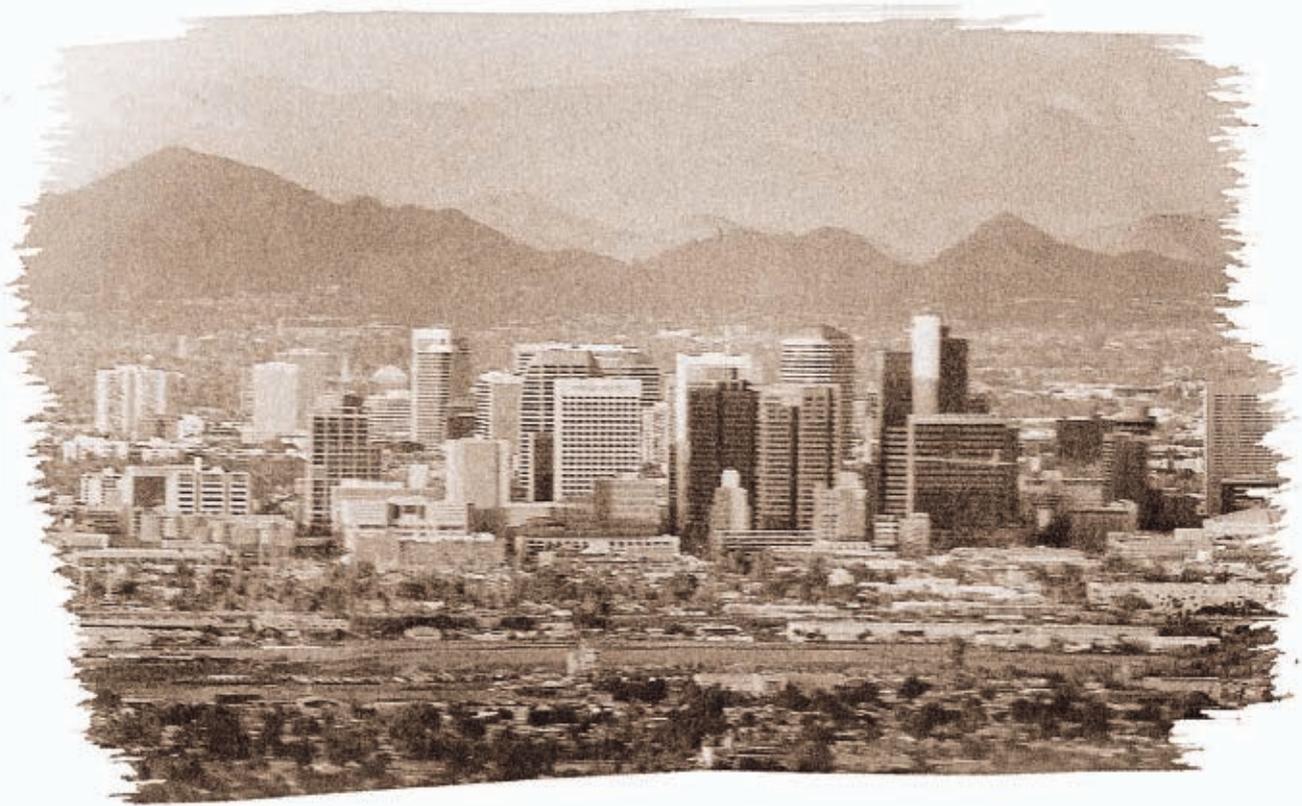


RULE OF THE PHOENIX

On the ephemeral nature of civilizations

CRAIG CHILDS

PHOTOGRAPHS BY DAVID MILLER



THE PHOENIX IS a mythical bird, Asian and Middle Eastern in origin, from a fantastic tale of death and self-generated rebirth. This legendary, flame-colored bird is said to ultimately rise up incandescent as its nest ignites. Fire consumes the creature and from its own ashes a new bird is born.

This city doesn't have its name by mere coincidence. Lift the sprawling rug of Phoenix, Arizona, and you will find an ancient city buried below. There were earthen temples, roofed villages,

plastered ball courts, and a vast network of irrigation canals and ditches, all predating the modern city by at least a thousand years. People of native lineage grew cotton, corn, beans, and agave here long before there was ever a Columbus to set sail. There were farmers, hunters, traders, feathered priests, and fine-handed shell carvers exchanging their goods hundreds of miles away. Equal in complexity to early Mesopotamian society, this was an early civilization, a first shot at grandeur that has

taken root at one time or another on nearly every inhabitable piece of earth. The people who lived here are now called Hohokam (accent on the first syllable). The word is a bastardization of an O’odham word meaning, simply, “ancestors,” or “ones-who-have-gone.”

When Anglo settlers started setting up shop in the Phoenix Basin around 1860, they found ruins and mysterious fields of broken pottery left from Hohokam ancestry. Between here and Tucson there still stands a thousand-year-old mud great house, a three-story ruin like a rook on the board of the desert, modern neighborhoods, prisons, and convenience stores crowding in all around it. Deep inside the city, eroded walls stand, marking chambers erected atop an earthen platform, the sun still rising through its rooms each morning. The Hohokam had bloomed for many centuries, but in the end, ruins like this were all that were left. Upon them, nineteenth-century settlers called their new city Phoenix.

