2.

The Accident

At midmorning on January 17, 1966, Captain Wendorf and his crew approached their midair refueling point over southeastern Spain. In the cockpit, Wendorf and Larry Messinger piloted the plane. Twenty feet behind them, facing backward, sat two men side by side: First Lieutenant George Glesner, an electronic warfare officer in charge of defending the B-52 (and arming the nuclear bombs), and the gunner, Technical Sergeant Ronald Snyder. Between the pilots and the defensive team a short ladder led down to a cramped, windowless compartment where Major Ivens Buchanan, the radar officer, and First Lieutenant Stephen Montanus, the navigator, sat facing forward. Mike Rooney, taking a break from his copilot duties, sat in the jump seat a few feet behind Buchanan and Montanus, reading a novel called *Thy Tears Might Cease,* by the Irish writer Michael Farrell.

The lower compartment, where Rooney sat, was about the size of a big closet—twelve feet long, three feet wide, and barely high enough to stand up in. Crew members called it "the box"—once they were strapped in, they couldn't tell whether it was day or night. At the back of the box crouched a chemical toilet. With the lid down and a cushion on top, it doubled as Mike Rooney's jump seat. Retired Chrome Dome airmen love to talk about the toilet. More precisely, they love to ex-

plain, in great detail, the proper eating strategy for long flights. Steak, bread, and hamburgers were okay; chili or anything "foreign" was off limits. The goal was to avoid having a bowel movement for the duration of the flight. This was partly out of deference to the unfortunate airmen stuck a few grim feet away from the toilet. But crews also had a custom that the first man to do his business in the "honeypot" earned the unsavory job of cleaning it once they got home.

So far, the trip had been uneventful in all respects. Wendorf, during his break, had time to nap, eat some fruitcake, and smoke a cigarette. The crew expected an easy journey back to North Carolina and needed just one final refueling to get home. The KC-135 tanker that would fill the bomber's fuel tanks had already left the SAC airfield near Morón, Spain, and was circling in the air waiting for the bomber. When the two planes were about twenty-one miles apart, the tanker began its "rollout," a long, curving maneuver that placed it directly in front of the bomber. Soon the bomber pilots could see the tanker about two miles in front of them and a thousand feet above. Messinger, at the B-52's helm, began to close the distance.

Messinger was about to attempt one of the marvels of modern flight—a midair refueling. In the early days of aviation, flying long distances meant packing your plane with fuel. During its historic flight across the Atlantic, *The Spirit of St. Louis* carried extra fuel under the wings and a main tank so big it partially blocked Charles Lindbergh's view. Army pilots of the early twentieth century, dreaming of long-range bombing, knew that Lindbergh's strategy would never work for them. Where would they put the bombs? In military lingo, planes with limited range are said to have "short legs." To give planes longer legs, the airmen needed a way to refuel them in the air.

The earliest attempts at midair refueling were just stunts—a daredevil "wing walker" crawling onto the top wing of a biplane with a can of gasoline strapped to his back, leaping onto the wing of a passing plane, and pouring the sloshing gas into the fuel tank. After World War I, the idea stumbled forward for a few decades but never really caught on. Designers found other ways to make planes fly farther, such as larger fuel tanks, more efficient engines, and lighter materials. But with the rise of the Strategic Air Command, midair refueling suddenly became crucial. When Curtis LeMay took over SAC in 1948, he had hundreds of bombers under his command, but none that could take off from America with nuclear bombs, drop them in the heart of

the USSR, and get back to safety. All his war plans required planes to attack the Soviet Union from forward bases, mostly in Europe and the Pacific. Analysts pointed out that any forward base within striking distance of the Soviet Union was also vulnerable to Soviet attack. What SAC really needed was a way to fly from the United States to the USSR and back without having to land for gas. By the early 1950s, midair refueling was a SAC priority.

