

# Acknowledgments

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I. Inch

# Keeping in Touch with the Ocean

Even a morning hundreds of miles inland, I drip two plastic dewdrops into my wet left palm and squint to see them settle in the riverbed of skin and brackish solution. My hand, a fleshy river delta, accepts the ocean. A blurry right index finger with one lens gaping toward an eye is an anemone reaching out of the water at low tide. Suddenly, the contact kisses the slick curved eyeball, brings high tide to the locked pool of my cornea: another kiss and the sea is everywhere I look, overflowing, the drying salt pulling at my cheeks.

# Cooking with Tar

When I went home the first time from college, where all food was fast, I watched and marveled as my father simmered bacon in a cast iron cauldron hard as bedrock, poured in half a blood-red bottle, added big legs of chicken on the bone, then slid the pot into the oven for an hour on 400°. Have you made this cog au vin at school in that pot I got you? I shake my head no, and he tells me again how his mother made this back in Russia, as did her mother before that, all the way, it seemed to me, back to a time when it was legs of mammoth cooking for a month in a pot lowered into a pit of hot tar. I remembered going with him to the La Brea Tar Pits and seeing half a still-furry saber-toothed tiger peering out the hole. My father was famished after this trip, bought some day-old shawarma right outside the Tar Pits and told me again about the thick smell of spring in Moscow, the meaty steam of homemade dumplings, the peeling birch wood, the rusting steel staircase.

### Gnomon

On endless cloudy days like these, the sundial stands dim, a dulled arrow

pointed at the soft grey belly of eternity. Its only use today is as a plaything

for the child clambering over its cold metal, tiny palms slapping to the beat of

second hands, a syncopation synced to hidden cesium transitions,

how could he know of definitions yet? Time is frozen for him now,

his babbling tongue may just stick to the tilted bronze obelisk stuck

in a perpetual snapshot of a stumbling fall, but all he worries about is

where did the shadows go today, mommy? Will they ever thaw so he can

keep growing into his sack of overalls? With a quick glance at her Cartier,

*lunchtime, dear*, his mother conjures the ability to tell time,

to tell it what to do, to have it answer with a steady yes, yes, yes.

# Turing's Lullaby

It's a fact that One can encode Only everything In code. "It's late, I'm tired" Ossifies to 0s and to 1s. Though, I've never calculated Inflection points Of mood swings, Or found the Intersects of Interjected comments. I guess that Intuition runs On humans, OSx, and Linux.

### Out of Sight

#### I.

A black hole was the maw of kitchen trash, the bin full at night: when I tiptoed to peek over its lip in the morning, would it be empty? I was scared I'd disappear if I fell in.

#### II.

A black hole is the last one of a mini-golf course, the tube to someplace else controlled by its own strange gravity. Standing there, twirling the putter like a pulsar, my father tells me that every black hole is a ring from which nothing can escape. Hit it in, see what happens. The dimpled planet rattles down the drain: carefully, I put my ear down to the carpet, just far enough from the bottomless cup.

#### III.

I stood on the edge of a black hole, the Caltech pool, and decided to jump in, felt the pressure of the water like so much starstuff close above, pulling me in. Mother wondered where her light had vanished as I dissolved on the bottom, felt more than heard the muffled splash of other children, saw the dry world squeezed into a circle of distortion glittering on the surface. Outside the ring of the horizon, there was only the reflection of pool linoleum, stark as my ghost while window shopping.

#### IV.

Avoid black holes, my physics textbook joked, which must include the hole in the side of a deer carcass in a clearing, all tetanus and buzzing flies, a peach-rich decay that crumples noses and pulls the gaze like light. If you smell it,

(continued, no break)

it's too late—beyond that line is only death, some physics we don't know. Avoid black holes, the physicists said, since we can't pull the dead back out yet. But now, they're saying maybe everything that falls, though torn apart, is spread like jam on the event horizon, waiting to be molded back. And so I stand and fill my nostrils with the stench of rotting meat, trying to pick out whiffs of the stag's life: that clean dark pool he found at midnight a few seasons back, the thick sweetness of sap pouring from a gash his fuzzing antlers left in a tree.