Not a great city by any means, average in size at 1.4 million people, it is located in one of those settling places, a region where people have always come. Two intermittent rivers converge from out of the highlands in the east, flowing across a broad subtropical desert, allowing for a nearly year-round growing season. A 2006 excavation for a new convention center in downtown Phoenix exposed a village of forty pit houses dating back three thousand years. By the early nineteenth century, irrigation networks were dug and scratched all over this desert basin to supply water to cotton and cornfields.

Look down on the city at night and you can see the blueprint of its evolution. The greater metropolitan area does not have a central downtown like most modern cities, but a web of satellites, the bright cores of Tempe, Mesa, Scottsdale, and Phoenix proper. Out in the distance you see the outliers of Queen Valley and Goodyear, places the Hohokam also occupied. It is as if we have poured in a new civilization—just add water and the hydrologic ghost of the Hohokam comes to life. When contemporary engineers have plotted new canals, they have discovered that they were following older ones already buried in the ground, same size, gradient, and direction. They have dug up pots and skeletons, layers of boom and bust, bones pocked and weakened by diseases, malnutrition, violence.

It is a version of the world we greet with both fear and fascination: the collapse of a civilization. We are captivated by it, because no matter how confident we are in our modern infrastructures, we know it is possible. It is one of the options on the table.

I wonder, did historic settlers know what they were doing when they gave this city its name? Did they realize the narrative of rise and fall they were entering themselves—and us—into? Death and rebirth, and by fire no less.

This is our track record: cities left like empty shells—Palmyra, Machu Picchu, Teotihuacán. Pre-Columbian temples and intricately carved slabs of stone push up from under the streets of Mexico City while London coughs up Roman skeletons and two-thousand-year-old bronze tableware. We live in the graveyards of former societies. This is the song we’ve been singing for thousands of years, call and repeat, glory and decline.

This time, we say we have it figured out. We will not fall.
As if we haven’t heard that before.

ATOP A ROCKY BUTTE within greater Phoenix, I sat with a friend, a contract archaeologist named Tom Wright, a digger who had worked in and around this city for thirty years. His job was to remove ancient objects in the way of development, pulling up pots and stone hoes, either returning them to tribes descended from the Hohokam, putting them into storage, or feeding them to museums. The round-topped summit we’d hiked up was decorated in ancient rock art and surrounded by sky-dazzling stadiums and freeways.

As dark came on, Wright and I talked about how civilizations tend to fall, common themes you see throughout time: environmental decay, failure of top-heavy infrastructure, resource depletion, loss of social egalitarianism, disease, conflict. Angkor Wat in Cambodia experienced gradual hydraulic failure starting in the thirteenth century, its irrigation network and retaining ponds proving too vast to maintain, collapsing just as the region became an agricultural hub for over 1 million people. Afterward, most of the area was left in ruins. Ur in Iraq lost its port during a drought in the fourth century BC when the Euphrates River shifted, leaving the city far from the water’s edge. Every age, region, and society has its unique but similar cause and effect. Lop Nur dropped from Taklimakan trade routes and was abandoned when sea routes bypassed the desert. Memphis in Egypt declined against the backdrop of new power centers as its temples were disassembled, the stones carried away and used to erect new monuments.

As Wright numbered the usual suspects among failed complex societies, I pressed him, asking what Phoenix would actually look like if the balance tipped and everything we knew slid into oblivion. Personally, I was thinking scattered fires flickering across this broad valley and dogs barking in the distance, none of this roar and glimmer. I could see encampments on overpasses, sanctuaries up on concrete pillars, and, straight out of *Road Warrior*, there’d be sawed-off shotguns and diabolical twists to the plot.

Wright answered, “It would look like this.”

It wasn’t the answer I’d expected. But when he said it, it made perfect sense. He was saying you probably wouldn’t even know.

Little by little a city falls, foreclosures eating away at the edges until you have eighty-eight thousand houses standing vacant.



Wright and I were looking down upon this blossoming city just as an economic plunge had been set in motion. Land that had been ninety dollars a square foot dropped to nine dollars within months. Construction on many developments would come to a standstill, neighborhoods left half empty, partly constructed, as moratoriums were put on building new schools. Swimming pools on foreclosed properties turned into trash dumps. Some people left in a hurry, their money gone all at once, medicine cabinets still stocked with toothpaste and aspirin, dishes in the sink, takeout boxes strewn on the dining room table.

The post-apocalyptic scenario of people living in the fresh scrap of their own collapsed societies is more Hollywood than reality. Collapses tend to take time, an evolution in themselves. Rome wouldn't have known it was falling even as poverty and decay spread, aqueducts failed, schools dissolved, and armies stretched untenable distances. The city was still standing, still occupied, the whole while.

Depending on which historian you hear it from, the fall of Rome took anywhere from three hundred to seven hundred years, which equates to more time than, say, the United States has been

in existence. Slow it down enough and you'd never even notice. In his classic eighteenth-century work, *The History of the Decline and Fall of the Roman Empire*, Edward Gibbon wrote that the Roman Empire's fate "was the natural and inevitable effect of immoderate greatness. Prosperity ripened the principle of decay; the causes of destruction multiplied with the extent of conquest; and as soon as time or accident had removed the artificial supports, the stupendous fabric yielded to the pressure of its own weight."

