Virgil “Gus” Grissom

Essay prepared by IHS staff

I wanted to be an astronaut, a star voyager. Like many youngsters who grew up during the 1960s, I thrilled to the adventures of the American space program, constructed rocket models (including the giant Saturn V), and strained to stay awake on the evening of 20 July 1969 to watch on television as Neil Armstrong became the first person to walk on the moon and to hear him utter the now famous remark: "That's one small step for [a] man, one giant leap for mankind." Space fever still gripped me a few years later when my family took a vacation to Spring Mill State Park near Mitchell, Indiana. What impressed me on that trip wasn't the park's Pioneer Village, with its restored log cabins and working gristmill, or the blind fish swimming in Donaldson's Cave, but rather a simple, low-slung structure near the park's entrance: the Virgil I. "Gus" Grissom State Memorial.

Formally dedicated by Gov. Edgar D. Whitcomb in 1971, the memorial pays tribute to the Mitchell-born Grissom, one of the nation's seven original astronauts, the second American to go into space, the first person to travel into space twice, and one of the first in the space program--along with Apollo 1 crewmates Edward White and Roger Chaffee--to die, when a fire swept through the spacecraft during countdown tests at Cape Kennedy early on the evening of 27 January 1967. To a space nut like me, the Grissom memorial was heaven. My two brothers and I eagerly explored the interior of Grissom's Gemini 3 two-man capsule, which the astronaut had named after the title character in the Broadway musical *The Unsinkable Molly Brown*, about a woman who helped save a number of her shipmates on the ill-fated Titanic. Naming the capsule after that character, Grissom reasoned, might help avert a calamity like the one that befell him when his Liberty Bell 7 Mercury spacecraft, loaded with valuable scientific data, sank at the conclusion of his previous flight into space in 1961. Also impressive to my young eyes was the memorial's Universe Room, which included a six-foot-in-diameter illuminated globe that rotated as a tape of Grissom and his ground-control cohorts during his Gemini flight played in the background. To this Hoosier, Gus Grissom has always been a full-blooded American hero.

To others, however, Grissom is not now remembered as such. Both Tom Wolfe's best-selling *The Right Stuff* (1979) and the movie based on that book have implied that Grissom panicked--"screwed the pooch"--at the end of his 1961 spaceflight. Whether Grissom accidentally brushed against the button or purposefully pushed it, the book and movie blamed him for triggering the explosive hatch on the Mercury capsule, which caused the craft to take on water and eventually sink to the bottom of the Atlantic Ocean. Grissom's explanation of "I was lying there, flat on my back--and it just blew," was met, according to Wolfe, by a healthy amount of skepticism from space-agency officials and Grissom's test-pilot brethren. "The damned things had been wrung inside out, but never, so far as anyone could recall, had a single hatch ever 'just blown,'" Wolfe noted. The author found his hero in Chuck Yeager, World War II fighter ace and the first man to break the sound barrier; Grissom became the book's goat.

Wolfe's assertions about Grissom's panicky behavior after the Mercury flight and the depiction of Grissom in the movie as a bit of an oaf were met with anger by Mitchell residents, who had turned out by the thousands to cheer their local hero at a special Memorial Day parade following his Gemini flight in 1965. "The Gus Grissom that Mitchell knows is not the Gus Grissom that's depicted in the movie," said Bill Jenkins, who owned the theater where the movie played in Mitchell. "They just wanted to make a movie and they needed a little excitement, so they picked on Gus, probably because he's dead and the others are still alive." Don Caudell, who worked for years to build the rocket-shaped memorial honoring Grissom that now stands on the site of the astronaut's former elementary school in Mitchell, spoke for many residents of the town when he said he worked so hard on behalf of the project not because of the astronaut's tragic death, but rather because of his achievements. "He came from the ground up and, by his own efforts, he got to a place where people hadn't been before," Caudell said of Grissom. "That's what made him special."

Located just off State Road 37 in southern Indiana, Mitchell was recognizable to motorists for many years because of the bright-yellow school buses being built at the Carpenter Body Works. Virgil Ivan Grissom, born on 3 April 1926, the oldest of four children raised by Dennis and Cecile Grissom, was brought up in this Hoosier town in a white frame house at 715 Baker Street (a road later renamed in his honor). Grissom's father was a signalman for the Baltimore & Ohio Railroad, where he worked six days a week at fifty cents an hour. The young Grissom was no stranger to work himself, rising early in the morning to pick up copies of the Indianapolis Star at the downtown bus station for delivery to local residents. In the evening he delivered issues of the *Bedford Times*. Grissom also kept busy as a member of Boy Scout Troop 46, an association that almost cost him his life. One day he and his friends were practicing tying knots, an essential skill for any self-respecting Boy Scout. Jokingly rigging a hangman’s noose, the youngsters slipped it over Grissom's head, threw the other end over a rafter, and pulled to see whether the knot would hold. It did; Grissom's face had already turned blue by the time his friends could get him safely down.

