

The Year of the Periwinkle

Every weekend, amateur botanists and semi-professional gardeners gather in eager droves at the Quezon City Memorial Circle Plant Center. Sheltered from the heat and smoke of Metro Manila, a sea of green in the concrete jungle, the place is a plantita's paradise. Orchids, lilies, and hoyas, monsteras and aloe vera, forests of dahlias, begonias, and geraniums. If there's any place to look for the Madagascar periwinkle, scientific name *Catharanthus roseus*, known locally as tsitsirika, it's here.

Borne out of Africa by European ships sometime in the 16th century, the periwinkle is a healer's plant. Ayurvedic sages squeeze the flowers' juice out to relieve wasp stings. Chinese herbalists brew the glossy green leaves into a decoction for malaria. Search for the plant on Facebook; look it up on Lazada. Many claim the plant can treat acne, eczema, diabetes, cancer, and more.

Not all these therapeutic claims are supported by the facts. Most lack sufficient clinical testing and evidence. Still, there's reason why the plant is known to apothecaries and pharmacists alike. Of all the illnesses reputedly healed by the periwinkle, there is one disease for which it can irrefutably provide a cure. Can you guess which one? Hint: it starts with the letter C.

Ever since it spurred the development of new chemotherapeutic drugs during the mid-20th century, the Madagascar periwinkle has helped save hundreds of thousands of lives. Last year, to my unending surprise, it helped save mine.

I was diagnosed with a rare form of Non-Hodgkin's lymphoma, a cancer of the immune system, last December 9, 2021, at the age of 23. I was in my last year of a B.S. Biology program, and had just won first prize in a research competition about Philippine biodiversity. When I was rushed to the hospital late one night for excruciating chest pain, my first thought was COVID-19. Instead, the doctors found a tumor the size of two clenched fists wrapped around my heart, with smaller tumors splattered across my lungs, liver, and spleen.

I remember only a few searing images from the days surrounding my diagnosis. My mother and I in the ER, about to be referred to the oncology department; an ominous PET-CT machine, thrumming as it scanned my body for cancer; a revolving door of doctors asking repeated questions about my symptoms. Had I noticed anything odd in the weeks leading up to admission? No, just some vague shortness of breath, which I thought was asthma.

For the next four months, I was told, I would need to shuttle back and forth between home and hospital for treatment. One week spent in-patient to receive chemotherapy, two weeks at home to recover, and then again, rinse and repeat, until the entire ordeal was done. Because chemotherapy weakens the immune system, I was banned from eating sushi and salads for fear of *Salmonella*. I would need to remain in isolation the entire time to avoid COVID-19. No one outside my immediate family, not even my grandparents, would be allowed to visit.

My father and I marked the holidays by getting rid of our hair. I shaved his head, he shaved mine. By the time chemo began just a few days before Christmas, I was already falling into an abyss so deep and black it swallowed everything, leaving only a blank terror in the mind.

To appreciate the power of the Madagascar periwinkle, we first have to understand life at the scale of the cell. Every human cell contains organelles, tiny structures roughly analogous to the larger organs of our bodies. The cellular version of the skeleton is called the cytoskeleton. It has three types of bones: microfilaments, intermediate filaments, and last but not least, microtubules, which span the entire volume of the cell like a network of microscopic pipes. During cell division, microtubules are responsible for directing newly duplicated chromosomes to their respective daughter cells. Without microtubules, the cell's entire internal organization collapses, its ability to reproduce itself snuffed.

Our cells normally run like tightly controlled machines. They divide only when they need to, stay docile when they don't, following the instructions contained by their genes to the letter. However, when these instructions are effaced by mutation, which can be caused by anything from radiation to cigarette smoke or just plain old bad luck, the cell goes haywire. It rampages, a berserk robot on a malfunctioning assembly line, only this time the robot can make more and more of itself until the entire factory is overrun. The mutated cells spread to the lungs, liver, and spleen. Left unchecked they will invade gut and kidney, brain and bone. This is cancer.