Two hundred fifty years after Gibbons wrote his opus on Rome, Thomas Homer-Dixon, political theorist and futurist at the Balsillie School of International Affairs in Waterloo, Ontario, wrote a corollary for our own scale of civilization: "If we try to keep things largely the way they are, our societies will become progressively more complex and rigid and, in turn, progressively less creative and able to cope with sudden crises and shocks. Their collapse—when it eventually does happen—could then be so destructive that there would be little of the prior order left behind. And there would be little left to seed the vital process of renewal that should follow."

I HAVE A PECULIAR way of looking at the world. For me, time comes in all shapes and sizes. It ranges between the ancient bed-rock beneath Phoenix and the ten p.m. curfew enforced by the city's parks. I know places where you can find pieces of broken Hohokam pottery a thousand years old—empty weedy lots by the airport and on the bouldery flanks of certain buttes. You pick a potsherd up off the ground, dust off its face with your thumb, and peer right through history, centuries made of air.

I do not ascribe to strict endings or beginnings, not in the black-and-white terms they tend to convey. I don't see those potsherds as finished. They are seeds, monocles to look through to understand where you are.

The end is never the end. It is not a point in time, no candle put out under the cupped hand of God. It is a process so entangled with inceptions and shutting doors that it could never be just one thing. But substantial and swift ends do occur. And when they do, they leave bones in the ground.

Under the final approach to Sky Harbor International Airport in Phoenix, I walked around the graves of mothers and children. When you see women and children all buried together, it is a bad sign. I saw a hole in the dry, buff-colored soil where the bones of an infant had been laid upon the chest of a woman, the mother, I imagined, the two of them placed in the same grave as if to keep them together forever. Another grave had held the remains of a young woman with an S-shaped spine, a bone disease related to malnutrition that would have left her crooked for life.

This is what the end looks like, the final gasp of a civilization. After seven hundred years of strong occupation in the

broad valley of Phoenix, the Hohokam died out in this place.

Beneath the dropped landing gear of passenger jets screaming overhead, archaeologists had been dispatched to accumulate the dead with trowels, dustpans, and paper bags. The construction workers who preceded them had thought this was going to be a simple job, removing a parking lot with jackhammers and backhoes to make way for a new light-rail station. Instead, they uncovered the tragic end of an ancient settlement.

I came to a depression the size of a kid's body. I could not help crouching at its edge. The skeleton had been removed for transport and reburial, the hole left in the ground just big enough for the body—a young girl, I learned, early teens—her legs long and narrow. The excavation notes described shell bangles and bracelets on one arm. The remains of someone beloved.

Almost two hundred bodies were found beneath that parking lot, marking the demise of the Hohokam in Phoenix, when the once-busy heart of this valley was left eerily vacant for centuries to come.

The Hohokam population had risen steadily through centuries of more or less excellent growing conditions. Its climax, numbering in the thousands, coincided with a debilitating drought. Violence brewed in the hinterlands as social networks and trade routes unraveled. Cliff dwellings near the headwaters were besieged, pueblos in more open country sacked. As if taking shelter behind their wisely built infrastructure, Hohokam settlements contracted, people crowding into smaller spaces. Irrigation demands increased as the soil became rapidly more saline, less fertile. Hunting became difficult, the game animals smaller and more scarce by the decade. Infant mortality skyrocketed. Drought mixed with overpopulation had turned deadly. By AD 1450, this was no longer a place to live. Those few who somehow survived walked away, their diaspora carrying away the last memories of this place, whatever happened here tucked into native legend like a warning.

The late Claire Russell and her husband, W.M.S. Russell, two distinguished British academics, studied the history of crashes in human civilizations, and then compared them to what happens when other animals are knocked back by their own overpopulation. Not surprisingly, we don't err much from natural cycles. "When a mammalian population becomes dangerously dense," the Russells wrote, "there is a reversal of behaviour. Cooperation and parental behaviour are replaced by competition, dominance and aggressive violence, leading to high mortality, especially of females and young, and a reduced population. The stress of overpopulation and the resulting violence impairs both the immune and the reproductive systems. Hence epidemics complete the crash of the population, and reproduction is slowed for three or four generations, giving the resources ample time to recover."

The height of the Hohokam civilization represented ancient America at one of its finest hours, with sophisticated hydraulic infrastructure and more than a hundred public ball courts within what are now the limits of greater Phoenix. But the Hohokam experienced a crippling end, a time of starvation, their bones showing signs of diseases that come from malnutrition. The final blow was a series of floods that roared down the drought-stricken Salt River. The last functioning irrigation systems were destroyed, the headgates gone. Canals and ditches were blown out and packed with silt. Too few people remained with too little expertise to make it happen again.

This is how it appeared to have finally ended for the Hohokam: with a bang and then a last fading whimper, the cry of a last infant in a village standing empty, its name never to be remembered again.

WE HAVE INVENTED something new out of ourselves since the Hohokam. Look down at us at night and you see our webs and clusters of light, continents brightened as if by luminous spiders. Beneath our pedestrian lives are grids of water mains, electrical conduits, and internet technology cables.





If population and climate change conspire to unravel civilizations, it is infrastructure that holds them together. The issue here is upkeep. You don't worry about what you don't see. The East Coast water infrastructure, put in by expert craftsmen more than a century ago, is in a state of systemwide deterioration. New York City's water main system is feared to be near collapse, with large-scale underground projects feeding more and more water into a rickety delivery system, some of the primary conduits still made of wood.

