



November 25, 2012

Position: Approximately 500 miles off
the coast of Mexico

N 12° 35' 35.09.89" - W 99° 20.21"

Day 8

The men passed another full day without water. They had now lost the ability to conserve body heat. "We could climb inside [the ice-box] and though it was tight, we could both huddle inside; one of us could stretch his legs up the side and we were protected from the wind, and if we hugged," said Alvarenga, "we could maintain at least some warmth. My face swelled up. My tongue was dry, I had no saliva."

Again and again the men searched the boat but could not find a single fishing hook. Alvarenga remembered the moment when the wave had crashed over them. If he had only grabbed the toolbox, he would have saved an invaluable supply of hooks, lines, thread, a pair of knives and a sharpening stone. But it had gone sliding over the rail as he'd watched bug-eyed and held on tightly.

Alvarenga's *Titanic* was now headed southwest, a fortunate deviation that allowed him to avoid the Equatorial Countercurrent—an enormous ocean eddy that would have hijacked his westerly course and spun him into a circular, counterclockwise loop—perhaps not letting them free for weeks. As he drifted, Alvarenga was shocked by the amount of trash and flotsam in the water around them. Abandoned fishing lines migrated with the current. Riddled with

hooks, nooks and crannies, these "ghost lines" became the nucleus of an organism that provided a home to crabs, small fish and turtles.

"I was so hungry that I was eating my own fingernails, swallowing all the little pieces," said Alvarenga, who began to grab jellyfish from the water, scooping them up in his hands and swallowing them whole. "It burned the top part of my throat," he said, "but wasn't so bad. I ate two of the purple jellyfish, those burn more." But jellyfish did little to satiate his hunger so he began to fantasize that he could eat his own finger. "I needed a piece of something." He was right-handed so it would have to be on his left hand. The pinky was the most useless. It would be the first to go. Alvarenga prepared for a gruesome operation. He would hack off his pinky with the machete, stanch the blood flow and then dice up his own finger and eat it. The amount of meat was minimal, probably a few bites. Hunger was teasing the sensibility out of his mind. But his plan had a potentially fatal flaw: he might bleed to death. Alvarenga was not convinced that he could stem the blood flow from his own finger. "I would have died, bled to death or got halfway through and stopped because of the pain."

As they drifted southwest, Alvarenga eyed the small triggerfish—seven inches long—that had been chewing on his boat the night before. Known as "sea piranhas," the triggerfish practically sanded the bottom of the boat clean with their teeth. Staring into the clear water, Alvarenga identified other members of a growing retinue. With a flat squarish head—like a miniature sperm whale—and an unmistakable green skin that passed in a flash, the prized game fish mahimahi zipped by in schools of a dozen.

While the fish activity under their boat increased, so did the

prevalence of sharks. "I needed hooks. Or a net to catch fish. Or a harpoon," said Alvarenga. "I could see the fish go by and in my mouth I tasted them. With a harpoon I would have been set. But I didn't have it so I had to imagine what to do. I had a pole and tied a knife to it and tried to spear them. I speared two fish but didn't land them. I dove into the water trying to grab them with my hands." The fish got away.

Alvarenga invented another strategy to catch fish. He kneeled alongside the edge of the boat—eyes scanning for sharks—and shoved his arms into the water up to his shoulders. With his chest tightly pressed to the side of the boat, Alvarenga set a trap for the fish. He kept his hands steady, ten inches apart. When a fish swam between his hands, he smashed them shut, digging his fingernails into the rough scales. Many escaped but soon Alvarenga mastered the tactic—"Sometimes after the triggerfish finished eating they would just float for a minute and I would grab them"—and he began to snatch the fish and toss them into the boat while trying to avoid the teeth. "The triggerfish teeth are terribly sharp and they nipped off the end of my fingertips or small pieces from the palm of my hand," said Alvarenga, who was able to capture as many as thirty of the small fish in a single session. "They would bite me but I hardly felt it. Who cares if they bit, I had caught them."

The men set up a mini fish-processing plant. Alvarenga would snare them, and with the fishing knife, Córdoba expertly cleaned and sliced the flesh into finger-sized strips that were left to dry in the sun. When Córdoba dumped the bloody innards of the palm-sized triggerfish into the water it was rarely more than a few minutes before mako and blue sharks feasted. The four-foot shark scraped their rough skin along the bottom of the boat, sending up

a jolting blow and a noisy reminder of how little separated these two worlds.

Alvarenga ate fish after fish. He stuffed raw meat and dried meat into his mouth, hardly noticing or caring about the difference. He was famished after days without a meal, yet his body was still in a state of adrenal overdrive that allowed him to ignore basic human needs like sleep in order to focus on the more crucial task of finding water.

Alvarenga began to drink his urine. He wasn't embarrassed and he encouraged Córdoba to follow suit. It was salty but not revolting as he drank, urinated, drank again, peed again, in a cycle that felt like it provided at least minimal hydration to his body. But urine, being filled with salts, throws the body's internal equilibriums off balance and requires the body to consume even more precious water in an attempt to flush out the salts. Drinking urine, both men realized, was a desperate measure. They needed protein, calories and hydration, so they scanned the ocean surface for food and tools. Vegetation was extensive, ranging from the trunks of palm trees to mats of seaweed.

Alvarenga and Córdoba divided their time between scanning the horizon for ships and inspecting the nonstop parade of floating garbage. They became astute scavengers and learned to distinguish the myriad varieties of plastic that float across the ocean, littering the surface with a permanent mark of the petroleum age. Garbage was so prevalent that trash became a constant source of possibilities. Alvarenga and Córdoba grabbed and stored every empty water bottle they found bobbing in the water. Nearly every day they could see dozens of the floating bottles, and when they drifted nearby they used the flagpole with the burn marks from the T-shirt to

snag them. At least now if it rained, they had a plan. They would clean out one of the plastic indentations on the boat, eliminate the salt and gunk and then transfer the collected water into the plastic half-liter bottles. Their plastic bottle collection, which grew almost daily, formed the basis of their first line of defense against thirst. Trash was now a tool.

When a stuffed green garbage bag drifted within reach, the men snared it, hauled it aboard and ripped open the plastic. They forensically inspected every item in the bag. A crust of bread would have been heavenly; a tortilla, the Holy Grail. When the men found a wad of prechewed gum, they divided the almond-sized lump, each man feasting on the wealth of sensorial pleasures. Underneath a layer of sodden kitchen oil, they found riches: half a head of cabbage, some carrots and a quart of milk. It was half rancid but still they drank it. It was the first fresh food the two men had seen in a week. They treated the soggy carrots with reverence befitting a Thanksgiving dinner. "We didn't eat it quickly at all," recalled Alvarenga. "Instead we chopped it up very fine and prepared an entire meal." With the precision of diamond dealers, they enthusiastically divided the loot. "I found a plastic bottle of soft drink floating in the ocean with just a little drop inside, but ahhhh! How sweet! I imagined that I was back in the world," said Alvarenga. "What a pleasure it was."

The two men hauled aboard every batch of seaweed within reach. Sometimes a crab or small fish could be found tangled in the spiderweb of plants. The men were at the epicenter of a newly hatched ecosystem—the few square yards of ocean under the drifting boat's hull now a petri dish where barnacles, crabs and fish began to congregate.

Tuna fishermen in this area of the Pacific are known to dump tree trunks into the ocean, then return in two days and circle the area with their lines. "Fish in the open ocean tend to aggregate under anything that provides any sort of structure. A boat that is floating for a long period of time acts as a magnet for fish," says Daniel Cartamil, a shark expert with the Scripps Institution of Oceanography, who describes the rapid buildup of a food chain in which the smaller fish "would act as a magnet for predators," including sharks. "Once sharks have found food, they will pretty much hang around all day," says Cartamil. "They won't leave."

The two men could see that food was plentiful and nearby. Sea-birds dove into the water to scoop up sardines. Tuna fish flashed under the boat chasing smaller fish. Birds landed on the prow of *The Titanic* to swallow a recent catch. The birds soiled the deck with syrupy excrement that smelled horrendous and which the men feared might foul any freshwater stores. The two men shooed the birds away, cursing the fact that their boat was a landing pad. A pea-sized drop of excrement could foul an entire section of the boat that might later fill with rainwater, thus the men's vigilance to scare away the birds and prevent them from landing. They considered building a scarecrow. Without realizing it, they were becoming experts on the behavior of these frequent visitors.

After nine days of minimal water and only a few servings of dried fish, milk, cabbage and carrots, Alvarenga and Córdoba were so desperate that they began searching for minuscule microdroplets. The men divided the boat in equal halves, from bow to stern, with an imaginary line running down the middle of the hull. Then they crouched and began licking the entire surface of the boat, especially the molded indentations, which tended to hold a few drops

of morning dew. "Like cows," said Alvarenga, who discovered and explored the secret contours of his boat with a slow and desperate intimacy.