The team of Canadian scientists who stumbled upon the Madagascar periwinkle weren't actually looking for new anti-cancer drugs. A Jamaican colleague had sent them a few periwinkle leaves, explaining that the plant was used locally to brew a tea for diabetics. He wanted them to check if the leaves had any actual anti-diabetic effect.

The Canadians began their tests by injecting diabetic mice with crude periwinkle extract. The mice died. Why? Apparently, rather than controlling blood sugar, some compound present in the extract disintegrated microtubules, especially those found in rapidly dividing cells. One consequence of this was the destruction of the mice's rapidly dividing, blood-forming bone

marrow, leading to a catastrophic drop in white blood cell counts and a dysfunctional immune system. Taken orally as part of a tea, the compound had no significant effects. However, at higher concentrations, and injected directly into the bloodstream, the result was deadly. The mice died of blistering infection.

Some cancers, however, like lymphoma, are caused by the abnormal proliferation of mutated white blood cells. By interfering with microtubule formation, the periwinkle extract could also short-circuit cancerous cell division. The rampaging robot stops, falls apart.

Realizing the significance of their discovery, the Canadians worked to refine their crude extract. By 1962, they could reliably isolate the first of a class of microtubule disrupting, cancer-killing drugs now called the *Vinca* alkaloids, after the Madagascar periwinkle's old scientific name, *Vinca roseus*. Vincristine, one such alkaloid, became part of the first multi-drug regimen to produce a durable cure in cancer patients.

Unfortunately, vincristine can be a double-edged sword. Chemotherapy disrupts cell division in healthy tissues as well. Hair, the acid-worn lining of the stomach, blood-forming bone marrow, all require constant cell division to regenerate themselves and function properly. Hence the familiar side-effects of cancer treatment: hair loss, debilitating nausea, crippling fatigue.

My chemotherapy regimen consisted of five drugs: vincristine, as well as rituximab, etoposide, cyclophosphamide, and doxorubicin. In an IV bag the latter three form an evil-looking, reddish orange liquid, a potion straight from hell.

By the third day of every week-long hospital stay I would be wholly confined to the bed. Think of the worst flu possible. Imagine running a ten-mile marathon and being mauled by sledgehammers immediately after. It's unexplainable. Your muscles crumble, your gut falls apart. Locked in the chilly confines of a cramped hospital room, assisted by my mother whenever I needed to go to the toilet, I would spend entire afternoons trying not to vomit.

Overwhelmed by the sudden awareness of my own mortality, I became obsessed with my disease. I read each and every WebMD article, prowled Facebook patient groups at 3 a.m., skimmed the latest obscure reports on the latest arcane drug trials. I memorized survival rates: about 90% of patients with my kind of cancer are cured with first-line treatment. The remaining 10% tend to be unresponsive to further therapy – people of “dismal prognoses,” as one research paper called it.

The fact that about 90% of patients are cured, that I could be cured at all, should have been reassuring. Except it wasn't, not really. Think of it like a game of Russian roulette. Five out of six chambers promise salvation and are empty. The last contains a bullet. Put the barrel against the side of your head and consider: when it's life or death, are there ever any safe bets?

Not that I had a choice. Back home, exhausted, I watched the ashen light pouring past my window. Stranded in my own personal limbo, barred from any meaningful contact with anyone beyond immediate family, life took on a spare, ascetic quality. Time shrank. The past became a fading blur, the future disintegrated. My room became my monastery. There was only treatment and what was necessary to get past it.

Sometime that summer, a pair of olive-backed sunbirds made a nest above my parents' balcony. Tiny, joyfully-colored birds with bright yellow chests and long thin beaks for probing nectar, sunbird males can be differentiated from females by their iridescent blue throats. The pair in question had been scouting my parents' balcony for some time. They came by every morning, whistling their high-pitched, outsized song - *weet weet!* – while hopping from branch to branch. Evidently something about the place made them happy, and we were relieved to have them too.

