

## Prelude

Out of the airplane window I had seen nothing but azure ocean in every direction for hours. The FASTEN SAFETY BELT sign flashed on and we were instructed to prepare for landing. As the 737 banked into its glide path, I could clearly see the devastation on the small island below. For years my friend and colleague Carl McDaniel and I have been interested in the history of other cultures, especially in the many examples of “overshoot and collapse” that seem typical of the complex human societies that emerged since the advent of agriculture. Just a year earlier I had walked into Carl’s laboratory and said, “Here it is! Our Easter Island,” as I handed him a short article in the *New York Times* titled “A Pacific Island Nation is Stripped of Everything.”

Carl and I had been collaborating for several years and the current project was a general audience book highlighting the conflict between biological diversity preservation and the expanding commercial economy. Nauru appeared to symbolize the fate of the planet—my wife, Linda, and I were going to check it out. Our Air Nauru flight from Brisbane, Australia, had been delayed and then canceled until the next day. Rumors were flying: “The President needed the plane to fly in shrimp for a big party he was throwing,” or “A key part was missing and no one was bothering to look for a replacement.” Preconceived notions people from the industrialized world have about native people in general, and Nauruans in particular, led to quick answers to the reasons for Air Nauru’s difficulties—avarice and sloth. After an hour or so we talked to the wife of an Air Nauru pilot and learned that the plane had been delayed because of difficulties with an airport landing system in New Zealand. We departed the next morning on schedule.

It was Christmas Eve on Nauru. The road from the airport to the Menen Hotel was crowded with cars full of people singing and laughing on their way to the season’s festivities. We were surprised at how happy the people were. I suppose we naively expected them to be in a constant state of depression about the destruction of their homeland and their bleak prospects. We checked into the Menen Hotel situated in a residential area on the eastern side of the island. The guide book had told us to expect the service to be poor to non-existent. “If it looks like there’s nobody on duty at the reception desk, look behind the counter: the clerk may be asleep on the floor.” That Menen was gone; at this new Menen Hotel, the service was efficient, pleasant and professional. The building itself was new and elegant, with spectacular views of the reef and the ocean beyond. We tossed our bags into our room and started walking to stretch our legs after the long plane ride. Although we had spent the previous week hiking in Australia, we were unprepared for the stifling heat of Nauru. Hardly a breeze stirred as we passed the water trucks making deliveries to the hotel and headed for the commercial district along the paved road that circled the island.

Having read several articles about “the richest island in the Pacific,” we were surprised to find that all the houses we saw, although certainly comfortable and adequate for the tropical climate, were modest. We passed several small restaurants, a school, and a cemetery, where we noted the early age of death on many tombstones. We walked through the commercial center, then turned inland

on a road that passed the phosphate processing facility. At the top of the hill we turned right onto a dirt road that headed into the mining area on the central plateau of the island called Topside.

We passed areas that had been mined decades ago and were surprised to see how much the vegetation had reestablished itself—life had recolonized the debris and coral pinnacles that remained after the phosphate ore had been removed. Small trees grew at improbable angles from the nooks and crannies of the coral outcrops. Vines, ferns, grasses, small bushes and sizable trees now filled what had been a wasteland. In the heat the verdant smell of thriving vegetation was refreshing. Birds sang and flew in areas now inaccessible to humans, while small animals scurried about in the brush.

The sides of the road were sprinkled with beer and Spam cans and assorted remnants of the technological civilization that had been imported to Nauru—wheels, pulleys, cable, shards of glass, plastic, and myriad forms of twisted, bent, and rusting iron. At some places along the road beer cans were strewn several meters apart while, in others they were piled in blue heaps of Fosters or green mounds of Victoria Bitter. We had seen signs urging people not to litter and to recycle. Despite the litter, we also saw much recycling—piles of crushed and neatly bundled cans along the side of a large building. Just beyond this recycling area was Nauru's landfill. Surprisingly, a truck drove past us into the dump and sounds of heavy machinery in the distance told us that Christmas Eve was a regular work day for some.

Oddly, the breeze one might expect on such a small island was absent that day. As we walked the heat became more and more oppressive, the dust from the road annoying, and, occasionally, the stench of garbage was heavy in the air. As we walked further along the desolate road, we came to an area recently mined. This was a truly depressing site but one that irrefutably confirmed our expectations. Bare coral pinnacles, devoid of green regrowth, jutted out as far as the eye could see. In the distance we saw the deep blue of the Central Pacific, a beautiful sight that contrasted sharply with the ugly barren moonscape of Topside. We tried to imagine what the area must have looked like before mining: tomano, pandanus, coconut, and almond trees swaying gently in equatorial breezes, birds flying overhead, and insects humming in the tropical heat.

