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# Father COPPER

**Essay by Annie Murphy**

Photographs by Rodrigo Llano

*Day by day you returned  
to the poor orphaned stone,  
the poor stone that sleeps  
and endures and hates the flame  
and you are, already, all your dead  
before you're buried.*

—Gabriela Mistral, "Copper"



A German tourist surveys the Chuquicamata mine from beneath the shade of an umbrella; tours run regularly to the mine and to the nearby ghost town.

**W**HEN CARMEN AHUMADA first looked on the copper mining city of Calama, she wanted to die. It was 1958, long after Germany's World War I-era invention of artificial saltpeter—the main ingredient in bombs—brought Chile's glory days as a world supplier to an end and made obsolete the tiny, arduous saltpeter towns that had cropped up all over the Atacama Desert. Carmen's home, Peña Chica, lay on the outskirts of the Atacama and was one of the last to hold on, but when it disappeared too, her family moved deeper into the desert. There was little choice but follow the tide of workers to Calama, where copper was fueling a new boom. Now there's a photograph in Carmen's living room, taken around that time; in it, she's sixteen, with soft brown hair and doe eyes like Annette Funicello.

"We only took what we could carry," Carmen tells me. "We just locked the door to our house, with the furniture and plates still inside, and carried our suitcases to the train." Now, as she approaches seventy, Carmen likes to tell people that she's never had an unhappy day in her life, but when she speaks about leaving Peña Chica, her eyes well and she wrings her hands. "It seemed so hard to me here," she says of life in the deep desert. "The air made my skin split open, and blood ran from my face and hands and legs. The gusts of wind would blow all that red earth right through the windows. I just wanted to go home."

But in Calama she soon fell in love with Mario, a baby-faced copper miner who'd grown up even poorer than she. They married and had eight children, and together they made a happy, simple life on his mining salary. He was even able to buy a late-model Chevy Bel Air, a cool, grand boat of a car that he'd always dreamed of owning. When their youngest daughter was almost ten, Mario died in the mine. And eventually their daughter, also named Carmen, went to work at the nearby Gaby copper mine as part of the first wave of women entering the industry.

"The desert is generous," Carmen says.

She repeats this, mantra-like, as she catalogs all the desert has given her and all it has taken

away. Her daughter does, too. It reminds me of the Arabic *Inshallah* or the Christian *God bless us, Amen*. It's the Chilean copper miners' hopeful blessing, *The desert is generous*.

And the Atacama Desert is generous—at least for those with the means and know-how to claim its gifts. Though it is one of the most inhospitable places on earth, immense mineral wealth lies beneath its sands, and for centuries, it has tempted miners and tested their endurance. The so-called Copper Man mummy, a sixth-century miner killed in a cave-in, was unearthed in the same mine where Carmen's husband worked.

Today, the Atacama is heavily industrialized. Tens of thousands labor around-the-clock in the mines that pock its surface like moon craters. In air-conditioned offices, observation towers, and the cabs of trucks, everyone is harvesting the copper that drives Chile's economy and has made it the most developed nation in Latin America. Chileans have honed precious metal extraction into a sophisticated business, and gone are the bare hands, the tent camps, and jerry-rigged equipment of their forbearers. This is development.

Yet modernization of the mines hasn't translated into modernity for Chile. The modern gadgetry that makes copper so prized is still manufactured in China, with Chilean raw materials, then imported back into this country—nonetheless, it's made copper so coveted the metal can erase everything else. Carmen's hometown of Peña Chica has been swallowed by the sand, abandoned by those who moved with mining's shifting tides. Calama is her home now and where she wants to be buried someday, under the terracotta and rose-colored earth that she once hated. "The desert is generous," she repeats.

**C**OPPER, ALONG WITH GOLD AND IRON, was one of the earliest metals used by man. A ten-thousand-year-old copper pendant has been discovered in Iraq, and there's evidence of smelting in the Balkans as early as 5000 BCE. Back then, copper smelting was used mostly to create implements with useful cutting edges. Ötzi, the "Ice Man," a male body discovered largely

## **Copper's value is concrete and has been particularly high since the digital revolution, but in Chile it is also a symbol of the country's power.**

intact in an ice floe in northern Italy, his frozen skin burnished like metal, was found to have been carrying an axe with a copper blade. And for most of human history, that's what copper remained—material for tools or, eventually, for currency.

