

## **The Listening Year at Big Walnut Creek**

July 2022-June 2023

Field Notes

Initial recording settings on Zoom H6: 48k/16 bit; stereo mic attachment w/ cloth headband and fuzzy windscreen; mic gain @ 7

Recording settings by week 5: 48k/16 bit; stereo mic; fuzzy windscreen; gain @ 8

### Week 1 - Intro

**Recorder:** Eliza

**Date & Time:** Wednesday, July 6, 9:15 am

**Approx Temperature and Humidity:** 82°, 98%

**Water Level:** lowish

**Notes:** very, very humid. Large old sawed-off tree stump exposed in creek that I haven't seen before. Sounds mostly water, birds, insects - a good overview of the site in summer. One fuzzy bumblebee flew up close to mic from blue wildflowers. Truck pulling load on opposite side of creek toward end of recording. Walked creek path more after recording - smelled a deer very close by but did not see it. Rain started as I was leaving the park.

### Week 2

**Recorder:** Eliza (joined by Jeane Pope, Professor of Geosciences and DePauw's Faculty Sustainability Coordinator)

**Date & Time:** Tuesday, July 12, 11:45 am

**Approx Temperature and Humidity:** 83°, 50%

**Water Level:** 1.78 (USGS [Reelsville Station](#))

**Notes:** This water level is probably "base flow" i.e. the water level that comes from groundwater. Water table drains into the creek bed. We are on a point bar - "beach" opposite the cut bank (bank with most erosion) at meander aka a turn. Cut bank = outer edge of the turn. "Active erosion screws up the textbook" - this is not a textbook meander b/c both sides have significant erosion. Cut bank has major exposed tree roots, more energy in the water flow on that side (I know from canoeing!) Jeane shows me different rocks - a granite pebble. Closest granite is 1000 miles away. Likely deposited here by glacial melt. Limestone bits from different sources - far away, has traveled through water = rounded, from close by, less water time = jagged.

Animals today: frogs or toads - tiny, well adapted to the environment. Pebbled texture skin, same color as sand of the point bar. Raises the question I've asked with NMC - what do we not hear? Birds are "overrepresented," but these toads don't make sounds. Do we hear the rocks? In a very indirect way, we hear how they shape the creek bed and the particular sounds of this water in this place.

The flowers I photographed last week on the upper East bank - the location of the bee heard on last week's recording - have been mowed down since last week by trail maintenance. Jeane and I discussed the ethical complexity of this. Safe access for people (physical access, reduce Lyme and poison ivy risk, etc.) vs. habitat degradation.

Best practices for ecologically sound farming are subsidized but not covered in full by the government. Cost share for things like - Access control/fencing, conservation tillage, cover crop, field border/filter strip, forage or biomass planting, heavy use area protection, livestock restriction, nutrient/pest management, soil testing. Big Walnut Creek Watershed Alliance manages this.

### Week 3

**Recorder:** Conner Nicoson

**Date & Time:** Saturday, July 23, 11:45 am

**Approx Temperature and Humidity:** 86°, 44%

**Water Level:** 1.63

**Notes:** From Conner: there was a small branch that fell from a tree across the creek just before 2 minutes. It felt as if it was meant to fall for the recording. I was forced to stop recording on my first attempt cause I got a phone call in the middle of it and if I had not had to take the call I would never have captured the branch falling. The branch fell and I was there to behold and therefore it sounded.

I for most of the recording fixated on leaves falling from the pebble beach on the other side of the creek into the creek. I watched them wash down stream in a way that seemed much more calm than the flow of the water.

Later in the recording I closed my eyes and just listened to the flow of the current. It's sound is somehow consistent and predictable -- musical -- but not rhythmic or with regularity that one could anticipate.

From Eliza: a few cicadas in this recording. High winds.

### Week 4

**Recorder:** Conner Nicoson

**Date & Time:** Saturday, July 30, 11:18 am

**Approx Temperature and Humidity:** 82°, 46%

**Water Level:** 1.64

**Notes:** From Conner: A vulture kept passing back and forth just beyond the tree line. It kept me wondering what it was the vulture had found or was looking for.

There was a massive group of whirligig beetles and water striders to my right just off the bank of the pebble beach. They all danced in the water anytime they were even slightly disturbed creating these chaotic ripples in the creek.

The whole time I recorded 9 or 10 gnats bothered me. At first I found their presence annoying as I would normally but as I grew more still so did they. Maybe they were pleased I had stopped bothering them so they could freely get at the salt in my sweat.

Today the wind was calmer and warmer. This I found much more comforting than last week. I think the cicadas did as well as it seemed they were more active. Around here they seem as persistent as the movement of the water in the creek.

From Eliza: cicadas chorusing more this week.

### Week 5

**Recorder:** Eliza

**Date & Time:** Friday, August 5, 11:45 am

**Approx Temperature and Humidity:** 80°, 62%

**Water Level:** 1.87

**Notes:** first time walking the entire route - from my apartment to the site and back, no car. That's the plan for most of the year - walk from my office at DePauw, which is approx. same distance as apartment. Was comfortable. About 2 hours roundtrip. Happy to spend this amount of time outdoors at least once a week all year.

I talked out most of my observations in the recording, which was perhaps indulgent. I mused on the "silent things" in the environment that Jeane and I talked about and how recording privileges the things that make sound over those that don't. Is that a problem? Walking back, I thought that no, this is not a problem - sight can show us those silent things, but also gives an incomplete picture. The point of this project is to focus on what is heard, as a vital source of information and aesthetic appreciation. **It is ok if the medium conditions our attention.** The goal here is not to scientifically understand the ecosystem but figure out what we can learn and what we can gain from listening to it. I'm comfortable with that answer but the tension remains, though - it's hard not to want to share the visual observations as well as the aural ones.