This is how a city falls apart, piece by piece. Cast-iron pipes from the late 1800s—employed in most eastern cities—have an average lifespan of about 120 years. Cheaper cast iron used in the 1920s lasts only 100 years, and pipes installed after the midcentury are expected to function for 75 years. Put all those numbers together and you are looking at, well, now.

About 240,000 water mains burst every year in cities and towns across the U.S., mostly from age. Meanwhile, engineers have deemed 3,500 U.S. dams unsafe, while half the country's navigational river locks have been rated "functionally obsolete." Most bridges in the country were built in the 1960s and 1970s, and they were built to last 50 years. You do the math. A transit bridge in Minneapolis failed under ordinary load conditions during rush hour in the summer of 2007, killing 13 and injuring 145. It was 43 years old.

But how fast or slow does this unpinning of public infrastructure take place? Looking at the Hohokam analog, the failures accelerate the closer you get to the end. Had those Phoenix floods come earlier, during the height of this early civilization, the damage would have been repaired, the losses cushioned, and life might have gone on.

One niggling question is, how many people can there be this time around? What is the carrying capacity of our current civilization, of the land, air, and water on which it depends? We are not ancient Hohokam, numbering in the thousands in this valley rather than the millions. We are not even the Americas, Asia, or the Middle East. We are, as the song goes, *The World*.

Can we, the current multiethnic, polylingual civilization of earth, even compare our trajectory to the rises and falls of earlier people? Everything about us looks different, from our buildings to our clothes to the tools we carry. We sit at outdoor cafés in Copenhagen, eye level with the sea, and gaze through high-rise windows across the gray smog banks and concrete-colored buildings of Chengdu. Our jetliners crisscross the Arctic Circle, connecting Paris to Salt Lake City, carrying an ever-burgeoning global consumer class.

I would argue that we can be clearly compared. The fundamentals are still the same. We still put food in our mouths and breathe this very air. We rely on the physical constructs of our civilization to deliver supplies, keep grocery shelves stocked and gas stations pumping. The stakes have certainly changed, the ante upped by the billions. Early populations manipulated landscapes on a much smaller scale (the first atmospheric signs of civilization have been recovered from Greenland ice cores where layers of iron soot correspond to smelting in Carthage from 600 BC). Now we are sucking up the slurry of Alberta's tar sands for oil and decapitating Virginia mountains for coal, damming nearly every last river for hydropower or water storage while rapidly altering atmospheric chemistry to levels not seen in millions of years.

If the question is carrying capacity, this is the moment to raise it. Within this half-century we are projected to increase from

7 billion to 9 billion. Within a hundred years, most estimates put us between 10 and 15 billion, and the UN projects that Africa alone will go from 1 billion in 2010 to 3.6 billion in 2100. Based on population trends, the need for food goes nowhere but up. Within a thousand years, our numbers could be in the hundreds of billions if the population curve follows a perfect and unerring rise. Not possible, simply not possible. Sometime long before that, there will be a change.

There has to be.

Right?

But the thought of collapse happening in my own civilization makes my stomach clench. The loss involved is unthinkable. Being a father and husband, having looked at those small graves, I do not wish to entertain a period of such horrors for my people. Not those born today, or those born a century from now. Not forever. I want our world to last.

“THERE IS NO CIVILIZATION without water,” said Charlie Ester, chief hydrologist for the Salt River Project, which secures and delivers half of Phoenix’s water supply (the other half is imported by a series of pumps, pipelines, and canals from the Colorado River three hundred miles away). “If it does not rain every year and reservoirs go dry and there is nothing to pump, we’re moving.”

Ester sat me in his office and showed me charts: water demand increasing, water availability decreasing. “The Arizona Department of Water Resources recognizes the Salt River Project as providing a hundred-year water supply for new developments within its service area,” he said. Then he told me he didn’t think it was possible. He could not make such a promise. Some years, the water supply was not as robust as people thought.

I had flown with Ester over a quarter of Arizona, surveying watershed conditions east of the city. It was his job to keep the water coming, to calculate years in advance, balancing reservoirs, tinkering with infrastructure, opening and closing dams chained together through mountains and canyons. Though he received data from remote gauging stations, he preferred coming out in person to eyeball the water situation.

Looking down through the helicopter’s Plexiglas bubble, we followed rivers and creeks that all ultimately led to Phoenix. He signaled the pilot to take us down the crook of a bedrock canyon so he could peek inside for a glimmer of water. None, none, none. It was 2009, thirteen years into a stretch of persistent and rarely interrupted drought conditions, a period of water deficit rather than surplus.

We skimmed over Roosevelt Reservoir, the biggest of his storage facilities. Its 1.6-million-acre-foot capacity was down by 20 percent. Through the headset he said, “Not bad for the thirteenth year of a drought.”

We flew up dam after dam, popping over massive impoundments artfully packed into canyons and gaps, most built in the early 1900s. As the canyon walls flew by, we saw cliff dwellings, half-crumbled walls of adobe tucked into caves and rock shelters. In the declining shallows of one reservoir, Ester pointed out a checkerboard pattern visible just below the surface of the blue-green water, the submerged ruins of a twelfth-century pueblo.