In the twentieth century, copper became a staple of modern living. In fact, if you were to tally all the electrical wiring, water pipes, appliances, and copper miscellanea in the average American household, you'd have four hundred pounds of copper; add the standard two cars and you have another hundred pounds of the stuff. But as the new century neared, copper became prized as the high-speed artillery of the digital revolution.

In 1997, IBM announced that copper-based chips would replace its aluminum microprocessors. The switch might seem small, but it was a sea change, and the principal reason that computers today are cheaper, faster, smaller, lighter, and less likely to overheat than they were a decade ago. But copper use doesn't stop there. Each electronic device sends and receives data to and from other devices, and all of the cables and wires that connect us to the internet, telephone networks, and cable television channels are also made, entirely or in part, of copper. And all of this came as a boon for Chile.

Chile holds over a third of the world's copper, almost all of it in the Atacama Desert—and much of its profits go into government coffers. Over a period of years in the fifties and sixties, the Chilean government nationalized the

country's largest mines and consolidated them under the National Copper Corporation of Chile (Codelco). Today, the metal accounts for nearly half of Chile's exports. Take away copper, and the country would be left with wine, fruit, and mountain views to peddle—not enough to sustain a nation of sixteen million in first-world comfort.

Copper's value is concrete and has been particularly high since the digital revolution, but it's also a symbol of the country's power. (The culmination of the copper industry's nationalization in 1971 was declared the Day of National Dignity by President Salvador Allende, who was elected with the backing of Chile's copper miners.) During the current global recession, the reserves generated by copper have kept Chile's economy intact while that of other nations has crumbled. But those reserves are finite and copper consumption shows no sign of slowing, so the Chilean government is investing heavily in ever more high-tech—and ever elaborate—methods of extracting the Atacama's mineral wealth.

**S**TRIKING OUT FROM THE COASTAL CITY of Antofagasta, with its rows of chrome and glass buildings, geological surveying companies, and billboards for iPhones and penthouse apartments, we head north and east out of town. We scale the coastal mountain range that holds back the moisture coming off the sea and take the

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Ice cream seller Pablo Montero appears like a mirage in the desert, scooping up cones of vanilla and coffee ice cream for passing truckers and miners.



Pan-American Highway, smooth and straight, to the north. Our car passes tractor trailer after tractor trailer, burdened with everything from mining equipment to fresh tomatoes, while an ancient train crosses the road at intervals, carrying in sulfuric acid and carrying out copper plates. Everything that gets used in copper mining must be brought in—particularly water, which is needed in great volumes for the mining process.

An industrial, open-pit copper mine, like the Codelco-owned Gaby Mine where we are headed, can use up to five hundred gallons of water per second to process ore. Yet the Atacama is not just a desert—it's the driest desert on Earth. That means huge pressure on the paltry local water supplies, which has led local mines to try everything from buying fifty-year rights to the sources that indigenous communities depend on, to installing gigantic desalination plants to make seawater potable. Right now much of the water used in the Atacama is shipped in from the Andes mountain chain that defines Chile's eastern border more than two thousand miles away.

Outside the car, a ruthless noon sun washes out all color, giving the desert the hue of a scallop shell. The sky is huge, cloudless, and without depth. A man in a spotless white smock sells ice cream far from any town, just him and his plywood booth in a whirl of dust. The phrase painted above his head—TAKE CARE OF YOURSELF, SOMEONE IS WAITING FOR YOU—seems less friendly encouragement than a byword against the inevitable loneliness of the landscape.

I'm traveling with Chilean photographer Rodrigo Llano, and he seems to revel in the dry heat and penetrating light. At a railroad crossing, he tells me to roll down my window and feel the air. A hot gust hits me in the face, as I stick my hand out the window. The fine, blond hairs on my arm stand on end like anemones, stretching toward the evaporating moisture of my body, and I run one hand over the other, marveling at how they seemed to have aged years in a few minutes. By the time we approach Gaby Mine, our skin is the texture of parchment, drawn taut enough that rain would bounce right off.

But there is no rain here—ever. The Atacama receives an average of one millimeter of precipitation each year, and some parts have never had a recorded rainfall.

