

Aki wants so much to stay in the home she's known her whole life, but with the Earth seeming to conspire against her, will she be able?

Shifting Fortunes

by

S. Q. Eries



I gnaw my lower lip as Mama tallies our expenses. Her eyebrows bunched with concentration, she scribbles numbers, taps the calculator, and scribbles some more. Then her pencil falls, and relief floods her face. "Aki, there's

enough left in the bank to last us another six months."

A whoop bursts from my lips. "Yes! We can stay!"

"For now. Whether we stay for good depends on the mushrooms." Her forehead puckers again. "I wish I didn't have to worry you with this. A fourteen-year-old girl should be having fun, not helping make ends meet."

I toss my head. "Who says I'm not having fun? You always called the mushroom shed my playground."

Mama's troubled look gives way to a small smile. "You really love it here, don't you?"

"It's home. And it'll stay that way." I take her hand in mine. "Don't worry. We'll be an overnight success at the farmers market. Soon all Japan will be raving about Kageyama Family Mushrooms!"

Mama chuckles, but worry still lurks in her eyes. We've gone through too much for her to get overly optimistic.

She glances at the kitchen clock. "You'd better go. You don't want to be late for school."

"Right." I grab my backpack. "And don't worry about the

crates. I'll pack them as soon as I get home."

I race out of the house and through Mama's garden. At the end of the vegetable rows squats Papa's mushroom shed. Beneath its curved white roof are trays of jumbo champignon mushrooms, and stacked by the door are the brand-new crates we'll use to take them to market tomorrow.

As I wheel my bicycle from the side of the shed, I scan the forested slope that rises steeply behind the garden. Upon that hillside are slashed logs seeded with more of our mushrooms. Logs that Papa and I picked together.

He never imagined us turning his hobby into a livelihood. But he probably never imagined dying in a car crash either.

I swallow the lump in my throat and pedal off.

My bike zips through our woods to the narrow road that leads out of town. It's a winding ten kilometer ride to the next village where I catch the bus to school. As I shift gears for the steep climb, I pass the sign: Ohyu Geyser Welcomes You.

Tall weeds grow in an untidy tangle in front of the fading words. Our village used to maintain the sign with care, but no one bothers now.

After all, the geyser stopped flowing years ago.

I have only hazy memories of its three-meter high eruptions, but Ohyu Geyser was once the pride of the village. It attracted sightseers from all over, so many that the hot springs inn my great-grandfather built was always full. Then a decade ago, the geyser began to peter out. Its hourly eruptions became less frequent, less forceful.

The village tried everything it could think of to revive it. People made sure tourists didn't throw coins or trash into the geyser vent. Ohyu banned the drilling of new wells in the valley. Our inn even stopped pumping hot spring water for a month.

Nothing helped. The geyser's flow continued to decline. When it stopped altogether, so did the flow of tourists. Papa and my uncles struggled to keep Kageyama Inn open but, after five difficult years, closed its doors. Ohyu's few shops and restaurants followed suit. Soon most villagers,

including my uncles, left for better opportunities. We stayed. Our family loved the mountain valley too much, and Papa found a lumberjack job that paid the bills.

But he's gone now.

I pedal furiously. Papa was determined to stay in Ohyu. That same determination burns in me. But despite scouring nearby villages, Mama can't find more than seasonal work. If the mushroom business fails—

I cut off that train of thought. *It has to work. It has to.*



A storm is drenching Hinata Village when the bus drops me off after school. As I duck beneath the convenience store awning to put on my poncho, a sleek sightseeing bus enters town. It halts before the manicured courtyard of Hinata Hot Springs Inn, and envy prickles my chest.

Tourists spill out. Elderly seeking relief from aches and pains. Hikers eager to ease sore muscles. City folk hoping to soak away stress. They scurry into the foyer, which already bustles with guests wearing Hinata Inn's indigo

robes. As they enter, they pass a sign that advertises:

Hydrocarbonate Mineral Water

Indoor and Outdoor Pools

Years ago, our inn had a similar sign, and Kageyama and Hinata Inns were matched rivals for hot springs tourists. While Hinata was conveniently located near the expressway and rail station, we boasted a view of the geyser. But after its eruptions ceased, Ohyu became just another backwoods village, hardly worth the effort of visiting.