### Week 6

**Recorder:** Eliza

**Date & Time:** Aug 10, 2022 , 10:30 am

**Approx Temperature and Humidity:** 73°, 92%

**Water Level:** 2.14

**Notes:** Dropped everything to go down to creek this morning so I could record at peak (or close to peak) of flow after yesterday's rain. Worth it! Recorded standing in the water this week. Some sounds of car doors closing at end - a pickup truck on the road on west bank. Getting very

curious to be at site regularly - what does it sound like when...ice? Snow? Major spring floods? When do cicadas end? How are cicadas affected by climate change? Do they come up earlier if it's warmer? Die sooner? Etc....

### Week 7

**Recorder:** Eliza

**Date & Time:** Wednesday, Aug 17, 2022 , 7:30 am

**Approx Temperature and Humidity:** 59°, 90%

**Water Level:** 1.7

**Notes:** Went down early this morning because I couldn't sleep after 3 am. Might as well use the early wake up to go hear the creek at sunrise. Actual sunrise here was 7:03 am; I got down to the creek around 7:25 but the sun hadn't broken the horizon in the park. The site is on a west-facing slope so the functional sunrise time is later than the meteorological sunrise time.

Beautiful time of day to be there. Many layers to the sound in a fairly balanced mix with slow crossfades among layers: birds, water, dogs, train, cars. I think I was there as the birds' dawn chorus was subsiding. Very few or no cicadas - hard to differentiate the bug sounds this morning - but that may just be a time of day thing. Should go later in the day next week to test the cicada situation. As I was leaving a flock of geese flew overhead honking - wish I had caught that on recording. Maybe another time. Signs of season change are upon us - the tired green of late summer leaves, geese, fading cicadas, wearing a sweatshirt to record.

### Week 8

**Recorder:** Eliza

**Date & Time:** August 23, 2022

**Approx Temperature and Humidity:** 73°, 69%

**Water Level:** 1.53

**Notes:** Low creek. Recorded facing creek toward S end of pebble beach. 1 mic thus pointed upstream at opposite bank - expecting hard-panned bird sounds from that direction in recording. Last recording before I move out of Greencastle and this becomes a project that I do when I come to work.

### Week 9

**Recorder:** Eliza

**Date & Time:** September 1, 2022

**Approx Temperature and Humidity:** 82°, 56%

**Water Level:** 1.99

**Notes:** group of kids, two adults and a dog present when I arrived - kids playing in and around the water. I told the adults about the project and asked if they were comfortable with me recording; they said yes. I'll edit the recording to take out names that were audible to protect their privacy. Forgot to take photos because I was focused on being considerate to the other

people present. Recorded upstream into the rapid to avoid as much identifiable human sound as possible - happy to have human sound on record, but don't want people to be able to listen and recognize someone, for the sake of their privacy. Wondering how much detail I have a responsibility to go into, if people sounds might be on recording, about how the recordings will/could be used. Maybe I need to print up a little handout or permission form to have with me just in case.

Otherwise a (I think?) typical day in the late summer environment of the creek. Cicadas fading?

#### Week 10

**Recorder:** Eliza (Chris Wild accompanied and took photos/video)

**Date & Time:** Thursday, September 8, 1:30 pm

**Approx Temperature and Humidity:** 73°, 48%

**Water Level:** 1.5

**Notes:** A very still and peaceful day at the creek. Low water level, cicadas gone now. Lots of crickets and other bug sounds though! Birds were also pretty quiet. It was insect-world this week and I faced the bank to pick that up as foreground. Very consistent sound environment. Just one truck on the road at the end adding human sounds. Will be interesting to contrast this with last week's extremely social creek soundscape.

#### Week 11

**Recorder:** Eliza

**Date & Time:** Thursday, September 15, 3 pm

**Approx Temperature and Humidity:** 80°, 50%

**Water Level:** 1.79

**Notes:** Another pretty "normal" day at the creek. Water and bugs and birds balanced into a texture. Not a lot of season change evident yet. Still feels like summer. This starts to feel routine. I have less to say - just here to listen. No groundbreaking observations. This might be good - I'm letting the site speak for itself, not pre-interpreting. Or, maybe I need new ideas - to reach out to new collaborators and bring folks on the recording trips.

#### Week 12

**Recorder:** Eliza

**Date & Time:** Thursday, Sept. 22, 2 pm

**Approx Temperature and Humidity:** 73°, humidity - not sure

**Water Level:** 1.51 ft

**Notes:** [added Oct 21]: In the weeks leading up to Music of the 21st Century I stopped contributing to this space - just getting the recording made was the goal. My little comments in the beginning of the recordings will have to do!

#### Week 13

**Recorder:** Eliza

**Date & Time:** Thursday, Sept. 29, 4 pm

**Approx Temperature and Humidity:** 66.4°, not sure of humidity

**Water Level:** 1.37 ft

**Notes:**

#### Week 14

**Recorder:** Eliza

**Date & Time:** Thursday, October 6, 10:30 am

**Approx Temperature and Humidity:** 61°, not sure of humidity

**Water Level:** 1.31 ft

**Notes:**

#### Week 15

**Recorder:** Conner

**Date & Time:** Saturday, October 15, 2:50 pm

**Approx Temperature and Humidity:** 57°, not sure humidity

**Water Level:** 1.26 ft (EB note: this is the lowest it has been so far in this project. 1.2 ft is "minimum operating level" - not sure if that is for this gauge station or the creek itself?)

**Notes:** Today was quite pleasant. It felt easy to slip away. To stop observing and just be. The leaves on the ground, fallen from the trees, were strangely still despite how active the wind was today. They remained in place almost as well as the pebbles under them. They were at rest as if at home.

The only distraction from my having slipped away was the occasional car that passed by on the road across from the creek. Every one that passed brought an accompanying cloud of dust that would creep towards me before dying in the creek in front of me.

The trees are more barren than they were before but seem more lively now that they host a myriad of colors. Their trunks while less hidden before remain just as I feel that I remember them.

#### Week 16

**Recorder:** Eliza

**Date & Time:** Friday, October 21, 3:30 pm

**Approx Temperature and Humidity:** 73°, 33%

**Water Level:** 1.82 ft (went up over the last 24 hours - why? Must have rained upstream? It did not rain in Plainfield but I guess it could have rained elsewhere locally. Unless some kind of engineering of the water level is possible?)