“Ironic, huh?” Ester said over the cockpit noise. “I don’t think they could have ever imagined this.”

The lobby of the Salt River Project’s headquarters contains Hohokam dioramas of little people with tiny baskets and pots tending their water systems. “You’ll find a certain pride here in the Hohokam, for the similarity of our tasks and adaptations,” Ester told me. “Although the scale has changed.”

He pushed open a pair of doors into the Command Room, which looked like the bridge of a starship. Railings led down through curved desks where two people sat in front of keyboards and batteries of computer screens running half the water flow through the city. Half the room was a curved map, 180 degrees floor to ceiling, the entire city pulsing with lights indicating where water was moving and where it wasn’t, municipal treatment plants, sprinkler systems, agricultural customers, and downwater ditches where people holding old water rights are still flood-irrigating the orange trees in their front yards.

“Two Water Masters run the show,” Ester said, introducing me to Maggie Cherner on the left, running the north side of the city, and Pete Cady on the right, running the south side. They looked up with a hello and quickly went back to finger-punching number pads and keyboards. They were smoothing out hourly surpluses and deficits within the system, while around them ran charts and graphs. Larger screens hung to both sides of the big map relaying squadrons of numbers, headgate flows and pipeline pressures.

“It’s a human-run system,” I said, surprised.

Maggie looked up, “A computer doesn’t know who these people are, or really what their priorities are.”

I had assumed the city was run by machine, and seeing that it wasn’t was actually a relief—two live people at the heart of Phoenix’s water supply, something organic still driving the system. Looking over Pete’s shoulder, I asked, “What’s all the red?”

Pete tapped his various screens with the butt of a pencil, saying, “These are where I’m not meeting demand.”

“And over there?” I pointed at another screen.

“The same,” he answered. “All the red you see, it’s a problem.”

Ester, who was leaning against a chair, explained, “Craig’s interested in the Hohokam.”

Pete laughed, “We’ve talked about that before. The parallels with what we’re doing here and what the Hohokam did.”

Maggie looked up from her monitors. “The Hohokam had to have had water masters back then, people keeping an eye on downstream users, making decisions about how to allocate resources. They couldn’t have done it without some kind of cultural structure.”

“And he’s the rain priest,” Pete said as he rolled his chair back from his desk.

Ester laughed, opening his arms to accept the title.

“This is a different civilization, though,” Pete continued. “The Hohokam had immediate consequences, while I don’t think we realize what is happening until it is too late. It’s like the invincibility of a teenager. We’re a young civilization.”

Maggie said, “If we were around in Hohokam days and you asked us how much water was available, just to let you know everybody, it’s looking tight on the supply end.”

I looked to the rain priest, holding up my notebook, concerned that publishing this kind of talk would be frowned upon by his company’s PR team.

“Write it down,” Ester said. “People should know.”

SPARE BATTERIES, canned fruit and beans, an extra few gallons of clean water—you want to have a few basics arranged ahead of time, just in case. It’s not paranoid. Just realistic. You never know what is going to happen. The U.S. Federal Emergency Management Agency recommends keeping a disaster preparedness kit including a three-day supply of anything needed to live.

In the summer of 2011, a public utility worker doing maintenance on high-tension wires in Yuma, Arizona, accidentally shut down electricity to 4 million people in Southern California. A minor mistake, and hundreds of miles away blackouts cascaded into San Diego, traffic gridlocked because signals were down as schools and business closed, and air traffic was grounded. One small thing. What if something bigger happened? What would you grab while running out the door?

- Headlamp
- Metal water bottle
- Fleece hoodie
- Lighter
- A good knife or multitool
- Good tweezers
- Bandanas
- Iodine
- Parachute cord
- Raincoat

Food you can usually find, a lizard on a stick, scraps at the bottom of a grocery store dumpster, but these other items, they are civilization in a bundle, the things you might have trouble

getting your hands on if the bottom dropped out.

But what is it, really, we are preparing ourselves for? Is it the one in a million, the supervolcano eruption, asteroid impact, reversal of ocean currents, barrage of nuclear missiles—an event that sends us back to the Stone Age, where we may someday puzzle over our own ruins?

I once came upon a survival cache in the desert of southern Utah about twenty miles from the nearest paved road. I was looking behind a boulder for shade when I noticed somebody had already been there. There were stocks of bullets and fishing lures, stacks of folded blankets. I crawled into the space behind the boulder and found an assortment of aluminized space blankets half buried in dust. On a pocket chain was a ferrocium rod and a fire striker. Matches in a tea tin were strike-anywhere and stacked heads up. Fishing rods, salt tablets, twine. Sleeping bag, sweaters, tarps. Wondering what end this person had been hoping to endure, I lifted out the top layer of artifacts, dusting them off one at a time before placing them back. Was this an escape from nuclear warfare or government takeover?

I found glass baby food jars cleaned out and stocked with seeds: corn, squash, beans, pumpkin. I did not open them, not wanting to let in outside air or moisture that would ruin these well-laid plans. What else was beneath the dust, tucked under this boulder, that I wasn’t willing to dig for? Perhaps rifles and guns in PVC, barrels sealed with wax, or down there somewhere a five-gallon bucket of red wheat or barley, a piece of dry ice thrown in when it was packed to sterilize the contents and burp out the last air. Perhaps there were bottles of capped alcohol, gin or vodka, the kind of thing you could trade in a post-apocalyptic world—lasts forever, sterilizes wounds, and useful to slug back if you have to saw off your own leg at some unfortunate moment.