We've turned off the Pan-American onto a dirt track. Now the horizon is broken by occasional hills, many covered in the obsessive tire marks of prospectors looking for a mineral deposit. Soon, however, we begin passing industrial copper mines, identifiable by the gigantic, blunt mountains of refuse that surround them. The piles are called *tortas*, or cakes, and they recall Bundt pans. After an hour or so, a sign announces that these tailing piles are Gaby's. From afar, it looks like any other mine, an immense gravel pit with pile after pile of gravel, conveyor belts, portable offices, and dump trucks, but Gaby is special. It's the only mine in Chile that no longer uses people to move earth. Gaby now mines entirely with automated trucks.

It's not quite as close to science fiction as it sounds. All the known big, pure deposits of copper have been dug up, so now it's more a matter of sifting through enough earth to cull smaller deposits of copper. Most mines in this area work with a "law" of about 2 percent, which means for every tonne of earth dug up, they take away 441 pounds of copper. But Gaby has an especially low law, only taking out about 90 pounds of copper per tonne. Once you account for impurities, the final take is about 68 pounds—only enough copper for one home air-conditioning unit. It wasn't until 2006 that the technology existed to make exploiting such a low law feasible. That technology takes the form of twelve immense Komatsu dump trucks, autonomous vehicles that can carry 350 tonnes in a single load, and run without a driver or remote operator, able to steer themselves independently using radar and GPS. In twenty-four hours—the mining never ceases—one Komatsu can move fifteen thousand tonnes of earth, and each day the twelve behemoths can harvest roughly 12 million pounds of copper. In this sprawling process, "miners" are basically the caretakers of these immense automated vehicles, people who drive auxiliary dump trucks or perform tasks like setting dynamite or repair-

**Sergio makes it sound like the trucks have minds of their own, but he sharply corrects me every time I suggest the trucks are like robots. “Autonomous!” he insists.**

ing vehicles or simply monitoring the operation from tall observation towers.

It's near dusk on our first day, and the lights of the mine are just flickering on, as Ivonne Herrera takes us into her tower for a better look. Ivonne has a dark, serious face, and a fifteen-year-old daughter she's raising alone. She came to work at the mine because here she can earn about three times what she used to make in public relations, but Ivonne works twelve-hour shifts, four days a week, as she puts it, “living in a constant cloud of dust.” And though she's conscious that this pit provides the copper that runs everything from her cell phone to her electric teakettle, she's ambivalent about the work itself. She peers out of her observation booth, perched on the edge of the gaping open pit. An enormous conveyor belt twinkles, covered in electric lights, and at this distance it almost looks like a roller coaster at a county fair.

“You know what I see here?” Ivonne says after explaining her work, and telling me her daughter wants to be a pilot. “I see a huge environmental impact.”

She mentions the 8.8 magnitude earthquake that hit southern Chile in February and says she believes it might be because of mining operations.

“The earth is continually forming and moving,” she says. “I think that it must have been trying to adjust to all we've taken out of it. But this is how we make our living. And when we're done, the idea is that we'll fill a lot of the hole with the tailings. Just bury it again.”

**I**VONNE'S OBSERVATION TOWER is as close as we will get to the Komatsu trucks. The next day, as we tour the mine, our guide Sergio Molina tells us that “not even the president of Codelco could get you near those trucks.”

“This is still a developing technology,” he explains, slowly brushing some dust from his starched button-down. “One of those trucks could go haywire and you wouldn't want to be around. Theoretically, we'd have to get you body-guard trucks.”

Sergio makes it sound like the trucks have minds of their own, but he sharply corrects me every time I suggest the trucks are like robots. “Autonomous!” he insists. They're certainly the newest marvel of copper mining, huge machines turned into tiny specks as they crawl along the floor of the mine pit, making enormous volumes of work possible. Outsiders are simply not allowed to see them up close. Sergio tells me we will have to be content with the other innovation at Gaby—the women.