**Notes:** Surprised to see the water level so high and am curious where it rained. [added later: it had indeed rained north of us earlier that week]. It is incredibly dry in this area right now so rain is noteworthy, and corresponding rises in water levels.

Many spiders today - they skitter under the leaves. Maybe they are more visible than usual due to the color contrast. Or are there more of them right now? Need to get a handle on bug life cycles over the year in this ecosystem. Cicadas, crickets, spiders, bees, little gnats have made appearances in the sounds or the notes so far. No mosquitos?

This was my first time down there this year where more than 50% of the leaves are off the trees. Leaves were actively falling at a pretty steady rate as I sat there recording. I found myself feeling very sad. It means we are headed for several months of barrenness, in which it is harder to be happy. I am mourning the joy that leaves bring.

There was also a plastic trash bag full of trash in the creek. It was too far out for me to get. It made me angry. An angsty week at the creek....

#### Week 17

**Recorder:** Eliza

**Date & Time:** Thursday, Oct. 27, 2:30 pm

**Approx Temperature and Humidity:** 53°, 60%

**Water Level:** 1.8 ft

**Notes:** Interesting that the Reelsville gauge shows a slightly lower water level than last week! Based on my memory and how the creek looks today, I could have sworn it was higher than last week (and said as much in the audio intro). I must be wrong - perhaps swayed by seeing White Lick Creek in Plainfield rise significantly over the first half of this week. The air is also noticeably less dry, which might contribute to my perception.

Beautiful day at the creek today - a little wind, a few clouds, still some color on the trees and on the ground. The crunchiest, most active time of leaf falling is passed. Most trees are bare - sycamores. Saw at least one oak and maple on the opposite bank and sandbar, respectively, that still have their leaves (mostly green, even). The staggered dropping of leaves is evident.

Auditorily I felt the creek was back to being the main character this week - less leaf noise means relatively more water noise (and relatively more water, at least compared to weeks 12-15). That might contribute to my perception that the water is higher than last week also - it is more present in the soundscape. I noticed it further up the path as I approached the creek than usual.

#### Week 18

**Recorder:** Eliza

**Date & Time:** Thursday Nov 3, 2022, 1:30 pm

**Approx Temperature and Humidity:** 73°, 45%

**Water Level:** 1.54

**Notes:** Gonna have to eat my words about maybe turning the corner on drought...water levels still very low, despite recent rain!

A quiet day at the creek. I was distracted and had limited time - trying to get back to campus in time for a meeting, after a stressful couple of meetings in the morning. Harder to listen closely. Enchanted by the deer tracks however! It looked like multiple deer had gone down the path on the south end of the bend and traversed the stone beach to the water's edge on the north end of the bend by the rapids. The recent rain and wetter ground meant their hoof prints were deep. The tracks looked fresh - not much fallen into them or disturbing them. I liked thinking about this being a space I/we humans share with deer and other animals. **It was like seeing evidence that someone you love has been in your kitchen and feeling affection for them because of the familiar ways they leave things in there.**

#### Week 19

**Recorder:** Eliza

**Date & Time:** Thursday, November 10, 2022, ca. 4:15 pm

**Approx Temperature and Humidity:** 73°, 50%

**Water Level:** 1.54 ft

**Notes:** THE FISH WERE JUMPING!!! A school of little fish - like, 2-3 inch long fish - were hanging out in the deeper bit of the bend between the rapids and the shallow "bridge" between the east bank and the sandbar. I only noticed them because a few of them jumped! The conditions were perfect to see them - almost no wind, sun streaming into the water and casting fish-shadows on the creekbed. I know that a still late afternoon is a good time to catch them jumping (or fish for them).

Also observed the "pond scum" film of brown-green organic matter at the water's edge closely today. It has bubbles attached under the surface of the water - evidence of life processes? Digestion or "breathing" of some kind? Of what organisms? Tempted to send Philips some photos and see what he thinks.

DePauw announced this week that I got the Fisher Fellowship to compose the music for this project next fall, in an entire semester leave from teaching. Excited and scared - excited for the time to do this deeply; scared to have the visibility of up-front promises that need to be kept.

I am starting to have quite a collection of open questions, notes from conversations to follow up on, people I want to involve. A first next step sometime soon will be to sit down and process that info and make a subsequent next-steps list that I can prioritize and act on - probably mostly in the new year.

#### Week 20

**Recorder:** Eliza

**Date & Time:** Thursday Nov. 17, 3 pm

**Approx Temperature and Humidity:** 37°, 52%

**Water Level:** 2.72 ft (there is a weird spike on the gauge readings on Nov. 14 that doesn't look natural - it goes straight up from 1.4 to ca. 2.8. Not sure what happened. Is this accurate?) [1.4 ft - revised number taken from site 12/28]

**Notes:** Beautiful recording day. Went north along the pebble beach a few yards until sheltered behind an outcropping, creek at my feet and bank almost vertical at my back. Little wind noise in the mics but great audio "view" of the rapids and dry grasses across the creek on the sandbar. I'll come back to that spot as long as it's accessible. If the creek goes up much it will disappear.

Thinking about how this spot seemed made for me, for this moment, for my safety, for my revelation. Don't want to anthropomorphize the land and water and whatnot too much but I get on my animist streaks sometimes - hard not to when the land feels so f\*cking *generous* and I feel so f\*cking *grateful* (argh, do my field notes need a language warning now?) What is one to do about the spiritual experiences?

Started having unbidden thoughts about what the structure of the piece could be - no commitments now, just brainstorming! A section for the sounds we don't hear - the microbiology. The people, with a montage of host names. A cut of 10 seconds from each week fading into each other so we get a glimpse of the entire year in a short time. Deep dives into some of the specific stories or moments that emerge. What are the sonic extremes - snow, flood cicadas? A section on those contrasts.