November 27, 2012

Position: 520 miles off the coast
of Mexico

N 12° 02.57.25" - W 100° 55' 06.14"

Day 10

Alvarenga was so thirsty and hungry he began to imagine a new source of food. He had a vision of pure nutrition: sea turtles. "I was taking these short half breaths, and wanting water and not having water. I thought I would die from the anguish," said Alvarenga. "My breaths were getting short. I started to suffocate. It felt like I was drowning. I couldn't get the oxygen; it was horrible. I thought a turtle might save me."

Finding a sea turtle would not be difficult as the Mexican coastline was host to coastal marine sanctuaries that included sea turtle conservation and hatchery programs. From September through January, tens of thousands of sea turtles come to nest and lay their eggs. These eggs are then fenced off, allowing tourists to photograph the hatchlings as they crawl back toward the surf to face the ocean. "They say the [sea] turtles are in extinction, but we go forty kilometers [twenty-five miles] from here and they are everywhere—

rocks on a mountainside," says Mino, Alvarenga's supervisor. "You have to swerve this way and that to avoid them and sometimes 'bang!' You hit a turtle at God-knows-how-many revolutions per second. Sometimes they are half sunk so you can't see them. We are talking thousands of turtles out there."

Thousands of these turtles are caught every year by fishermen and sold for fifty dollars apiece on the black market. Although "Fresh Turtle Steak" is rarely printed on the menu, the savvy gourmet along the Mexican coast never has to search far to find a local restaurant willing to serve up the illegal delicacy. Despite the threat of fines and public awareness campaigns, turtle meat finds its way into household cooking pots and commercial kitchens all along the coast.

Sea turtles in the open ocean dive when boats appear. It is common, however, that when a boat is still, the sea turtles approach. Attracted to floating objects that might serve as a rest stop or source of food, sea turtles along the coast routinely swim *toward* a stationary fisherman's boat and make a racket as they try to climb aboard.

The first turtles Alvarenga and Córdoba found were dead. "They fill up like a balloon and turn purple," said Alvarenga. "The smell is terrible, we couldn't eat them. It was impossible."

But in late November—roughly ten days after losing their engine—Alvarenga heard a "thunk" in the night. He thought a log had bumped the boat. Climbing out from under the icebox, he was surprised to see an eye. Then a second eye. He grabbed the two-foot-long turtle by the back and tossed him aboard.

"Let's eat the turtle," Salvador told his stunned companion. "We can drink the blood! If we are really this thirsty, we drink blood!"

"No. No. No. That would be a sin. Let's catch fish," Córdoba replied, shocked by the radical proposal.

"Sin? What are you talking about? A sin?" said Alvarenga. He prepared his knife.

Alvarenga's mouth was dry and his tongue swollen. He did not hesitate. "I killed the turtle with the knife and there were some tubes coming off the motor. I sliced a piece of tubing off the motor and used it like a straw." Turtles were gorged with a thick merlot-colored blood with hints of violet. If thirst was the problem, Alvarenga reasoned, then turtle blood was the solution. He slurped pint after pint of the liquid blood and later ate the congealed blood that formed into a Jell-O-like consistency.

"Eat it, eat it!" Alvarenga pleaded to his companion.

"No. No. I can't," Córdoba said, balking at the thought.

Then Alvarenga began to carve up the meat. He began with the flippers. Cutting into the thick skin was wrenching and slow work. To crack open the shell and reach the thick meat in the tail took an hour of work. Inside the turtle's stomach he found a collection of garbage including plastic bottle caps as well as clams and barnacles.

Laying out the turtle steaks, Alvarenga tried to kindle a fire. His lighter was long since dead, so he tried with his mirror. He had used a turtle shell as a frying pan before. Wood could be shaved off the plank they slept on. But with his lighter dead and the mirror useless in creating a flame, Alvarenga settled on the sun to warm up his fresh meat. But his patience was limited. Less than an hour after laying out the thick purple meat he was slicing finger-long strips of raw turtle meat and chewing it with glee. He smiled as he savored the luscious flavors. Nothing about the meal made him retch; to the contrary, he felt feted by the sea.

Lying awake inside his icebox home after his first day of turtle food, Alvarenga felt his body surging to life. His thirst temporarily quenched by blood, his appetite sated by raw turtle steaks, he gave thanks for the turtle and for his good fortune. Alvarenga saw the turtle as a venerated gift, handed to him by a benevolent sea.

Once he began scouring the open ocean for turtles, Alvarenga found they were as common as sharks. When a turtle came up for air, the head and nose rippled the surface and sometimes the animal would float, as if sunning on the surface. "A resting turtle at the surface would not be expecting any danger from a big chunk of flotsam," says Blair Witherington, a research scientist with more than twenty-five years' experience in sea turtle biology and conservation. "Turtles often like to hang out around stuff that floats. And it could be they just saw Alvarenga's boat as just flotsam out there. . . . Some of these turtles may be diving deep for food and the water down there is cold. By the time the turtle comes up, it might want to soak up sun."

Alvarenga's entire day mutated into an obsessive turtle hunt. Córdoba was also an eager hunter even if he refused the nutrients and energy contained in the blood. Despite no rain and intense sun, turtle meat kept the two men alive and they began recovering strength.

At every meal, Alvarenga divided the blood and meat with a solemn equanimity but Córdoba ate only the meat; he resisted the blood, so Alvarenga was drinking double portions. Alvarenga began to stockpile food—he caught three turtles and penned them up in a small pool of water on the deck. The turtles climbed and tumbled around, creating a racket day and night and a counter note to the crunching of triggerfish.

Alvarenga's taste for turtle was not limited to the blood and meat. "I would pull out the eggs. Córdoba did not like the meat but he ate it, but when he tried an egg he loved it. Then he ate many many turtle eggs. There were lots and lots of turtles around there. I would catch them, kill them and then put my hands in and pull out the eggs."

Invigorated by the food, the men planned to escape. Using the turtle shells, they decided to row across the Pacific. "I had a turtle shell in each arm and for two hours rowed and rowed," said Alvarenga. "Then I thought, 'This is impossible, what am I doing?'"

Hunter Gatherers



November 30, 2012

Position: 550 miles off the coast
of Mexico

N 11° 44' 18.06" - W 101° 26' 6.47"

Day 13

Alvarenga was resting inside the icebox, a bucket of turtle scraps next to the wooden plank that was his bed, when he heard, *Splat!* Another bird, another mess, he thought. *Splat . . . Splat . . . Splat.* The rhythm of raindrops on the hard roof of the icebox was unmistakable. "Piñata! Piñata! Piñata!" Alvarenga screamed as he tilted up the icebox and slipped out. His crewmate awoke and joined him. Rushing across the deck, the two men deployed a jerry-rigged rainwater collection system that Alvarenga had been designing and imagining for a week. Córdoba scrubbed clean the bottom of the gray five-gallon bucket and positioned its mouth skyward. Alvarenga balanced the plastic housing to the outboard motor on the deck, jamming it at an angle to collect rainwater.

After days of drinking urine and turtle blood, licking up droplets of freshwater, munching turtle eggs and nearly dying of thirst,

a storm finally bore down on the men. Dark clouds stalked overhead. The stormy weather came on fast and the men opened their mouths to the falling rain, stripped off their clothes and showered in a glorious deluge of freshwater. The men lapped up spoonful after spoonful of water as it dripped into the bucket. The growing swells rocked the boat, the water sloshing in the bucket a measure of their riches. Within an hour the bucket had an inch, then two inches of water. The men laughed and drank every couple of minutes. As water collected in the outboard motor housing they poured it into the gray bucket. After their initial attack on the water supplies the men vowed to maintain strict water rations. "What if we go another ten days without rain?" Alvarenga asked Córdoba.

The storm picked up. Swells now reached eight feet and swung the boat around and around. They had little ballast, no rudder and only the makeshift sea anchor dragging behind them to align the bow with the surging waves. Besides having no control over the boat, the men were half frozen. With the rain came a deep chill as their rehydrated bodies were still incapable of generating or holding body heat. Then too the men had not planned on wet clothes and their obsession with collecting water hadn't included plans for keeping clothes dry. Their clothes sodden, the men shivered and entered the icebox, although it was daytime. Nearly naked they hugged.