### V.

I don't avoid black holes anymore. I lay flowers at their cusps, headstones of obsidian, and watch their petals get pulled in like little letters to everything I've lost, disappearing into the dark slit of a mailbox.

# Kyotera Road

On the road to Tanzania, we pass bouncing trucks stuffed with pigs or cows or sheep. I'm crammed into a quiet greying taxi with twelve people, try to move my big right toe, but my leg is dozing, circulation cut by Ugandan hipbone. You-know-rock? The driver/DJ skips over tracks like potholes, barters beats. We agree on Red Hot Chili Peppers' "Can't Stop", and I start belting it out. Ugandan hipbone bobs her headscarf to the snares, cascades gold specks of sunlight on the seats. There's laughter in the car now, and smiles, and my foot awakens to the beat.

# The Composition

I slam the brakes with
Heimlich vigor: good, the bird is
dead but not too bloody, doesn't
smell yet. My car's a hearse now
and the apples, carrots, pears—
having given up my neat stacking
in their brown paper bodybag—
bounce in the trunk like expanding gas.
At home, I compress the particles
of produce onto the kitchen table,
lay out the bird, pick up my brush
and try to resurrect the corpses.
It's funny how the French 'dead nature'
Frankensteins into 'still life' in English.

# The Day I Learn How Currents Work

The ground sinks away into a swamp, but there is still a trail,

planks of old wood

like trees cutting into the air: someone had built

a boardwalk to the river.

The water underneath seems still, but I can see

the currents of energy

in the slow billowing of long blades of faded grass

like wet hair in a bath.

The only sound, the echo of my steps on the wood,

until I hear a gurgling

that grows louder. Abruptly, the planks end:

My friend sits, stares

at the river, breathes with it. She looks still, but I can

tell from the way her hair

trembles that she's drifting underneath. The only sound

now is the water and her

rush of sobs, catching in the throat. You're a good listener,

she says, but only because

I just don't know what to say, my own thoughts

stuck on who

would build this boardwalk, and how they must have

waded through the mud,

fresh, lacquered slabs of wood up on their shoulders.

# Fossil Soup

On one shelf of a mountain gem shop, between layers of amethyst and opal, teem trilobite shadows, caught midsniff, mid-scuttle, mid-primal thought of dark or hunger, more gut than thought, more rock than gut. One is inset in a sandstone bowl, I guess for keys and paperclips and other human sediment. I want to take that parabola home then fill it with gazpacho and eat slowly, carefully shoveling a spoon through thick tomato mud like a paleontologist before licking the bowl clean, the cold stone skeletons familiar as kitchen tile to bare feet.

### Aubade

I woke to find you glowing in the morning, buzzing legs swung down like rays of sunlight from your side of the bed.

"Go back to sleep," you said and, lifting long hair, bent to kiss me one last time, stretched into the doorway

as a train rumbled by, then stood shining, shining just as bright but redder now, garnet lipstick and blushing cheeks, the whistling heat

of your voice during phone calls. Then you left, or never left.

### **Plasticity**

-for Samuil Marshak and my father-

Dad applied to grad school at Caltech because it was free and the Soviet Union had fallen apart. Boxes in the student housing made it as cramped as Moscow apartments. I learned English at the campus preschool and Russian from my dad reading Marshak to me as I went to sleep, his dark brown eyes darting behind the fume hood of his huge 90s glasses.

The lady was standing at bag check with a lamp, and a stamp, and a tape deck; some string, two rings, a strudel, and the teeniest tiniest poodle.

They gave the lady a form in triplicate, of course, to confirm that her bags indeed had been checked: a lamp, and a stamp, and a tape deck; some string, two rings, a strudel, and the teeniest tiniest poodle.

Boxes still packed up from the move stacked around my bed looked like an audience leaning in to listen. Tonight, like last night, a tape deck sat where my dad sometimes would, injected hiss of steam and pop of wheels as it pulled his voice out of the plastic. Two dark brown eyes behind a single pane of glass, one tugging on the other.