There are various stories about why the geologists who discovered this copper deposit in 1996 dubbed it Gaby. One is that it was the name of a favored prostitute in nearby Calama; another is that it was the name of one of the geologists' daughters; a third, which most employees believe, is that it was named for a popular Chilean television program character. No matter the original namesake, the deposit was far larger than originally thought, and when the mine officials realized this, they thought they'd

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A former office secretary, Carmen Zuleta was one of the first women to work at the Gaby Mine, where she now drives heavy equipment.





better give it a more dignified name. They chose a variation on Gaby—Gabriela Mistral, one of Chile’s most famous poets and the only Latin American woman ever to receive a Nobel Prize in Literature. They also decided this mine would be modern not just because of the autonomous Komatsu trucks that make it profitable, but because it would employ large numbers of women. Most Chilean mines employ about 6 percent women, almost all in secretarial jobs, but at Gaby about a quarter of employees are women, and they hold positions from executives to truck drivers.

Their presence is a coup; in addition to the gender division and male bravado you’d expect to find in any mining industry in the world, Andean mining culture is full of centuries-old legends and cultural mores that prohibit women from entering mines. Women are believed to bring bad luck and even death; their presence is considered dangerous. Bernardita Espinoza, a freckled, ambitious executive at Gaby, said that when she accompanied her father to work in the mines one day in the midnineties, she wasn’t

even allowed through the entrance. But it’s not so much that society has changed; it’s the world of the mine that has—and permitting a woman in an office cubicle or even a truck cab is far less fraught than letting them into the sacred entrails of the earth.

Gaby Mine is proud of how it has worked to integrate women. The offices are outfitted with feminine details, including a sterile, mauve and beige “Mothers Room” where new moms pump and refrigerate breast milk for the infants they must leave behind during the twelve-hour shifts. Outside there’s a “desert garden” full of lavender and rosemary kept alive by constant tending, and above it sails a metal angel meant to recall the mine’s namesake. Entering the lobby, there’s also a collection of artwork—all of it incorporating copper—in homage to Gabriela Mistral. Above the waiting area a line from her poem “Copper” is stenciled, one letter in each window: RISE, FATHER COPPER, RISE. YOU WERE BORN FOR THE FIRE.

We eat lunch with a handful of workers in a climate-controlled mess hall that’s mostly

**The locked gates of the Gaby Mine keep the curious from getting too close to the high-tech trucking equipment.**

empty. Just as we sit, the door swings open and a brown-haired woman with a charming smile strides in and sits down with us. Carmen Zuleta is the youngest daughter of Carmen Ahumada, the woman forced to abandon her house as a young girl. Zuleta straightens her hair, sets her walkie-talkie to one side, and tells us she's on a diet, as she fills a plate with garbanzo beans and green salad. "No carbs," she says. She laughs at herself, shrugs, then begins to eat.

I can't stop looking at Carmen's eyebrows. They're plucked and groomed into two elegant arcs, the kind of eyebrows usually had by for women with money and time. Carmen makes a decent salary as a machine operator here at the mine, but working twelve hours a day, four days a week leaves few leisure hours. She admits her three days off are mostly spent resting up for the next four-day stint, though she's just as quick to say she loves her job. With her salary she supports her two teenage children and her mother, and she seems to find great satisfaction in how they all look up to her.

"This is the job I saw my dad do," she says. "When I was eight, he'd put me in his lap in the truck he drove at the mine, and from then on I loved big vehicles. It's really something to know that a person is capable of dominating a huge machine." (When we see Zuleta at her house a few days later, her mother will remind us that her father died in the mine a year after he first put her in his lap in that mining truck.)

Zuleta glances at the clock and rises from her seat. Taking her hardhat and polarized wrap-around sunglasses off their peg at the entrance to the mess hall, she beckons to us to go outside. We step back out into the parched dust and follow her to her truck.

"It's the daily dynamite blast that always happens after lunch," she says. She grins, checks her watch, then she points to a spot over the immense open hole that is the mine and tells us to pay attention. Almost immediately, a siren begins to wail. A minute later comes a profound rumble, and a big cloud of pale dust balloons

into the air. Before it settles, Carmen poses for a few photos in front of her rig and invites us to visit her house in Calama. She goes to pick up another machine, a watering truck, which she'll use to keep down some of the dust that was just kicked up by the explosion, while the enormous driverless dump trucks begin to collect the hundreds of tonnes of earth that have just been reduced to a very large pile of dirt.