Alvarenga and Córdoba tried to escape the water gathering at their feet by sitting on the plank, then for much of the stormy day they sought refuge in the box. When the rain poured down in sheets, visibility was little more than a hundred feet. The whistling wind played tricks with their minds. As darkness swept in, the men heard chilling screams. A voice—like taunting laughter—emerged from the ocean depths. Alvarenga was not sure whether this was a

hallucination or a nightmare. Was he going mad? Were they going to be eaten alive?

After a day, the rain let up and as the sun began to cut through the thinning cloud patch, a calm silence returned. The men took stock of their new reality. They had transferred water from the indentations on deck to completely fill the five-gallon bucket with fresh water. It was enough for at least a week if rations were kept to a minimum. Though their thirst was sated the men's hunger grew, as if the arrival of water had primed the body for the promise of food. Alvarenga began to attack the stock of three turtles—each one represented three full days of food.

Using his authority as captain, Alvarenga made an executive decision. He ordered Córdoba to eat. But instead of screaming or forcing the issue, Alvarenga instead seduced his mate into eating by presenting the turtle steaks as a gourmet delicacy. After cutting the meat into thin strips and dripping salt water for flavoring, he toasted them on a part of the outboard motor housing heated by the sun. Alvarenga sliced each strip into tiny squares and using the vertebrae of the triggerfish created what looked like a fancy appetizer. The turtle shell served as a plate and to the surprise of both men, Córdoba began to enjoy turtle meat. His body immediately overruled his mind—rich in fat, vitamins and protein, turtle meat was exactly what a starved human body required.

"It was really common for European sailors to gather sea turtles and turn them upside down in the holds of the ship, and tie their flippers together," says Witherington. "The turtles would stay alive without any food or water for weeks and weeks and weeks."

Alvarenga and Córdoba began a ritual of eating together as they slowly consumed equal-sized portions. "One myth about sur-

vivors is that people think you're so starved that you bury your face into the food and it all tastes the same. It's not that at all," says Steve Callahan, author of *Adrift*, his memoir of survival at sea for seventy-six days aboard a tiny raft after his sailboat was sunk by a whale. "I would fantasize about all these subtle differences in flavor between different parts of the fish. I would hang the meat until it got really dry and it was like 'Ahhhhh, that's like toast, nice and crunchy.' The liver was sweet, so that was dessert. . . . It's not like you're walking through the grocery store and you look at a package of fish for sale, you buy it, throw it in the cart, take it home, cook and eat it with absolutely no consciousness that this was an actual creature that had a life. Instead, you are connected to all that richness in a very close way."

Turtle meat staved off the worst effects of starvation but there was never enough food. Salvation came in the unlikely form of a shark pack. "I would see stains—dark shadows in the water—as schools of fish passed by," said Alvarenga. "The sharks were chasing them and the water boiled. When the sharks started eating them, the fish would slide up to the side of my boat and I would be scooping them out until the sharks left."

The shark pack and feeding frenzy didn't surprise Alvarenga, but Córdoba was stunned by the spectacle. He kept far from the waterline and brandished a wooden pole when the sharks launched an attack. "They banged and crashed around as they hunted," said Alvarenga. "I would watch the sharks and tell them, 'Someday we are coming back for you. All this torture you are causing us? We will be back.'"

Alvarenga was also talking to the outboard motor. He was

Hunter Gatherers

still stunned by the machine's betrayal. "I was very angry with the motor. I found some branches in the ocean and began smashing the motor. I was swearing. I smashed it with my machete and the wooden poles," said Alvarenga. "Later I asked for forgiveness and I took it apart to try and make hooks. There was lots of metal inside."



December 2, 2012

Position: 650 miles off the coast
of Mexico

N 11° 03' 43.81" - W 102° 10' 52.20"

Day 16

As he picked apart the motor, Alvarenga tried to decipher the cause of the engine failure. A single screw? A cracked motor housing? Wet spark plugs? Whatever lay at the root of this motor's premature death, Alvarenga was certain it was something mundane and simple. Fixing the motor was beyond his limited mechanical capabilities, and anyway, weeks earlier they had watched as all their fuel containers sank beneath the waves, presumably to rest on the ocean floor. Alvarenga dissected the outboard motor in search of a sharp piece of metal he could fashion into a tool or a weapon. When he removed a foot-long rod it took him less than a day to shave one end into a sharp point and to fashion a makeshift harpoon. He needed only to anchor the harpoon system to the boat via a thin

line of fishing filament and the men would have a reusable weapon capable of supplying them with fish. On the first toss the filament snapped. His handmade harpoon sank into the depths.

Alvarenga continued to strip pieces from the outboard motor in an effort to craft tools. Most of the motor was locked up by bolts and screws but through a combination of bashing the motor and prying it apart, the two men removed a second strip of metal, this one as long as a man's forearm. Alvarenga placed the metal on the rail of the boat and using his heft bent it into the shape of the letter J. He imagined the curve of a gaffing hook. After half a day of exertion, Alvarenga had done it. There was no barb, but by scraping the metal along the edge of the propeller for hours he shaped a sharp tip.

Alvarenga was a lifelong hunter who always ate whatever he caught. The sport of hunting never appealed to him; it was food he was after. He began to experiment with his new weapon. Learning over the edge of the boat, he would first grab triggerfish then cut them up and chum the water with blood and pieces of flesh. The bait attracted more triggerfish and the flat-headed mahimahi. His hands in the water, Alvarenga positioned the hook as deep as possible. Córdoba tossed more bait—including turtle entrails—and waited. Alvarenga's plan was to position the hook under the soft underbelly of the mahimahi, then whip it up, in the hope of snagging the fish deep enough to haul it aboard before it wriggled free.

Two decades of hunting had taught him patience. He had vast experience killing raccoons with a slingshot and shooting birds out of the sky with a shotgun. Several times Alvarenga had mahimahi flirting with his bait, nearly lined up with the handmade hook. Still he waited. Even the slightest movement of the hook spooked

the curious but cautious mahimahi. Finally, Alvarenga lined up a two-foot mahimahi. Snapping his arm up, he ripped the hook with such force that it cut through the fish. Writhing and in shock, the mahimahi fought but was aboard *The Titanic* in seconds. Córdoba smashed the fish in the head with the propeller, which he had removed from the motor. Alvarenga watched the beautiful creature's chameleon death performance. Bright greens, brilliant blues, the fish seemed almost magical as it changed colors while dying. Alvarenga too was in shock. He had planned the whole sequence, no surprise there. But having a fresh fish as long as his arm changed everything. Córdoba was proud of his captain. The bounty felt communal.

Alvarenga prepared the mahimahi with obsessive attention to detail. He rescued every nugget of meat and added to each man's portion one kidney and one eyeball. They didn't divide the heart or liver for fear of losing precious drops of blood, so each man slowly chewed an entire organ. Their feast felt like a six-course meal. They even had extra meat, which they balanced atop the outboard motor housing to dry in the sun.

After the meal, Alvarenga went back to the hunt. Catching the second fish took less than an hour. Then Alvarenga got careless. When a third fish was within range he yanked the hook into the fish, a bit sideways but deep. The mahimahi lashed out and slipped the hook from Alvarenga's grasp. He watched as the fish, trailing a stream of blood, darted away, the homemade hook impaled in its belly. "I felt like crying. I couldn't believe it. It was gone," said Alvarenga, who was back to fishing with his hands. They rationed the meat from the two mahimahi and cut it into nuggets the size of a kernel of corn. They savored each bite. "Sometimes I would just

hold the piece in my mouth for five minutes, letting the flavor leak out," said Alvarenga.



December 10, 2012

Position: 920 miles off the coast
of Mexico

N 9° 48' 30.06" - W 106° 58' 49.17"

Day 24

The two men were living off survival rations of three cups of water a day, piles of fresh turtle eggs and portions of dried turtle meat. Although they would collectively eat up to a dozen triggerfish every day, the men were extremely dehydrated. They maintained a strict ration of one cup of water in the morning, one cup at lunch and one in the evening. When Alvarenga licked his lips, at least he could celebrate that he no longer tasted salt. The rain had washed his body clean and the calm sea meant he was no longer constantly doused in salty sea spray. But his throat remained swollen and felt brittle. Could the skin be flaking off inside? Or was this just another creation of his ever more fertile imagination?

Córdoba was in worse shape. He pleaded with Alvarenga, "Oranges, bring me oranges." Alvarenga stood above the prone man and assured him food was close. "Okay, I am going to the store, I will see if it is open, to bring you some food," he said with conviction as he pointed to the horizon. "I will get tamales, oranges and

Hunter Gatherers

shrimp." Alvarenga strode with confidence for the few seconds it took to cross the length of the boat. After waiting for five minutes in silence, he strode back with bad news. "The store is closed, but don't worry, they open in an hour and they have fresh tortillas." To his surprise, the scheme worked. Córdoba stopped moaning and fell asleep. The game of visiting the store bought Alvarenga a few hours of respite from the cloud of fear that had seized Córdoba's mind and rarely loosened its grip on the despairing young fisherman.