So here is one view of the end of the world, I thought. Run for the hills and survive. As I rotated baby food bottles in my hand, letting the seeds roll around themselves, I felt relieved this cache had not yet been accessed.

OF THE MANY civilizations that have come and gone, one of the more spectacular collapses happened around the eighth century AD, at the end of the Classic Mayan rule in the lowland jungles of Central America. Working primarily in limestone, the lowland Mayans had engaged in monumental architecture decorated with stonework as finely executed as any dancing Ganesh or Akkadian relief, leaving behind ornate and monumental cities for the jungle to swallow.

Quiriguá is one of those cities. A Phoenix of its time, mid-sized and within commuter range of the much larger and more influential city of Copán (think Los Angeles), what remains of Quiriguá today is a seven-hundred-acre patch of ruins and rocks,

a stair-stepped acropolis leading down to a procession of carved monoliths. A U.S. fruit company set the plot aside in 1910, preserving a small portion of what was once here. Vegetation has been cleared away to reveal an open-air pre-Columbian sculpture gallery full of beams of upright sandstone known as stelae, each delicately carved into curled and sweeping images—glyphs, stories, animals, dates, kings, wars, captives. The rocks had been etched so deeply that they looked like creatures in themselves, as if they would rise to their haunches and leap away.

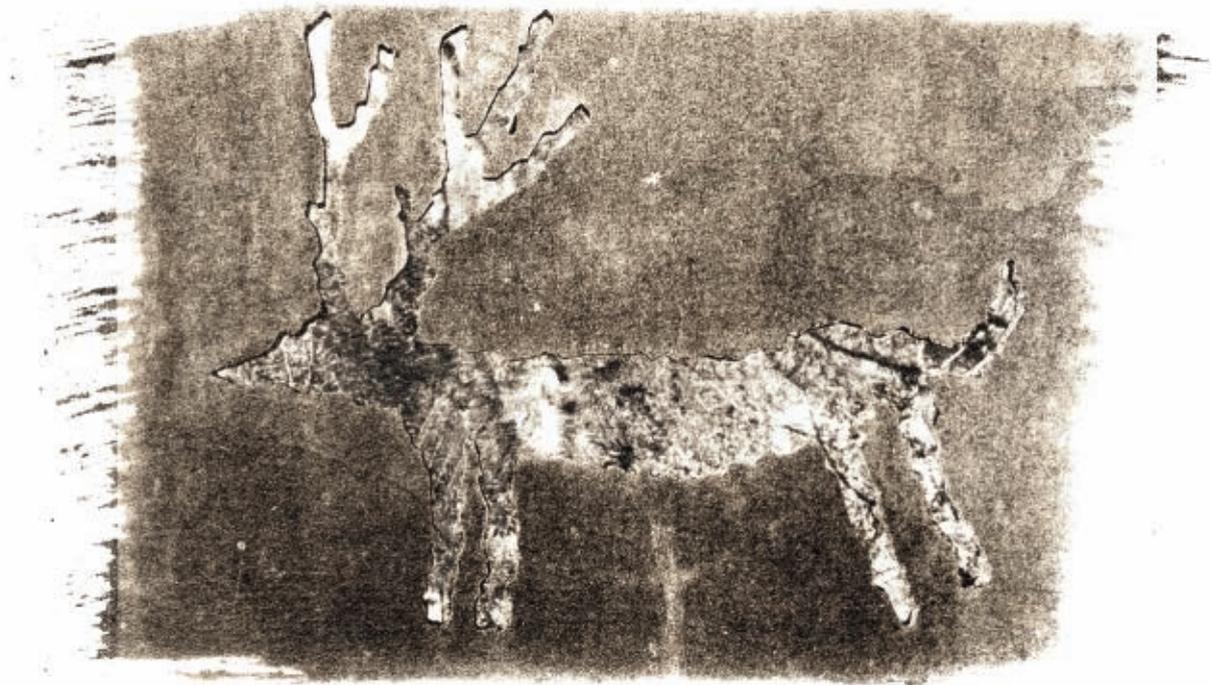
In the early 1930s, Aldous Huxley visited these same stelae. He wrote, “And there they still stood, obscurely commemorating man’s triumph over time and matter and the triumph of time and matter over man.”