Want to try some different mics in coming weeks.

## Week 21

**Recorder:** Eliza and Conner

**Date & Time:** Tuesday, Nov. 22, 2022, 2:18ish pm

**Approx Temperature and Humidity:** 57°, 30%

**Water Level:** 2.68' [revised # taken from site Dec 28 - 1.36 ft]

**Notes:** [Conner] The ice looks like it's the artifact of other ice. The air is much drier despite it being warmer than the lowest temperatures of recent. The creek felt more still than late. Algae survives still on the bed of the creek. Little bubbles like exhalations rise from them to the surface of the water. A singular sandal lies on the rocks covered in sand and algae implying that it has been there longer than it actually has. It seems to invite skepticism.

## Week 22

**Recorder:** Eliza

**Date & Time:** Tuesday, Nov. 29, 2022, 3 pm

**Approx Temperature and Humidity:** 60°, 72%

**Water Level:** 2.93' [revised # taken from site Dec 28 - 1.62 ft]

**Notes:** While the creek does seem higher than I've ever seen it so far, I'm not sure it's really at almost 3 feet of depth. I'm still suspicious of the big spike on Nov. 14 in the gauge readings. In a way it doesn't matter if it's accurate about the exact depth, but I want to know whether the comparisons to last year's levels are accurate and whether the apparent rise in depth now is really of the magnitude the readings imply after that jump. Going to ask Jeane about that!

More sounds of water and cars this week, fewer sounds of anything else. A distant emergency siren from town. I just missed both a train and rain, which came by as I was packing up. I haven't recorded any rain yet and have not avoided or rescheduled a planned recording session due to weather - it just hasn't yet rained on any of the days and times I planned to go to the creek. I'd like to get some rain sounds eventually and hope I do.

More fresh deer tracks down the path this time. It's becoming a real pattern. I'd love to share the space with them sometime but I doubt they want to do that!

Enjoying the invisibility of saying little on the recording this week, of disappearing into the sounds.

#### Week 23

**Recorder:** Eliza

**Date & Time:** Thursday Dec 8, 3:30 pm

**Approx Temperature and Humidity:** 43°, 89% (light rain/fog)

**Water Level:** 1.49 ft

**Notes:** dotting in three weeks later to say that I again did not really do field notes on weeks 23 and 24. End-of-semester crunch! The recordings will have to speak for themselves.

#### Week 24

**Recorder:** Eliza

**Date & Time:** Friday Dec 16, 11:30 am

**Approx Temperature and Humidity:** 38°, 68% (broken clouds)

**Water Level:** 1.63 ft

**Notes:** see week 23

#### Week 25

**Recorder:** Eliza

**Date & Time:** Thursday Dec 22, 3:30 pm

**Approx Temperature and Humidity:** 40°, 92% ("light rain/fog" but it started freezing while I was out there)

**Water Level:** 1.71 ft

**Notes:** This was a special day of recording. I went in the late afternoon - it was raining and there was a storm forecast for overnight, including a huge temperature drop down into negative

temperatures - like a 50 degree drop in 12 hours. The park gates were closed so I hiked in from the traffic circle before the gates; as far as I could tell nobody else in the park. I probably wasn't supposed to be there. At the top of the creek bank I tested my foot on the path, which looked like pure mud; I started slipping even with one careful step so I did not risk the descent and recorded from the top of the bank. It would have been possible to get down other ways but my sister was waiting for me in town, the park was deserted, and my parents were flying in that night so I decided it was not the day to take extra time getting down carefully or risk injury by rushing down in the mud. I leaned against a tree for shelter from the wind and rain and hovered over the recorder so it would stay as dry as possible. While I was recording the precipitation changed from rain to freezing rain, and the sound changed to my ear. I am eager to hear how that change did or did not show up on the recording.

#### Week 26 (halfway!)

**Recorder:** Eliza

**Date & Time:** Thursday Dec 29, 2022, 11:30 am

**Approx Temperature and Humidity:** 51°, 88%

**Water Level:** 1.47 ft

**Notes:** a fairly thick (max 1-2 inches) ice shelf left on the edges of the stream, both banks. It was strong enough for me to step onto the thickest part and stay there to record. The path down to the creekbed was quite muddy again but I found an alternate route. I was less pressed for time this week so I could explore options for climbing down more thoroughly. The path I chose wasn't really a path but a ditch carved out by water, with many exposed roots for handholds or foot anchors and leaves covering the worst of the mud.

The action of the water under the ice was beautiful, sonically and visually. That was the primary recording subject and story of this week.

We are halfway through the listening year. It is really a coincidence that this corresponds with the new calendar year but makes it feel more significant, perhaps. I do plan to spend time next week taking stock of the project and formulating next steps, in a half-way-check-in and new-year-check-in kind of way.

#### Week 27

**Recorder:** Eliza

**Date & Time:** Tuesday, Jan 3, 10:45 am

**Approx Temperature and Humidity:** 63°, 87%, cloudy

**Water Level:** 3.49' (ok this really is the highest I've seen)

**Notes:** It was unseasonably warm (T-shirt weather in January!) and very exciting to see the creek running so high and fast. I was right that it was still rising - the level peaked at the Reelsville station at 4.13 ft around 11 pm this day. There was more birdcall activity, both on the recording and during my hike down to the creek, than there has been in weeks - including a

Canada goose on the hike down, as well as a prominent bird on the recording that I don't recognize. Is it because of the weather? This is a question to follow up on.

The train sounds are louder from the upper bank of the creek. I am not sure of their directionality - exactly where they are coming from when I can hear them down there - but being below the lip of the bank must put the bank in between my ears and the sound source. It appears to be a significant muffler.