Despite brutal thirst and aching hunger, Alvarenga maintained a reserve of goodwill, and in an effort to humor his ever more despondent shipmate he made frequent visits to the grocery store. Alvarenga's trick solved several deep psychological wants, including Córdoba's need for a roadmap outlining a solution. Alvarenga's clarity, purpose and determined explanations soothed much of Córdoba's anxiety. Waiting for tamales, even imaginary tamales, was bearable.



December 12, 2012

Position: 950 miles off the coast
of Mexico

N 9° 52' 06.79" - W 106° 49' 04.27"

Day 25

Alvarenga began to look forward to his strolls to the store—it not only calmed Córdoba but also allowed him to imagine life on

land. Dr. John Leach, senior research fellow in survival psychology at the Extreme Environments Laboratory at the University of Portsmouth, England, suggests that by nurturing his sick mate, Alvarenga was building a foundation to maintain his own mental health. "If you've got a task to do, then you're concentrating on that task, which provides a degree of meaning in your life. That's one of the reasons that people like doctors and nurses have quite a high survival rate in concentration camps during wars," says Leach. "If you're a doctor or nurse in camp, you've got an automatic task, you've got a job that gives meaning to your existence, which is looking after others."

Before long, Alvarenga began taking his own imaginary journeys. He had never owned a car, but aboard *The Titanic* he imagined owning a brand-new pickup truck. He polished the chrome, tuned the booming radio, admired his jacked-up cab and the flirtatious looks he received as he cruised around Costa Azul, ripping up the dirt roads with knobby tires. Like Córdoba's vision of a nearby grocery store, Alvarenga entered another dimension—although in his case as a result of deliberate self-hypnosis. Alvarenga spun ever more elaborate tales and whether it was a meal, a woman or an imaginary cold beer, his invented world provided a platform from which he could taste the myriad pleasures he so craved.

"The thing about survival is that there are moments when you have to be active in order to survive," says Dr. Leach, who works frequently with prisoners and survivors of hostage situations. "But there are also times when you have to be passive. And it's on those occasions that people will quite often retreat into their own head. What tends to happen in long-term survival is that there are changes in your memory structure . . . some aspects are improved

Hunter Gatherers

because they are being exercised. Quite prodigious feats of memory can be performed by people who are isolated. The caveat is that it's okay living inside your own head provided it doesn't slip into psychosis."

Alvarenga and Córdoba had no way to track time. They had no watch, no clock. But as a young boy, Alvarenga had been taught by his grandfather to mark the months by following the cycles of the moon. It was a skill that he picked up early and never abandoned. This ingrained habit allowed him to calculate their time at sea. They had left shore with nearly no moon, seen it grow during the storm and following days, and now its light was waning. The men had been adrift for roughly three weeks.



December 15, 2012

Position: 1,000 miles off the coast
of Mexico

N 9° 25' 29.34" - W 107° 39' 59.79"

Day 28

One evening as the men rested inside the icebox, a slight thump startled them. Then another thump. And a third. Emerging from a light sleep, the men found three flying fish flopping on the deck. "They whistled through the air and fell on the boat," said Alvarenga. Córdoba defined the gift in religious terms, a delivery from heaven for which he thanked God. Alvarenga had long consid-

ered church just another landlubber's scam. For him, the arrival of fresh fish was a reminder that food was bountiful and reinforced his belief that more than anything else, survival was his job, not God's.

Except for the turtles, the two mahimahi caught with the hook, dozens of triggerfish grabbed from the sea and the gift of three flying fish, by the middle of December the men hadn't eaten more than the equivalent of a single meal a day. The constant sun and limited supply of fresh water pulled their skin tight, an abnormal Botox-like shrinkage. Combined with the pallor from their malnourished blood, it made the men look like starved, haunted prisoners. "You have an invariable loss of about one and a half liters of water a day. Essentially you are a leaky bag," explains Professor Michael Tipton, a survival physiologist with the Extreme Environments Laboratory at the University of Portsmouth, England, and coauthor of *Essentials of Sea Survival*. "Because your blood volume is reduced—and of course it's your blood that is delivering oxygen around the body and to the brain—you have a decreased oxygen supply. That's when you get things like hallucinations, delirium and finally death . . . dying of thirst is a pretty nasty way to go."

Córdoba's shirt hung loose. He was falling out of his clothes. He was shrinking, especially around his eyes, thought Alvarenga, who couldn't avoid noticing the similarity between the skull and crossbones insignia stamped on Córdoba's hoodie and his ever more bony face. Alvarenga's girth too was several sizes smaller and his strength was ebbing away, but his mind remained sharp.

Córdoba was burning through his physical and mental reserves. He submitted himself to what he believed was a fate chosen by

God. "I don't want to suffer," the skinny lad said. It was a phrase he repeated like a mantra. Córdoba had a vision of a heavenly palace complete with pearly gates. Alvarenga, who harbored a stubborn optimism, tried to humor him: "Even a random corner of that palace is good enough for me," he said. "I don't necessarily need his temple. Give me a street corner with golden skies and crystal oceans. Any old corner as long as it gets me out of this hell."

Fifteen years older and a veteran of countless misadventures at sea, Alvarenga maintained an indefatigable will to survive, but ravaged by thirst and hunger he recognized their collective health was slipping rapidly. Yet all around them the sea teemed with life. Alvarenga felt he was in a cage where food was showcased tantalizingly close, just barely out of reach. Above their boat, the sky was dotted with the angular wings of gliding seabirds. On the horizon, fish chased by predators leapt out of the ocean. At sea level, islands of refuse washed by Alvarenga—always a skilled hunter on land—began to stalk the seabirds. He imagined they were wild ducks and plotted to capture one to determine firsthand how much meat was stuck to its legs, breast and wings. "They would get away when I tried to catch them. It was impossible. For three days they all escaped. I was angry and hungry," said Alvarenga. "I was trying to rush them and snatch them out of the air. It was a brute force attack, but they were too fast. I never even touched one." Alvarenga spent fruitless—and meatless—days unsuccessfully hunting birds. "I stopped and tried to figure it out. How do you catch a bird? I told myself: think like a cat."

Crouched flat like a soldier crawling through a battlefield, Alvarenga waited for a bird to land. When it first perched, the bird was attentive for several minutes, swinging its eyes, surveying the

scene. Alvarenga didn't move—instead he waited until the bird's defenses relaxed. When the bird busied itself eating fleas, lice or whatever parasites lurked deep inside its plumage, he inched across the deck of the boat. Alvarenga avoided eye contact as he stalked his prey. When he crept closer, the bird snapped to attention so Alvarenga froze still and the bird resumed preening. When his prey was within reach, Alvarenga slid his arm up the side of the boat, his fingers clenched in a fist. Then he extended his fingers in slow motion, careful not to scrape the side of the boat. With a snapping motion he trapped the bird's foot. A stinging pain ripped across his knuckles as the bird pecked and escaped. Studying the bloody welt on his hand and his overall strategy, Alvarenga noted a single flaw—he would have to ignore the pain of that first beak strike. If he could grab the bird's neck with his other hand, he would have a solid meal and the beginning of a strategy for long-term survival.

It took several more attempts. Often the birds flitted into the sky while Alvarenga was still several feet away, and once he touched a bird but felt its legs slip between his fingertips. Then he did it. "Before I thought about what to do, I had the bird's neck in one hand and a leg in the other." The trapped bird shrieked and fought. Wary of stories that wild birds aim for the eyeball, Alvarenga kept the thrashing bird—which he called a duck—at arm's length until a short crack confirmed he had broken its neck. Examining the bird, Alvarenga decided to fillet it like a chicken. He sliced open the chest cavity and, after plucking the feathers one by one, peeled off the skin to expose a skinny carcass that seemed to have already been stripped of meat. What could you eat? All that effort for this? Alvarenga was disappointed his hunt had culminated with such a miserly harvest.

An expert with a knife, Alvarenga felt like he was showing off as he cleaned the meager catch and laid out strips of glistening flesh. He added his only condiment—drops of seawater—onto strips warmed in the afternoon sun. He and Córdoba sat down to eat, if not enjoy, their first full meal since the flying fish. “In my mind, I prepared a feast with cilantro, onions and tomatoes,” said Alvarenga. He popped a sashimi-sized chunk of raw “duck” into his mouth and chewed with gusto.

