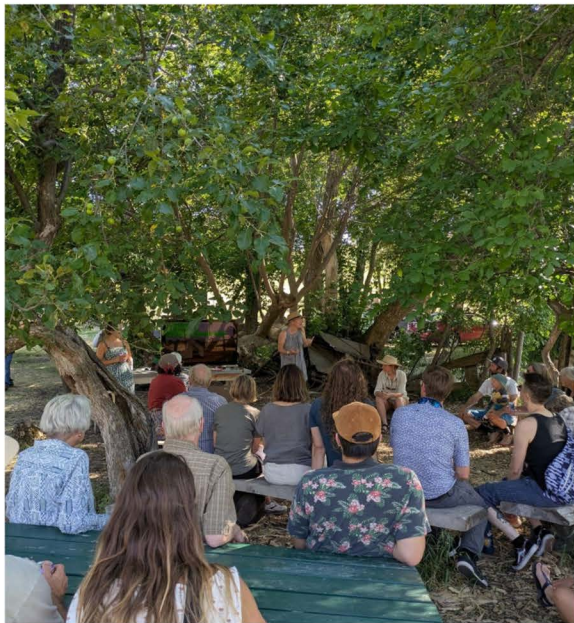
About the score: I made this quilted sculpture with 40 pieces of 22" x 22" undyed cotton cloth which I buried for 6 weeks under orchard trees and unearthed after they were marked by soil microbes. I used red ribbon used as location marker since the soil shifts, orange tape to measure tree circumferences, thread, and quilt batting. The separate fabric squares buried at each tree are now connected into one piece. This score reimagines the orchard as a single body formed of multitudes of other beings, materializes the entanglement of all the trees, and considers quilting as a metaphor for grafting. The fabric burial and exhuming process is part of a collaboration with an Ecoartspace work group "Soil Dialogues" led by Patricia Lea Watts with citizen science techniques shared by Rhonda Janke.

Instructions for performers: Dancers manipulate the soft sculpture to connect trees, humans, and other-than-human orchard bodies either literally or metaphorically. Musicians "read" the sculpture as a line to be sonified.









About Open AIR: Open AIR is a 501 c 3 nonprofit organization that fosters creative collaboration in Montana. With headquarters in Missoula, MT, we serve urban and rural areas of Montana. Our mission is to connect diverse communities with creativity through educational, collaborative, and place-based initiatives. Our vision is to strengthen the creative capacity of Montana and foster experiences that are culturally vibrant, healthy, and intellectually vigorous. Open AIR is best known for its unique place-based Artist-in-Residence program that connects artists from all disciplines and origins, with culturally, historically, and ecologically significant locations through collaborative partnerships in Montana. With innovative opportunities available in places such as remote wilderness areas to historically significant sites closer to town, artists have the opportunity to draw inspiration from a regional community dedicated to preserving place, environment, and the artist.

About the Moon Randolph Homestead: Less than two miles from downtown Missoula, tucked behind the city's North Hills, history and culture intertwine at one of the region's oldest intact ranches. The site of this ranch is situated within the vast ancestral territories of the Sélis-Qlispé people who have called this land home for 14,000 years. For just over 100 years, the land was cultivated by the Moon and Randolph families. In 1997, the City of Missoula purchased this land as open space, and later, a group of Missoula Northside residents worked to preserve this historic site. Visitors to the Moon Randolph Homestead bear witness to changing human-land relationships over time. They can taste wild American plums that lined a trail traveled by Sélis-Qlispé people. They can experience the remnants of a century's worth of small scale agriculture. Laying hens continue to scratch about the chicken yard. Rare apple varieties continue to ripen in the 130-year-old heritage orchard. Children continue to play in the box elder trees and help with farm chores. As part of Missoula's public open space, visitors can experience and take part in a rare and layered piece of Montana history. Visit during open hours and by appointment.



About the Artist: Anne Yoncha is Associate Professor of Art at Metropolitan State University Denver. She was born and raised in Wilmington, Delaware. After earning her MFA at the University of Montana, she was awarded a Fulbright fellowship at the Natural Resources Institute Finland, working with restorationists to make collaborative art-science work about former peat extraction sites outside Oulu. Her practice combines digital sensing technology, such as bio-data sonification, and analog, traditional processes including painting with ink she makes from locally-sourced plant matter. Her ongoing research with the HAB (High Altitude Bioprospecting) working group began in Fall 2019 at Field_Notes, a residency of Finland's Bio Art Society at Kilpisjärvi Biological Station in subarctic Lapland, where she worked with artists, biologists, and programmers to detect high-altitude microbes using a heli-kite. Outside the studio she can often be found doing another kind of environmental "research" via bicycle.

Artist Statement: Tensioned silk cantilevered over viewers in a gallery demonstrates pressurization within a Ponderosa pine as it pumps water up against the force of gravity. Robotic sails translate changes in wind speed along the trunk of a pine into the gallery. Quilted paintings echo the slow labor of peatland mosses as they manufacture an artificial water table. My practice combines digital sensing technology, such as bio-data sonification, and analog processes including painting with ink I make from locally-sourced plant matter. The materials used in the piece add another layer of data. I make visual and sonic compositions in collaboration with plants and airborne- and soil-dwelling microbes. These visual scores play with the idea of a painting as data to be read or performed, with non-human agents as composers. My studio research combines experimental art and ecological science to explore the mechanics of plant physiology, soil health, and our relationship with microbial life. When public understanding of ecological problems is limited, creative artists have been historically successful in uncovering background narratives, shaping how scientifically declared emergencies are perceived and acted upon.

See more at <https://anneyoncha.com>

