

leans. It is a tetragon, several stories high, and it is right beside the river. Its foundation was dug in the mainline levee. That, to a fare-thee-well, is putting your money where your mouth is.

Among the five hundred miles of levee deficiencies now calling for attention along the Mississippi River, the most serious happen to be in New Orleans. Among other factors, the freeboard—the amount of levee that reaches above flood levels—has to be higher in New Orleans to combat the waves of ships. Elsewhere, the deficiencies are averaging between one and two feet with respect to the computed high-water flow line, which goes on rising as runoffs continue to speed up and waters are increasingly confined. Not only is the water higher. The levees tend to sink as well. They press down on the mucks beneath them and squirt materials out to the sides. Their crowns have to be built up. “You put five feet on and three feet sink,” a Corps engineer remarked to me one day. This is especially true of the levees that frame the Atchafalaya swamp, so the Corps has given up trying to fight the subsidence there with earth movers alone, and has built concrete floodwalls along the tops of the levees, causing the largest river swamp in North America to appear to be the world’s largest prison. It keeps in not only water, of course, but silt. Gradually, the swamp elevations are building up. The people of Acadiana say that the swamp would be the safest place in which to seek refuge in a major flood, because the swamp is higher than the land outside the levees.

As sediments slide down the continental slope and the river is prevented from building a proper lobe—as the delta plain subsides and is not replenished—erosion eats into the coastal marshes, and quantities of Louisiana steadily disappear. The net loss is over fifty square miles a year. In a hundred years, Louisiana as a whole has decreased by a million acres. Plaquemines Parish is coming to pieces like old rotted cloth. A hundred years hence, there will in all likelihood be no Plaquemines Parish, no Terrebonne Parish. Such losses are being accelerated by access canals to the sites of oil and gas wells. There are in Louisiana ten thousand miles of canals. In the nineteen-fifties, after Louisiana had been made nervous by the St. Lawrence Seaway, the Corps of Engineers built the Mississippi

River–Gulf Outlet, a shipping canal that saves forty miles by traversing marsh country straight from New Orleans to the Gulf. The canal is known as Mr. Go, and shipping has largely ignored it. Mr. Go, having eroded laterally for twenty-five years, is as much as three times its original width. It has devastated twenty-four thousand acres of wetlands, replacing them with open water. A mile of marsh will reduce a coastal-storm-surge wave by about one inch. Where fifty miles of marsh are gone, fifty inches of additional water will inevitably surge. The Corps has been obliged to deal with this fact by completing the ring of levees around New Orleans, thus creating New Avignon, a walled medieval city accessed by an interstate that jumps over the walls.

“The coast is sinking out of sight,” Oliver Houck has said. “We’ve reversed Mother Nature.” Hurricanes greatly advance the coastal erosion process, tearing up landscape made weak by the confinement of the river. The threat of destruction from the south is even greater than the threat from the north.

—John McPhee

## CENTER CITY ON THE ROOF



The two families shared a one-story house on South Prieur Street with one good job among them. Thirteen-year-old Timesha Johnson and twelve-year-old Irele Guidry might have been sisters, with their identically red-tipped cornrows and denim miniskirts. When the city of New Orleans ordered them to evacuate, they gladly would have gone. “I’m poor, but I’m not stupid,” said Timesha’s stepfather, Charles Covington, a roofer, who wears his own hair in short, blond-tipped dreadlocks. But none of them own a car, and their friends who do had no room for extra passengers. There was a rumor of buses, but none appeared. “We even called cabs, but they was all getting out themselves,” Charles said. So they bought what food and water they could, and the eight of them, from Irele’s grandmother, Janet, down to Timesha’s eleven-month-old sister, Alleiah, hud-

dled up together in the living room.

The house, in which Janet was born, creaked and banged and sighed as the winds blew, but it held together as it always had. Then it was over. That wasn’t so bad, they said. Not as bad as Camille. Not as bad as Betsy. It was only when they pried off the plywood that they realized that their ordeal had just begun.

The water rose so fast that they barely had time to snatch up some food and clothing before it got soaked. First they sat on tables. Then they sat on dressers. Then they pushed Janet and her obese thirty-three-year-old son, Mario, up through the hatch to the stifling attic and climbed in. Luckily, Charles thought to grab a heavy hammer from his tool belt, because it wasn’t long before the water was bubbling through the cracks in the attic floor. They sat on boxes, then stood, and still it rose, pushing them against the exposed points of roofing nails. Charles began banging at the ceiling with the hammer and finally bashed a hole big enough for them to squeeze through. Then they were sitting, exposed, on the sloping, sticky, hot tar roof, expecting to be rescued. That was Tuesday morning.

They sat like that, in the hot sun, eating Pop-Tarts, Rice Krispies Treats, and two-foot-long Slim Jims. They gave most of the water to Tasha Johnson, so she could nurse Alleiah. They took turns holding up shirts as sunshades to protect the baby and Janet, who cannot walk, from heatstroke. Helicopters buzzed in the distance. The sun went down. They heard shooting and mayhem, but none of it came near. Night, though scary, was at least a reprieve from the sun, which returned on Wednesday with malice. Every now and then, a boat crossed a nearby intersection, and they’d shout, but they couldn’t make themselves heard. At around midday, a passing helicopter swerved toward them and hovered, its rotor wash making a frightening maelstrom of loosened pieces of roof. A basket dangled from the helicopter, but a tangle of power lines kept it from getting low enough. Finally, the great whining machine veered away, the crewman at the door gesturing as if to say they’d come back.