Reportedly equipped with an IQ of 145, Grissom was nevertheless, he later admitted, not much of a "whiz" in school. "I guess it was a case of drifting and not knowing what I wanted to make of myself," he said. "I suppose I built my share of model airplanes, but I can't remember that I was a flying fanatic." Although sons in railroading families often follow in their father's footsteps, Grissom recalled that his father encouraged him instead to explore other career possibilities "in which he felt there were better chances for getting ahead." Standing only five feet, four inches tall when he entered high school in 1940, Grissom was too short to make the school’s basketball team, the dream of many a Hoosier youth. "Maybe if I had even made the squad as a substitute," said Grissom, "I would have been encouraged to give athletics a try even though I was awfully small." Instead of taking the court as a member of the team, he led his Boy Scout honor guard in carrying the American flag at the opening of games, impressing fellow student and future wife Betty Moore, who played the drum in the school band.

During his high school years, Grissom completed one year of precadet training in the United States Army Air Corps. Following his graduation in 1944, he was inducted into the Army Air Corps and sent to Wichita Falls, Texas, for five weeks of basic training. Stationed eventually at Brooks Field in San Antonio, Grissom spent much of his time before his discharge in November 1945 serving as a deskbound clerk. He made it back to Mitchell for his marriage on 6 July 1945 to Betty Moore, who received some hard words of advice from her mother before the wedding. Perhaps sensing the often difficult and lonely life of an Air Force wife that awaited her daughter, her mother, Betty recalled, tried to prepare her by issuing the following warning: "I just want you to know that I'm not going to be a baby sitter. I'm not going to raise your kids for you, and if you have fights, don't come home."

After his discharge from the armed forces, Grissom found a job installing doors on school buses at Carpenter Body Works. With the help of the GI Bill, Grissom left Mitchell to enroll at Purdue University as a mechanical-engineering student. Life for the young couple was rough; during his first semester Grissom shared a basement apartment with another male student while his wife remained behind in Mitchell with her parents. Joining her husband during the second semester of his studies at the West Lafayette campus, Betty Grissom helped pay for the future astronaut's education by working as a long-distance operator for the Indiana Bell Telephone Company. Grissom, who worked after class as a short-order cook, finished his degree early by skipping summer vacations and graduated in 1950. Donald S. Clark, one of Grissom's professors in mechanical engineering, recalled that the future astronaut was a "better than average student and was a very determined young man who wanted more than anything else in the world to become a test pilot."

After graduating from Purdue, Grissom needed a job, and fast, he said, "because I didn't want Betty spending any more of her life at a switchboard. She had made my degree possible." He decided to rejoin the armed services and became an air cadet at Randolph Air Force Base in Texas. After completing his basic training, he moved on to Williams Air Force Base in Arizona, where his wife and six-month-old son, Scott, joined him and his $105 monthly salary. "By that time I'm sure she must have felt that flying equaled poverty," Grissom said of his wife. In March 1951 Grissom received his commission as a second lieutenant in the Air Force and saw his pay skyrocket to $400 a month; they were "practically millionaires!" he joked. Just nine months later Grissom received orders for Korea where he joined the 334th Fighter-Interceptor Squadron at Kimpo Air Force Base, just twelve miles from the front lines. Here the Hoosier flier experienced firsthand the fighter-jock ethos explored so well by Wolfe in The Right Stuff. While riding a bus to his awaiting F-86 fighter jet, which he had named Scotty after his firstborn son, Grissom discovered that those pilots who had not been shot at by an opposition North Korean MIG had to stand for the trip to the airfield. The next morning Grissom sat on the bus. He had learned, as Wolfe noted, that the "main thing was not to be left behind."

In the approximately six months that he was in Korea, Grissom flew more than one hundred combat missions and received the Distinguished Flying Cross for his actions

on 23 March 1952 as he flew cover in his F-86 for a photoreconnaissance mission. Even after flying his one hundredth mission, which meant a ticket back to the States, Grissom wanted more, requesting to fly twenty-five more missions. "If you were a shoe salesman," he explained, "you'd want to be where you could sell shoes." With his request denied by the Air Force, he returned home as an instructor, an assignment that Grissom considered the most dangerous in his career. "I know what I'm going to do when I'm up there, all the time," he noted, "but I don't know what that student is going to do."