Córdoba made a costly mistake: he smelled the seabird meat. Unlike Alvarenga, who conjured gourmet flavors, Córdoba revolted at the stench, like that of rotten fish. He wouldn't try a bite. For four days Alvarenga alternately threatened and cajoled Córdoba to eat raw bird meat. Finally, the despondent mate took a tentative bite. Hunger had vanquished revulsion.

“See, I told you,” Alvarenga gloated. “Thought you didn't like bird, eh?”

“Yeah, I like bird,” Córdoba admitted.

Now in their fourth week adrift, the two men abandoned traditional modesty and walked naked, squatted on the rim of the boat next to the motor to defecate into the sea and then washed their butts with seawater. To pee they stood and urinated into the ocean. From roughly ten a.m. to four p.m., the men escaped the sun by living inside the icebox. It was crowded, stinky, uncomfortable and flat-out painful to wedge two bodies into the box—Alvarenga developed constant lower back pain from being scrunched up. But there was no other way to avoid being burned by the sun. “Once you get sunburn over about five percent of your body surface, then

that starts to impair your ability to maintain your body temperature," says Professor Tipton. "How important was it that they created shade and stayed under it, minimizing the solar heat load? It was critical."

Despite the boredom of long hours during the hottest part of the day cramped inside the icebox, the men recognized that this inconvenience mattered little compared with the shelter it provided from the harsh sun. Yet even with the shade, they were still sunburned and their skin was covered in blisters that erupted into a full-body rash. The salty spray became painful. But the icebox kept them from being toasted alive.

After the first successful capture of a seabird, Alvarenga and Córdoba became accomplished "duck" hunters. The two men hunted wild birds in earnest. "Catching a bird standing on the side of the boat was difficult as they often flew away," said Alvarenga. The easiest way to catch the birds was at night. Alvarenga lay on his back under the pole where the birds liked to perch. He waited until the birds were comfortably settled or even asleep. Then in a one-two move, he grabbed a leg with one hand and the neck with the other. If he planned to eat the bird immediately, he broke the neck with the casual familiarity of a man popping open a can of beer. Sometimes he even used his body to trap the birds. "They would always land on the boat to rest so I learned their strategy. I would hear them circling so I would stand still and they liked to land on my head. I was afraid they would take out my eyes," Alvarenga said. "Then I would grab them off my head."

When it was time to eat, they divided up the catch, an equal number of birds each. A path to survival was now mapped. "I would

Hunter Gatherers

eat the feathers, the bones, even the feet," said Alvarenga. To pass the time, Alvarenga would sometimes kill two birds and then chop them up like ceviche. "I would not kill them and just stuff them in my mouth. I chopped them and chopped them into very fine pieces, then placed them in a bucket and used fish spines like toothpicks to serve it up. That was one way to pass the time, eating each piece, one by one."

Steve Callahan, reflecting on the seventy-six days he spent drifting alone in the Atlantic Ocean in 1982, says, "People think you just sit around, and wait to wash up on something. And I have always pointed out to people that survival is not a passive activity, it's an active pursuit. If you don't work at it, you are screwed. I have a pet theory that one of the most dangerous things you can do in life is try to minimize all risks. You never fall on your face, nothing happens, and so when something big happens, you're totally unprepared, you have no tool kit."

Inside the icebox, Alvarenga noticed that his hearing was becoming sharp. "I could tell the size of the bird by the sounds. Sometimes I would hear a deep whoosh sound, and I knew it was a big bird. The birds flew low over the icebox on the first loop. Then looped again a second and a third time, then landed on the icebox. 'Yes!' I would say. 'Now I am going to eat duck.'"

When the wind and temperature permitted, the two men spent hours at night outside the icebox creating games with the sky, inventing competitions to see who could call out a shooting star first. They fell asleep counting stars—it was a game that Córdoba usually won: "He passed a thousand stars," said Alvarenga.

"Sometimes when we were both in the box and heard a bird, I

would hold up the edge, he would creep out. He was good," said Alvarenga with pride. "The icebox would not bump down on the deck and scare away the bird." While Córdoba became a skilled hunter, he still retched at the sensation of swallowing raw bird meat. Alvarenga, however, went native. His brain, set on survival and long accustomed to raw food, ranging from iguana to crabs, adapted to whatever might provide nutrition.

At night, before going to sleep, the men set fish traps. They sliced a hole in the side of five empty bottles of bleach—previously used to float their fishing line. For bait they stuffed feathers and chunks of bird meat into the bottles. A pair of intact Clorox bottles with screw-on caps kept the traps floating near the surface. The men trolled their traps, attached to the boat by one of the few pieces of solid twine available, behind them. Occasionally they found small fish trapped in the bleach bottle and even if the traps were empty, the thrill and possibility of a catch helped bolster the dream of a more steady food supply.



December 23, 2012

Position: 1,200 miles off the coast
of Mexico

N 9° 20' 46.92" - W 110° 34' 49.43"

Day 36

Watching the moon grow bright, Alvarenga calculated Christmas was near. Traditionally he would have feasted on roast turkey or chicken mole—roasted chicken bathed in a thick chili pepper sauce. The sauce includes a dollop of chocolate, allegedly a frantic effort by Mexican nuns attempting to impress a visiting bishop with their rich cuisine. Alvarenga and Córdoba would be lucky to have a few bites of raw fish and sun-roasted strips of meat, peeled off the skinny “ducks.”

In order to avoid arguments over who received a bigger portion, one man prepared the food and the other chose which serving to eat. Alvarenga diced four entire birds for their big meal. He had now learned not to pluck the feathers but to expertly peel the skin off the birds. A full bird, including the gut, provided as much meat as a hamburger. The saltwater flavoring helped mask the stench, but the men noticed that at night, inside their icebox refuge, they too were starting to smell like the flesh of seabirds—a rank and rotten odor like that of dead fish.

On the evening they estimated was Christmas Eve, as the men chatted, cleaned the birds and commenced their traditional meal—if there can be anything traditional about slicing, dicing and eating

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Hunter Gatherers



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On the evening they estimated was Christmas Eve, as the men chatted, cleaned the birds and commenced their traditional meal—if there can be anything traditional about slicing, dicing and eating

raw sea "ducks"—Córdoba coughed. "My stomach," he groaned as his eyes bulged like he was going to be sick. Bubbles and liquid dribbled from his mouth.

Alvarenga, who had waded through his companion's fears, tears and complaints, realized this was no exaggeration. A sudden, wrenching pain convulsed Córdoba's body. Alvarenga handed him a half-liter bottle filled with rainwater and, ignoring their rations, Córdoba sucked the bottle down and then spat it out. Whatever had taken hold of his gut held tight and the pain intensified.

The men dissected the intestines of Córdoba's "duck." Often the stomach and intestines brought surprises like plastic bottle caps or entire sardines. This time the men found a six-inch, articulated skeleton. The skin had fallen off and most of the meat was gone, but enough remained for them to identify the remains of a venomous, yellow-bellied sea snake.

"Chancha, there's a snake inside here!" Córdoba exclaimed.

"Yeah, and you already ate it," responded Alvarenga.

"Oh shit, I am going to vomit," stuttered Córdoba.

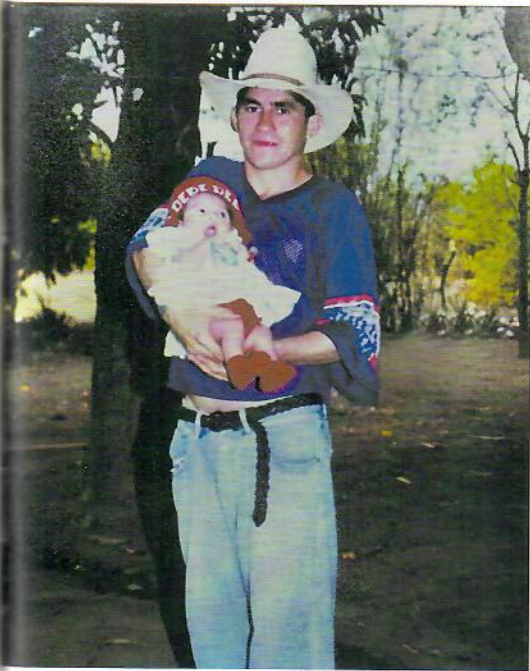
As Córdoba screamed and spewed white bubbles from his mouth, Alvarenga wondered if the poison had entered his mate's bloodstream. Was it fatal? How did it kill its victims? Watching as, drop by drop, a bubbly foam leaked out of his companion's mouth and listening to his guttural groans, Alvarenga considered his own fate. Had he also been poisoned? Was the venom going to hit?