**T**HIS MINE IS THE MOST BRUTAL physical environment I've ever been in, and it grates on me as the days pass. The immediate landscape is flat, most of it sky; the rest is deep veins of rock and mineral covered by a layer of earth the color of dirty towels and the texture of cement. Then there's the pit—at the edge of the mine, the earth drops abruptly away into a hole large enough to engulf a small city, including forty-story buildings. Though this is modest in the grand scheme of copper mines, Gaby is still sufficiently cavernous to dwarf the autonomous dump trucks that scuttle across the bottom like insects, and to put into relief some of the projects we humans undertake together. The place becomes like a drug made of dust and negative space, and as the sun climbs in the sky, I remember over and over that this is the driest place on earth, though it begins to feel more like an arid hell. Any ill feeling is compounded by the endless burn of the full desert sun, the clang of machinery against the sob of the wind, and the taste of old pennies on a swollen tongue. This is a place the human body isn't naturally equipped to endure, and it's easy to imagine how Carmen Ahumada's face split open and bled when she arrived with her suitcases as a teenage girl.

As we bump through the desert in Sergio Molina's 4 × 4, I close my eyes and conjure up trees, willing an artificial sense of calm. A curse still escapes under my breath, and Sergio asks if I'm okay. "Just a little nauseous," I say. He rolls down his window, as if the boiling gusts of sand will be a palliative, and makes a joke to Rodrigo about how I might be pregnant, to which I can only make a frightened laugh and squeeze my eyes shut tighter.



**N**OT FAR FROM GABY, a city is being buried. We drive twenty minutes outside Calama, into the glare of the desert, then take a lane through wizened and skeletal trees and into the ex-city of Chuquicamata. The city has bowed to the mine that now bears its name—one of the world’s largest open pit copper mines—and with all its residents now relocated or deceased, the only way to enter Chuquicamata now is on a bus tour.

Rodrigo and I arrive late, sweating and thirsty, and are sandwiched in between pairs of elderly German tourists. Our guide is a young woman with a long ponytail, who speaks in a childish singsong, and she chatters between English and Spanish while the bus passes block after block of decrepit bungalows, their windows boarded up with sheet metal like big tins of sardines. Paint has been bleached like bones in the sun. Great cracks spread like spider webs across the pavement, and many streets abruptly dead-end into an encroaching hill of gravelly waste, currently several stories tall. Some houses are already buried; others are still a few yards away from their demise. The guide points out that these houses were technically owned by the mine, and that

Homes stand empty in the ex-city of Chuquicamata, their windows covered with metal. **FACING PAGE: A winding track leads to the bottom of the Chuquicamata Mine. At nearly half a mile deep, it dwarfs a truck carrying over four hundred tonnes of earth.**

all the inhabitants were given “a very good deal” on houses in Calama, which the mine built for them and sold to the miners at one-third their market value.

The guide peers out the tinted window of the tour bus. “There must be some around here,” she says, searching for something. After a few minutes she gives up. She gets on the intercom. “Unfortunately, it looks like the big dump trucks aren’t out today,” she announces. “We often see so very many of them—a shame!”

Rodrigo shifts in his seat, trying to avoid the piercing sun. “It’s as if we’re on safari, but instead of zebras they’ve got 400-ton dump trucks,” he says. Both of us find it unsettling that the mammoth trucks are regarded almost like creatures with their own habits and movements, rather than pieces of machinery made and operated by humans.



The bus drives to an overlook so everyone can take photos of the immense mine. A German tourist, with a comical plaid umbrella open against the sun, approaches our guide. “Now, Miss,” he says, tilting his head pensively like a college student, “does this operation have environmental impact?”

“It does,” she allows. “The mine raises quite a bit of dust. But we are able to cut down on that by constantly watering the ground. Furthermore, we follow all regulations and have a series of projects that help minimize the impact of the mine.”

I lean over the railing of the observation tower and then pull back as the sun sears my eyes. I can barely see the bottom of the hole—half a mile down, nearly a mile across. The tiered sides loom up like the terraces of some ancient civilization, and instead of noble earth or stone, they seem to be made of boxed cake mix, riddled with fine dry lumps of unsifted baking powder. All of it looks as though it could crumble at any moment.

