

Decomposition Study

I

Nearly a quarter century ago, when I was still quite certain that my brain's amazingness would move planets, my maternal grandfather asked me to take him to the ocean. Tata, as we all called him, was then in his mid-eighties and very much in love with the world. La Jolla, he'd been told, was especially beautiful.

"My son," Tata said, "we can go for three nights, maybe four, if that won't interfere with your studies."

I was a graduate student at UCLA at the time, pursuing my degree in chemistry. My grandparents lived not too far away, in Hollywood. La Jolla Cove, an easy drive south from Los Angeles if you beat the traffic, was a favourite place of mine. I loved to go running, cycling, and swimming down there. I loved the kelp forests and the sea lions. And I had friends who were students at the nearby university. A few days in La Jolla would be great.

"Yeah, Tata," I nodded my head in agreement, "that sounds real good. Four nights is fine. Let's do that."

I'd completely forgotten about that trip.

The H. J. Andrews Experimental Forest in Oregon's Cascade Mountains is home to, among other creatures, the spotted owl. But it's also a place of measurement and so of instruments. Scientists study and monitor the forest's trees, the fauna and flora, its watersheds, the hydrodynamics of streams. School kids visit to learn about ecology and to climb Douglas-fir trees. Twenty-five years after my trip with Tata, I'd been invited to spend two weeks in the ancient forest, significant chunks of which have never been logged. So, as a scientist-turned-writer who loves to be outside, I was looking forward to this three-horned cornucopia of goodies.

After a final shot of espresso at the Wandering Goat Café in Eugene, I got into my car, fired up the engine, turned up the radio, and headed to Andrews. There, among the trees, to look for the perfect story about the land and our relationship to it.

Armenian storytellers of old prefaced their tales with "There was and there was not . . ." And so, with a nod to my ancestry, this story very much is and is not about Andrews Forest.

My grandfather was there, waiting for me.

II

After I check in at the main office at Andrews Forest – the word ‘massive’ might have been invented for the trees here – I’m told that some of the twigs on the road are actually rough-skinned newts working their way from the woods to the Blue River Reservoir, there to breed. If you know what you’re looking for, they’re easy to spot: they’re like little brown wedges unless they’ve been run over. Their undersides are a fierce orange. Steve, one of the scientists, says it’s pretty bad karma to run over something that moves so slow. Not even settled in and already I’m killing newts.

Tree decomposition studies are underway at a research station several miles from the office. Tim, the guy who takes me there to get oriented, is intense and alert with knowledge of the forest’s ecology and birdsongs. He points to a barred owl flying through the trees. They’re not native to Andrews, Tim explains, over the years they’ve migrated west through Canada’s forests. And barred owls are more aggressive than the spotted owl and enjoy the same flying squirrels and voles for food.

A quick singularity of motion, that barred owl, and we turn our attention back to the decomposition site. A group of fallen trees has been amassed here and left to decay for a study of decomposition dynamics. Tim tells me the particulars of the experiments and, when we part ways, says he’ll look forward to reading what I write about the forest.

OK then, I say to myself, gotta get to work.

Next to the decomposition site in a lower-lying gully there’s a wetland with groves of Western Red Cedar, soft moss, and ferns. There are no edges here; everything is wet-soft as it rains for days without end. Rest a hand too forcefully on a fallen tree’s body and it’ll crumble, that edge, too, illusionary. No chainsaw has ever been here –neither for logging, nor to clear paths for our ease of travel, nor to cut down those trees now left to decompose under watch only a hundred feet from where I stand.

You get here by a short trail off a dirt road, and you walk through second-growth forest into old-growth like entering a different order of existence. Day after day, I walk with my eyes fixed at my feet, tuning in for that transition to old-growth. I rarely miss the mark – the experiment is reproducible – the new silence, the shift in temperature and smell, the different energy.