The one point of hope during those impossible days was my oncologist, a fierce, grey-haired tiger of a woman who made tumors tremble at her approach. At the beginning of my treatment, she explained the plan clearly and succinctly. “If A happens, then B. If C happens, then D.” Would I be ok? What were my chances? “I don't like talking about chances,” she said. “Don't worry, we'll take care of you.”

I completed chemotherapy early April. I wasn't expecting much. A while before I had done a mid-therapy PET/CT scan to assess how treatment was going, and the results weren't encouraging. The main mass choking my heart had shriveled away, and so had the smaller tumors in my lungs, but the ones peppering my spleen and liver were unchanged. No growth, but no decrease either, which suggested a dire possibility. As with antibiotics, the best bet with chemotherapy is to eradicate the disease entirely by the first attack. Should any cancer cell survive the initial wave of medication, they will, by force of evolution, pass down their chemo-resistant genes to their offspring, who will continue to explosively multiply.

Undeterred, my oncologist scheduled another PET/CT scan. The morning after the scan I went immediately to the hospital's online portal to download the results. I read it from top to bottom: complete remission. No detectable cancer. No active tumor anywhere in the body. I was clean. Clean, clean, clean.

My mother wept with joy. So did my aunts, my grandmother, and probably my grandfather as well, at least after the video call was over. My father became teary eyed too. But not me. I felt empty. My emotions were less happiness than exhausted relief. The marathon, for now, was over. Time to crawl back into bed for a long nap. Everything else could come after.

Once I had awoken weeks later, it was finally time to put the pieces back together. And of the many thoughts and desires that crystallized out of the chaos, there was one that burned with immediate urgency: Field. Work.

As I've mentioned before, I'm a training biologist, specifically a budding field biologist, a would-be sage of tropical biodiversity. I don't know why. I've been a city boy all my life. Maybe it was all the National Geographic Channel programs as a child. Or maybe it's because I live in one of the most biodiverse countries on Earth, a place so dense with life that in terms of species per square kilometer it rivals the Amazon Rainforest. In any case, there is something about the non-human world, the secrets of birds, the intelligence of bees, the constant flow of energy from mortal coil to fertile soil, which calls me.

Except, of course, that I was a student during a global pandemic, and face to face classes were still suspended, including fieldwork classes. I got desperate. Nobody wants to be a field biologist with only theoretical knowledge of the field. More than anything I wanted to avoid dying not even a full apprentice of my chosen trade.

An opportunity arose in July. With the recent dip in COVID cases and loosening of quarantine restrictions, my college was organizing a week-long field ecology class in a forest near Subic Bay. One of the professors sent a message. Would I like to come?

I was at the college by 5:00AM on departure day, bags full of shiny new gear: wet boots, sleeping bag, Swiss knife, journal, pencil, headlamp. We left about an hour late under a pale drenched sky and had breakfast at a Pancake House by the highway. By the time our vans arrived at the trail to the campsite, a grove of mahogany trees by a rushing river, the ground had long turned to squelching mud.

An important lesson: always bring your own tent. I had the brilliant idea of saving money by borrowing an extra from the professors, only to discover that extra tents are extra because they're old and leaky and nobody wants them.

We caught, measured, tagged, and released a number of beautiful birds, including an ashy ground thrush and an indigo-banded kingfisher. Our guide poked open a small hole in a rod of bamboo, revealing a wriggling colony of tiny, snub-nosed bats, insectivorous members of the genus *Tylonycteris*, smaller than your palm and crabby at having their home broken into (the bamboo was glued and tied back into place later). We ran after frogs and toads, snakes and lizards, chased after insects with glass jars in hand. An absurdly wishful part of me wanted to see a cloud rat, an adorably furry rodent found only on Philippine mountaintops, but alas, it was not to be. Our rodent traps failed, the coconut and peanut butter bait eaten by ants. We spent an entire day counting and identifying trees, arguably the most exhausting part of the entire class. After all, how many trees do you think are there in a forest?