We thought back to the *New York Times* article that had brought us to this stifling-hot wasteland of human creation. According to the *Times* account, Nauru's experiment with global capitalism had left its land ravaged and its culture in tatters. Most of the land—rich in phosphate—had been dug up and sold overseas; its people had succumbed to the worst excesses of western-style consumption. The Reverend James Aingimea, the eighty-four year-old minister of the Nauru Congregational Church, lamented, "I wish we'd never discovered that phosphate. I wish Nauru could be like it was before. When I was a boy, it was so beautiful. There were trees. It was green everywhere, and we could eat the fresh coconuts and breadfruit. Now I see what has happened here, and I want to cry." After a hundred years of western occupation, "our cultural traditions have been basically wiped out," said Maggie Jacob, a Nauruan school teacher.

Although the phosphate had generated annual profits of tens of millions of dollars for decades, it was unclear how much money remained to provide for the Nauruans now that the phosphate was nearly gone. The government releases no financial data, but the *New York Times* article mentioned failed investments—an investment scam of eight Americans cost Nauru \$12 million (\$US) or more, another \$12 million (\$US) lost in bogus letters of credit and bank notes purchased on the advice of a lawyer from one of Australia’s most respected law firms, \$2 million (\$US) in a failed London musical—and questioned how much, if anything, was left in the Trust Funds that had been set aside over the decades for the time when the phosphate would be gone. The huge flow of cash through the island allowed Nauruans to live well without working and changed their diet from fish and fruits to one of Spam, potato chips, canned corned beef, and beer. As a consequence Nauruans are obese and have one of the highest rates of diabetes in the world.

On the surface, what we saw confirmed what was written in the *New York Times* article. Physically the island was a wreck, obesity among the populace was common, and prosperity was obvious—a beautiful hotel, modern houses, and Land Rovers, vans, sports utility vehicles, motor cycles, and motor bikes everywhere. But, in contrast to the intended message of the article, people appeared happy and went about their business as if there were no crisis. An old Nauruan saying “Tomorrow will take care of itself” alluded to an underlying belief that might explain the behavior we observed. At the same time, this seemed curious to me. After all, on this tiny island of just 21 square kilometers, the devastation jumps out at you! Old people like James Aingimea see and bemoan what has happened to the island and its culture, yet, the mining and its destructive consequences are still tolerated if not embraced.

At first glance Nauru is just a very clear-cut case of short-sighted misjudgment that could easily have been avoided. Like the entire planet, Nauru’s fate was sealed by greed, corruption, and short-sightedness. The problem and its solution seem obvious: When we are educated to realize the folly of devastating the life-support systems and ravenously consuming the resources that permit human habitation, we will readily change our behavior and will be on the road to sustainability. But, in reality, folly holds the upper hand. Why this is so, as well as why Nauru is a window through which one can see global trajectories into disaster, are the stories we seek to tell.

The more Carl and I had read about Nauru, the more we realized that it was not the exception portrayed by the *Times* article but rather the rule. The story of Nauru is the story of all of us. Phosphate mining on Nauru provides a perfect parable for what our market system is doing to earth. The first humans came to Nauru more than 2,000 years ago and over time created a sustainable culture with a language and a pattern of living found nowhere else. In 1798 a Western whaler happened upon Nauru, and the ship’s captain named it Pleasant Island. Extensive coconut groves fueled copra trading, and Germany brought Nauru into the sphere of Western influence. The discovery of one of the richest phosphate deposits in the world placed Nauru onto the global stage. During the first sixty years of phosphate mining, Nauruan culture was engulfed by the West: Christianity,

World War I, League of Nations Trusteeship, World War II, deportation under Japanese occupation, and United Nations Trusteeship. By the time independence came in 1968, the tremendous financial wealth from phosphate mining had done its deed—a radically altered Nauruan culture, seduced by the promises of phenomenal monetary wealth, entered a global market economy that has no long-term capacity to ensure human well-being or to foster enduring habitation. In a mere century the island home of this once self-sufficient culture has been transformed into a wasteland of mined-out ruins devoid of much of its initial biological diversity—the 10,000 inhabitants are absolutely dependent upon the outside world for their very survival. Nauru exquisitely illuminates the ruinous course of our global market culture.