It’s increasingly unsettling to return again and again to this cedar grove and the adjacent decomposition site. Perhaps, I tell myself, I’m only fighting my usual expectation of some transcendent, mind-blowing encounter with the land. How many times have I gone backpacking or canoeing in remote places expecting to be

changed – something like being saved, if I’m to be truthful – only to realize that mystical experiences are rarely offered up on tap? Maybe my uneasiness is simply the obvious, that I’m supposed to write something clever and original about the forest. Or perhaps I’m bothered by the incongruity of stark-white plastic buckets making measurements in otherwise pristine woods, of shiny metal badges segregating this tree from that one. When asked how I’m liking my stay, I say, “It’s tremendous, amazing.” And I’m ridiculously tongue-tied to elaborate beyond this obvious abstraction.

It rains every day. I hike up to higher elevations and follow deer tracks in fresh snow. They’re soon joined – footstep to footstep, footstep on footstep – by cougar tracks. With the hair on the back of my neck at keen attention, I add mine. A convergence of prey, predator, and observer.

The scientist I was until not too long ago stares with narrowed eyes at the Douglas-fir trees, the hemlocks, and the juicy moss. There’s got to be an equation for it all, that scientist, still propelling my brain, declares categorically. Something audacious with deceptive simplicity, an elegant mathematics to capture the verdant and wet, the all-encompassing $E = mc^2$ of the forest. But try as I do, all I get is a squiggled line, convoluted and crossing and crossing and crossing itself until my pen rips through the journal page. And I think of our grand efforts, our mighty labors to grab at the ends of that riotous line to pull it taut into straightness. But maybe you have to do that. Otherwise, it’d be like trees in this rainforest tangle without human-given names for focus and bearing.

On a particularly rainy and frigid day, I’m slow to leave for a hike and spend the morning at the office among my own kind: staff, scientists, students, all humans, and their hot coffee. Again, the question, “Are you enjoying your stay?”

“I am,” I say, “It’s awesome here,” and to cover for this imbecilic response, I mention that I’m also a chemistry professor. Am I to confess that I’m troubled as if by ghosts?

When asked what brought me to writing, I want to say that there are different ways of knowing, each with a language appropriate to it. That what you learn depends on which language – that of the body, the mind, the soul, or that of the guts – you use to frame your questions. I want to reveal my conviction that there’s a new emergent language at the confluence of those four, a slippery pact between them we haven’t yet discovered. But shy to talk about all this, I simply explain that I love to write, that for me it’s a language more pliable than that of science. Since no one presses me on what I mean, I let it go at that and walk over to the soda machine to study my choices.

I read John Haines at night with a fluorescent reading lamp as sole illumination. His words don't sink to my bones quite the same way in daylight, and I suspect a bright candle would be better still. He recalls a still cold Alaskan spring and the butterfly he found nearly powerless against it. Haines cupped the butterfly in his hands and warmed it with breath and into flight. For much of my twenties, I read Nikos Kazantzakis voraciously, usually in cafés when I was still learning to stomach strong espresso without a Coke chaser. Kazantzakis was Old Testament fierce. I thoroughly loved him. When he was a young man, he once found an unopened chrysalis hanging from a tree branch. The struggling butterfly was visible inside. Kazantzakis cupped the chrysalis in his hands and warmed it with his breath until it opened. The butterfly, not yet ready for life, died.

Kazantzakis knew intimately a restless longing for gods, and he knew also his vitality and genius as a writer. But that knowledge would be useless here in this old-growth forest. Haines knew much of what Kazantzakis knew and also the body of a butterfly. His was a knowing appropriate to the hard land from which he lived, and it was a knowing he earned after years in the Alaskan wilderness.

So much of what I know of life is from books. This knowledge, portable as it is in my brain, is what I've brought here with me to this forest where a flamethrower couldn't start a fire, it's so wet. But, at its core, to know the forest means to know how to live on and from it. And that is a knowing that is my own body at stake, a gamble I'm frightened to take on.