A wasp stung my palm as I blundered through the underbrush. It swelled for the entire day. Mosquitoes and other ungodly bugs feasted on my legs. Blisters, scratches, welts. None of it mattered. The rain stopped. Patches of blue sky shone through the canopy. I was here, alive, surrounded by tropical heat, slipping through pools of verdant sunlight.

I mentioned receiving five drugs for chemotherapy. Two of them were created solely in the lab: rituximab, a monoclonal antibody, and cyclophosphamide, manufactured from the same class of chemicals used to make mustard gas (which, I was surprised to learn, has no actual relation with the mustard plant, except for the name and similar odor). The remaining three can be traced back to wild plants and bacteria. Vincristine comes from the Madagascar periwinkle. Etoposide comes from the wild mandrake, a poisonous plant common to North America, once used by First Nation communities to heal warts. Doxorubicin was isolated from a mutated strain of Italian soil-inhabiting bacteria.

This shouldn't come as a surprise. Many modern drugs and technologies come from the most innocuous of natural sources. PCR tests for COVID-19 depend upon an enzyme from *Thermus aquaticus*, a heat-resistant species of bacteria first discovered from a geyser in Yellowstone National Park. Ziconotide, a potent painkiller about a thousand times more powerful than morphine, is derived from the poison of *Conus magus*, a cone snail native to the Philippines. Artemisinin, used to treat malaria, is extracted from *Artemisia annua*, the sweet wormwood, an herb commonly used in Chinese traditional medicine. According to writer-oncologist Siddhartha Mukherjee, between 1954 and 1964, the National Cancer Institute of the United States would test 17,200 plant derivatives looking for new cancer drugs, using up close to one million mice for experiments in the process.

Screening the natural world for new products is big business. So it was with the Madagascar periwinkle. The Canadian researchers who worked on the plant were supported by the Eli Lilly company, perhaps better known for releasing the first commercially available insulin in the early 20th century. Eli Lilly gave the Canadians access to expensive chemicals and bigger, better equipment. In return, the researchers helped generate a lucrative, life-saving

product. By the early 2000s, *Vinca* alkaloid sales would net Eli Lilly around 100 million dollars in annual profit.

Yet rampant extraction has a price. The United Nations Food and Agriculture Association warns that around 10 million hectares of forest are destroyed each year. Conservationists estimate that Madagascar has lost close to half its forest cover since the 1950's. The Philippines has lost its forests at a similar if not greater rate. What happens when all forests have been logged down? When all springs have been polluted with filth? What new miracle cures then?

Near the end of our field ecology class, we went to a nearby shore to practice aquatic sampling. We waded into the sea, nets and other scientific instruments in hand to study fish. By mid-morning, we had set the nets aside and spent the rest of the day swimming. Why? There were barely any fish. There was barely anything to do science with. Our professor had been bringing students to that spot for just over half a decade, and in that span of time he witnessed the bay go from somewhat intact coast to a barren, garbage strewn wasteland. The fish had been consumed, replaced by industrial waste. "We are literally," he said, in a combination of indignation, disbelief, and sorrow, "emptying the sea."

On the ride home from Subic, I watched the silver countryside rush gleaming by. Interconnection is a fundamental theme of ecology. It's a tangled science, sensitive to obscure yet essential linkages. Sunlight is captured by leaves, which are plucked by herbivores, who are hunted by carnivores, who themselves eventually die of hunger or old age, to be decomposed by

fungi back into the earth. Ultimately, even the most urban of us need good soil, clean air, and clear water to survive.

With that as my starting point, I wanted to know: How many beings do I owe my life to? It's a question of gratitude. By all rights I should be dead, and yet I wasn't. I was saved. By who? And how many? How far back do the vital connections go?

