

Summer at KBS

2019

Created by students, faculty,
staff, and postdoctoral research associates at the
W.K. Kellogg Biological Station, and
this summer's farmer and writer-in-residence
at the KBS LTER, or
Long-term Ecological Research project

2019

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W.K. Kellogg Biological Station is more than a place to make art
(though, it is a wonderful place to do so).

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Contents

Foreward	4
Acknowledgments	5
Dedication	6
Untitled	7
Black, brown, red and orange	8
Untitled	10
Familiar perch	11
Poplar destinations	12
Still advancement	14
California girl	16
Agricultural haiku	17
Scaffold	18
Untitled	19
Farm trail	20
Peace watching wheat	22
Art and science	23
Untitled	24
found	25
Tomatoes & peaches	26
An ode to the soil's soul	28
Squareland Mysteries: an excerpt	31

Foreward

In mid-May, just a few weeks into my time at KBS, I took a walk with Erin Schneider, the KBS LTER's first-ever farmer and writer-in-residence. The shine of arriving to work each day at such a beautiful place hadn't yet worn off (does it ever?), and so it seemed perfectly understandable, obvious even, that an artist might come here to draw inspiration.

Later that week I sat in Erin's workshop, enthralled as I listened to scientists, students and staff share their writings. Poets and other creatives were everywhere at KBS, hiding in plain sight! The experience only added to the allure of this place for me and was the inspiration for this project.

To all who devoted creative energy to this book—thank you. I'm grateful for Grace Beltowski, our external communications intern, and her expertise in publishing. And many thanks to Erin Schneider and Julie Doll for helping to create a space where art and science could converge.

Cara Barnes
KBS Communications Coordinator

Acknowledgements

This little book is a big reminder that the universe is held together by allurement. The power of attraction, what draws us in at this moment furthers our creativity, connections to each other and the land.

I remain forever grateful to Michigan State University's W.K. Kellogg Biological Station research community, the staff, the students, and the generative hospitality of the land. Special thanks to Cara Barnes for her efforts in collating this collection and for extending the invitation to participate.

May you enjoy the poetry, sketches, and reflections that emerged from our shared summer of allurement.

Erin Schneider

KBS LTER Farmer/Writer in Residence

2019

Dedication

To nature,
art,
science,
analysis,
contemplation,
and the quiet corners
where they meet.

Untitled



— Liz Schultheis

Black, brown, red and orange

I see you,
unveiling your colors.
You explicitly tell me what you are made of.
But, I sit and wonder,
Can others see what I am seeing?

Black, brown, red and orange.

Can they see you?
Can they see what lies within your palette of colors?
The beauty inside each mineral's soul grants you many tones.
What if I tell them that the darker your black tone,
the richer you are (i.e., highly fertile)?
Red and orange tell us the presence of iron, manganese,
among other minerals.
Can they see that at a microscale, a great dance of anions and
cations takes place?
They dance, and take turns to jump around your clays.

Black, brown, red and orange.

Water up, water down, shaping and flushing your colors.

Piling up or running down.

Can they see the beauty inside you?

Infinite nonsense to call you dirt when you hold a minute
universe still not well understood.

Black, brown, red and orange.

For me, you are nature's soul,

for ancient cultures you are a mother (i.e., Pachamama),

for others, you are our soil.

Black, brown, red and orange.