Her things were taken away, loaded quick to prevent a delay. The train was set for her trek, with a lamp, and a stamp, and a tape deck; some string, two rings, a strudel, and the teeniest tiniest poodle.

But the door was left slightly ajar and the poodle jumped out of the car. When three or four state lines were crossed the porters noticed something was lost. The next stop, they ran through a check: a lamp, and a stamp, and a tape deck; some string, two rings, a strudel...

(continued, no break)

Wait a minute!—where's the poodle?

They looked everywhere and they found by the wheels a huge, frazzle-haired hound. And, so, by the scruff of its neck, they threw it in with the tape deck, the string, the rings, and the strudel, where recently bounded a poodle.

I wake up when the tape deck stops clicking. Yawning, dad puts the tape deck back into a box: I'll read to you tonight, okay? Not too many experiments. He kisses me before he heads across campus to the lab, lets me poke the cartilage of his flattened nose, which still gives like stretched polyester from when a goalpost fell on it when he was little.

The lady got off the next morning, tired and cranky and yawning. Her luggage came out when she beckoned: a lamp, a stamp, a tape deck, and some string, two rings, a strudel, and something that wasn't a poodle,

a big hound that started growling till the lady was yelling and yowling:

'Idiots! Imbeciles! Hogs!

How the hell do you think that's my dog?"

She kicked at the lamp, she tossed out the stamp, the string, the rings, and the strudel—

'Return me my favorite poodle!"

Back from college in our neat new house, I find dad left his mother's stamp collection by my bed. The soviet red is fading from the acid yellow squares, plastic slots the only thing that protect them. In the room next door, I can hear dad reading to my little sister, her giggling at the end of the poem.

"Sorry," said a worker, "my sweet, but according to this here receipt when you left, you had checked: a lamp, a stamp, and a tape deck; some string, two rings, a strudel, and the teeniest tiniest poodle.

Though, I wonder, might you also accept that your little dog grew up while you slept?"

### Here

More familiar than it should be, the photo sent from Mars. I feel I've been there.

Mojave Desert's iron sand more solid than the grainy panorama, but only for a second – that, too, slips away, my mind an upturned hourglass. There was a time I clambered canyons red and young and jutting crust, made habit out of place. Was it windy? The crisp gust of realizing I've never been anywhere but

II. Kilometer

### How I Wear My Poems

Don't know how I got those first t-shirt verses. I've outgrown them by now: little hand-me-down iambics.

---

Slip new ones on right away, shoes smelling of new leather, tags still flopping on the sidewalk. Five blocks later—sewn meat bites below the ankles. Blisters.

---

A Robert Hass one for a baseball cap floated into my head while waiting for all this hair to dry.

---

You took my sonnet to sleep in. Mornings, you wear my aubade around the house, so now it will always smell of you.

---

Short lines are slimming on you, someone offered at a bar, at last call.

---

Every day of a cold week, they're unfinished scarves, a few lines hanging off the ends. I guess my hands were worrying them while I was waiting for a cup of coffee.

\_\_\_

This one has a coffee stain in the second stanza, right on the shoulder of its comfy fleece. Rubbed and anxious, it stays in the bottom of my dresser drawer till I need it to go out into this unwritten world.

# Equinox

With a sudden peal thundering the sky, a deep vibration ringing earbones

and shuddering marrow like a serrated knife sawing at a T-bone: fall came on a Wednesday

this year. The pit of seasons, the heavy minimum of flying on a swing set before being dragged back

up into winter's wind, its moment fast as a sharp inhale. The lightning bleaches

everything an equal white, leaves just a whiff of ozone sweet as rotting meat.

# **Angles of Refraction**

The worst part of getting used to glasses was the glare: the sudden bursts of rainbow at the edges. Soon, I learned to look everywhere, just not sunward.

But now, the sunlight wriggles deeper in the glass—compression ripples near the frame, the blur of streetlamps spreading, corners alive

with ghosts of passers by whose wavering reminds me I am nothing but a greenhouse, an eddy in the energy, a trapping of

a bit of Sun, interred inside the innards of a human prism.