I got curious about how this year's creek levels compare to past years and set the Reelsville station data page to show me 10 years of data. There is an overall decline in the water levels over those 10 years, with the troughs and peaks of the yearly cycle all getting lower over time. This year, the levels are the lowest, and low for the longest time, of any year in the past 10. I wonder if this should be concerning. Does one station's trend indicate a trend for the creek overall? Or could the local creekbed topography be changing around that station such that the water levels in that specific place decline but not elsewhere? If the water levels in this creek decline, is that a problem? If this creek dried up, would that be bad? Obviously it would be bad for certain populations of certain species but would it be globally bad for humans, or indicative of larger ecological changes that should worry us? More questions to pursue...

## Week 28

**Recorder:** Eliza, joined by Dana Dudle

**Date & Time:** Jan 13, 3 pm

**Approx Temperature and Humidity:** 33°, 76%

**Water Level:** 3.29 ft

**Notes:** According to the gauge reading at Reelsville, the creek is lower than it was last week. But visually it looked fuller to me this week. The gauge isn't at my site. I am quite convinced that I was seeing a fuller creek at my site. But I guess I can't really know! I was down on the pebble beach this week so I had a different perspective than last week. Apples and oranges.

Dana came on the recording trip today! We talked about (among other things) trees and leaf litter and various aspects of plant life cycles over the year in the park. Leaf litter peaks in November, which I think is consistent with my recordings and when the most dramatic dry leaf sounds were happening. A previous Nature Park researcher found that there was less leaf litter in the parts of the park they studied than other comparable forests. Why not clear - do trees produce less, for example? When leaf litter is slow to decompose it is called "recalcitrant," which I love. "**Recalcitrant litter.**" The brush, stems and dead plants, will decompose. It is still standing tall - lots of dried up sturdy stalks still on the banks of the creek - and it is hard to imagine that it will all be gone (or at least no longer visible and upright in the landscape) by the time the plants are at peak green again next summer. April is the best time for plants - the flowers are out. Dana will come with me again then I hope!

I walked around while recording today to get closeups of the water along the whole bend of the creek. There will be some walking and handling noise and some clipping from wind when it

caught the recorder at the wrong angle. But I think the chaos is worth taking the trip along the bank this week because the sound changes so much from the rapids to the wider, deeper section at the south end of the bend.

### Week 29

**Recorder:** Eliza

**Date & Time:** Wednesday Jan 18, ca 1:30 pm

**Approx Temperature and Humidity:** 37°, 84%, cloudy, very light rain

**Water Level:** 2.41 ft

**Notes:** Teagan and Leo came today and recorded a bit with the 360° recording device. I'm very interested to hear what that captured and how it is different from my stereo recorder. Leo, listening with the 360, noticed how different the environment sounds at different levels of height ground level vs. head level. Teagan got close to the water's edge with the 360 and without, and noticed the "loudness" of the water sounds made at the shallowest edge of the creek today. So the theme of listening this week was about layers and levels - foreground vs. background and how that changes depending on the height orientation of your ears. I ended up recording crouched low next to the water's edge to get those watery edge sounds within the larger environment. The specific water level today meant that the creek edge was shallow for a good distance from water's edge into the creek span, and that shallow depth of water was traveling quickly over pebbles of varying sizes (1-3 inches in diameter), like a miniature-scale rapids. At deeper or more shallow depths, or less quickly-moving iterations of the creek, those sounds don't occur - the terrain doesn't produce them or the water speed isn't enough to make them audible. The fact that the creek is lower and less roaring than the past few weeks also meant that the birds and other elements of the environment (deeper sounds and other layers of the deeper parts of the creek included) were audible despite my closeness to the water. I'm curious to compare those water's edge sounds to the sounds on the ice day, when I was also right on the edge of the water, and to hear the 360 recorder's version of the same location and circumstances.

Is the Birkenstock growing algae? Inquiring minds want to know.

### Week 30

**Recorder:** Eliza

**Date & Time:** Jan 25, 2023, 2:45 pm

**Approx Temperature and Humidity:** 35°, 89%, cloudy with snow on ground

**Water Level:** estimated 2.9 ft. (there is a gap in the data - probably due to snow/ice on the gauge. I am estimating based on the last/first available data points on either side of the time I was there.)

**Notes:** snowshoed from parking lot to creek site. I was very excited about snowshoeing. Was it strictly necessary? No, boots would have sufficed; there was only about 2' of slushy snow. But the snowshoes probably kept my feet from being totally soaked, and their spikes made it

possible to get safely down the steep path to the creek bed to record, so I think they were an asset.

As I said in the recording I am curious to compare this recording against others to see what if any impact the snow has on the quality of sounds. The water seems like itself - rushing gaily as usual after some precipitation - but what about other sounds? There weren't many other sounds. Are the birds quieter due to snow? Muffled by snow? What am I not hearing that I otherwise would?

Seek out research on acoustic impacts of snow.

### Week 31

**Recorder:** Eliza

**Date & Time:** Feb 3, 2023, 4 pm

**Approx Temperature and Humidity:** 20°, 41%

**Water Level:** 2.58 ft

**Notes:** Cold and sunny day. The ground is frozen and small amounts of snow and ice remain on many surfaces. Ice formations lace the edges of the creek. The water level has fallen since ice began to form, leaving intricate water-lapped formations above the current waterline. Depending on the topography of the creek bed the ice formations differ. Steep-banked areas form different ice shapes than gradually-sloped ones as the water recedes. I recorded holding the mics above a little pool that sometimes forms in a dip in the gravel beach when the water levels are right for it (somewhere in the 2.5 ft vicinity). There was a skim of highly irregular ice around the edges of the pool (or puddle, really) - pitted and cracked and unstable. Sheets of it were floating in the pool. I hoped it would make sounds, given its apparent structural fragility and the fact that water from the pool was lapping at it - an implement playing the ice. It delivered.

### Week 32

**Recorder:** Eliza

**Date & Time:** Thursday Feb 9, 3:45 pm

**Approx Temperature and Humidity:** 41°, 82%, very windy

**Water Level:** 4.73 ft

**Notes:** Very very windy! Chaos reigns in mic levels-land. Little bit of clipping despite my best efforts. It's one of those things where I'm recording the conditions, though - not just trying to get the sounds of nature in a pristine way.