Why? I asked Papa that when our inn closed, and I remember the sadness that filled his eyes.

"Many villages have hot springs, but geysers are rare," he answered. "It takes a special formation and the right balance of groundwater and heat. Unfortunately, that balance is delicate. Sometimes nature upsets it; sometimes people do. Either way, once a geyser stops, it's no simple matter to bring back."

A truck bearing the logo "Tanaka Water and Geothermal

Wells" splashes by. I stare at the drill rig mounted in its bed and wish it could somehow reopen the geyser. But a geyser's water supply isn't at all like a pipe; it's a complicated network of underground cracks and fissures. And all it takes is a natural shift of the earth or mineral deposit buildup to disrupt that flow.

A hydrogeologist who visited Ohyu believed that was why our geyser stopped. But even if he was right, we on the surface can't possibly pinpoint those blocked pathways, let alone reopen them.

I unlock my bike and head home. Rain splatters my face, soaks my socks, and beats the pavement.

Of those billions of raindrops, some will evaporate when the clouds part. Others will join rivers, ultimately reaching the sea. Plants will take their share, drawing moisture through their roots. The rest will trickle into the earth. Some of that water will stay trapped in shallow soil; some will join the groundwater reserves that feed wells; yet another portion will continue down, descending to the depths where the scalding waters of the hot springs are born.

And once, a tiny fraction of that geothermal stream wound beneath Ohyu and emerged a spectacular jet, shooting to the sky like fireworks.

If only it would return. But that would take a miracle of geologic proportions.



It's still raining when I coast into Ohyu. As Kageyama Inn comes into view, I slow down. My uncles are trying to sell the property, and until they do, Mama and I keep an eye on it. The three-story wooden building is dark and silent as usual, but in the plaza beyond, I glimpse the bright colors of an umbrella.

My bike skids to a halt. "Granny Ito?"

The bent form beneath the umbrella waves, and anxiety buzzes in my chest. Of our few remaining neighbors, Granny Ito is the oldest. She always complains about arthritis and never goes out when it's wet. Hoping that her ninety-year-old wits haven't unraveled, I lean my bicycle against the inn's padlocked gates and trot to her.

She's sitting on a bench near the geyser's meter-high cone. Years ago, it spewed steaming spray to the delight of sightseers. Now only cold rainwater pools behind the safety barrier surrounding the silent vent.

Granny smiles. "Hello, Aki."

To my relief, her eyes are clear. "What are you doing, Granny? You'll catch cold."

"Don't worry. I'll go in soon. I just wanted to say goodbye to the geyser spirit."

A frog wedges in my throat. "Goodbye?"

"My daughter called today. She wants me to live in Osaka with her." Granny sighs. "I agreed."

"B-but you said you'd never leave the village."

"Things get difficult when you're old." Her gaze drifts to the inn's boarded-up windows. "This village never was large, but it was lively. At least it was when we had the geyser. With so few left now, my daughter worries."

I can't argue with that. Granny's the last resident on the

main avenue. If something happened to her, the rest of us likely wouldn't realize until it was too late. As my heart sinks, she pats the spot beside her. "Sit with me."

We huddle beneath her umbrella. Before us, the geyser cone glistens in the rain. I think it looks eerie; chunky mineral deposits coat the cone and surrounding stones like an attack of mutant mold. Granny gazes like it's a long lost friend.

"I suppose it's silly to say goodbye. After all, the spirit left long ago." Her body sags. "We took it and its blessings for granted. Now we're paying the price."

She scans Ohyu's empty streets. "I wonder sometimes where it's gone and whether it might return."

I smile but say nothing. I know from school that geysers are steam explosions when superheated groundwater blasts to the surface. Spirits have nothing to do with it. But explaining that to Granny won't do a thing to bring the geyser back.

She pats my knee. "Enough of my rambling. Let's go."

I walk Granny to her house. The moment her door shuts, the smile on my face slips. I never imagined Granny would leave. Losing her is a huge blow.