Wednesday went by in a blur. Thursday brought some clouds, and a little cooling rain, but no more helicopters. At last, on Friday, a friend paddled by in a

small aluminum boat, and they all piled wobblingly aboard. By noon they were sitting amid a vast field of trash at the once stylish corner of Napoleon and St. Charles, waiting for buses out that had been promised by the police. They all had rashes on their arms and legs, from the hot tar. Janet, who is fifty-two but looks seventy-two, slumped in a wheelchair they'd found in the water. "I had a wine-glass I really liked," she moaned through a mouth sagging with few teeth. "Even that's gone." Behind her stood Mario, so exhausted his heavy face seemed to be melting. "We're O.K., we're O.K.," he kept whispering to himself, eyes closed. "We're O.K. We're O.K."

If the buses came, they said, they were going to try to call relatives in Irving, Texas, for money and bus tickets. "One eight hundred C-A-L-L-A-T-T," chanted Timesha, who cradled the baby in her arms. "That's how you make a collect call."

The others sat on a set of beautifully carved dining-room chairs that might have come from any of a thousand graceful houses in the neighborhood. "I'll have plenty of work," Charles, the roofer, said, "if I ever come back here."

—Dan Baum

## UPTOWN HOME ALONE



We finished boarding up the house on Sunday, the day before the expected hit, and my husband, Joe, prepared the attic with tarps and Visqueen in the hope of directing water leaks through the old slate roof into a copper cistern that hasn't had any use for close to a century. Our neighbors had left earlier in the day, their cars packed with kids, pets, photographs, and possessions that, at the next junction in life, might well look like junk.

The wind began in earnest that evening, gusts that blew off roof tiles and ripped branches from our neighbor's oak. We settled in, alert but calm, in that way that belies anxiety. During the night, the awning on the windows of the sunroom tried to get airborne and take the second

story with it. We jumped out of bed, ready to take action, only to find nothing to do. Through the back glass doors, we could see the rain driving horizontally.

The phone rang, and we both laughed; we were shocked that it worked. It was a neighbor who is a reporter at the *Times-Picayune*. He said, "I'm stuck. The building is surrounded." He meant by water. He wanted to know if the neighborhood was flooded. "Not a sign of standing water," we told him. "But our crape-myrtle tree just blew out of the ground."

"Anything else happening?"

"The cat won't come in," I told him. "She's on the front porch, pulling a Walter Anderson act." Anderson, the Mississippi artist, used to lash himself to a tree out on Horn Island, in the Gulf of Mexico, to observe the storms so he could paint them.

The electricity had been out since before dawn. We turned on the radio and listened to WWL. The usual talk show was in progress, a city official taking calls. "What should we do when it's over?" one caller asked.

"The first thing I have to say about that," the city father pronounced, "is to ask you, why are you still here?" With an edge of sarcasm, the caller asked if she should leave now. "No! No!" the official yelled. "I cannot emphasize strongly enough that everyone should stay where they are. Do not move around the city. Trees are falling, lines are down—" We decided to save the batteries.

At about three o'clock, the storm was past us, and we ventured out. Roof slate surrounded the house, which otherwise had weathered it all. Split trees blocked the street. A utility pole leaned on a magnolia tree, the phone lines stretched taut to the house. The air felt heavy, substantial. As far as we could tell, we were the only people around for blocks.

A few minutes later, a car picked its way through the tree debris. It was two neighbors returning from the downtown hotel they'd checked in to—no power, no food, and a fourteenth-floor room. We had a pleasant dinner together that night. After being closed into our houses away from the heat all summer, with the air-conditioner compressors creating white noise, we heard frogs and cicadas that seemed as if they had jumped into the future from our childhoods. We sipped our wine and listened and began trading sto-

ries of our lives. We turned on the radio and heard a general call to anyone with a flat boat to go out to the suburb of Metairie to help rescue people from rooftops. Relief workers were pushing bodies out of the way to save those still alive. The guilt of survivors passed through us; we didn't know anything about tragedy.

The next day, more reality came unbidden. The phone line no longer worked. The radio told us that the water supply was now contaminated. We had enough food left for three days. We went over a few blocks to visit another diehard, a man with a generator, and he said that the local stores were being looted. We knew the houses would be next. As we walked home, we saw a gang wearing gray hooded sweatshirts, in spite of the heat, their hands hidden in their pockets, eying our



car. Joe headed toward it, and they moved off down the street.

We went back into the house, neither of us saying a word. Joe went upstairs, I stayed down. About an hour later, we met on the landing. "We have to go," Joe said. "I know," I told him. I'd already packed the things I would need from my office. We locked up halfheartedly. The radio reported looters with AK-47s roaming the streets. Officials cancelled their request for flat-boat owners; they were being shot at on their search-and-rescue missions.

On the way out of town, we saw a man boarding up his house for the second time. "I took it all down," he said. "I thought it was over."

—Christine Wiltz