Planning for the future does not seem to be a dominant human trait. Pre-agricultural societies are distinguished by their live-for-today mentality. In fact the traditional Nauruan saying about tomorrow taking care of itself has been true—for most of Nauruan history tomorrow did take care of itself. One of the many ironies of modern Nauru is that, under the influence of Western notions of resource exploitation, the destruction of the island provides for today, while future habitability is sacrificed. It appeared to Linda and me, as casual observers, that Nauruans seemed to be unconcerned about their bleak prospects. This raised perhaps the most disturbing question of the trip. If people in such an obviously desperate situation, caused by resource exploitation to the point of almost complete destruction of their natural environment, were unconcerned, what hope is there to convince the rest of the world to be concerned about the more subtle but equally destructive activities going on around them?

Numerous writers and scientists have made the case convincingly clear—the global market system of our technological culture has permitted explosive growth of population and consumption that is unsustainable. Human activities are radically changing the land, the sea, and the air, all of which are causing the sixth mass biological diversity extinction of the last 600 million years. Our civilization is destroying what makes its existence possible. And our cultural response is more of the same. Why?

For quite a while Carl and I have been struggling with this question. Paul and Anne Ehrlich established in *Betrayal of Science and Reason* what is and is not known about critical and contentious environmental issues. Issue by issue—population, food, non-living resources, biological diversity, Endangered Species Act, atmosphere, climate, toxic substances, economics—they used sound logic and established science to undress the arguments of those who, knowingly or unknowingly, have employed environmental anti-science to obfuscate the truly immense challenges before us. A reviewer of the book stated that “The Ehrlichs are fighting the smoke, not the fire.” This assertion startled us. Suddenly we realized why our, and Nauruan, cultures have failed to respond to the crises so well documented by the Ehrlichs. All of the facts, all of the logic, and all of the science are important and necessary, but ultimately insufficient. The fire—our beliefs and their undergirding myths—is the navigator that establishes the course. A culture is driven by the integrated sum of its stories, beliefs, values, ethics, behaviors, and actions. To intellectually assess that one’s culture is courting

monumental disaster is one thing. It is a wholly different proposition to change our culture's course, but this is the task before us.

The successes of the global market economy are impressive—more people have more things and a higher standard of living than ever before. People in the industrial world are living longer and benefiting from a cornucopia of technological innovations brought forth by the explosion of scientific knowledge in the last several centuries. At the same time, the natural and social sciences are also delivering another message: the current pattern and magnitude of human habitation will be short lived. This is an abstract message; one that is not reinforced by overt short-term negative feedback signals that might elicit immediate corrective actions. Understanding the message is extremely difficult for most modern-day human beings because we have physically and emotionally extracted ourselves from the larger biological world upon which we utterly depend for our very existence. As a consequence we are unaware of the dire consequences of the mass biological extinction we are causing. Commentators have noted that the inhabitants of Easter Island, Sumer, and the Mayan Empire, to cite a few of many examples, would hardly have noticed from one generation to the next the biological impoverishment that eventually led to the collapse of their complex societies. How can you miss what you haven't seen? Do residents of North America miss the endless old growth forests filled with an abundance of animals on the ground and birds in the air that greeted the first European explorers? Were the pre-European native North Americans aware of the absence of plains camels, giant armadillos, anteaters, sloths, and mammoths that were here when the first humans arrived over 10,000 years ago?

Linda and I were surprised on Nauru by the resilience of nature as plants and animals recolonized Topside. But this merely confirms what careful observers have written about the consequences of human activities. It is arrogant for us to think that we are “destroying the planet”—Earth got along quite well before humans appeared and will get along quite well after we are gone. Humans may be impoverishing biological diversity by changing the climate and destroying habitat, but the earth's biological diversity has been hammered like this before and it has always bounced back in 10 or 20 million years. Much of the environmental havoc we are wreaking on the planet is certainly reversible, but the time required makes biological diversity recovery without meaning for us—humans just won't be here to see it.

Nauru is a story of power, exploitation, greed, and the selling of the future for short-term gain. It is the story of our own past as well as what might very well turn out to be our future. The Nauruans learned from westerners the global market game and then played their hand. This tragic tale provides a window through which to see our culture's fire blaze its course. Nauru and a host of other cultural stories scattered around the globe render intelligible the numerous fallacies in our cultural beliefs and the trajectories they produce. The extrapolations of these trajectories, enlightened by the perspectives of the natural sciences, predict catastrophe. These revelations and myriad others—we hope—will be sufficient to call forth new beliefs that will elicit dramatic adjustments to our pattern of

habitation. Otherwise, we will sear civilization to the bone and turn its bones to ashes.