— S. Carolina Córdova

Untitled

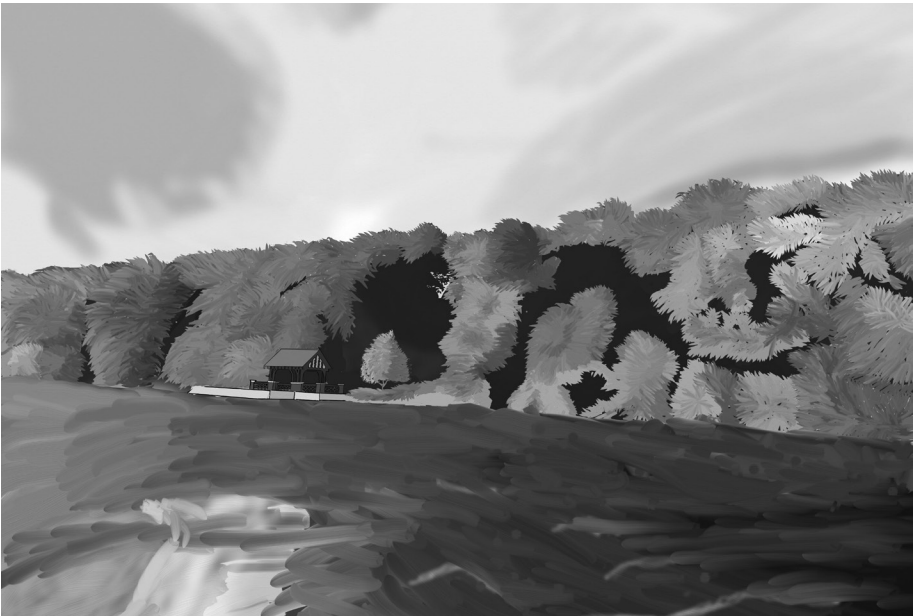
Rose and daisy,
meadowsweet and ginger,
these are the fruits of the labor
of a well-tended garden,
perhaps left free
to imagine
just a little
(perhaps more),
or spark some curiosity
in its frequent, well-timed visitors.
Shoots of green sprout up,
bursting through rich, loamy Mother Earth,
flowering bright yellow

— Akshata Rudrapatna

Familiar perch

Sitting in the Beech tree alongside the river,
as I had Freshman year.
Though I have learned much since then,
I always had the right idea when I sat here.

— Tom Charney



Poplar destinations

Isn't it funny
When suddenly
after a decade of vigor and climb
You were razed overnight.

I didn't raise you
Though I remember planting you, a slender whip,
with a rooted tuck
A gentle press and off you went
All spindly, chalk-white, and nodal
And when you leafed out to scintillate silver,
alchemize the sun
I stood winded, sighed
the sapling years were through

Before I knew you surpassed 5'10"
explored new heights underground,
ran amok with neighbors.

Roots groping, branching out, testing boundaries,
Leaves settling for sun allotment

Trunk sequentially spaced
and turgidity in check.

Wonder and Movement came naturally to you.

I knew resisting change causes the past
to present memories
on quaking platters.
I take to analyzing the remains;
Age is a number
Gravity a wave
Tree breath a miracle
Attractions sometimes strange.

I love these poplars and this world!
Ten years ago, such a proclamation would've
upset control, emancipate research.

But now, appreciation for decays' arrival,
And transformed research,
I reach for a fine sip of soil
As timbre goes underground.
Sporulating nightcaps of mushrooms
reclaim stumps and pollards
And everywhere I look, fuel for renew.

— Erin Schneider

Still advancement

In the dark, feet dangle before landing below.
On the same spot as the previous morn,
And its predecessor as well.

Programmed to trudge a path predestined.
Determined, ironically, by the contents
of once-automated shoes.
Until their return.

A damning fluorescent light casts a shadow of pacing feet,
As they switch between worries.
Five paces are advanced, but a new problem is found,
Before pivoting, and returning to the last.

The intent being to ease the mind of worry.
But no displacement is accomplished, no escape found.
Thus, there isn't a point.

And just when the feet were running,
The treadmill was shut off.

And so, the feet were stilled.
For four hours.
And movement was achieved.

Walking now beside those in collaboration,
not competition.
With hope,
With excitement,
With intent.

— Brandon D'Souza

California girl

Californian girl—
Why'd you go to Michigan?
Don't you know it's flat?

Cali girl, my gosh,
You're having so much fun there!
Can you believe it?

Oh, California,
I'll be back in a few weeks
Heart in Michigan

— Meghan Jeffus

Agricultural haiku

Unripened leaping,
An acre, sunny farm plant,
Whilst watching the field

~ ~ ~

Never-ending rain
Get the damn corn in the ground
Ethanol price up

~ ~ ~

Warming summertime
A hybrid, rich corn
Growing because of the soil

— Kevin Kahmark

Scaffold

“It seems wet this year.”

But the data do not agree.

Is the system failing or are we misled?

and is there a way to know.