The creek was, inarguably, the highest I have seen it in this project. For real this time. [It crested at 5.38 ft later in the night. I wish I had seen it then.] I thought it might be since it had rained all night the previous night, heavily at times. The pebble beach was entirely underwater. I could have walked down the paths to be close to the water, but they were pure mud and there wouldn't have been a clear and dry place to stand/set up the recorder. So I stayed on top of the creek bank and moved slowly around the base of a tree to find the angle with the most wind

protection from the trunk. Recording still clipped. Interesting that the water has less sound when it's that deep - no rocks to interrupt its surface flow, so the surface was more smooth and less noisy, though cloudy and fast-moving (not an inviting swim...)

### Week 33

**Recorder:** Eliza

**Date & Time:** Feb. 18, 10:30 am

**Approx Temperature and Humidity:** 31°, 55%

**Water Level:** 3.05'

**Notes:** sparkly, sunny, burbly day at the creek. Mostly water sounds. Water level down enough to expose a bit of the pebble beach. The ground was frozen but had clearly recently been mud - there were deep, crisp tracks on the beach. They appeared to be from deer, human, and paws that I assume belonged to a big dog (they looked entwined with the human footprints in ways that suggested that to me) but I'm not sure. There was evidence of deer using a different path down to the beach - not the one I usually walk down where I have seen deer tracks before. They appeared to have gone down a steeper part of the bank where I don't think there was a path before - did they make it?

### Week 34

**Recorder:** Eliza

**Date & Time:** Feb 23, 2023

**Approx Temperature and Humidity:** 50°, 56%

**Water Level:** 3.04 ft

**Notes:** sunny, spring-like day. Too spring-like for February? Green things poking up amid the grey and brown organic litter. Lots of students in the Park - runners, walkers. Using the midside mic attachment this week - it does do better in wind and it's a windy day. I like the sound of it - it's more surround-y and picks up my voice better - why did I decide the xy was better earlier in the year? I can't remember. Maybe I wanted to focus on certain sounds up close (the directionality of the xy allows for that). I remember wanting to hear where the creek was in the audio field, to hear the layout of the site and what direction I'm facing relative to the creek - I think the xy recordings locate sounds more specifically on the left to right axis, so they help with that. But the midside is more immersive. And better for the vocal audio if you're holding the recorder and the mic isn't pointing at your face.

### Week 35

**Recorder:** Eliza

**Date & Time:** Friday, March 3, ca. 4:15 pm (the courthouse clock has struck 4 in my first attempt recording up on the road to the Nature Park)

**Approx Temperature and Humidity:** 44°, lord if it was not 100% humidity I don't know what it was

**Water Level:** 6.13 ft (it crested just below 12 ft around 6 am the next day)

**Notes:** OKAY! This was a wild day. Flood watch, wind advisory; had been raining hard since the night before and predicted to keep raining for several more hours. Standing water all over town in low-lying areas, and you could literally see the runoff coursing down any sloped surface toward the creek valley. I drove down to the park but the road was blocked by a downed tree! I got out of the car and tried to move the tree but it was still attached to its trunk and wedged among other trunks, so I would have needed superhuman strength to budge it. I didn't want to leave my car on the road where it might get hit by other falling branches/trees (there were a lot down), and didn't want to subject the gear to a long hike in from the road, even with the waterproof backpack, case, etc - it was just that wet that it felt like everything could soak through. I also didn't want to get soaked through myself - hypothermia at 44 degrees is definitely a possibility. So what to do? First I recorded for 5 minutes in my car. That felt disappointing. I got out when the rain had a lull and recorded a creek tributary that was rushing on the south side of the road. That was also disappointing but I was prepared to accept it. Then I decided to drive to a bridge over the creek so I could at least see the water level...and remembered that there is A ROAD on the other side of the creek at the spot where I record that I could just...drive to. Facepalm. So, I recorded the "real" version of today's recording from the road on the opposite bank from normal. Mid-side mic attachment, windscreen, shielding the recorder with my body (the backs of my legs got so wet and the back of my nominally waterproof coat soaked through). I think it only clipped once or twice, haha. The gusts were strong - I had to adjust my body to not be pushed off balance by the wind. I swear I saw the creek levels rise in the ca. 15 minute time frame I was there. It looked like it could flood the road imminently. Wish I could have been there to see the peak of the water level this morning - just under official flood stage by a few inches!

The conditions were perhaps distracting me from the sounds - but it was a complete sensory package. Lashing rain (I understand "lashing" as an adjective with rain now more than ever before; it actually hurt!), buffeting wind, the low roar of a full creek, the power of the water evident in its ability to shuttle large debris swiftly downstream. Curious to hear the recording and hear the sound environment divorced from the rest of the experience.

### Week 36

**Recorder:** Eliza

**Date & Time:** March 10, 2023, 4:15 pm

**Approx Temperature and Humidity:** 38°, 77%

**Water Level:** 3.46'

**Notes:** creek banks totally reconfigured by last week's flood. My usual path washed to a clean rippled slope. Water looked blue, more blue than usual, big contrast to last week's muddy brown. A fresh landscape.

Mud underfoot - the beach sandy, the sand waterlogged; water table rising for spring. I stood on litter, last fall's grasses, for purchase. I turned my body to shield the recorder from wind, keeping feet planted, with the grass.

### Week 37

**Recorder:** Eliza

**Date & Time:** Friday, March 17, 2023, 2:45 pm

**Approx Temperature and Humidity:** 35°, 70%, overcast

**Water Level:** 3.11 ft

**Notes:** creek beautiful - stone blue-green, very active rapids. Was able to creep north past the rapids to a wind-protected spot. Recorded on a throne of grass spilling over a knee-high knoll of land just above the creek; feet resting at water level; creek bank at my back. Like my body was made for the land. Water the most present sound; also wind but not overwhelmingly. Good to have the rapids in my ears for five minutes; brain-cleaning beyond the amount it feels it should be able to do in such a short time.