I give myself a mental shake and mount my bicycle. *I don't have time to be depressed. I have mushrooms to pack.*

The next instant, the ground bucks like a horse, and I fall with a crash.



It was a 4.5 magnitude quake. Duration five seconds. Epicenter Ohyu Village. No casualties, no injuries. For most, it was barely newsworthy.

For us, it was a disaster.

I gape at the massive heap of dirt looming where the mushroom shed once stood. There's no sign of its white roof, not one mushroom tray, not a single champignon. Even the forest logs we seeded have disappeared beneath the landslide's path of destruction.

Mama weeps, her knees sinking into mud, but I'm too

stunned to cry. The wooded slope behind our garden had always seemed so strong and enduring. Yet one shrug of the earth had brought it crashing upon the shed that sheltered our hopes.

Mama lurches to her feet. "That's it. We're finished."

I jolt from my daze. "Finished? But we can start over—"

She whips an arm toward the mound. "Everything's gone. It's a sign. We can't stay."

"But..."

She's not listening. Stony-faced, she marches into the house.

I crumple to the ground. Then the sobs come, and my tears mingle with the rain.



Two weeks later, the skies are clear above the village cemetery. Mama arranges fresh flowers while I clean the Kageyama Family headstone.

As I scrub off moss with an old wooden brush, guilt fills my chest. "I don't want to leave Papa."

"We'll visit," says Mama, not looking up. "He'll be fine. So will you. You'll love living with your cousins, and Tokyo will feel like home before you know it."

I doubt that. The few times we visited, I found the city stifling, and people sneered at our country accent. "Do we have to leave tomorrow?"

"We discussed this, Aki. I need to find work."

"Maybe you can go, and I'll stay a little longer."

Mama slams down the flowers. "With whom? Granny Ito's already moved, and I won't have you burdening the others. And if you say another word, we'll leave for Tokyo this instant."

Her words strike like an executioner's blade. These last days, even as we prepared to leave, I believed I could find a way to stay. Those last shreds of hope disintegrate.

Tears fill my eyes, and I bolt from the cemetery.

I race blindly down an overgrown path. Branches scratch my skin, but I scarcely notice. I'm desperate to get away from the inevitable, from my helplessness, from the hurt swallowing me alive.

My foot catches, and I go sprawling. Pain rips across my forearms and knees, and I lose all control.

"Give it back!" I scream. "Haven't I lost enough? Give it back to me!"

But there's no response, not even a sigh of wind.

I lift my head. I'm at the plaza. Through the haze of tears, the geyser cone looms, a gravestone marking the death of everything I've known, and rage surges anew.

"It's all your fault!" Scrambling up, I hurl the scrub brush in my hand. It smacks the crusty stones and drops with a splash.

Suddenly, a white jet bursts from the cone. I shriek, stumbling back, as Mama rushes into the plaza. "Aki!" she cries. "Are you—"

Her voice fades, and we gape at the column of vapor and water before us.

Seconds later, it disappears. I sprint across the plaza to the safety barrier. A pool of milky water steams within. From the size of it, the eruption wasn't today's first. From the thin vapor plume streaming out the vent, it won't be the last.

As my brain reels, Mama stammers, "Aki, was that real? How on earth?"

"The earthquake!" Temblors had the power to impact things above and below. The same jolt that triggered a landslide could also reshape the layers of soil and stone underfoot. And though that geologic shift crushed one dream, it may have opened the path to another.

Our gazes lock. For the first time in weeks, determination sparks in Mama's eyes. "Come on, Aki. We have plans to change."



S.Q. Eries is a registered professional engineer. She holds Masters Degrees in civil and environmental engineering and adores Japanese hot springs and Korean saunas. She also writes young adult fiction and reviews books and manga for The Fandom Post website. *Shifting Fortunes*, which is her fifth short story, was inspired by a visit to Ohyu Geyser in Atami, Japan. Special thanks go to hydrogeologist Yemia Hashimoto of the San Francisco Bay Regional Water Quality Control Board. For more about S.Q. Eries, drop by her blog: sqeries.wordpress.com.

Credit: Shifting Fortunes Illustration by Erin Colson.

Find more essays, games, and stories at
[Issues in Earth Science](#).

©2015 Issues in Earth Science