A million ways to measure wetness

Muddy boots, gushing gutters, counting each drop in the air.

Without a system there is no science.

There is no scaffold.

Then what prevails?

Whims, intuition.

Then agendas, manipulation, misinformation.

A single interest.

We cling to the scaffold til our knuckles are white.

We can't risk the consequences of letting go.

But what do we lose?

The feeling of the sun after months of clouds.

Stories. And experience.

An imperfect tunnel. Parts crumbling.

Can we stand on it but also float, and transcend,

to new material

— Sarah Evans

Untitled

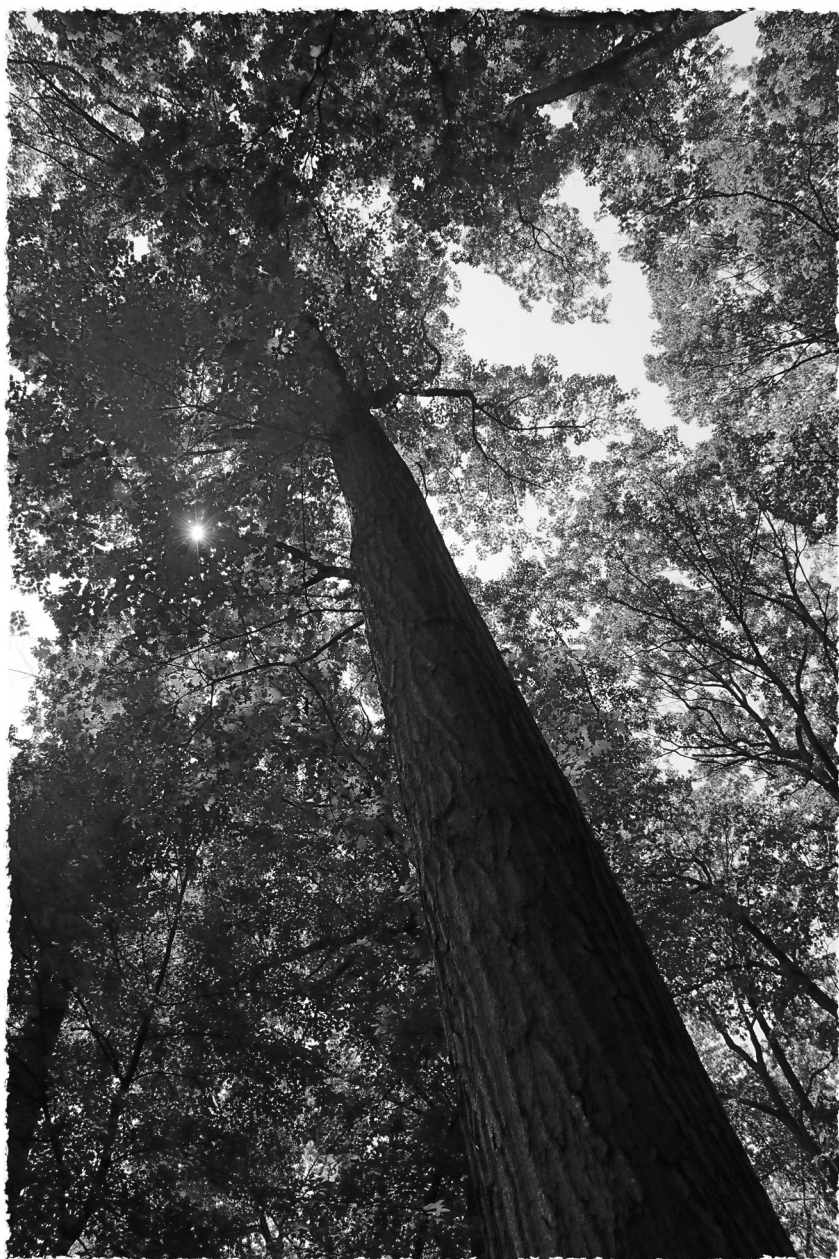


— Stephanie Clark

Farm trail

Boots pause on tree roots
Dwarfed by a canopy
Grosbeaks, turtles and mason bees
Far outnumber me.
And it's a comfort,
Like huddling at the base of a reaching oak
Limbs and leaves outstretched
Giving dappled shelter.