The 1958 paper publicly announcing the discovery of a new class of chemotherapeutic drugs from the Madagascar periwinkle has three listed authors: James Cutts, research fellow of Canada's National Cancer Institute, Charles Beer, distinguished chemist and British Empire Cancer Exchange Fellow, and Robert Noble, team lead and member of the Canadian Medical Hall of Fame.

At the end of the paper, briefly mentioned in the acknowledgements, is Halina Czajkowski Robinson, Polish immigrant and survivor of Auschwitz, who joined the team as a lab technologist in 1951. She was the first to notice the stark drop in white blood cell counts caused by periwinkle injections in mice. Recognizing the significance of her observations, she was quick to inform her supervisor. He had another hospital double-check her results. Without Robinson's keen work, nobody might have noticed anything amiss about the poor mice.

Where did the lab get their samples from? The initial material came from Dr. C. D. Johnston of Black River, Jamaica, who sent the first periwinkle leaves to Canada. He learned about the plant from a chatty local, who brewed a tea for diabetics from the leaves of an alien plant. The doctor's wife, Mrs. Julia Johnston, organized a troop of boy scouts to scour local forests for the leaves, before drying and preparing them for delivery on her own veranda.

The list of names goes on and on. How did that chatty local first learn of the periwinkle? Remember, the plant isn't native to Jamaica. Perhaps they heard about it from Indian and Chinese immigrants to the country (mostly indentured laborers under the British empire), or overheard a passing merchant extolling its qualities on the docks (19th century British salesmen marketed the plant as a cure-all for diabetes). So many chance conversations, so many small meetings had to happen for the periwinkle to reach me. Each of us exists embedded in a web of relationships, the trail of connections extending far back in space and time.

Some parts of the story I do know for certain. Who saved my life? First and foremost, my medical team. My general of an oncologist. The residents and fellows who work with her. My surgeons, pathologists, and anesthesiologists. My cardiologist. My nurses, who always checked in on me when I was in the hospital, and who never failed to fix the beeping IV drip when it woke me up at night. Family and friends. Cutts, Beer, and Noble. Czajkowski and Dr. Johnston. The mice.

In case of emergency, wrote the poet Sandra Cisneros, "Contact nearest/cloud. Begin by/calling Milky way." Summon the Madagascar periwinkle. Call the wild mandrake. Invoke bacteria. Greet the sunbirds. Stretch and exercise the human capacity for empathy, because isn't a little stretching good every once in a while? Think of all the mice sacrificed for the sake of modern medicine. How many legions of murine souls watch us from rodent heaven, observing our silly antics with beady, inscrutable eyes? I imagine them peering at me through a break in the clouds: all this, just to save a life.

The weeks after fieldwork were filled with joyful excess. I went bar-hopping with friends. I ate everything I was banned from eating during chemotherapy. In August, we flew with my grandparents to Turkey, eager to experience Turkish hospitality and the winding, weaving, melting-pot chaos of their bazaars. We arrived in Istanbul one sunny afternoon, our plane flying over the waters of the Golden Horn, an estuary so named for its molten glow at sunset.

I vividly remember our second day at the ancient capital, once the home of Byzantine then Ottoman emperors. We were at a crowded square near the core of the city, surrounded by graceful mosques, fresh from the cardamom aroma of a spice market. Silver trees stood shining in the sunlight. The call to prayer rolled singsong over red-tiled hills. Our train card was empty and nobody knew how to refill it using the ticket machine.

We tried inserting the card into various slots. Nothing worked. We pressed random buttons, hoping for the best. The machine responded with angry gibberish. It flashed a series of terse instructions on the screen. The instructions were in Turkish.

Our hotel was an hour's walk away. As families often do in such dire situations, we quarreled. You're doing it wrong. Let's ask somebody for help. Again? None of us can speak the language! What if we just walk instead? I'm hungry, let's eat.