In August 1955 Grissom took a vital step toward becoming a test pilot, and consequently an astronaut, when he enrolled at the Institute of Technology at Wright-Patterson Air Force Base in Dayton, Ohio, where he met and became friends with Gordon Cooper, another future space explorer. Both also attended test-pilot school at Edwards Air Force Base in California. Completing his test-pilot training, Grissom was assigned by the Air Force to return to Wright-Patterson. He was still at the Dayton facility testing aircraft like the F-104 Starfighter on 4 October 1957, when the Soviet Union shocked the world by announcing it had successfully launched the first satellite, Sputnik, into space. The 184-pound satellite, the size of a basketball, could be heard by American tracking stations as it circled the globe making its "beep-beep" sound. The space race had begun.

After a few false starts (early rockets had the disconcerting habit of blowing up), scientists managed to put the first American satellite, Explorer 1, into orbit nearly four months after the Russians' space success. As the public and politicians clamored for action, the United States initiated in 1958 its first man-in-space program, Project Mercury. President Dwight Eisenhower decided that the astronauts for the space program should come from the ranks of military-service test pilots, and the National Aeronautics and Space Administration asked the services to list their members who met specific qualifications. A candidate for the space program had to be under forty years old, be less than five feet, eleven inches tall, hold a bachelor's degree or equivalent in engineering, be a qualified jet pilot, be a graduate of test-pilot school, and have at least fifteen hundred hours of flying time. Approximately five hundred candidates qualified; one hundred and ten survived the initial screening process.

One of the pilots called to Washington, D.C., at the beginning of February 1959 to be evaluated as a possible astronaut was Grissom, who received the top secret news from the adjutant at Wright-Patterson, who asked him, "Gus, what kind of hell have you been raising lately?" A confused Grissom expressed puzzlement over the question and learned that he had received orders to report to Washington wearing civilian, not military, attire. Before he left home, Grissom's wife, thinking of the wildest possibility, prophetically asked him: "What are they going to do? Shoot you up in the nose cone of an Atlas [rocket]?" Reporting to the nation's capital--he felt like he had "wandered right into the middle of a James Bond novel"--Grissom was ushered into a large reception room filled with men who were, he discovered after a brief time talking with them, fellow test pilots. From this group, a total of thirty-nine men, Grissom included, were sent to Lovelace Clinic in Albuquerque, New Mexico, to be probed and prodded by scientists.

They later underwent pressure-suit tests, heat tests, acceleration tests, and vibration tests at the Aeromedical Laboratory of the Wright Air Development Center in Ohio.

From this torturous process NASA picked seven to serve as Project Mercury astronauts and presented them to the public in April 1959. The American astronauts were, from the Marines, John Glenn; from the Navy, Walter Schirra, Alan Shepard, and Malcolm Scott Carpenter; and from the Air Force, Donald "Deke" Slayton, Gordon Cooper, and Grissom. The Hoosier flier had almost missed out on the historic designation when doctors during their wide-ranging tests discovered that Grissom suffered from hay fever. His pointed reply--"there won't be any ragweed pollen in space"--saved him from being dropped from consideration.

With his allergy problem out of the way, Grissom and his fellow astronauts underwent training to see which one, NASA confidently predicted, would be the first man in space. The astronauts, with the exception of Glenn, seemed more at ease with training for going into space than they did with dealing with the crush of media attention on them and their families. The press coverage grew so great that Grissom, never comfortable in the spotlight, went to great lengths to avoid the demands of publicity. "As far as I know," noted CBS television anchorman Walter Cronkite, "he was the only astronaut ever to don disguise to duck the waiting press. He always considered one of his greatest personal successes his slipping by assembled newsmen in a floppy plantation hat and a pair of dark glasses." The media scrutiny would only grow as time went by. On 19 January 1961 Robert Gilruth, head of Project Mercury, confidentially informed the astronauts of the flight order: Shepard would be the first man to ride the Redstone rocket; Grissom had the second flight; and Glenn would be the backup for both missions.