Still no evidence of other human footprints down there since the flood. Deer and other paws, though.

### Week 38

**Recorder:** Eliza

**Date & Time:** Friday, March 24, ca. 4 pm

**Approx Temperature and Humidity:** 47°, 93%

**Water Level:** 8.5'

**Notes:** at the creek in between stints of rain, at the peak of the water level crest after stint 1. [Water level peaked around 10 feet the next day after stint 2.] There were flocks of birds chattering loudly, seemingly agitated? I haven't heard birds like that in months. The birds are the aural headline of the week - as we now know, high water levels are visually impressive but aurally fairly quiet. Perhaps part of the source of their awe - their power is mighty but they are relatively quiet about it.

Spoke longer than usual in the intro to the recording processing some thoughts about how the creek and its every-changing nature is related to transness - too angry about anti-trans legislation being proposed in Indiana to not talk about it. The creek is part of the political entity that is the state of Indiana, after all...I'm sure that children who will be affected by these bills, should they pass, have visited this very spot...

### Week 39

**Recorder:** Eliza, Elissa, Cher, Elena, Cam

**Date & Time:** Monday, March 27, 2:30 pm

**Approx Temperature and Humidity:** 43°, 80%

**Water Level:** 6.33 ft

**Notes:** recorded with a lovely group consisting of two DePauw music alums, one current student, and a colleague. Water level was above the beach so we recorded from the upper bank. Mostly water sounds, and a janky truck. So nice to be out here with this group of people, and catch up with alums, who have been following the project on Instagram/SoundCloud.

## Week 40

**Recorder:** Eliza and Dana

**Date & Time:** April 7, 2023, 3:30 pm

**Approx Temperature and Humidity:** 57°, 35%

**Water Level:** 4.16 ft

**Notes:** beautiful day! Spring suddenly is here, the floor is green and flowers are flowering. Floor, shrubs, trees is the order in which things go green. Went with Dana Dudle - she showed me many plants! We talked about dioecious and monoecious plants and other models for plant reproduction (moss is v cool this way). Floor, shrubs, trees is the order in which things go green - shrubs coming next! Trees will have an "addition" of leaves just as they had a subtraction in the fall - different species at different times.

### Notes taken on phone while looking at plants:

Common Chickweed

Garlic mustard

Little weeds on path area

Spiderwort

Bedstraw- sticks to you

Spring beauty

Goldenrod

Autumn olive

Greenbriar

Sycamores will get leaves last out of the trees

Mayapples - clonals connected underground

Moss - haploid - one set of chromosomes. Sporangium - diploid, makes spores

Box elder? - kind of maple, is a flood plain tree

Phlox

Virginia bluebell - trans plant, pink bud blue flower

Squirrel corn

False rue anemones

Cleistogamous

Trillium

Buckeye tree

Bloodroot

Bell flower

Wild ginger

Buttercup - the bad kind

Trout lillies (Dana was so so happy to see them they don't flower every year)

## Week 41

**Recorder:** Eliza

**Date & Time:** Thursday, April 13, 2023, 5 pm

**Approx Temperature and Humidity:** 78°, 26%

**Water Level:** 2.96 ft

**Notes:** Warmest recording day of spring so far - felt like one could get a sunburn. Trees are just getting buds/flowers; the haze of green is up to their tops now. I wonder when the canopy will fill in - when it will seem like we have cycled back around to where the site was at the beginning of last year. But it will be changed of course - by erosion and floods and other factors.

Sitting in my north-side protected spot, with a grassy step right above the waterline that is a nice natural bench. Canada goose in the water but did not make sound. One car passed on recording. Mostly familiar creek sounds.

#### Week 42

**Recorder:** Eliza

**Date & Time:** Friday April 21, 3:15 pm

**Approx Temperature and Humidity:** 55°, 63%

**Water Level:** 2.85'

**Notes:** low wind day. Lots of sounds - water, birds - a kind of "normal" spring/summer afternoon level of birds now - Canada geese on record for the first time I think?, propeller plane, SUV on road across the creek. Had to record on phone because recorder battery was dead, argh! More human objects down there this time - deteriorated green army truck toy with no wheels, a beach towel left on the pebbles. It was very hot earlier this week - looks like someone "went to the beach" such as it is, and forgot their towel...it was clear it had rained the previous 24 hours; the sand was smoothed down and pocked - like it had melted and reformed into a lumpy mass rather than the angular, erosion-carved cliffs of previous weeks. I see how the sandbar ends up looking like a smooth hump by mid-summer...

#### Week 43

**Recorder:** Eliza

**Date & Time:** April 28, Friday, 3 pm start from parking lot :)

**Approx Temperature and Humidity:** 55°, 70%

**Water Level:** 2.36 ft

**Notes:** Art Walk recording! Three students and five faculty members joined the recording trip. I had a planned set of listening stops introducing various kinds of listening activities and questions, then we got to the creek and I recorded while folks listened and in some cases explored around the site. Very interesting experience! Love taking a group down. Discussions included - different meanings of same sound depending on your life experience (fireworks reading as "guns, bad" vs "fun times"), cows in the field across the creek!, listening including awareness of one's own inner voice sometimes distracting, animals are listening to us too, how the landmasses are shaping our perception of the sounds, were birds actually reacting to the cars on the road or did we add that narrative to the sounds? Forgot to take photos at site but got people photos in parking lot at end.

## Week 44

**Recorder:** Eliza

**Date & Time:** Friday, May 5, 2023, 3 pm

**Approx Temperature and Humidity:** 74°, 36%, clear sky, very gentle breeze

**Water Level:** 2.44 ft

**Notes:** A truly beautiful day. It feels like we are wrapping back around to the state the site was in when I started this. In some ways, at least - some trees have leafed out, so filling out the leaf canopy gets us closer. There will be more bugs yet, I think; more vegetation and growth. I'm curious what the water level will do at this point - it started out around 1.7 ft (started recording this in week 2). We're at 2.44 now - a significant difference. Will it go back down?