Our furious chatter drew the attention a slender young man wearing a neon safety vest. Hello, he said, gingerly approaching us. Can I help you?

We stood for a moment like a herd of deer caught in the headlights. Oh! Oh, yes. We don't how to refill our train card.

Here, let me show you. He asked for the card and placed it on the screen. You press this, then this. You put your money in this slot.

We fumbled for cash in our pockets. No need, he said, fishing out a 50 lira bill from his wallet. I'll refill it for you.

We asked the young man about himself. Where did he come from? Syria, he said. He had come to Istanbul several years ago with his parents to escape the war. Refugees. Right now he was working with the local tourist office to help lost visitors like us.

My father, effusive with gratitude, replied in Arabic. "Hataa naltaqi mujadadan, inshallah." Till we meet again, God willing.

The young man's large brown eyes lit up in pleasant surprise. "Mashallah! La mushkilata! Shkran! Yaetani!" Wonderful! No problem! Thank you! Take care!

And we were on our way.

How breathtaking, the kindness of strangers. It reminded me of home. Like a wellspring, so many people stepped forward to help me during my time of need: aunts and uncles, godparents, old classmates, fellow cancer survivors, former teachers. To be loved is a permanent gift, carried across years and continents, a shelter to take refuge in during dark and difficult times.

After Istanbul we made short visits to the cities of Izmir and Bursa, saw the Roman Agora, lingered in the airy interior of the Grand Mosque, stayed for a while in dusty, golden Cappadocia. The warm memory of our Syrian friend would remain, together with all the other memories made during that trip, as our plane returned to Manila during a downpour, grey skies churning in the wake of a passing typhoon, in time for me to catch the lump that would appear on my neck later that September.

It has been difficult to describe, even to myself, the terror of the past year, the pain and grueling nature of chemotherapy, and the strain of living every day with death perched silently on your shoulder. It has been difficult to communicate the profound awareness of one's own mortality, the irrevocable loss of youthful invulnerability, and the feeling of having received, in what should have been the prime of your life, a glimpse of your frailty at 80. I am in ordinary times an avid journal keeper. I try my best to jot down an entry every day. But from the time I realized my cancer was back in September up to the beginning of a stem cell transplant in December, I wrote down nothing. Blank. Dead silence on every page.

I felt like a man on the execution block. I felt like someone scheduled to die. My namesake, Macario Sakay, was betrayed by a comrade while fighting against the Americans early in the 20th century. With the noose around his neck, he somehow found the grace and resolve necessary to bid farewell to his beloved country and hope for a brighter future. With death on my mind as well, I looked back at him with renewed awe. How did he ever muster the courage? From where are such reserves of willpower drawn?

My oncologist referred me to a new specialist, a hematologist, who explained that the next step would be a stem cell transplant. I would be given chemotherapy so intense and in such high doses that my bone marrow would be entirely seared away, leaving me, for a time, without an immune system, just like the mice experimented on during the early days of *Vinca* alkaloid research. To let me survive the procedure, they would extract stem cells from my blood before beginning treatment, putting the cells back into my body only once chemo was over, where they

would then grow and replace my destroyed bone marrow. It would be hard, he promised, but I'd get past it.

A litany of possible short- and long-term side-effects: Hair loss. Crippling nausea. Fatigue. Breakdown of the mucous membranes lining my digestive tract. Mouth sores. Loss of appetite. Vulnerability to infection for at least a year, while my new marrow develops. A small risk of heart failure. A small risk of developing a second cancer in the future, particularly leukemia.

Just half a year ago I thought I was cured, and now here I was again, seemingly back to square one. I could hear the angels of doubt swirling above my head. Why? How could this have happened?