It failed to work out as the American space agency had hoped; on 12 April 1961 Russian cosmonaut Yuri A. Gagarin made a one-orbit flight around the Earth that lasted one hundred and eight minutes in his Vostok spacecraft *Swallow*, winning for the Soviet Union the honor of being the first nation to put a human being into the inky void of space. Glenn, the most comfortable with the press, spoke for the rest of the astronauts when he noted: "They [the Russians] just beat the pants off us, that's all. There's no use kidding ourselves about that. But now that the space age has begun, there's going to be plenty of work for everybody." That hard work resulted in Shepard finally becoming the first American into space with his suborbital flight aboard *Freedom 7* on 5 May 1961.

Except for a problem with a full bladder, which Shepard solved by relieving himself in his spacesuit, the United States' initial manned mission into space went well. The same could not be said of Grissom's flight, which blasted off from Cape Canaveral on 21 July 1961. The Hoosier native had "maintained an even strain, as fellow astronaut Schirra liked to say, the morning of his mission. During a last-minute physical, the doctor examining Grissom had been surprised at his subject's low blood pressure. His fifteen-minute, thirty-seven-second flight went off without a hitch, as his *Liberty Bell 7* spacecraft made a successful splashdown in the Atlantic Ocean. From that point on, however, things began to go wrong.

As Grissom waited to be picked up by Marine helicopters from the carrier *Randolph*, he informed the chopper pilots that he would need three or four minutes to check the switch positions on his instrument panel. According to the recovery plan, the helicopter pilot was supposed to radio to Grissom as soon as he had lifted the capsule from the water. At that point, Grissom would remove his helmet, blow off the hatch, and exit the spacecraft. "I had unhooked the oxygen inlet hose by now and was lying flat on my back and minding my own business," Grissom recalled, "when suddenly the hatch blew off with a dull thud. All I could see was blue sky and sea water rushing in over the sill." Tossing off his helmet, the astronaut hoisted himself through the hatch. "I have never moved as fast in my life," said Grissom. "The next thing I knew I was floating high in my suit with the water up to my armpits."

Although a helicopter managed to snag the capsule, it could not handle the weight of the waterlogged spacecraft and had to cut it loose; it was the first time in his long flying career that Grissom had ever lost an aircraft. Meanwhile, the astronaut was struggling to keep from drowning. Although his space suit kept out the water, he was losing buoyancy because of an open air-inlet port in the belly of his suit. As he fought to stay afloat, Grissom regretted the two rolls of dimes, three one-dollar bills, two sets of pilot's wings, and some miniature models of the Liberty Bell spacecraft he had stowed in the leg pocket of his space suit as souvenirs of his flight. "I thought to myself, 'Well, you've gone through the whole flight, and now you're going to sink right here in front of all these people,'"" Grissom recalled. Finally picked up by a helicopter, the now exhausted astronaut had strength enough to grab a Mae West life jacket and put it on for the flight back to the aircraft carrier. "I wanted to make certain that if anything happened to this helicopter I would not have to go through another dunking," he said. Once Grissom was safely onboard the Navy ship, an officer came up to him and handed him his space helmet, which had been plucked from the water by the crew of an escort destroyer. "For your information," the officer told the astronaut, “we found it floating right next to a ten-foot shark."

After his harrowing swim Grissom had enough composure to call his wife from Grand Bahama Island. A relieved Betty Grissom lightheartedly informed her husband that she had heard he had "got a little bit wet." Moving on to more serious matters, she asked him the crucial question: had he done anything wrong that contributed to the capsule's sinking? "I did not do anything wrong," Grissom emphatically replied. "That hatch just blew." With that matter resolved for the moment, the astronaut calmly ended the conversation by asking his wife to bring some extra slacks and shirts with her when she met him in Florida.

Although an accident review panel cleared Grissom, and the other astronauts supported him, unanswered questions about the hatch dogged the Hoosier native for the rest of his career. Wolfe's insinuations of panic on Grissom's part were way off base according to astronaut Gordon Cooper. "He [Grissom] did not screw up and lose his spacecraft," Cooper said. "Later tests showed the hatch could malfunction, just as Gus said it did. A vacuum built up in the firing pin channels." Sam Beddingfield, a NASA engineer responsible for the pyrotechnics and recovery system on the Mercury capsule and a

friend of Grissom who believed in the astronaut's courage and poise, thoroughly investigated the incident and discovered two ways in which the hatch could have blown in the manner described by Grissom. Even the actor who played the unlucky astronaut in the movie *The Right Stuff*, Fred Ward, expressed doubt about Grissom blowing the hatch on purpose. Ward learned that all the astronauts who did blow their hatches suffered bruised knuckles, and Grissom's knuckles were not bruised. "I think NASA sort of pointed the finger at him to take the blame off themselves for losing the capsule," the actor said. "I don't think he was responsible at all."