Alvarenga didn't get sick and after four hours of retching and coughing, Córdoba stabilized. The men huddled, looking for subtle signs of improvement—aware the poison might have spread to other organs. The men tried to recall cases of bites by the yellow-

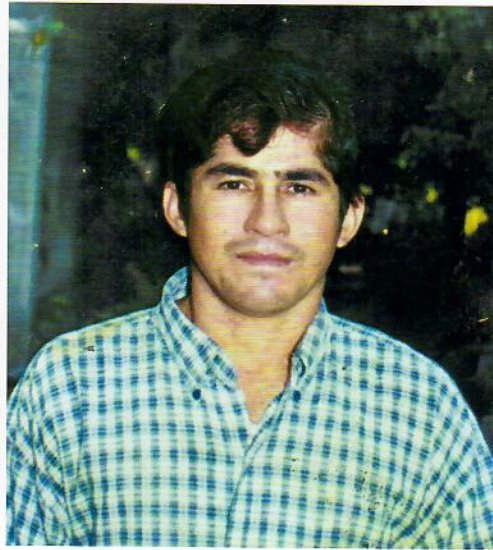
Hunter Gatherers

bellied snake. But they had only heard thirdhand versions and their only firm conclusion was that even the most hardened fishermen gave the snake a wide berth and tried to decapitate it with a machete.

The venom was not fatal, and Córdoba made a full physical recovery within two days. But in the realm of psychological terror, the poison possessed Córdoba. He retched at the thought of eating another raw seabird and withdrew from the world of food. Never again would he feast on one of Alvarenga's "ducks."



José Salvador Alvarenga with
his newborn daughter, Fatima,
in Garita Palmera, El Salvador.
(ALVARENGA FAMILY)



Alvarenga in El Salvador
prior to leaving the
country for Mexico.
(OSCAR MACHÓN)



Ezequiel Córdoba in one of the few known photographs of the young fisherman and soccer star. (JAMES BREEDEN)



The blue cooler box that protected Alvarenga and Córdoba from the sun. (MATT RIDING)

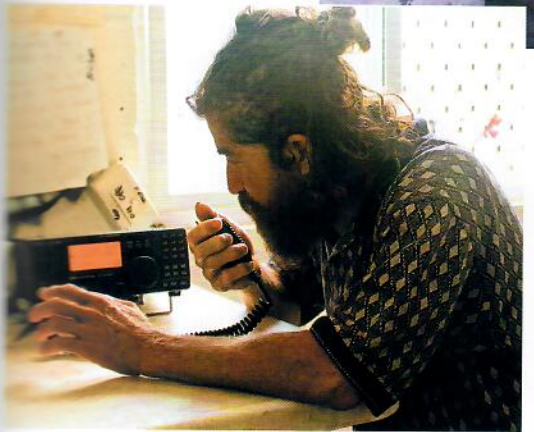


Ebon Atoll, where the bodies were washed ashore in 2015. (OLA FIELDSTAD)



Though battered and green with mold, Alvarenga's boat was salvaged by a local family and kept in their front yard. (AFP)

First-known picture of Salvador Alvarenga after he was found on the island. He had been at sea for less than forty-eight hours when this photo was taken. (IONE DEBRUM)



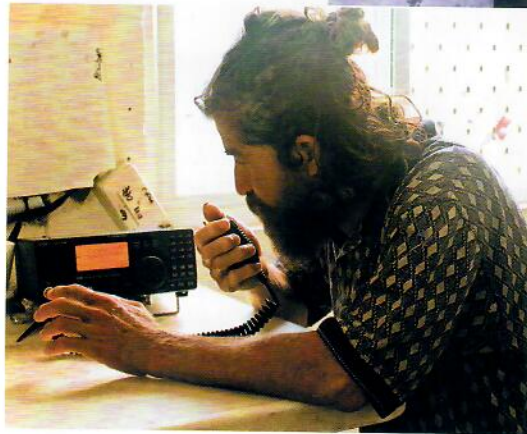
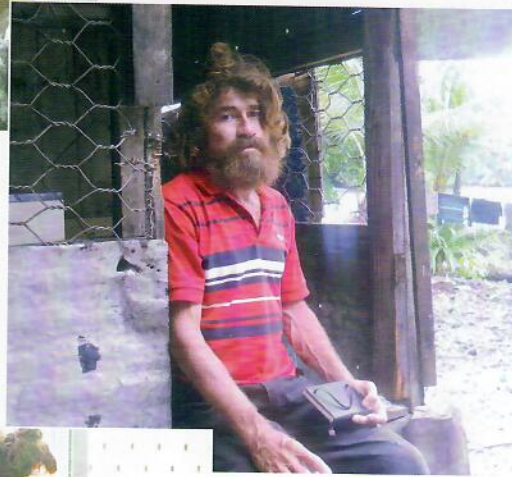
Alvarenga at a radio station in Ebon Atoll, where he was found. (OLA FIELDSTAD)



Ebon Atoll, where Salvador Alvarenga washed ashore in January 2014.

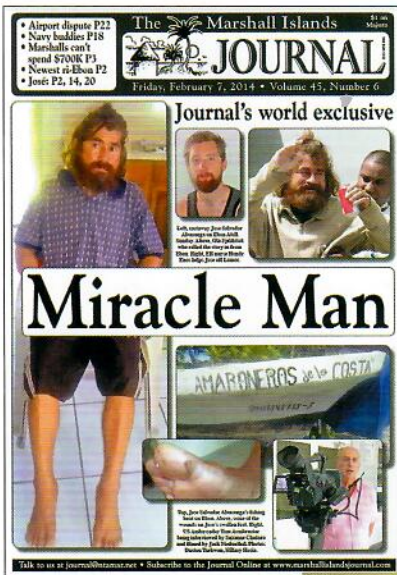
(OLA FJELDSTAD)

First-known picture of Salvador Alvarenga after he hit solid ground. He had been ashore for less than forty-eight hours when this photo was taken. (IONE DEBRUM)

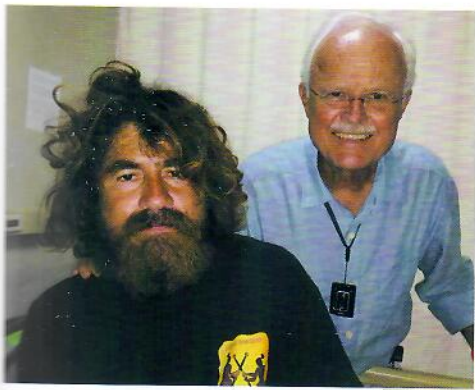


Alvarenga making his first radio calls from Ebon Atoll, where he washed ashore. Alvarenga was eventually patched through to rescue officials and family members.

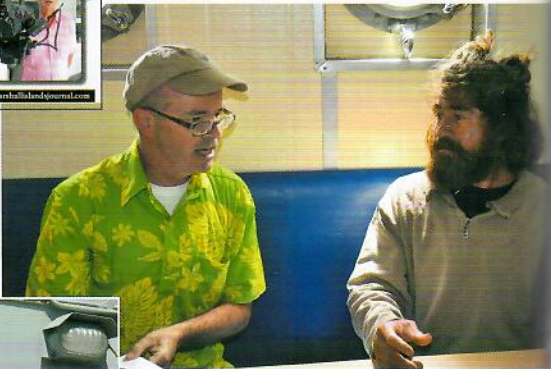
(OLA FJELDSTAD)



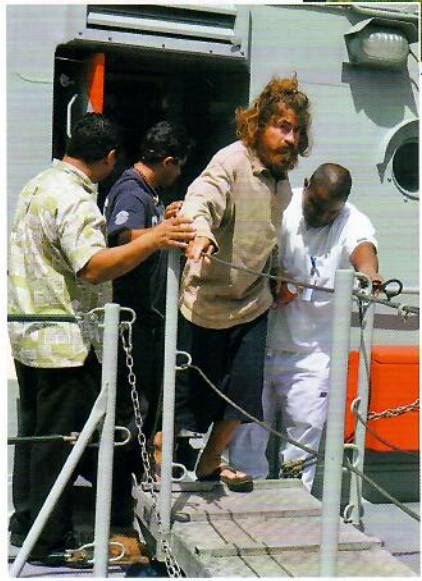
The front page of the *Marshall Islands Journal* on February 7, 2014.
(MARSHALL ISLANDS JOURNAL)



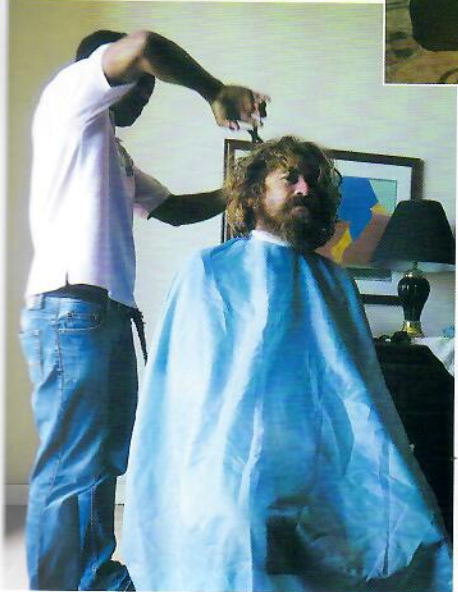
Alvarenga was treated by Dr. Franklin... a physician visiting Texas who was fluent in Spanish. (FRANKLIN...)