— Cara Barnes



Peace watching wheat

Green tractors

and

Green pastures

—Joe Simmons

Art and science

New
Reinvent
Plump, pregnant with purpose
Emergent, but already here
Roots with energy and secrets
Pulling together
Leaving so fast
Finally a breath: a moment
Time to evolve
Wonder
Same people, new layers. All of us.

Data to dancing.
Figures to fawns.
Professional to prose.
Plans to pondering.
Units to universe.
Emergent. Not going back.

—Julie Doll

Untitled



— Corinn Rutkoski

found

cellular spheres organized compact
leaves twist and twine in complimentary layers
dichotomous textures - pinnation combing
between glabrous stalk
scales of aesthetic, functional, vital being at interplay
simultaneous symphony, each visible only at unique distance

yet sonic, too
audible textures mirroring visible
linear tones interwoven with the curled heightened note -
a whistle, a snap, a whispered brush, a flutter, a rustle -
scaled similarly
and perceptible only at the sacrifice of the foremost thought

— Corinn Rutkoski

Tomatoes & peaches

Whenever I am in nature,
My heart sends my mind to my grandmother
All the mornings spent reading with her,
and the days spent gathering dandelion greens
Watering the herb beds and the bliss
that the smell of basil brought
The nights spent canning tomatoes or peaches
in the basement kitchen
Playing cards and watching black and white movies

Learning about love and connectedness
and what it means to feel happy
How I'm connected to her
How we're all connected to one another
And how we're connected to everything we see

How can you repay someone who gave you the kindest gift?
A gift that fills your days with joy and wonder
No matter the simultaneous sadness
How do you repay someone who is now gone?

My belief is that I can honor her by cherishing my time
Finding what brings happiness and reflecting
on the meaning of connection
To search for paths that bring me back to how it felt
to walk through her garden

Wherever that peace exists for you,
I hope you find it and are able to visit often

— Leah Fabian

An ode to the soil's soul

The soil's magic is not only found behind the veil of the physical and chemical dynamics that are occurring within it, but it is also found in the fascinating history of its formation. Many of those who have felt a profound admiration for the soil's morphology also are very curious about the forming factors (pedogenesis). Doctor Hans Jenny (1899-1992) is one of them, fascinated by soil's magnificent, multicolored palate, admiring every inch of the soil. This passion led him to study and differentiate each layer (horizon) of the soil.

He found spatial variability of the soil within a field, dividing the area into small units called tessera (pedon). The heterogeneity of the field reflected in the variability in pedons, he compared it with a mosaic in stained glass. His great contribution to Pedology was his remarkable work on the soil forming factors. From his studies and those of many other soil scientists, we know that the reason for the difference in color in the soil profile is due to biogeochemical kinetics, occurring over millions of years and continuing to transform.

Many poets and scientists agree that a gram of soil holds enormous information. For a poet, this information can be perceived through the senses (sight, touch, sometimes taste). For a scientist, an even greater amount of information can be obtained

by using analytical techniques, from sieving to X-Ray diffraction. Nevertheless, it remains unknown how soils' spatial variability influences the ecosystem and, therefore, its features.

In human history, soils received attention not only as a resource for agriculture but also as a muse for poets. Soils captivated many people and inspired them to write beautiful poems. One of them is the British poet William Blake (1757-1817), who in romantic words immortalized a sensation related to how little things could have a huge meaning. In his poem titled "Auguries of Innocence," he said: "To see a world in a grain of sand, and a heaven in a wild flower, hold infinity in the palm of your hand and Eternity in an hour ..." With only a few words he expressed his excitement and great admiration about the soil, the same feeling is shared by many pedologists, civil engineers, geologists, and ecologists, at the professional level, and others, to whom the soil is their main economic resource or important piece of their culture.