# Falling Asleep in Public for the First Time

The sun heats beach sand into fine-grained butter, people or seagulls squawking far away while I teeter on my side, carving a Zen garden with my finger.

I see each ridge, each groove, each grain I index under index fingernail. The heat, the sun, the memories of other sands, all rust me off to sleep.

I wake absorbing orange, dissolve in the limbo of twilight's witching hour soaking through clocks hung out to dry. The sand is flat and so, oh joy,

am I, transparent now as a pane of glass.

# Talking to the Tree in Front of a Frat House

My shoes tsk at me as I step on the sticky hardwood floor of my living room, littered with red Solo cups, and step down onto the front lawn. If it weren't for this hangover, maybe I'd remember why I'm out here. My hammock's still up so in I climb and see you up above, so I ask: How many brews of frat boys have you seen rotate through this 12-pack of a house? Do you hate the plastic chair the previous president heaved up, still hanging in your branches as if lifted by a flood? Do you try to shake it down every autumn like the leaves?

I remember now: There was a party last night. People scuffed around as if there was a fire to put out and the only thing to douse it with were cups of frothy keg beer.

I grabbed a draft in both hands, went quietly upstairs, and watched a nature documentary on plants.

There was a time-lapse of fallen leaves, rotting over roots. Sped up, rotting is a kind of slow clear flame. That's what I came to ask about. Is that how you see us? Some windblown leaves burning up, half-drunk cups of beer nearby, still searching for a fire?

### Beached

Shit—there it goes, the bus slips round the corner with a huff of steam shooting from its blowhole. I guess I'm walking in the rain today. Unrolling phalanges of sea-trench-blue umbrella like a flipper, I see the bus down the hill, deflated on the grass as if it had been washed up there by the waving hills of the rain-slicked road, a blue whale drooped on the shoulder of the road, so much mass in stillness. The driver stands in the doors, turns to me as I approach, shakes his head: Bad news, it's dead. The steady click of hazard lights the only sound it ekes out now, this beast of weighty grace—that each weekday ambled past my stop, not caring if it was full or empty, following the migration of its brethren, bellowing and singing—can only idly purr.

#### Rains

### 1. Los Angeles, California

It rarely happens, but when it does, rain pours for days and days. Fat droplets, each a little water balloon exploding on the pavement and the windshield. Thick, like my mom plucking at guitar strings. She hates listening to music, but steals the show each dinner party

when she plays and sings. In the front seat, she says nobody here knows how to drive in the rain, and we have to be careful, the roads are slick from months of oil buildup. In the rearview mirror, I still see her smile just a little. The only music is the rain.

### 2. Countryside near Moscow, Russia

My mother, her friend, and I are rowing to a little island in the middle of a lake when we get caught in a storm. My mother didn't listen to the boat rental girl. Once she set her mind to something, it was a chord progression we had to see to the end.

Everything is rain: it's coming down in waves, splashing from the waves, bouncing into the boat. We get to the island and take cover under the trees, find some dry wood for a fire to warm up. The rain ends just as quickly as it started. There's a rainbow over the water. Everything is air. We're pushing the boat out again.

### 3. Kalisizo, Uganda

I passed chocolate milk puddles dissolving the orange dust to find my new home for the summer.

My host mother Betty made all the children popcorn and gave me a poncho: tomorrow morning it will rain. I asked her how she knew

and she laughed: *it rains every day during* the wet season. The next morning, our neighbor Joachim bounced me on his motorcycle to work in silence,

(continued, no break)

the rain the only sound like woodpeckers on my helmet. We didn't speak for weeks until, one morning, I pressed my helmet to his and asked Joachim to tell me about his mother.

### 4. Chapel Hill, North Carolina

Now I know: 30% chance of rain means it's raining constantly at 30%. Walking home from chemistry class was was more like swimming through a mist. Droplets beading on my glasses, growing like the crystals I had just watched

form in a petri dish. One droplet bulges, quivers, and then streaks down the glass. Russian rock shuffles onto my phone, and think of my mother when she would scold but smile, give me new umbrellas to replace the ones I always lost. I take out wet earbuds, listen to the rain instead.