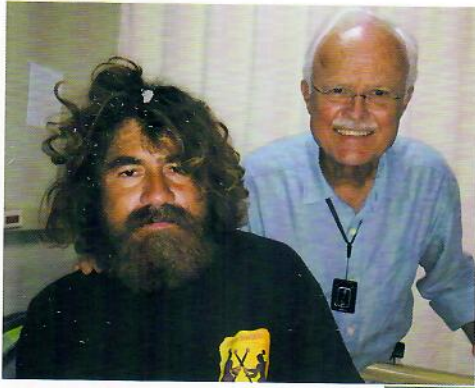
Fatima, Alvarenga's daughter, upon learning that her father is alive, Garita Palmera, El Salvador.
(OSCAR MACHÓN)



(Above) Alvarenga being interviewed on the patrol boat *Lomor* by Norman Barth, deputy chief of mission for the US Embassy in Majuro, Marshall Islands. (Left) Alvarenga shuffling ashore after a twenty-four-hour journey from Ebon Atoll to Majuro, the capital of the Marshall Islands.
(US EMBASSY, MAJURO)

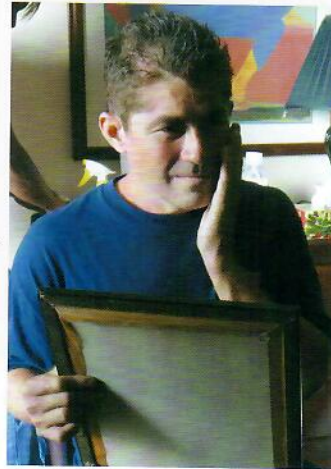
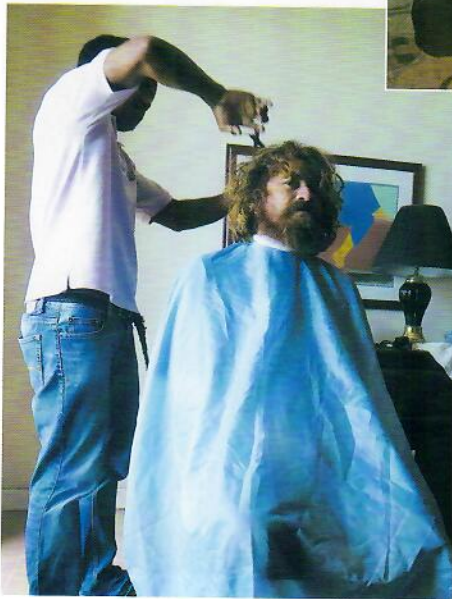


Alvarenga's first haircut in a hotel room hideout in Majuro. (MAJURO)



Alvarenga was treated by Dr. Franklin House, a physician visiting from Texas who was fluent in Spanish. (FRANKLIN HOUSE)

Fatima, Alvarenga's daughter, upon learning that her father is alive, Garita Palmera, El Salvador. (OSCAR MACHÓN)



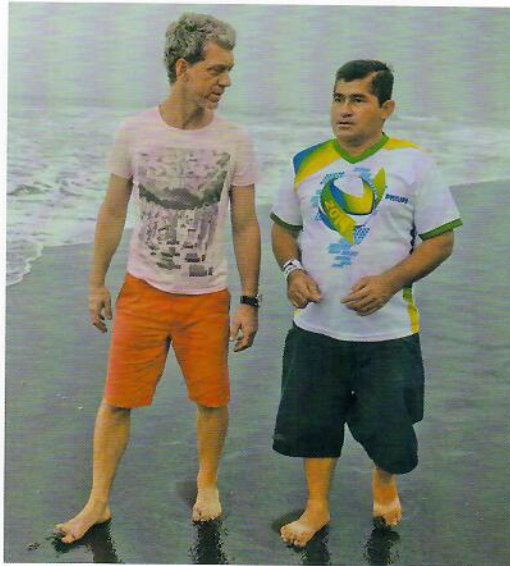
Alvarenga's first haircut in a hotel room hideout in Majuro. (MATT RIDING)



Alvarenga completed his promise and visited Ezequiel Córdoba's mother, Ana Rosa, to personally describe the agonizing death of her son. (AFP)



AFP



Alvarenga and author Jonathan Franklin in Garita Palmera, El Salvador. (OSCAR MACHÓN)

JONATHAN FRANKLIN

438 DAYS

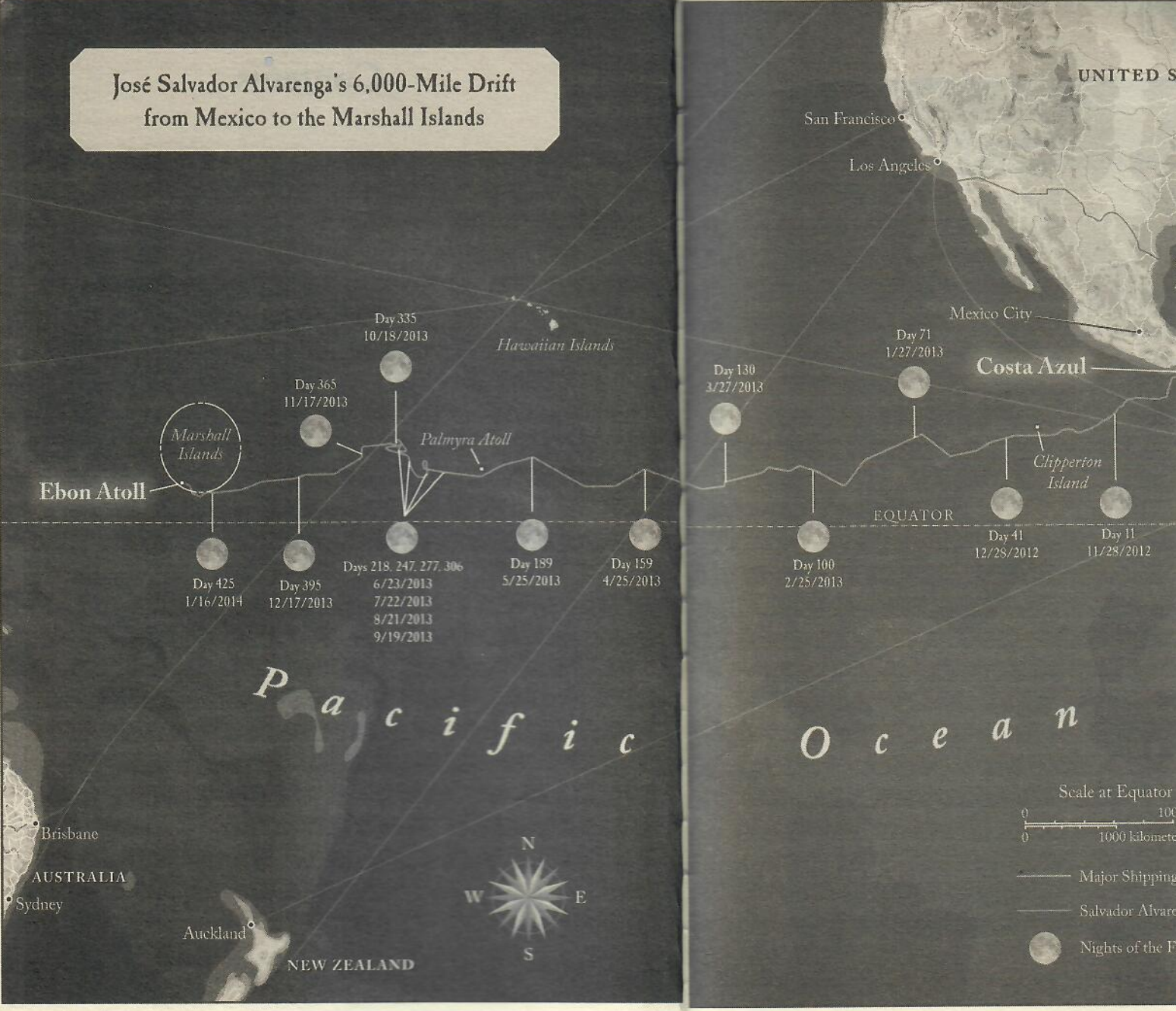
AN EXTRAORDINARY TRUE STORY OF SURVIVAL AT SEA