This is the case of Ecuador, where many Ecuadorians sing the verses of a poem that highlights this feeling of respect and love to the soil. The poem is entitled "Clay Pot," written in 1950 by a famous Ecuadorian poet, Jorge Carrera (1902-1978):

*"...When my life is lost behind a curtain of years,
loves and disappointments will live on in the flower of time.
Hard-baked clay pot,
souls of green hills,
sunshine from my ancestors.
From you, I was born and to you, I'll return,
As clay in a clay pot.
I'll come back to you,
to your loving dust".*

In the same time period (the 1950s), the soil became the muse for another poetic movement on the other side of the world, formed by geologists at the Leningrad Mining Institute in St. Petersburg, Russia. They are known as the “Pochveniks,” a nickname conferred to the Poets of the soil (Landa, 2009).

Across the world, respect and care for the soil have shaped our society and the history of different cultures. One remarkable ancient belief comes from the Andes, where the Incas and Aymaras named the soil “Pachamama” meaning “Mother Earth,” the giver of life, who assembles and feeds all creatures on Earth. Some indigenous traditions that honored the blessings of each harvest still remain in some villages, which once were part of the Tahuantinsuyo kingdom. This kingdom was mainly made up of territories from the southern part of Colombia to the northern part of Chile, and Bolivia.

Overall, our understanding of soil, based on chemical and physical phenomena, can be enhanced by soil’s power to inspire our emotions and our curiosity. Such curiosity and wonder compel us to solve the remaining soil’s mysteries that have thus far evaded our knowledge.

If you have read this far, I invite you to join me to take good care of our soil, and thus, life on this planet.

— S. Carolina Córdova

Squareland Mysteries: an excerpt

~ ~ ~

“Squareland Mysteries: Field Journal of a Scientist in Training at Kellogg Biological Station,” is a book in progress. It follows two unforgettable characters who love science and exploring KBS. In this excerpt, Cora befriends Jackson on the school bus and begins asking questions about the surrounding landscape. Later, Cora and Jackson continue their adventure running into scientists, debunking urban legends and showing off their scientist skills along the way. The book is part of the KBS K-12 Partnership and will support elementary science.

~ ~ ~

Journal 3 *New girl. New school. New frenemy.*

Today was my first day of fifth grade in Richland, Michigan. Here’s what happened:

The night before I went to school, mom made my favorite dinner—orzo pasta with feta cheese. Conner hates feta cheese, so mom made him mac ‘n cheese and hot dogs. Connor was playing with his macaroni, making a mess, like he always does. Mom and dad kept paying attention to him, and he kept sulking. In between, they gave me this pep talk:

‘Talk to people, Cora! Join a club! Be outgoing! Making friends will be easy.’

I do like adventures, and I’m not always afraid of new things. But this was different. Everything was new: town, school, people. But when my parents said all those things, I thought, sure, yeah right! Let’s see them enter a new school with hundreds of eyes staring down the ‘new girl.’

I was about to tell them how nervous I still felt, but Connor made his toy plane dive into his mac and cheese, and the noodles flew all over the kitchen. That was the end of my pep talk.

Later, in my bedroom, I was deciding what to wear, and I was feeling SUPER self-conscious. I had to make the right impression—whatever that was—and I couldn’t decide. Clothes were piled on the bed, and I would pick up a shirt or a pair of pants or a dress. Then I would toss each one back on the pile. There was a knock at the door. I said, “Come in,” and mom came into my bedroom. She took one look at the huge pile of clothing, and she knew I was nervous, the same kind of nervous that made her give me this journal in the first place. I tried to explain it when I told her that I wondered what the new kids would be like. Would they like me? Would I like them? What do they like to do? Do they like stars and planets?

Take a deep breath, Cora. That’s what mom told me.

So I did, and then I promised her that I would talk to the first person I met on the bus.

Remember, Cora, mom said, that you are a girl who loves adventure.

I hugged my mom. Together, we chose an outfit to wear the next day. Nothing flashy, nothing outrageous. Just a basic shirt and jeans. I felt so much better. Even though I didn't sleep much that night, I still was eager to go to school and meet my new classmates.

~ ~ ~

The next morning, I jumped on the bus and sat next to the first person I saw who was sitting by the window.

"I'm Cora. What's your name?"

"Jackson."

I stuck out my hand. "Nice to meet you, Jackson." He didn't shake my hand. "Anyway, I just moved here from Chicago."

"Good for you."

"Someone's grumpy today."