Back at the parking lot, we get in our car and pretend to drive toward the guard station, then start to make a loop around the town, trying to

imagine what it would look like with people. After five minutes, a security vehicle slinks up behind our car and shepherds us to the exit.

The gate is manned by William Daza, a thin young man with a clipboard and ears that stick out like a physical mark of his earnestness. William is charged with registering all vehicles authorized to enter the ex-town and with turning away anyone not authorized to enter—mostly former residents who want to visit their old homes or to scatter the ashes of deceased family members in the main plaza. The plaza is one of the few places still fully intact, a square of prim, early nineteenth-century buildings with carved moldings and bright paint and a garish piece of playground equipment in the center. Codelco keeps the area groomed and waters the trees so that the tour groups can see what a part of Chuquicamata looked like when, just a decade ago, it was a still inhabited. But anyone who wants to enter Chuquicamata now needs authorization, and while Codelco will authorize the entrance of tour buses and the scattering of ashes—with proper notice—no ex-citizen of Chuquicamata is allowed back into their homes.



“We can’t let them in because their homes have fallen into disrepair. They’re full of broken water pipes, live wires, and the floors could cave in,” says William. “It’s dangerous.” But William admits that his post is often quiet, and he sometimes walks around, looking at the abandoned homes, peering into unsealed windows. “In some of the houses, people just left everything as it was. There’s furniture, entire living rooms arranged like someone lives there. Books, even photos. They knew that it would all be buried. Some people wrote messages on the walls or just painted the word *GRACÍAS*. This place is full of spirits—of the deceased, and of the living, too.”

One morning about a month ago, an elderly man and his son came, the old man in a wheelchair and connected to oxygen tubes. His son explained that doctors had given his father four more days to live, and he had asked to be brought to Chuquicamata to say goodbye to the place he still considered his home. I asked William what the man said when he saw his old house. William says he couldn’t let the man in, because Codelco hadn’t authorized the visit and he would have lost his job. He looks over my shoulder at the empty houses.

“I think in that moment, something inside me must have broken,” William says, now meeting



**On a lonely stretch of desert road stands a memorial to dozens of miners executed by the Pinochet dictatorship**

owned many of the Chilean operations before everything was nationalized. Most of the people who work in the surrounding mines were born there, including Sergio Molina, who organized our visit to Gaby. He told us Glover Hospital was the first thing to go when Codelco closed the town—they blew it up with dynamite and buried it beneath a pile of tailings. Now, once a year, there’s a ceremony for the hospital on the day it was buried, during which the mine dump trucks stop to honk their horns in unison.

The Chilean state officially erased Chuquicamata from the map; it’s become an ex-city, and its residents are ex-citizens. “They even changed our passports,” Sergio tells us. “My passport used to say, ‘Place of Birth: Chuquicamata.’ Now it says I was born in Calama. I wasn’t born in Calama. But Chuquicamata the city no longer exists. It’s just part of the mine now.”

**A**BOUT TWENTY-FIVE MILES from Chuquicamata, near the turnoff for Gaby Mine, stands a cluster of cement columns and an ornate metal cross, on the steps of a gentle amphitheatre. We pass it just before sunset, while the sky turns an eerie, pale lilac, and pull off the asphalt to take a look. The columns are painted safety orange, like the vests workers wear in the mines, and they’re arranged in a semi-circle. Each one bears a man’s name on a metal plaque, and in the center another plaque reads:

IN THIS SPOT, IN THIS PIT, BENEATH THE  
DRY SKY OF THE ATACAMA DESERT, WERE  
BURIED THE BODIES OF TWENTY-SIX MEN,  
EXECUTED ON OCTOBER 19, 1973,  
BY A SPECIAL GROUP SENT BY THE ARMY,  
KNOWN AS THE “CARAVAN OF DEATH”  
DURING THE MILITARY DICTATORSHIP.

my eyes. “How could anyone look at a man on oxygen, with four days to live, and not feel something crack? I imagine how that man’s last wish was just to visit where he grew up. His home, the place where his parents are buried, where he met his wife, where they began to build a future together. And in the end, he couldn’t even stand in the street outside his own house.”