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José Salvador Alvarenga's 6,000-Mile Drift from Mexico to the Marshall Islands



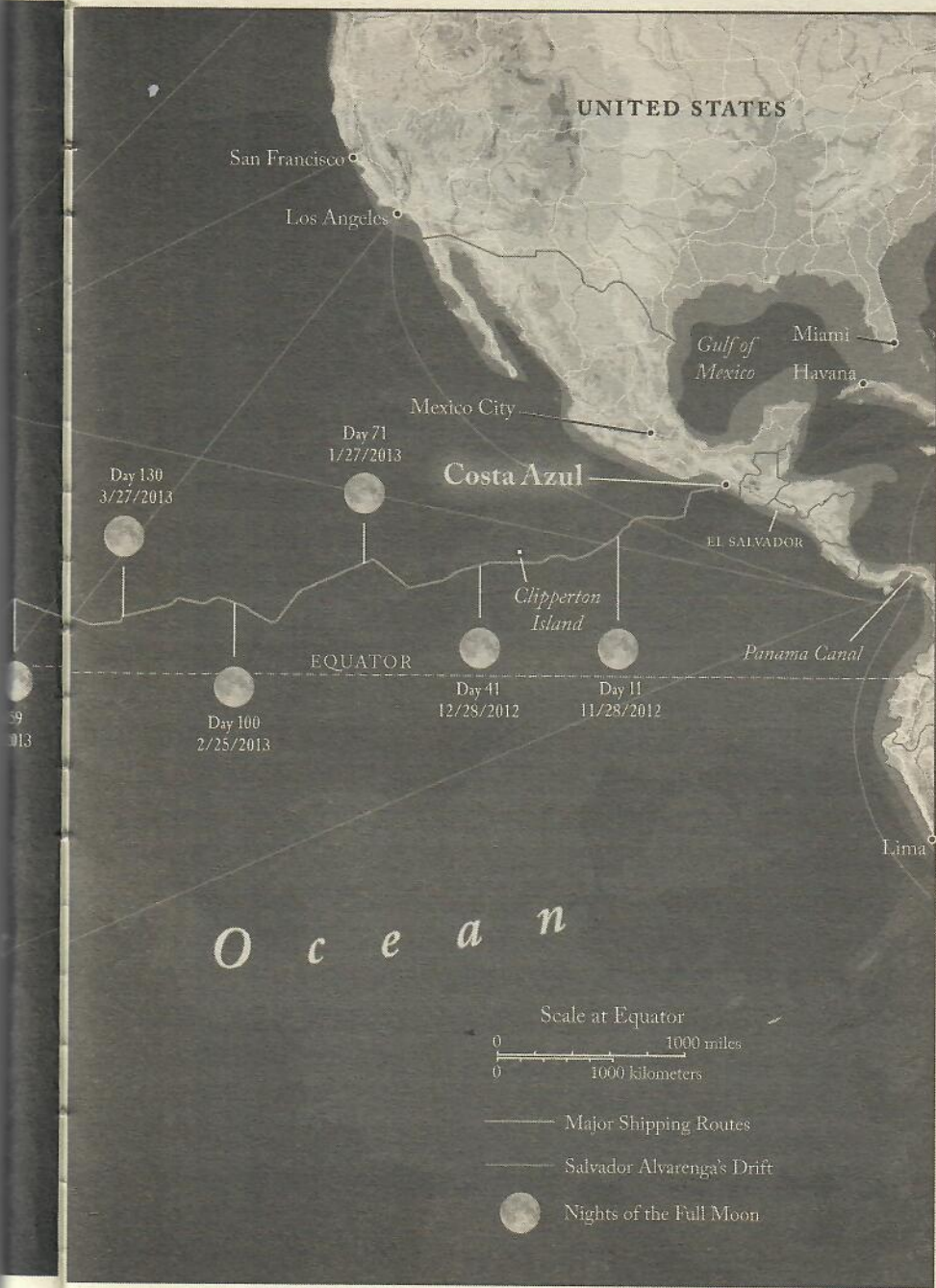
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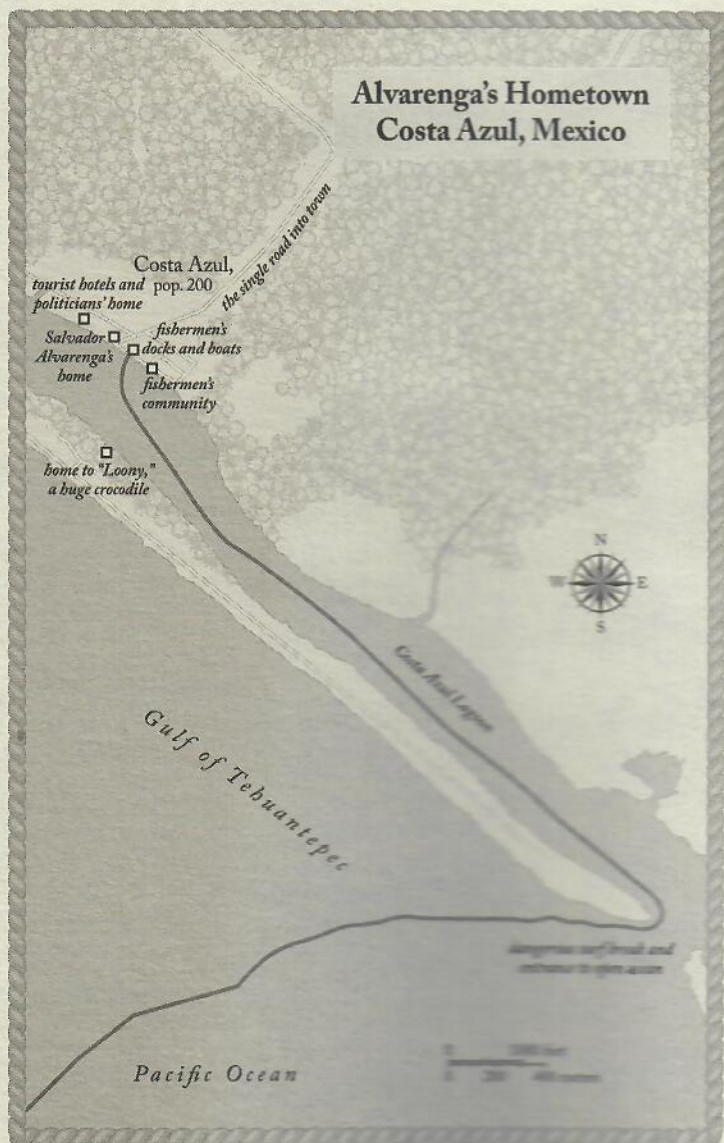
- Major Shipping
- Salvador Alvarenga
- Nights of the Full Moon



Brisbane
AUSTRALIA
Sydney
Auckland
NEW ZEALAND



The Sharkers



His name was Salvador and he arrived with was looking for work—anything to start—saw the newcomer arrive, he looked like a man

Salvador Alvarenga had walked on rocks for six Mexican coastline to reach the beach village carried only a small backpack and his clothes when he entered Costa Azul in the fall of 2001, a sense of relief. The mangrove swamps, nearby ocean and protected lagoon reminded him of his home in California, but here no one wanted to kill him. Only a few people lived in the beachside community, though it was surrounded by flocks of migrating birds, many making the long journey south from California. Thousands of seabirds came from coastal hatcheries to breed and migrate—12,000-mile swim across the Pacific Ocean to Costa Azul. Half ecotourism paradise, half lawless Wild West, the man trying to escape his past and embark on a new life.

Quick with a smile and a helping hand, the young, unskinned Alvarenga arrived without a visa or work permit.

On 17 November 2012, Salvador Alvarenga left the coast of Mexico for a two-day fishing trip. A vicious storm killed his engine and carried him west, deep into the heart of the Pacific. When he was washed ashore on 30 January 2014, he had drifted for fourteen months, covering over 9,000 miles.

Not one of the three dozen cruise and cargo ships which passed nearby stopped for the stranded fisherman. Despite often contemplating suicide, he developed a survival strategy that kept him alive and alert until his boat eventually drifted to a remote palm-studded island. Crawling ashore, he was saved by a local couple living in their own private castaway paradise.

Based on hours of interviews with Alvarenga, his close colleagues, search and rescue officials, the medical team that saved his life and the remote islanders who nursed him back to normality, *438 Days* is one man's incredible survival story of beating the ultimate odds.

Non-Fiction

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