Jackson didn't say anything, so we were stuck next to each other in the same seat all the way to the school.

Ugh.

I tried again. "So, Jackson, how long have you lived here?"

"All my life."

"That's a long time."

"I'm not an old man."

“Haha. Funny. You’re not as old as the galaxies, that’s for sure. Do you like science?”

“Ya. I guess.”

“I love the stars and the planets and all the galaxies that are out there in the universe. New worlds that one day we will have a chance to explore and learn more about.”

“I like it right here just fine,” Jackson said, and he stomped his foot on the floor. I thought he either was trying to make his point, or he was trying to get me to shut up.

I felt like a planet spinning out of its own orbit.

It seemed that I couldn’t say the right thing or figure out how to make new friends. Feeling deflated, I stared out the window and tried to take in the new scenery. I was used to crowded streets and tall buildings like the Sears Tower. I was used to cars lined up, bumper to bumper. People walking everywhere, stepping out in the street in front of you, calling for a taxi. I was used to going to Lake Michigan in the summer and trying different kinds of food from restaurants all over the world. I was used to hearing the sounds of the El trains speeding along the tracks and horns honking nonstop at all the other drivers.

Here, everything was quiet and green and open. I could see everything all around me in every direction. Stars came out at night, and I could actually identify the Big Dipper, Little Dipper, and Orion. The rest of the stars sparkled against the night sky. There was no pollution or city lights or gray skies to get in the way like in Chicago. Sometimes, Connor and I would lie on the

grass, right after dad mowed it, and count them. Other times, I climbed trees whose branches were thick and heavy with the greenest leaves, trusting that they would hold me as I sought to watch a golden bird create a nest. There were other birds too, brown or white or gray, sometimes a combination. I did not know their names. A few times, I have spied Monarch butterflies flitting from flower to flower. They are so beautiful. I could watch their black and orange wings flutter for hours.

On the bus, I was searching for birds in the trees and butterflies in the air. All of a sudden...wow! I pointed to some fields. "Jackson, what's that?"

Jackson didn't even look out the window. I guess he didn't need to because he has lived here all his life because of what he said to me: "They're fields, okay? Just because you're new here doesn't mean everything is new to us. We just live here. Some of us for a long, long time. We're not a freak show. Quit being such a pest."

"I never said you were a freak show. I just get excited about new things. I want to learn about my new home."

Jackson slumped further into his seat. "That's cool," he said. But he said it in a whispery voice, like he didn't want anyone to hear.

The bus stopped to pick up some more kids. As they took their seats, I noticed, to my joy, the tall flowers and grasses nearly as tall. I had been searching for birds and butterflies along our route. Now, they were flying all around us. "Look at the butterflies and look at the fields. Why are the fields square?" I said.

“You really don’t listen, do you?”

“Aren’t you even a little bit curious, Jackson?”

“They’ve been around since I was a kid and longer, like the buildings in Chicago.” It’s part of something bigger. That’s all I know.”

“You’ve been there?”

“Ya. No big deal.”

“Well, Chicago is like one big grid, you know.

“Here we go again. I know that.”

“And these fields are like a grid, too. They are perfect squares. Cities are laid out according to plans like a grid. But fields are supposed to be free and grow the way they want. So, this is a big deal, Jackson. Because they’re perfect squares, and fields aren’t supposed to be squares.”

I snapped a picture on my phone just to be sure I had a copy of it:



“What kind of plants are those anyway?”

“You ask too many questions.”

“There are so many mysteries to be solved, Jackson.”

We drove past the squares. “Hey, Jackson. Let’s call this place Squareland.”

“Wow,” said Jackson. “You’re the smartest person I’ve ever met.”

“Really?”

“Sure,” Jackson said as the bus pulled into the school parking lot.

Somehow, I don’t think he meant it.

By then we had arrived at the school. Well, you did it, I told myself. You spoke to someone new. And everything else was new, too. Meeting Jackson and being less nervous after the first day of school were good things. Well, maybe not meeting grumpy Jackson. LOL. JK. But those weren’t the best things that had happened all day.

Squareland was the best part of my day. The best best best part.

To be continued...

— Catalina Bartlett