Once, Chuquicamata had the most modern hospital in South America, a big bright building full of revered American doctors and named after Roy H. Glover, the former CEO of Anaconda Mines. Back then, Anaconda was the Coca-Cola of the mining industry, and it

When General Augusto Pinochet overthrew the government of socialist president Salvador Allende on September 11, 1973, he began by bombing the presidential palace, and then



sending in his mutinous military. Allende killed himself rather than surrender to the coup, and the last photo taken of him shows the President outside the palace in a flak helmet, loosely holding a gun at his side, like a professor with a briefcase. He looks calm, and certain everything is about to change.

Tanks rolled into the streets of Santiago, and families locked themselves inside their houses, held their hands around their teacups, and wondered what would happen next. Almost immediately, the military began to round up anyone who might resist the new government—union leaders, student activists, and intellectuals who had supported Allende. The coup was supported by the Nixon administration—and Pinochet was so bent on bringing an American-style free market to Chile that he would take no chances with popular dissent or any of the other trappings of democracy. Thousands of Chileans, most of them young, were put into camps where they were interrogated, tortured, and often killed. Many of the survivors, now middle-aged, still live in Chile, where many—in the government, as well as the populace—re-

**In spite of its run-down appearance, Mario Zuleta's old Bel Air still watches over his family, decades after his death.**

gard their suffering as part of the unfortunate price that had to be paid in order to enter the developed world.

A month after the coup, Pinochet dispatched a single Puma helicopter filled with soldiers that traveled from south to north, along with a list of the people who could be key opponents of the dictatorship. In each city, they asked those people to present themselves, and most did so willingly, trusting that their good faith would be met with equal measure. All were executed. The journey became known as the Caravan of Death, and the last stop was here in Calama, where those twenty-six miners lost their lives.

I stare into the depression at the bottom of the tiered steps, which seems meant to echo a mine. But instead of the pink glow that foretells copper, there's a cairn. Glass jars and soda bottles holding old silk flowers are wedged between the stones. There's a thick film of sand on everything, and the wind tosses more over us,

**Zuleta wanders into her son's room as he plays on the computer. She picks up a USB cable from his desk and smiles sweetly. "His mom digs up the raw material for all this," she says.**

into our ears and eyes and mouths. The inscription says that this place is meant to receive the spirits of those dead men, most of them miners, buried here in an anonymous pit of sand.

**J**ORGE MONTEALEGRE is a gray-bearded poet who lives in a middle-class suburb of Santiago. Right about the time that Pinochet was dispatching the Caravan of Death, Montealegre was arrested by the military police and taken to the National Stadium in Santiago, which had been converted into a gigantic holding pen and torture center. Montealegre was still in high school, a fatherless teenager active in politics, who had seen little outside the capital. After a few months in the National Stadium, he was sent along with a group of about six hundred others to an ex-saltpetr town that had been converted into a concentration camp.

The political prisoners were loaded into the belly of a great iron ship that formerly had been used to move saltpetr. After three days, the ship arrived in Antofagasta, where they were loaded onto a train, and later into giant trucks to Chacabuco in the Atacama. There, the political prisoners began to play a strange game; they began to pretend they were miners. Chile's political left has long counted on unions as its base, and in a country with mind-blowing mineral wealth, the largest and strongest unions had always been the miners. The prisoners felt a connection to the legacy of the miners from this region, and to help weather their imprisonment and pass time, the city-bred prisoners took on desert nicknames and began to speak in the patois of the northern mining camps.

"We had no reason to do these things, yet

we felt compelled to," said Montealegre. "The Atacama had an enormous political and cultural meaning for us. We were in a place where the saltpetr miners had begun the fight to unionize, where there had been historic massacres of copper miners that reminded us of the coup that we ourselves had just lived through."

The game helped many of the prisoners get through their time in the desert, where a common punishment was being forced to stand for hours in the grueling midday sun. But for a few, the game held little escape. In Montealegre's group there were two men who had lived in Chacabuco decades earlier, when it was a working saltpetr town. One of them finally hanged himself inside the house he'd once inhabited as a miner.

**I**N CALAMA, the house of Carmen Zuleta may soon join the ranks of homes sacrificed to the mine. A rich vein of copper has been discovered beneath her neighborhood, and these days the city is full of rumors the state may evict everyone and begin digging.