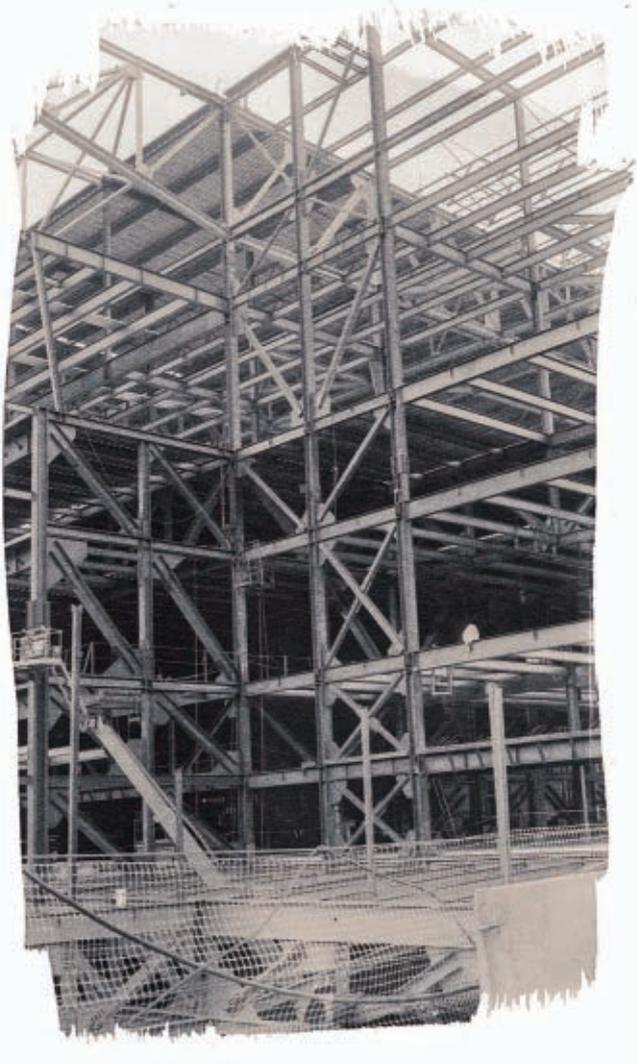
Quiriguá had been positioned along key trade routes, nestled into a broad region of Mayan kingdoms that then existed within a larger network of monumental cities serving all of Mesoamerica. When you fly over Belize and Guatemala, you get a sense of the scale. The jungle is bulged into mounds, hundreds upon hundreds of them, each a former city, a cluster of high temples buried in vegetation. Something big was happening here, thousands of years of cultural development and conspicuous architecture becoming more colossal by the century until pyramids larger than those in Egypt rose from the ground. All you see now are mysterious ruins, as if the wave of a hand had ended it all. From the distance of more than a thousand years, it feels as if this were just another time smoothed over, a moment lost and nearly forgotten. But look closer and the end becomes a world unto itself.

Consider Stela E, an erect 130,000-pound tower of stone carved in amazing detail, feathers overlapping down its edges while panels up the middle portray events, gods, people, names, and dates. It wears a grass-roof cap and is fenced off to protect it from further decay and admiring hands. Placed here later in the eighth century, Stela E was the largest work of its kind in the Mayan world. Its glyphs show a dynastic sequence, king upon king all the way to the tapering end. It was erected just before the collapse, at that glorious peak of the ancient Mayan civilization.

The monstrous city of Teotihuacán about seven hundred miles north of Quiriguá—occupied by Maya, Nahua, Zapotec, Otomi, and Mixtec people—had fallen two hundred years earlier during a mid-sixth-century drought. Teotihuacán, which once boasted 200,000 residents, appears to have been upended by an uprising from within when the elite centers of the city were burned. This burning pattern would later become a hallmark of collapses across the Americas, elite architecture often the first to go.

Arguments for why the Mayans went from peak to fall tend to land in two categories: ecological and nonecological. On the ecological side are the familiar suspects of drought, disease, and climate change. On the nonecological side are warfare, overpopulation, political collapse, social disarray. The fact that the two have been separated is amusing, as if drought had no relation to warfare, or climate change and overpopulation did not mutually pack a punch. Even now, in modern history, drought periods are statistically related to heightened conflicts. When the land is strained, so are the people.





The most sensible answer to how the Mayan world came apart between the eighth and tenth centuries AD is *all of the above*. Everything rose to a head and the center could no longer hold. The issue, ultimately, was carrying capacity. The system itself—the society, the landscape, and its interwoven pieces—could no longer maintain the Mayan city-state empire as it was. Increasing social complexity and conspicuous consumption ran smack into overallocated resources in a time of both environmental degradation and significant drought. The simplest way to describe what happened is system failure. Everything went wrong. Elites had risen too far above commoners, who in turn far outnumbered elites. Intensive agriculture exhausted the land while plant diseases common to monocropping were spreading.

Sound familiar?

But as archaeologists delve deeper into this fall, they find it is far more complex than we had imagined. You can paint as ugly a picture as you want of the Classic Mayan collapse, and certainly the worst of it was true, but even for the Mayans it was not a snap

of the fingers. Not every Mayan city came down in the same way or at the same time. Some were vacated centuries apart. Others actually grew.

The drought that occupied the region during that period appears to have been patchy, inconsistent from place to place, shifting by the year or season. It was similar to what is happening in the Southwest right now—drought centers moving between Mexico, Colorado, Texas, New Mexico so that one region is hit right after the next, while the relief of rain still occasionally falls here and there. The collapse could not have been attributed to drought alone, though it may have played an important, back-breaking role. Ultimately, the Mayan fall appears to have involved the disintegration of political structures and elite hierarchies, along with the dispersal and collapse of urban populations. The construction of monumental architecture came to a halt in many places, and by the close of AD 1050 this jungle civilization was more or less over.

As I strolled between carved towers, I thought of how the Mayans must have watched this moment fly past them, just as we watch our history fly now. They must have thought themselves indestructible at their height. Even this smaller, secondary city of Quiriguá got up the nerve to capture the king of Copán and ritually behead him, his blood given to the gods. It was all written in stone, ancient alliances and separations between cities written in glyphs rising overhead, tribute to a once great future that never panned out.