SAC tried a number of refueling methods and tanker-bomber combinations, but each had its shortcomings. One of the biggest problems was speed matching. In 1951, SAC started flying a piston-engine tanker called the KC-97. SAC paired this slow tanker, which had a maximum speed of only 375 mph, with the B-47 jet bomber, which could fly up to 600 mph. Both planes, when linked for refueling, had to fly at exactly the same speed, slowing the bomber dangerously close to a stall. To avoid this sticky situation, pilots invented a daring maneuver: the two planes linked at a high altitude and then dove in tandem so the less powerful tanker could match the jet bomber's speed. This technique was imperfect, to say the least, and SAC pilots eagerly awaited jet-to-jet refueling. In 1957, they finally got it. On the receiving end was the B-52. On the tanker side was the KC-135 Stratotanker, equipped with a Boeing innovation called the flying boom. In 1966, the KC-135 and its flying boom were the state of the art in midair refueling, and they remain so today.

The boom is an aluminum tube 33 feet, 8 inches long and about 2 feet in diameter. The far end is bulbous, giving the contraption the look of a giant metal Q-tip. Near the tip, two four-foot wings stick off either side of the boom. These wings were Boeing's big innovation—"ruddervators" that allow the boom operator to fly the pipe into position, a bit like sticking your hand out the window of a moving car and swimming your fingers up and down. Tucked inside the boom is a 12-foot, 3-inch telescoping nozzle that shoots in and out at the boom operator's command. The fuel travels through the nozzle to the receiving plane.

To prepare for refueling, a boom operator, or "boomer," walks to the back of the KC-135 and hops down into a small, coffin-shaped room called the boom pod. The pod is about three feet across, three feet high, and ten feet long. At the end of the pod, giving a view out the back, is a window about three feet wide and two feet high. On both sides of this main window are small side windows, and directly below it is an in-

strument panel. A long, padded cushion, shaped a bit like a fully reclined dentist's chair, fills the rest of the pod. The boomer lies on this cushion stomach down, hands on the controls, looking out the back window.

The job of boom operator is widely regarded as the best enlisted job in the Air Force, because it's challenging and well paid and earns a lot of respect. "In what other job," runs a popular joke among boomers, "do you get two officers to drive you to work?" (Pilots usually reply that the boomer has it easy, because "he gets to lie down on the job and pass gas.")

To hook up, the tanker holds its position as the receiving plane slowly approaches from behind and below. The boomer extends the telescoping nozzle about ten feet out the end of the boom and watches the other plane approach. (Human depth perception falls off after about twenty feet—to the untrained eye, the ten-foot nozzle looks as if it extends a foot or less.) The boomer guides the receiving plane toward the boom by lights on the tanker's belly, shining a steady "F" for "forward" until it hovers about ten feet away. The receiving plane crawls closer at about one foot per second, making sure its large bow wave doesn't knock the tanker out of position.

The receiving plane finally stops closing the gap about two feet from the end of the nozzle and "parks" it in the air, exactly matching the tanker's speed and heading. The boomer lines up the boom with the tiny, four-inch hole in the roof of the receiving plane. Then, when the boom and the hole are aligned, the boomer presses a button and the last two feet of the nozzle shoot out the end of the boom and slap into the hole. It looks and sounds like a giant iguana shooting its tongue out to snag a fly. The nozzle locks into place, and the gas begins to pump.

After the "thwock" of the connection, the tanker's belly lights glow a steady green if the receiving plane is correctly situated. The boom can swing in a circle about 20 degrees up, 40 degrees down, and 10 degrees left and right. The receiving plane must fly within this cone-shaped "envelope" to stay connected to the boom.

Pumping the gas is a complicated job, and it falls to the tanker's copilot. Offloading 7,500 gallons of fuel can drastically alter the tanker's center of gravity, unless the copilot continually monitors and regulates the fuel levels in each tank. Pumps connect the KC-135's ten fuel tanks, allowing the copilot to shuttle fuel among them and keep the plane on an even keel.

It's a balancing act, and there's plenty that can go wrong. If the tanker's pumps go haywire and pump with too much pressure, they can blow the receiving plane backward off the boom. If the two planes disconnect too quickly, the tanker can spray jet fuel all over the receiver's windshield, creating a smeary mess. Or the two planes could collide, causing everything from a crunched boom to a fiery crash. Refueling gets more dangerous when bad weather hits, or when a tired or inexperienced pilot is flying the receiving plane. Even under ideal conditions, things can quickly go awry.