### Oxidation

The bike I got from Craigslist creaks beneath me, squeals and lurches when I pull the brakes like reins. Professionals in suits and biking sunglasses streak past, sleek on their Cannondale machines smooth as assembly lines, smirk at me while I try to wrangle a beast that wants to buck me. On days like wet hair, I worry that the speed bumps will launch me off the road. And yet, I still prefer this '90s Schwinn the color of sun-licked leather, with more than a few teeth missing from gears that hiccup, joints rusted after hibernating under Boston snowdrifts, its frame osteoporotic. That tumor of red that used to be a bell—what part of town does it remember?

### Ambiance Nightclub

Living in a new country feels like I'm eight again, worn out by eight again, stomach rumbling, wondering just what I ate again. I need to get away from family

who every night reads scripture, so I join an intern's twenty-first year celebration. Inside the buzzing, greying glass, a mass of people skipping mass tomorrow throbs moth-like in the lights. It might have been a Brooklyn club. But no: they wouldn't let you mix your own drinks in America. A flask of Smirnoff for four dollars in one hand, Crest bitter lemon in the other, I try to find a table to figure out which to pour into the other.

Some forty-something passes out on a luscious couch, but tea tray steam a barmaid brings him brings him back. I need to get away from these tiny strangenesses and the taste of bile in my mouth, so out onto the balcony I go.

Living in a new country feels like waking up from a dream repeatedly, and, suddenly, I wake up to the fact I'm in Uganda. But where's the snooze?

So dark outside you can see the spilt milk of stars. The music's faded long ago, the buzz of night envelops me. The only manmade light comes from the junkyards across the street; their tall sheet metal's bathed in buckets of it. Black spots whirl in the light. Are those cicadas? Locusts? Moths? Grasshoppers, says Raymond, a local that we came with. Those things are traps for grasshoppers. They come for the light and slide down the wet metal sides into a pool of water down below. Then, they die. In the morning, the workers will collect them and dry them out to sell on the street.

Living in a new country, I feel like a grasshopper who sees a familiar light, then finds itself sliding down, everything slick and with nothing to hold onto.

# Moths Navigate by the Moon and Stars

Looks like we're doing this again, under a streetlight outside a bar at 2 a.m., you leaning against the wall with your head in your hands and me asking the same *what's wrong, what did I say?* question like that moth around the lamp, a moth that thinks it stars or moonlight and wants to open up its body to the rays, use that radiance to fly by.

Too bad: this light doesn't come straight down from a great distance but from a point so close it spills in all directions. Your hands are down now and your eyes are shining and my wings of words struggle against the glass, phrases dusting in a circle. You look away. Why do we see moths only when it's dark and they are dying?

# Listening to You Wrap Birthday Presents in the Other Room

The first time staying at your mother's house, you kicked me out to the kitchen while you wrapped my gifts in the living room. I tried to guess what they were from the sounds, but all I could hear was a fire of similes: Some boxes lugged around like logs. Scotch tape pulled out like a crackling of kindling. Quick cut of wrapping paper like flames shooting up.

### **Triple Point**

Finally, the gate has opened and the frozen crystal of the Southwest line melts, flows down the gangplank and jostles me onto the plane. We slosh around, find seats, ignore the "Fasten Seatbelts" sign to pour bags into every overhead compartment, spill over armrests to visit friends and family, fill up the bathroom one last time.

Once liquid settles, the plane takes off, the ocean below grows and curves till it explodes all white, the scattered snowball of a cloud right on my porthole window.

And we transition too in these few minutes of ascension, of evaporating into clouds, when trays are stowed and laptops put to bed. Soon, we'll be gas, lost to our fluid friends below, our phones on "Airplane Mode"—we might as well be other people. What will we search for now? I do not know what state of being I will be in once this flight is over: son, student, friend? A gas, a solid, plasma? Will I condense back to a liquid? One time, I melted on a flight from LA to North Carolina. It wasn't bad, just different.