My scientific work as a theoretician took place in front of a piece of paper, writing equations, and in front of a computer screen, writing code for simulations. I prefer to be outside rather than facing a machine. Would I have remained committed, I ask myself, to the scientific method had my investigations taken place in Andrews Forest with the owls, the trees, the coyote scat, that crazy creek whose rush obliterates the chatter in my brain? I have no answer and it doesn't escape me that my work as a writer also takes place largely on a computer.

I bushwhack to the decomposition site through what might as well be a non-stop clump of fishing line. Something underfoot collapses with a loud snap under my weight. I finally reach my destination and sit my tired rain-gear-covered ass on a fallen tree, helping things along.

To feel the part, I lie down with the trees. But an overwhelming desire to do sit-ups takes over. I know how to maneuver around city streets, a pizzeria, www.amazon.com. There, I know what questions to ask and possess the language to do so. That's not true in the forest and so I create metaphors and ideas instead. The miniature moss forests growing on bark contain the universe as do Chinese landscape drawings. The sway of the log I'm straddling, which in turn straddles the

creek, is the sway of the Twin Towers. Of course I could make up all kinds of shit about the land and know the bluff.

My connection to the human world remains unshaken. My human voice won't abate. And as I walk through this patchwork of old-growth and second-growth forest quilted by creeks and streams and roads and trails, I see everywhere the signature of the human: metal markers on trees like dog tags, nylon ribbons, water collection devices, plastic pipes. These are questions put to the forest in our human language of inquiry. Even here, it seems, it's hard to give that up.

John Haines wrote, "The land lives in its people. It is more alive because they worked it, because they left this hillside and that creek bottom marked by their shovels and axes. The meaning of this place lies in the rough weight of their hands, in the imprint of their gum-booted travel."

Perhaps he wasn't preposterously Neanderthal to think so. All around me here there's the rough weight of scientists' hands, the sharp weight of their instruments, the imprint of their Vibram-booted travel. But there's also the rough weight of my writer's hand and my own stomping. After all is said and done, scientists and writers both, by means specific to their craft and vision, are trying to give the forest meaning, a meaning that human beings can sufficiently apprehend so as to talk about.

The weather finally breaks to a drizzle and a light jacket. Today feels like a stroll.

Observations are made: The creek's many voices. A piccolo gurgle in that spot there as a bit of white water nudges at an eddy; bass thumps as heavy waters crest the large boulder to the left; the delicate solo of that tiny waterfall, riding the rock face to its destiny. Polyrhythm from a topography of sound.

And: Some trees are comfort and consolation, but you knew that already. They'll listen to your story for hours before finally telling you quietly what you fear most. They're to be thanked with tears upon their bark.

Other trees are elation and elevation. Touch them and you immediately rise to tip-toes as your spine grows upwards in laughter and in good fun. These trees are to be thanked simply with an enthusiastic high-five.

Some trees are sex, that one there especially. A great kisser for sure and I won't say more.

And some trees pull the very life from you. You drop to your knees before them with heavy eyelids, and you know you'll die if your hands remain on their merciless bark much longer. Should you ever walk by these trees again, you must do so with eyes averted.

Questions are pondered: Does it drive the trees freakin' insane that the creek is so damn loud? Do the trees insist again and again that the creek just slow down – what's the rush anyways – that it take its time, that it forego its swelling cascade for a more dignified existence?

Do the trees proclaim solemnly that our exuberance, and that of the moss and fern as well, is in our green waiting?

Does the creek lose patience with all that nonsense and scream out, finally but again and again, Waiting for what? For what??

Action is taken in this war of time-scales: I've asked the creek to mind the trees' need for quiet. But maybe the creek's a video game or action movie and the slow forest secretly enjoys this diversion of speed and noise.

Directions for future work are detailed: I sense there's something the forest and I share beyond molecules, air and water, though you'd think that should be enough. Perhaps it's that waiting. When I leave here, I'll drive straightaway to the Wandering Goat Café. An espresso-sodden brain can take better stock of things.