Zuleta lives with her mother and children in the house her father Mario once owned, near a gigantic new mall that sits in a sandy plain, with a circus set up nearby. We visit her on a Sunday afternoon, at the beginning of her three-day rest from the mine. The light is softer and tea-colored this time of day, and her neighborhood is full of pleasant, small brick and stucco bungalows, the same style as in Chuquicamata, but here they're inhabited, kept up, and painted bright colors—canary yellow, teal, pistachio. Zuleta's house is baby blue, with a brand new 4 × 4 parked out front, alongside a dusty Chevrolet Bel

Air with half the paint sandblasted away. Zuleta meets us at the door, and gestures proudly to the Bel Air. “That’s my dad’s,” she says. “I’m going to fix it up myself.”

She’s dressed in a pink shirt and pink jacket. She wears gold earrings, and as always, her eyebrows are perfectly groomed, and her eyelashes curled and painted with mascara. Nonetheless, Zuleta looks tired; she had to go to a mine seminar all day, her first day off after four twelve-hour shifts, and just got back.

The family regularly takes in stray dogs and a few lie at the door, where the entryway is littered with construction equipment: Carmen’s having the kitchen remodeled for her mother. Just inside, a new stove sits awkwardly in the living room, an old-fashioned wood-fired oven that her mother will use to make empanadas.

The house is quite humble, considering that Zuleta is part of a revolutionary workforce in her country’s most important industry. It is small, with low ceilings and linoleum floors, and some basic pieces of furniture. There are lime green curtains in the living room and a television set that shows a rodeo on mute. There are also televisions in each of the four bedrooms—and, in her children’s rooms, computers, stereos, MP3 players, and video games. Zuleta wanders into her son Marcelo’s room as he listens to heavy metal and plays on the computer. She picks up a USB cable from her son’s desk and smiles sweetly. “His mom digs up the raw material for all this,” she says, in the same way she told us she was restoring her father’s old car.

As for the fate of her house, she doesn’t seem to believe that the mine would dig for the copper under the ground here. But she says she always knew it was there.

“There are no trees here, at all. When they built the house, they had to use dynamite to lay the foundation,” she says. “It was always clear we were sitting on top of mineral.”

She pauses a moment. “I suppose if we got a new house, it would be fine,” she says of possibly being evicted from her home. “As long as it was the exact same quality and as long as we could stay in Calama. But if they want to take me out of my Calama, they’ll have to take me dead.”

**W**HEN WE RETURN TO SANTIAGO, I’m relieved to be back in a place where the air is cool and humid, and the streets are lined with big trees. Fall has begun in the southern hemisphere, making the light diffuse and slanted, and the naked glare of the desert sun quickly seems like a frame from an old movie.

One evening at rush hour, Rodrigo and I make our way across the city of six million, boarding a cramped bus with the windows cracked open against the heat of so many bodies. It’s teatime, a sacred ritual left over from the British who also had a turn here running Chile’s mines. The buttery smell of bread, pastries, and roasted nuts mixes with the damp air, and the odor of cigarettes and perfume, and downtown we push our way off the bus to buy a cake for a friend. The bakery is full of middle-class Chileans sipping Earl Grey and tapping at their BlackBerries and iPhones while they wait for tarts and kuchen. We ask and pay quickly and descend now into the metro, becoming part of another swell of people, most with earbuds threaded through their collars and into the MP3 players and smartphones tucked beneath their dark wool coats. There are televisions on the metro platforms and televisions in the suffocating metro cars, all of them braying ads for the department stores and malls that were part of the free-market rebirth Pinochet and his American-trained economists designed for Chile—and that copper financed. People frantically push each other to board, and the girl next to me actually grunts when I ask her to be careful of the cake in my hands, then tucks her head down and mutters into a Bluetooth.

At our stop, we struggle off and walk past dozens of people seated on the grimy floor of the station, their faces illuminated pale blue by the screens of laptops; some city planner decided this was a good place for a wi-fi hotspot, and their collective tapping is now an audible layer of the rush hour noise. As we pull ourselves up the stairs, part of another wave of people connected to electronic devices, I notice the railing is covered in copper. Copper is everywhere, and the cake was crushed a long time ago. ■