### The One Place in the Cabin Which Gets a Little Signal

Three iPhones, huddled on a warm wood counter, no buzzing or wiggling,

quiet as upturned turtles on the side of the road. And we are just as helpless: stranded,

my parents and I take shifts, check in and prod to see if the little beasts are coping

any better than us. Every few minutes they call out, yet their faces are cold. I want to

stuff all three into my pockets for warmth, feel the faint heat of other people like a phantom

limb. But they need rest, too. The only thing the phones catch is sunlight through windows:

that, too, they send to us, rainbows on the wooden ceiling above our breakfast.

III. Lightyear

### Static

The Big Bang ended when we switched to cable. Before, remember flipping through the snowball handful of channels and stumbling across a blizzard? A popping melting-pot of scrambled M\*A\*S\*H, torn-up Top-40 Hits, and garbled late-night pizza orders reflected off the moon. Well, one percent of that, perhaps that snowflake of a pixel there—the one on Alan Alda's nose—is the Big Bang's voicemail, stretched dial tones of creation, the radiating hiss of cosmic microwave background. Our TV dishes and antennas were telescopes but, not being radio astronomers, we called the static useless noise. Sometimes, we'd let the universe whisper us to sleep. But now there's cable, a thousand channels of pure signal pumped through wires spreading through the ground like the first fingers of the last frost. And no more static.

# William Coker's Copy of Charles Darwin's *Diary from the Voyage of the H.M.S. Beagle*

Gold threads stick out of the tattered binding, green bubbles up in places like a layer of moss. On the title page: an inkstain where you, Professor Coker, signed your name. Inside: pencil marks that could be yours, made in 1933. Was your gesture just as sweeping as your scrawl when you pointed out the cow pasture you wanted to caretake into a garden here on campus, an arboretum that now bears your name?

I flip to a random page: no notes, just Darwin recounting his troubles with getting into a hammock for the first time. He misses a pronoun so the editor, Darwin's own granddaughter, brackets one in to correct him. Back in Darwin's time, a voyage was the travel and the ship, and books are much the same. I want to tuck this diary under my arm after a day's excursions and slump against a tree in Coker Arboretum, a cup of dark coffee in my hand, savoring the wait to make my own mistakes.

## The Avocado Tree I Gave My Father for His Birthday

He planted the five-foot sapling on the far side of our house, where nobody went. We forgot it. At breakfast a few years later,

my spoon a shovel in the green of a half-avocado, soy sauce pooling like oil in the peat, a smile rose to my father's face

and he led me out around the house. The tree was thirty feet at least, fat leaves and heavy fruit. He propped a ladder against it and disappeared

into the branches, speaking of the years and all the fertilizer he used, the seasons each leaf was spotted with disease. I was scared at how fast

this tree had grown, that it had pulled up ground and foundation, left a sinkhole. My father laughed and told me that trees grow not out of the soil

but into the air, distilling the carbon dioxide and the sunlight into smooth trunks and splitting branches. *The atmosphere is everything*, he breathed

to the leaves, punctuating his points with dropped bombs of avocados, hard and black and coarse as granite rock. They'll ripen in the kitchen, in its thick air.

# Power Outage

for David Bowie

I heard the guy next door start playing trumpet. I grabbed my guitar and called him over to my porch so we could jam while sunset blushed the receding storm clouds. When darkness fell, it fell hard into the depths of our pupils. We played "Space Oddity" over and over, the moon and passing headlights our spotlights, the upright shadow of a passerby our audience. I sang the loudest I have ever sung. When the power came back on we went inside, turned off the lights, and talked about how different the stars looked today.

### Dust

Sagan said the Earth is just a mote of dust suspended in a sunbeam. I guess he wanted us to feel the wind of insignificance. But what's wrong with dust? The interstellar clouds are also dust—a billion pollen miles that birthed the stars. Dust made our planet, pressed itself into a crust, then rose into men and buildings. And now, my room's dust is a skin-cell haze of people I have touched and loved. At night, I lie in bed and watch the ceiling fan go round: the blades spin but the dust piles only grow and never slip, remembering every visitor better than I ever will.