Now the creek has really had it. That 'waiting' again, it scoffs. What in God's-green-earth could you possibly be waiting for?

And in response, the trees say, Exactly.

I can only hold my palms up to the light rain.

III

So, we've talked some, the forest and I. I've even understood some of its words, though of course they were in English and that's very good cause for suspicion. But a story did come to me, a true one that I'd forgotten for twenty-five years.

"Thank you, my son, you've made me very happy," Tata, my grandfather, said when I agreed to take him to the beach at La Jolla for a few days. For clarification he added, "I'll pay for everything."

Tata was a generous and fair man beyond bounds. I knew he'd insist on paying. "You don't have to," said the part of me I knew to be lying.

In the Old Country, my grandparents wove and repaired oriental rugs, as they were then called. Before losing everything to nationalization, they owned a factory where dyeing wool to the deep colors of those rugs was a day-to-day operation. They decorated Easter eggs with the same dyes. "Those weren't exactly for food," my mom concluded when telling the story from her childhood, "but my parents both lived a very long time." They continued their profession in the New Country. First working for others and then out of their home sitting together at an old wood table salvaged in their early immigrant days. My grandparents worked

into their eighties, repairing rugs owned by the rich, now dyeing faded wool with permanent magic markers if they could match the colors.

Tata patted my back, "Yes, I do. Of course, I must pay." And he added, "We'll make great plans for our trip together."

"OK, so we'll leave in a week," I said as I fished my pockets for my car keys, getting ready to leave.

"Thank you, my son. I'll be ready. We'll be together, and we'll see the ocean."

I drove away from my grandparents' home and returned to the task of redirecting planetary trajectories.

Every day over the phone, Tata thanked me again and again. I reassured him that, no, he really wasn't taking me from my work. He'd pay for everything, he repeated, gas, food, hotel, everything. "He's packed his luggage already," my grandmother told me, "and you're not leaving for five more days." Even now, I can see her shaking her head in disbelief on the other end of the line. As a little kid, I'd named her Homama, which actually makes some sort of sense in Armenian, and the name stuck. Before she hung-up the phone, Homama said, "You're doing a very good thing, my son, he's very happy."

Homama and Tata are dead now. This story came back to me, unbidden as these things do, at the Andrews Forest decomposition site.

We loaded up my car and headed south on I-5. Every twenty miles or so I'd pull into a gas station so that Tata could use the restroom. "I'm sorry, my son, but let's stop again. Just to be sure."

I'd exit the freeway in fuming silence. "I don't think I have to go," he'd elaborate, "but it's important to avoid embarrassment."

The closer we got to La Jolla, the longer he'd linger after finishing his business. "Let's go, Tata."

He nodded. "Just one more minute, we don't have to rush, do we? Take a breath. You can smell the sea."

"Yeah, we're close to it," I agreed, though all I could smell was gasoline. "OK, let's go." My engine was running.

Back then my head was so far up my ass I couldn't see a thing. But shoots of new trees grow from the nourishing bodies of their fallen forebears, the vertical anchored to the horizontal. If I have stories to tell today, it's because of Tata, because his own stories and example as a good man are nourishment to me. It's taken me a long time to understand that his now horizontal body is my anchor.

We found a hotel not far from the ocean, just a block or two away. A long and steep wooden stairway led down to the beach. At the top of the stairs there was a

bench offering a great view over the water. We checked into the hotel and unloaded the car.

With a smile, Tata asked, "Are you hungry? Let's eat something."

"Later, maybe," I said, "I have to do some things."

"Yes, your work comes first." He followed me back outside to my car. "Look, there's a grocery store just down the street," he said. I looked to where he pointed. "You go do your work, my son. I'll get a snack now, and when you get back we'll have a good meal together."

I nodded my head and drove off to Torrey Pines for a long run, eager for the hills there. Twenty-five years later, I worked up hills in an old-growth forest, jonesing for that endurance I once took for granted, vastly unsettled, an old man's ghost-voice and the word 'exile' drumming in my head.