On January 17, 1966, Wendorf's bomber would refuel over the scrubby hills between the villages of Cuevas and Palomares, in what was known as the Saddle Rock Refueling Area. Saddle Rock was one of the best places in the world for midair refueling, as the dry desert air kept the sky bright and clear and there were no busy cities or airports below. Wendorf liked refuelings—they were an interesting break from the long and tedious flights where he spent most of his time "boring holes" through empty space. But Wendorf had already handled one refueling on this trip, and as a courtesy common on such flights, he asked Messinger to take the second. For Messinger, refueling was one of his least favorite parts of the job. Unlike Wendorf, Messinger hated flying the B-52. "It was a dog," he said. "No fun to fly and hard to work. It was like driving a Mack truck." B-52 pilots say that flying the plane is challenging because it is relatively unresponsive. "First you tell the plane to turn, then it thinks about it for a minute, *then* it makes the turn," said one veteran B-52 pilot. "And once it goes, it doesn't want to stop."

Refueling any plane requires the pilot to make continuous, minute adjustments. Accordingly, refueling can be one of the toughest things B-52 pilots have to do. They rely on little tricks to align themselves correctly with the tanker. For instance, when a small black UHF antenna on the tanker's belly appears to line up with a certain white stripe, the bomber is at the proper 30-degree angle for receiving fuel. Once connected, if the bomber's copilot can see the boomer's face through a certain high corner window, the B-52 is flying safely inside the envelope.

Throughout the approach and refueling, Messinger would have to keep his right hand on the eight throttles and his left hand on the

yoke, both moving constantly. He couldn't take his eyes off the tanker plane for a second. Because of the danger, both crews wore full safety gear—helmet, gloves, and parachute—for the entire rendezvous and fuel exchange. The whole process normally took thirty minutes to an hour. Even with two decades of flying under his belt, Messinger still found refueling a sticky business. By the end, he was usually drenched with sweat.

Pilots usually refer to the B-52 by the nickname "BUFF." Depending on whom you ask, this stands for either "Big Ugly Flying Fellow" or, less politely, "Big Ugly Fat Fucker." The B-52 entered the fleet in 1955, underwent multiple modifications, and by 1966 was the workhorse of SAC's bomber force. The "ugly" bit notwithstanding, most pilots regard the BUFF with fond nostalgia—a dependable old bird that always got you home.

A B-52 is the size of a Boeing 707, with elegant wings, tapered and graceful as a hawk's, stretching ninety feet from top to tip. When the plane is sitting on the ground, the wings, laden with fuel tanks and four engines each, droop almost to the tarmac. They would drag on the ground if not for the small wheels on each wingtip. Once the plane gets moving, the wings rise. With a seventeen-foot deflection in either direction, they can move seventeen feet upward and seventeen feet downward. As a result, the wings can "flap" up to thirty-four feet during turbulence.

Saving weight was a major issue for the B-52. When they built the plane, pilots say, they crammed it full of gas and bombs and threw some people in as an afterthought. The G model that Wendorf and Messinger flew had a takeoff weight of 488,000 pounds, almost 40,000 pounds heavier than previous models, even though the designers had lopped nearly eight feet off the horizontal stabilizer. Yet the engines offered barely more thrust. During the Cold War, SAC stuffed the G models so full of bombs and fuel that they usually topped the takeoff weight sitting in the chocks. To help the plane take off, engineers devised a technique called "water augmenting" the engines, pushing the limits of technology in pursuit of SAC's Cold War mission.

During takeoff, B-52 pilots injected 10,000 pounds of water into the back sections of each engine. The water cooled the engine blades, allowing them to spin faster without melting or disintegrating. The water

also added mass to the exhaust, creating more lift. Often the B-52 remained well above its takeoff weight as it zoomed down the runway. But during the trip, the plane consumed 4,000 to 5,000 pounds of fuel and 10,000 pounds of water. That weight loss, along with the extra 2,550 pounds of thrust, allowed the bomber to crawl into the sky.

The water-augmented thrust lasted exactly ten seconds. When the airborne plane reached about a thousand feet, it lost power and took a sudden dip. The dip usually caused utter panic in first-time pilots, much to the amusement of old-timers.