#### Lwemodde

1

Forty minutes I bounce on dirtbike taxis from the edge to the middle of nowhere. It's down that dirt road, there, there, there. Even in the village, people don't know where I work. Chair of Kyesiiga Subcounty? No?

2.

Bbale, the man in faded floral blue, greets me with a bony hand and a bonier smile.

What just creaked, him or his wheelchair?

The four phones he incubates in his Airtel mobile minutes shop screech all at once for his attention and advice. He coos to them, funnels sunlight down to warm them through USB umbilicals. One phone's alarm goes off and Bbale asks me to look after his brood—it's time for him to pray.

3.

Two girls named Sylvia watch TV in front of my desk at the Airtel shop when lightning burrows down the antenna and explodes.
One falls over, her screams like bright thunder. We take turns massaging her spasming leg. The other wears earrings like engorged resistors, all red, green, yellow stripes. Perhaps that's why the lightning skipped her? No, I tell an elder, red does not attract the lightning, it's not a matador.

4.

Miki, lanky chairman, fat cat of town, beaming, shows me the tractor the Vice President gave them.

Nobody knows how to use it so small dresses are drying on it for now. We stoop to pass slowly under the chessboard trellises of his passionfruit plantation. Kids run around, get scolded if they play anything but "Build Your Passionfruit Plantation."

Miki slices open the heavy pulp of a fruit and we split the fleshy seeds.

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Their assets are liquid, I realize, as passionfruit juice drips from our lip. A week in, I've got Miki's chain rotation figured out: red gold, gold gold, silver.

5. All better dressed than me, full suits and flip flops. The only money they save they bury, and that gets eaten by termites. My look of horror makes all of them laugh: better than eaten by the police or politicians!

#### Hubble's Law

Standing in our Pasadena backyard on holiday, tossing a slime of tennis ball to my parents' dog, brings vertigo like the airplane that brought me here: a rush of speed, white fur, hip-length blond little sister hair twirling on the trampoline, the weeping willows we planted years ago down there exploding above the cinderblock wall like fireworks that I see only through a strobe light, blinking once every few months.

As my head tilts back and I'm about to fall, my eyes catch on the jagged line of San Gabriel Mountains above the wall and willows and torn wallpaper of sky. The roughness right where I'd left it, crowned with antennae and blinking lights.

That's where Edwin Hubble shivered in the night, the sky a rotted gash in his observatory's milky white.

Staring at the whorls of photographic plates through his breath, he saw the galaxies all rushing away from Earth. The first glimpse of the expanding universe like a fierce inhale, the dizziness of the universe receding from the peak like the lights of Pasadena. Late into the night, they spread so far apart he could no longer see them.

My sister asks what's wrong, you haven't thrown the ball in minutes. I smile, throw the ball, and don't say that I'm dizzy from how far away and fast she's growing up.

# The World's Best Planetarium Is a Gold 1990 Subaru Legacy Station Wagon

I. On the dark two-lane capillary feeding the Sierra Nevadas, I studied the scream of Morse code lane dividers until Papa, I'm carsick. He told me to watch something far away: the torn cutout of mountains, the lights of cities in the foothills, stars and not cacti. I lay down in the backseat and looked up through the back window, stared at the only constellation I knew: Orion. Papa was saying something like lightyear or photon, eyes jumping from road to rearview mirror. I reached for Orion, familiar as heavy fruit of the squat orange tree rustling in our Los Angeles backyard, whispering from the lowest branch that I still couldn't reach.

### II.

My father woke me up at 5-damn-a.m. to go watch the Leonid Meteor Shower. I had school and a physics test in a few hours, but some twist of stomach, some thirst for stars and my father's voice, got me out of bed and into the Subaru. Hugging the curves in the cold of the San Gabriel Mountains, I started to get carsick, even in the front seat. My father said to watch something far away, but LA below, the hills all around, even the stars, kept turning and falling. I closed my eyes and pretended to sleep until we parked at a dusty turnout overlooking the throbbing glow of the city. We lay on the hood and watched meteors streak across the sky, an Etch-a-Sketch of constellations, quickly shaken invisible. They aren't falling stars, my father says, they're bits of a passing comet.