When I returned to the hotel a couple of hours later to shower, Tata was in our room and happy enough. "I ate a little," he said. "I bought a tuna sandwich and ate it there on that little bench. I haven't seen the ocean in many, many years. After our dinner, let's walk down the stairs to the water's edge. I'm sure there are many restaurants serving good, fresh fish."

"You didn't go down to the beach when I was gone?" I asked.

"Well," he hesitated, "the steps are difficult for me to manage alone. Let's go together after eating."

"I have to meet some people at the University," I explained.

Tata only nodded his head. His insight into life's dimensions was, to the end of his days, Shakespearian.

So I went to meet my friends. When I got back to the hotel room later, I noticed that he'd arranged several cans of baked beans and a package of white bread on the table along with a stack of paper plates and plastic cutlery. The trash bin held an empty bean can and two spent banana peels. Apparently these things registered in my brain for consideration at some much later time. Tata pointed to the microwave.

"My son, do you know how to use this oven?" he asked. I pressed some buttons, got it working, showed him how. Tata thanked me. "Don't you need to eat?" he asked.

"I've already eaten," I answered.

And so it went. Except for quick breakfasts in the hotel's dining area, I didn't have any meals with Tata. I didn't walk with him along the beach. We didn't talk much. I was rarely around. After the first night, he asked me if I could please get him a new pillowcase from the front desk. His smelled funny, he said. I was so thoroughly annoyed by that simple request.

Questions were asked: "We'll eat lunch and maybe dinner together today, yes?"

Answers were given: "I have to meet people." Or, "I have things to do."

And I'd go off to whatever was calling my restless and rushing spirit which had yet to be harmed, though that would come later, through careless words or neglect. Another old man told me not too long ago that getting older means living through things you never get over.

As far as I can tell, the planets still follow the same orbits as they did twenty-five years ago. I no longer compete at running, or biking, or triathlon. I lost track of those friends whose company I so much enjoyed back then. I turned my back on science but still think like a scientist.

In my last days in Andrews Forest, I started to understand the obvious: The forest exists because humans haven't cut it down completely. It's enslaved to us. Although well-meaning and necessary for the protection of the forest, the questions asked of it by scientists and writers are not those it would ever ask of itself. Andrews Forest doesn't exist on its own terms. It survives estranged from its own volition, and so in exile.

How unobtrusive to my life it would have been to have helped Tata down those wooden steps to the beach, there to walk together along the water for a time, grandfather and grandson. Tata was a refugee twice over, first from his homeland, then from his first adopted country. His fear was lifelong. Had I helped him down those stairs, giving myself to his volition, we would have walked in silence except for the waves, this walking together so easy and so durable. The sunset would have gleamed off his eyeglasses when his head turned just so. Instead, I added a bit more to my grandfather's exile.

As I sat on a decaying tree, memories of that long-forgotten trip came to suffocate me. I needed to get away from the decomposition site, maybe to the cedar grove nearby, unmarred by saw cuts and our intentions.

The grove was cooler, wetter, but what-the-hell I laid down anyway in the moss. And I heard my grandfather's resurrected voice say to me again, as it had long ago when we'd gotten back to Los Angeles, after I had dropped him off at home, "Thank you, my son. Thank you for taking me to the ocean."

My mother is the last chapter of my ancestors. She's the last one: no others on my dead father's side, none left on my mother's. Tata and Homama increasingly inhabit my mom's face and hands and words as she grows older. Maybe I have another chance to get it right.

Moments before he died, Tata said, "I'm not afraid."

The trees are still waiting.

I have no doubt that there's life elsewhere in the universe. But maybe it's only here that forgiveness is possible.

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BIOGRAPHICAL NOTE

I'm ever convinced that new languages at the confluence of art and science are necessary to re-envision our connections, commitments, and responsibilities to the non-human world. As a scientist-writer, I hope to motivate my students in that direction.