At 10:20 a.m. on January 17, 1966, the sky in Saddle Rock shone a bright, clear blue. The bomber and tanker cut their speed and began their approach. In the B-52, Messinger sat on the left, in the pilot's seat; Wendorf sat in the copilot's seat to the right. Rooney was downstairs reading. The B-52 was 31,000 feet in the air and about 150 feet below the tanker when Messinger sensed that something was wrong.

"We came in behind the tanker. We were a little bit fast, and we started to overrun him a little bit," Messinger said. "There is a procedure they have in refueling where if the boom operator feels that you're getting too close and it's a dangerous situation, he will call, 'Breakaway, breakaway, breakaway.' " Messinger remembers overrunning the tanker a "wee bit" but nothing serious. "There was no call for breakaway, so we didn't see anything dangerous about the situation," he said. "But all of a sudden, all hell seemed to break loose."

What happened next is disputed. Wendorf says he still had his eye on the tanker when he heard an explosion coming from the back of the B-52. The plane pitched down and to the left. Fire and debris shot into the cockpit, and the plane began to come apart.

The other pilots agree that the accident began with an explosion in the back of the B-52. But the official accident report tells a different story. Investigators concluded that the B-52 overran the KC-135 and then pitched upward and rammed the tanker. The collision ripped the tanker's belly open, spilling jet fuel through the plane, onto the bomber, and into the air. A fireball quickly engulfed both planes.

Rooney and Wendorf suspect that fatigue failure—a problem in the B-52—caused a portion of the tail section to break off. Flying debris sparked an explosion in one of the gas tanks, and the plane came apart. After the initial explosion, the bomber may have rammed the tanker—

everything happened so quickly that the pilots can't be sure. But they insist that the explosion came first and that it came from the back of the bomber.

We may never know conclusively whether a collision or an explosion triggered the accident. After a crash, it is Air Force custom to bury the wreckage. Because this accident occurred on foreign soil, SAC dumped the debris into the ocean. The one surviving member of the investigation board has refused to speak publicly about the accident.

Regardless of how it started, the first explosion grew into a massive fireball that enveloped the KC-135 tanker. The tanker had no ejection seats; the four men aboard were incinerated. More explosions began to rip both planes into large chunks and flaming fragments, flinging four hydrogen bombs into the sky.

In the cockpit of the B-52, the force of the explosion pitched Wendorf forward. He hit his face on the steering column and blacked out for a few seconds. When he came to, the cockpit was hot. The ejection hatch next to him had been blown, and Messinger and his seat were gone. The plane was tumbling downward, and the excruciating g-forces crushed Wendorf into his seat. He was bent over and unable to move, his left hand stuck, immobile, on the throttle.

"To eject from a plane," Wendorf said, "you have to be upright in your seat, with your back straight, elbows in, and your feet together. If you are not within the confines of your seat, you are going to lose whatever is hanging out there." Wendorf remembers taking a long look at his left arm, stuck on the throttle. He felt as if he had all the time in the world to make a decision, and finally he did. "I knew I was going to lose my arm," he said. "But I thought it was better to lose that than lose everything." With intense effort, he forced his right hand to pull the ejection trigger on the arm of his seat and shot into the sky.

Rooney, sitting in the lower compartment with his nose buried in his book, had removed his gloves to better turn the pages. He heard the explosion and looked up. Through the hatch he saw fire and debris shooting forward from the back of the plane. The gunner and the electronic warfare officer, sitting just to the rear of the hatch, were probably killed instantly. Buchanan, in the lower compartment with Rooney, turned around to see what was going on. Rooney gave him a thumbs-down, signaling that he should eject. Buchanan pulled the ejection handle and shot down out of the plane. His ejection seat, designed to automatically separate from him and activate the parachute,

didn't work. He raced toward the ground stuck in his seat, his parachute stubbornly shut. He reached back and started to haul his chute out of the pack, foot by foot. It finally snapped open just before he hit. He crashed into the ground, still trapped in his seat, and survived with major burns and a broken back.

As Rooney unbuckled himself, the plane pitched violently to the left, flinging him into the radar with such force that his helmet split. He crumpled, badly stunned, as the plummeting plane careened into a left-handed spin. Montanus ejected. His ejection seat, like Buchanan's, malfunctioned. Montanus didn't make it.