(continued, no break)

See how they blossom from one spot? When we get off the hood with the sunrise, the only stars still out are on the Subaru logo.

## III.

In college, out on our fourth date, we settled into planetarium seats that reclined not nearly enough, kinking our necks as the dome darkened and stars dotted out one by one, a pricked skyful, then swirled. Orion spun, shot arrows in all directions, and I felt sick. After the show, we sat in my friend's borrowed Camry so I could catch my breath. The wave of nausea passed when you pointed at Orion through the windshield, your eye a vault full of stars, my new favorite planetarium.

## Queen Elizabeth National Park

The mountains thrust us down into a long, flat plain, its green-gold grass like toothpicks stuck in a homemade tablecloth.

Its trees are cacti, many-armed menorahs, their dull green wax dripped down to stiffen in puddles of the wisps of bush beneath.

This plain is a Jewish table named for a visiting queen and we, a solitary Grand Cherokee safari, are a Black Vine Weevil, scuttling toward the feast.

## **Adaptive Optics**

And have you ever seen a constant? I'll concede the c of light holds true, but only when there's nothing in the way, out there in space's vacuum. And are we even sure that's there? All we can ever see is light that entered glass or eyeball fluid: flipped, reversed, slowed down, took a side street, took its time. Starlight—unsure, uncertain since it's so rarely there twinkles in the air, distorts the gaze of telescopes. They have these fancy mirrors now that bend, contort to fickle waveforms, adapt to murky skies. Yes, my eyesight's getting worse each year but, hey, even the Hubble needed glasses. Inside, the light refracts and ripples or, maybe, photons bounce like memories interred. Each night, reviewing photographic plates of what we saw, the radii of questions dodged, the angle of a gaze, what color were her twinkling eyes—we're all astronomers.

## Satellite Dishes in Uganda Point Straight Up

Joachim saved every shilling from his motorcycle taxi business for a month to, beaming, buy a satellite dish. He held it like a shield as he lanced his way through cars and back out into the countryside. His mother shushed him when he arrived at their brick house rising from red clay, said not to interrupt the telenovela she could barely see or hear through static.

Joachim climbed up on the sheet-metal roof, hacked clear the green of neem tree, offered supplication to the sky so those little gods of satellites looping far above the equator would see their dish and smile down a clear show or two upon his house. That night it rained. Joachim's mother got up at purple dawn to watch yellow weaverbirds bathe in the dish.

## The Big One

The thought arrived through no fault of your own, or mine, or that of San Andreas which now slices plates between us—no. This thought came through the earth itself: I sensed it with

the certain doom that dogs feel right before a quake. The strain of distance like a rubber band between us, a tension I can't hold. The wait so heavy, maybe neither can

the ground. The thought was: any second now, it might all snap, collapse, the Great Plains drowned, the Mississippi joined to river Styx, and California touching Carolina.

Would you feel bad as me to learn we caused it, our fractured closeness causing dogs to bark?

## Ways the Universe Could End, in Descending Order of Probability

#### T

Expanded to infinity, the threads of time and space unravel, death by chill of zero Kelvin. Plucked stars, a string of Xmas lights left up into February that, one by one, wink out.

#### II.

The mass and energy of everything hangs heavy as a storm cloud, collapses into fog on the road. This future, a Big Crunch of the first snow. The flow of time might be reversed, which would be nice for those who value symmetry. All hurts undone, all loves unmet. Our Earth, a snowball, melts.

### III.

With no warning whatsoever. Could be electrons all conspire to flip their charges and, whoops, no more atoms. Could be that gravity skips out on work without giving two weeks' notice.

## IV.

A rogue black hole opens up a sinkhole in a Louisiana bayou, flushes the universe down the drain. However, this might have already happened and we are just in another bathtub now.

## V.

You, me, the Earth, the universe are all just figments of the imagination of the girl with the ponytail standing two people in front of me in the Subway line. I see her everywhere. When she dies, we'll all go with her.