After Stela E was raised, commemorating the city's history, a few more stones went up, but they were of inferior quality. Copán was soon to fall, as were the other great cities, El Perú, the Mirador Basin, Tikal. Quiriguá was not as big, lasted a little longer, but ultimately faced the same fate: total abandonment followed by the grasping fingers of ceiba trees and drooping vines, reducing the city to mere bumps in the jungle, to be revealed in some future time by machetes and chainsaws.

Drifting among these carved pillars of rock, I was struck by how absurdly profligate our own civilization seemed. Empires felt a dime a dozen—here today, gone tomorrow. But with enough distance, horrific endings can be hauntingly beautiful.

OUR IMPATIENCE is palpable. Apocalyptic prophecies are countless, one doomsday for every beating heart. An excited anticipation for civilization to slip down the drain keeps some enrapt, others religiously paralyzed. We pay good money to see it in movies. There is always a new date, a fresh prophecy to pucker our expectations.

For 2012, the biggest world-ending prediction was generated from Mayan prehistory. It came from the translation of ancient inscriptions, particularly those found on a single stone tablet

uncovered during road construction in southern Mexico in the 1960s. It was one of thousands of glyph-covered stones and calendar references found throughout ancient Mesoamerica, but this one seemed to have enticing references to a dire and singular future that would come to pass in the year 2012, when the present Mayan calendar cycle comes to an end. Interpreting various inscriptions, Yale anthropologist Michael Coe wrote in 1966, "Armageddon would overtake the degenerate peoples of the world and all creation on the final day." It sounded downright biblical. How could one resist, especially if you were poised at the edge of boredom, drumming your fingers, waiting for the apocalypse to come?

In 2011, a formal response to this supposed Mayan prophecy was offered by Grand Elder Wandering Wolf, Cirilo Perez Oxlaj, representing the National Council of Elders of Mayas, Xinca, and Garifuna tribes. The letter politely explained that conditions on the earth were rapidly becoming worse, and if something is not done to curb the impact of civilization soon, we are all going to pay the price. "We will see hunger and drought. Plagues will invade the fields and affect the agriculture; new illnesses will appear and will be difficult to cure. The sun rays are getting stronger and stronger as time goes by."

It made you want to say, *yes, we've noticed.*

"If we do not change," the Grand Elder added, "few will be the ones to survive." At the bottom of the page was a footnote: "Contrary to popular belief the living elders of the Maya do not agree that December 21, 2012 is the end of their calendar."

So much for that prediction.

But when it comes to relatively swift and tragic endings, the Mayans could be considered experts. They have felt the sharp stick many times. You could say their end came with the fall of their largest city-states during sociopolitical decline nearly a thousand years ago when the elite palaces of Tikal were burned. Or did it come with the European-introduced epidemics that followed, wiping out most of the sixteenth-century Mayan population in a macabre environment of lesions and corpses? It could have been when the last standing Mayan cities were taken down in fire and blood, the Spanish conquistadors bringing unfathomable warfare and genocidal slavery. You could even say it was much later, in the twentieth century, when paramilitary death squads flooded these same jungles, their atrocities unspeakable.

One thing is certain, for the Mayans and for anyone placing bets on the future of various civilizations: endings are constant. The question is not could civilization fall again, but how could it not? No matter how much concrete, steel, and glass we put in our hives, or genes we twist for our foods, we still obey the familiar edicts of rise and fall, of evolution and perpetual change. In fact,

pieces of our current civilization are falling apart all the time, even while we race to shore up what we can, lurching our way into the future.

And yet Mayan culture still exists, with a population of at least 6 million living in Central America, speaking twenty-one different dialects. If you ask a Mayan when it all ended, when they ceased to exist, you would discover how farcical the question really is. There was no end, no final switch thrown to shut off the lights. You might say that civilization as a whole has never fallen. Our global enterprise has not paused since the first large-scale human settlements appeared six thousand years ago in Southeast Asia. Parts of it have gone under, but at the same time others have risen. There is always an exit, a gap to slip through. The baton keeps being passed ahead. This is the rule of the Phoenix, the myth of eternal return.

Even Phoenix never really ended. When the Spanish arrived in the late seventeenth century, far on the outskirts of what would someday be the city, they met natives tending small plots of irrigation along the Gila River, a cultural bridge of sorts, a slender thread connecting one hydraulic empire to the next. Pour in water and it all starts up again, forever changed, forever the same. 🐉

Life Story

When I lived under the black oaks
I felt I was made of leaves.
When I lived by Little Sister Pond,
I dreamed I was the feather of the blue heron
left on the shore;
I was the pond lily, my root delicate as an artery,
my face like a star,
my happiness brimming.
Later I was the footsteps that follow the sea.
I knew the tides, I knew the ingredients of the wrack.
I knew the eider, the red-throated loon
with his uplifted beak and his smart eye.
I felt I was the tip of the wave,
the pearl of water on the eider's glossy back.
No, there's no escaping, nor would I want to escape
this outgo, this foot-loosening, this solution
to gravity and a single shape.
Now I am here, later I will be there.
I will be that small cloud, staring down at the water,
the one that stalls, that lifts its white legs, that
looks like a lamb.

—Mary Oliver