Rooney was now the only living person left in the plane. A few feet away gaped the hole in the floor where Buchanan and Montanus had been sitting. The g-forces crushed Rooney to the floor, just as they had pinned Wendorf to his seat. Barely able to move, he looked out the hole at the brown earth and blue sky. The hole was only a few feet away, but it seemed an impossible distance. "I'm saying to myself, either I get out of here or I'm going to die," Rooney recalled. He dragged himself across the wall toward the hole. He reached the hatch and grabbed its sharp edge, giving his gloveless hands a vicious slice. Pulling himself halfway out, he stuck there, pinned in place by the fierce wind. Then the plane shifted and suddenly he was free, hurling through the hole and into the sky.

Rooney tumbled through the air as hot chunks of debris hissed by. A flaming engine pod passed so close that it singed the hair off his arms and neck. When he was clear of the disintegrating plane, he pulled his rip cord. As his chute caught the wind and floated him gently over the water, he pulled his gloves over his cold, bleeding hands and inflated his life vest. He splashed down about three miles out to sea. He unstrapped a Buck knife from his boot and cut himself free from his parachute. Then, bobbing in the waves, he prayed for help.

Charles Wendorf was knocked unconscious when he ejected from the plane and woke with a jerk when his parachute opened automatically at 14,000 feet. With a sudden burst of cheer, he realized that he was still alive, with his left arm intact. He took stock of the situation: though happily still attached, his left arm seemed badly broken, with a bone sticking out of the wrist. His helmet was gone, and there was a bloody

tear on his left leg where a pocket used to be. With a shock of dismay, Wendorf realized that the pocket had held his wallet. "Shoot," he remembers thinking, "now I'm going to have to get a new driver's license." Then he had another realization—his parachute didn't seem to be working so well. And he smelled smoke.

Looking up, Wendorf put it all together. Part of his chute was on fire, and the rest was tangled and flapping wildly. He saw his boxy survival kit caught in the lines, preventing the chute from opening fully. "I tried to reach up with my left arm, but it wasn't working," he said. "So I reached up with my right arm and shook out the lines." A few shakes put out the fire and untangled the lines. The parachute opened and slowed his fall. Wendorf breathed a bit easier.

Floating out over the sea, Wendorf saw several small fishing boats below. When he got closer to the sea, he tried to steer for one of them. But as he pulled the riser, he accidentally collapsed his chute and plummeted into the cold water. He swam to the surface, buoyed by the rectangular survival kit that was somehow tucked under his right arm. He inflated his life preserver and floated in the water, waiting for help. Like Rooney, he had landed about three miles out from shore. The two men had hit the water astonishingly close to each other but didn't know it. The waves rolled too high for them to see very far. Within ten minutes, the fishing boat *Dorita* was chugging toward Wendorf. The crew threw him a life ring and pulled him on board. Wet and shivering uncontrollably, Wendorf was stripped of his clothes and wrapped in blankets. As he lay on the deck, he glimpsed Rooney, bobbing on the waves as the boat approached. Rooney had been in the water for about an hour, growing increasingly frustrated that he had survived a plane crash but was now going to die of hypothermia. The fishermen pulled Rooney aboard; he was bleeding badly from a gash in his leg. As they wrapped him in blankets and gave him hot coffee, Francisco Simó—the fisherman who had tried and failed to rescue the unconscious man—approached in the *Manuela Orts*. The captains agreed that the *Dorita* should hustle the injured men back to shore while Simó looked for more survivors. Simó headed toward his brother, who was steering the *Agustín y Rosa* toward a floating parachute some five miles distant. The *Dorita* headed to Aguilas.

As they motored toward shore, Rooney and Wendorf lay on the deck, shivering under a pile of blankets. Wendorf turned to Rooney

and tried to make a joke. "The only thing that could complete this day," he said, "is if this was a Russian trawler." Rooney doesn't remember laughing.

The shore was crowded with curious onlookers. In his excitement, the *Dorita*'s captain crashed into the dock, giving the passengers a good knock and badly damaging the boat. Two bread trucks were waiting nearby to take the injured airmen to the local infirmary. Rooney remembers lying on a wooden bench in the back as the truck struggled up a windy mountain road. "Every time I looked up, the driver's looking back at me to see how I'm doing," Rooney said. "And I'm turning to him saying 'Look at the goddam road!' I've already been in a plane crash and a boat wreck, and if they get me in a car wreck, that's going to be three strikes and I'm out."