I ran into Cam on the walk down - he had just been at the creek collecting fossils, which I didn't know he does and is apparently quite knowledgeable about! He showed me several - a coral was particularly striking. He talked about how this was a limestone quarry, which means it was formed under an ocean millions of years ago. Most of the fossils one finds are of under-sea life. It was like **the timeline in my brain of the site went "woosh" and expanded by millions of years in just a moment.** He also showed me a pink rock - calcite? And talked about its angled cleavage faces and how to test that it's really calcite. He had found the door of a washing machine in the creek - and I remembered Jeff Dunn telling us there was a washing machine somewhere in the water near the bend that he had to be aware of when his kids swim there, a random utterance that stuck in my mind for some reason and I always wonder about when I'm down there. Apparently it is real! The whole thing was a great serendipitous moment that opened a whole new door of things to look into, and truly a moment of learning from a student, which is always great.

## Week 45

**Recorder:** Eliza, Conner

**Date & Time:** Thurs, May 11, 3:45 pm

**Approx Temperature and Humidity:** 77°, 39%

**Water Level:** ca. 2.82 ft (equipment malfunction at gauge starting May 10; first available reading is 4:30 pm on May 11)

**Notes:** recorded at extreme south end of pebble beach today, in soft sand/mud recently exposed by receding water. Different creek sounds in that direction, away from rapids. It was hot - standing in the sun felt like not a great idea but we did it anyway. Very deadly spider web sighting.

## Week 46

**Recorder:** Eliza, Levi, Elise, ran into Cam

**Date & Time:** Weds, May 17, 1:30 pm

**Approx Temperature and Humidity:** 70°, 45%

**Water Level:** 2.48 ft

**Notes:** Absolutely beautiful day. Sun, a few patchy clouds. Perfectly comfortable temperature. Levi and Elise came along - met in GCPA and drove down together. A break from finals week for all. Ran into Cam who was fossil hunting in the creek; the sounds of him panning and wading are featured in this week's recording. We noted the directionality of rapids in our field of hearing vs the ambience of the birds. Lots of little frogs (or toads)? hopping around. Sycamores are starting to leaf out.

#### Week 47

**Recorder:** Eliza and Dana

**Date & Time:** Friday May 26, 2023 2:30 pm

**Approx Temperature and Humidity:** 73%, 30%

**Water Level:** 1.91 ft

**Notes:** Beautiful day. Not too hot, not humid. Sunny. Trees mostly leafed out - sycamore leaves out but still not all full sized. Dana told me about hypotheses for why young leaves are often reddish (the red is a chemical that protects from light damage- too much light causes photosynthesis to go into overdrive and electrons go nuts in the plant cells. Membranes are not fully formed yet in young leaves so they are more prone to damage and need more protection hence redness.) Recorded by small lagoon that has formed in creek just south of rapids where animals clearly go to drink (deer, dog, raccoon tracks I think). I'm exhausted and don't have much to say! Oh, there was a bike. It was quiet but audible on the other side of the creek (on road) toward the end of recording. Thinking about how auditorily bikes also have smaller footprint than cars, like carbon footprint.

#### Week 48

**Recorder:** Eliza

**Date & Time:** Saturday, June 3, 2023, 10:45 am

**Approx Temperature and Humidity:** 82°, 42%

**Water Level:** 1.71 ft

**Notes:** The last time the water level was this low was December. A beautiful day but hot! Very loud bird soloists that I want to identify, including multiple calls from the same birds. Shooting range gunfire sounds echoing off the far hills. A very musical day. This whole day's recording could be a movement, translating sounds into instruments would be easy - birds and gunshots; cello, pitched perc, and drums. An errant fly! Was exciting. Saariaho died yesterday or her death was announced yesterday and I am hearing resonances of her work in these sounds. Including the gunfire - not so much the sounds of her opera *Innocence*, but its subject.

#### Week 49

**Recorder:** Eliza

**Date & Time:** June 8, 2023, 4 pm

**Approx Temperature and Humidity:** 75°, 29%

**Water Level:** 1.6 ft

**Notes:** Gorgeous pitchy sounds from the creek at the lower end of the sandbar, below the rapids. Intersection of water level and creek bottom topography/rocks created opportunities for water to move in ways that produce pitch. Almost like a mbira or dobro - twangy melody, where pitches have a core but move at their beginning or end. Also - motorcycle, crows, wind in trees - the uszh. Beautiful day overall - not too hot or cold, sunny, low wind, low humidity. Air quality alerts this week due to Canadian wildfires - New York city and state are in bad shape but it's ok here - AQI in 50s-80s here today, not awful. Yesterday it got over 150 for a bit and my eyes and throat noticed it.

#### Week 50

**Recorder:** Eliza

**Date & Time:** Friday, June 16

**Approx Temperature and Humidity:** 63°, 69%

**Water Level:** 1.58 ft

**Notes:** low wind, low water. Birds of many kinds calling. Cloudy and cool. Banks are very green and overgrown now; sycamore leaves fully grown. All leafing out complete. Some small swoopy birds (swallows? Too small I think) were swooping up and down the open creek surface. One came close enough to me that I could hear its wings - hope it was picked up on recording! Green, straight line of plants at former waterline a few feet above - must have been some recent point at which seeds or other germinating material for that plant were deposited by the water.

#### Week 51

**Recorder:** Will, with a Zoom H4N Pro

**Date & Time:** Friday, June 23 morning

**Approx Temperature and Humidity:** 75°, 60%

**Water Level:** 1.43 ft

**Notes:**

#### Week 52

**Recorder:** Will, with a Zoom H4N Pro

**Date & Time:** Friday, June 30 morning

**Approx Temperature and Humidity:** 77°, 79%

**Water Level:** 1.48 ft

**Notes:** Will recorded the night after a big storm - photos include downed trees. I think this was the storm that took power out for a large portion of the Greencastle area. The Reelsville gauge looks to have a big spike the next day - not sure if that's a delay in the rainfall of the previous day reading on the gauges, or if more rain fell after that.