Well, an angel answers. Around 400 million years ago a fish walks out of the sea. That walking fish gives birth to more walking fish, whose descendants become amphibians, reptiles, birds, mammals. From the mammals come the apes, and from the apes, humans. Some humans, the Austronesians, sail out of what is now Taiwan toward the Philippines. Those who stay in the archipelago intermingle with native communities, trade with China, embrace Islam, are colonized by the Spaniards, become Filipino, rebel, stage a revolution, eject the Spaniards, are invaded by the Americans, fail, resist again. Other Austronesians move on, some sailing all the way across the Indian Ocean, to a large island near the African coast, where they encounter a dainty-looking shrub with pretty flowers, a hardy inhabitant of sandy soil. It's the Madagascar periwinkle. You are born, a Filipino of the 21st century. We have come full circle.

Before handing me off to her hematologist colleague, my oncologist gave me her rosary. Keep faith, she said. You'll get through this. My oncologist has always been a bit taken aback by

her patient's stubborn agnosticism, one of the rare heretics in a majority Catholic country. She has always tried her best to understand all the strange talismans I bring with me to the hospital: wooden crosses, Buddhist prayer beads, a lucky sock, a favorite pen, the notebook my sister gave me for my birthday.

What lies beyond death? Perhaps birdsong, suggests Dr. Joey A. Tabula. Placing his stethoscope against the heaving chest of a man dying from COVID-19, he hears, to his surprise, "crickets/the chirp of nesting sparrows/rustling of bamboo/burble of stream/the silence of an earthen jar filled with spring water." Whatever your approach to mystery, any gift sincerely given forms by itself a kind of miracle.

My hematologist was right – the stem cell transplant was the hardest of all my cancer treatments. I was in the hospital for a month, reeling from body pains, nausea, and fatigue. All my food had to be sterilized beforehand to prevent infection. My white blood cell counts dipped close to zero. At one point I went down with a fever so harsh I became delirious, imagining myself writing poetry in some strange desert, the individual lines ringing so clear and true that the air sang as I spelled out the words in the sand.

And yet, after all that, here I am. I surfaced from delirium with a lingering sense of transformation. My stem cells engrafted to my bone marrow on December 7, 2022, a successful transplantation, almost a year to the day after my initial diagnosis. A few weeks later, the good news came through. I am cancer-free once again.

There's a certain kind of vertigo that haunts patients who emerge intact from treatment. After spending so much time with your mind's eye locked on the certainty of your own ending, the sudden influx of possibilities can be overwhelming. Will my cancer come back? What if I catch COVID-19? Are they still looking for research assistants in the lab? What happens now? It's like seeing the sky for the first time. It's like falling into space. The agony of hope is that no one can ever really predict the future.

Either way, I have lived a good life. An odd thing to say, but it's true. I have seen my share of the globe. I have given my tiny contribution to science, however humble. I have had the pleasure of reading, of touching through countless pages radiant minds both living and long-dead, and of entering the boundless realms of story many times beyond measure. I have had the privilege and luck of affording quality medical care. And I have been blessed with the warm company of family and friends; the gift, in this winter of discontent, of witnessing love tried and tested and found true. The lens through which you view the world has been fractured and remade, infused with a different color, and now when you peer through the glass everything appears just an inch or so off-center.

Back at the Quezon City Memorial Circle Plant Center, I pay the shopkeeper for my potted periwinkle. I try to study the way her leaves branch off the main stem, the number of petals on each flower, how the yellow core of stamens and ovaries at the center of each pink bloom shines golden under the sun. Up above, white clouds float idly by. How nice it would be, to pass away under the infinite blue sky. There I will rise like smoke and become air. Ash to ash, dust to dust. Breath to shining breath. What was once I will melt away, the carbon, nitrogen, and oxygen of my body spinning away to join the atmosphere.

But first, home. My new companion needs a spot in the garden. She's a pretty plant, tougher than she looks, with laughing flowers and long grasping branches. I cradle her close to my chest. So this is why people get into gardening. There's something reassuring about carrying such a burden, the responsibility of it, the weight. It grounds you, steadies you, to hold a piece of life blooming in your hand.