Larry Messinger had a longer journey to safety. As he ejected from the exploding B-52, he knocked his head hard enough to make him woozy. Disoriented, he pulled his rip cord immediately, opening his parachute at 31,000 feet. "I shouldn't have done that," Messinger recalled. "I should have free-falled and the parachute would open automatically at fourteen thousand feet. But I opened mine anyway, because of the fact that I got hit in the head, I imagine."

Messinger, fighting the strong wind, drifted out to sea. Helplessly, he watched the coastline dwindle as he sailed farther and farther over the Mediterranean, miles past the spot where Wendorf and Rooney landed. Finally he splashed into the sea, about eight miles from land. Messinger inflated his life raft and climbed in. He floated for about forty-five minutes, riding huge swells and shivering from the cold. Eventually two fishing boats approached. Simó's brother, in the *Agustín y Rosa,* got to him first. The crew pulled him aboard, stripped off his soaking wet clothes, and wrapped him in a blanket. Then they gave him a shot of brandy and headed to shore.

When Air Force officials visited his bed in the Aguilas infirmary, Messinger remembered something important. Drifting over the ocean below his parachute, he had seen something odd in the water below, off to the side. It was a huge ripple on the surface of the sea, "like when you drop something in the water and it makes a big circle," he said. Messinger told the officials about the huge circle in the water. As far as he knows, they never did a thing about it.

That evening, a helicopter took the survivors to nearby San Javier. There they boarded a plane for the U.S. air base in Torrejón, near Madrid. The next day, the accident board convened at the air base. The investigators questioned the men separately and told them not to discuss the accident among themselves. Wendorf recalls no one asking him about the four nuclear bombs missing from his plane, and he didn't venture any guesses. The interrogation continued for two days. Then the investigators took the survivors' statements and left.

The survivors stayed at Torrejón Air Base for two weeks to recuperate. One day, a week or so after the accident, Wendorf, Messinger, and some other Air Force personnel were shooting the bull. They started talking about the accident, trying to remember how many parachutes they had seen after ejecting from the plane. As Wendorf replayed the scene in his mind, he recalled seeing a couple of survival chutes and then remembered something else. Survival chutes, which carry people, are orange and white, so they can be easily found. Bomb chutes are more of an off-white or dirty yellow. Wendorf had seen an off-white chute. Suddenly he realized that it must have been one of the bombs falling to the ocean. Messinger, startled, told him about the giant circle he had seen on the water.

The two men looked at each other. Each one went into a separate room. Someone ran and got a couple of maps of the Spanish coastline. Separately, each man marked the map where he thought a bomb might have hit the water. When they compared marks, they were about a mile apart.

An Air Force aide took the maps and "ran off like he discovered gold," said Wendorf. A couple of days later, the survivors boarded a plane home to North Carolina. Rooney had bought a new copy of *Thy Tears Might Cease* but decided not to read it in the air.

At 7:05 a.m. Washington time on January 17, just about the time that Spanish fishermen were plucking Wendorf, Messinger, and Rooney from the cold Spanish sea, Lyndon Johnson sat in his bedroom eating a breakfast of melon, chipped beef, and hot tea. A messenger from the White House Situation Room walked in and handed the president his daily security briefing. The first page of the memo offered dismal news from Vietnam: a series of Viet Cong attacks against government installations; a mine explosion under a bus that had killed twenty-six

civilians; a deadly raid on an infantry school. The second page held only one item: an early report of the accident, peppered with inaccuracies. It read:

B-52 CRASH

A B-52 and a KC-135 Tanker collided while conducting a refueling operation 180 miles from Gibraltar. The B-52 crashed on the shore in Spain and the Tanker went down in the sea. Four survivors have been picked up, and three additional life rafts have been sighted. The B-52 was carrying four Mark 28 thermo-nuclear bombs. The 16th Nuclear Disaster team has been dispatched to the area.

President Johnson picked up the phone and asked for Bob McNamara.