Whatever the reason for the accident, Grissom continued his career at NASA, becoming so involved in the design of the two-man Gemini spacecraft that fellow astronauts dubbed it "the Gusmobile." He and John W. Young were selected to make the first manned flight in the Gemini program. In naming the *Gemini 3* spaceship, Grissom found a way to exorcise the demons from his Mercury misfortune. At first he had wanted to use *Wapasha*, after a Native American tribe that had lived along the Wabash River. Then someone pointed out to Grissom that people might start calling the spacecraft *The Wabash Cannon Ball*. "Well, my Dad was working for the Baltimore and Ohio Railroad, and I wasn't too sure just how he'd take to *The Wabash Cannon Ball*," said Grissom. "How would he explain that one to his pals on the B&O?" Instead, the astronaut, attempting to squelch ideas that he was still sensitive about losing the *Liberty Bell 7*, christened his Gemini craft *Molly Brown* after the character from the Broadway musical. Some officials at NASA were not amused at the choice of names and asked him to pick another. "Well," Grissom told one, "what about the *Titanic*?" *Molly Brown* it was.

Grissom and Young's three-orbit Gemini flight on 23 March 1965 went off without a hitch, except for some consternation on behalf of space-agency scientists who fretted over an unauthorized meal sneaked aboard by Young, in cahoots with Schirra: a corned-beef sandwich. The astronauts ate a few bites before concern about the possibility of crumbs damaging sensitive electronic equipment caused the duo to stow it away for safekeeping. In spite of the media latching onto the "sandwich affair" after the flight and some members of Congress wailing that the space agency had lost control of its astronauts, Grissom remained one of NASA's top men and was picked to command the first manned Apollo mission, one of the initial steps on the way to meeting President John F. Kennedy's ambitious goal of landing a man on the moon before the end of the decade. Joining Grissom on the crew were Edward White II, who had flown into space on Gemini 4 and had been the first American to walk in space, and rookie astronaut Roger B. Chaffee. Slayton, responsible for selecting flight crews, privately told his friend Grissom that if all went well, he would be first in line to command a lunar mission.

Troubles plagued the Apollo program from the start, especially with the scheduled first manned vehicle, Spacecraft 012, built by North American Aviation. Betty Grissom remembered her husband receiving a number of phone calls at home concerning difficulties with the Apollo craft. "That was not like Gus," she said. "He never brought work problems home with him. . . . But now he was uptight about it." Questioned by a reporter about rumors swirling around that the program had experienced problems, Grissom did express some misgivings. "We've had problems before," he said, "but

these [with Apollo] have been coming in bushelfuls. Frankly, I think this mission has a pretty damn slim chance of flying its full fourteen days." On what was the final time he was ever home, Grissom, according to his wife, went out to their yard and cut down a lemon to take with him to hang on a full-scale duplicate of the troubled Apollo spacecraft.

Grissom's premonition of trouble came tragically true on 27 January 1967 during a test of the Apollo spacecraft and Saturn 1B rocket. Once again, glitches frustrated the astronauts. A sour odor fouled the capsule's pure-oxygen interior for a time. Grissom, upset over a communication problem with the test-control sites, angrily told mission control: "If I can't talk with you only five miles away, how can we talk to you from the moon?" Shortly after 6:30 in the evening, under Grissom's commander seat, a frayed wire sparked, causing a fire. Feeding on the pure-oxygen atmosphere that permeated the Apollo spacecraft's pressurized crew cabin, the fire fed itself on a host of combustible materials in the command module, and by doing so, released poisonous gases that suffocated the three astronauts. The well-trained crew attempted to exit the inferno according to emergency procedures but could not make it out in time. Ironically, the multilayered hatch to the capsule, which took at a minimum at least ninety seconds to open, had come about because of Grissom's difficulty with the Mercury capsule's hatch blowing open prematurely.

Grissom was given a hero's burial at Arlington National Cemetery in Virginia, with the service broadcast nationwide on television. Neighbors from Mitchell joined President Lyndon B. Johnson, members of Congress, and fellow astronauts at the funeral. It took NASA more than a year after the accident, during which time the spacecraft underwent extensive modification, to launch another manned mission. Apollo 7, commanded by Grissom's friend Schirra, made 163 orbits during its eleven-day mission in the redesigned command module; America was on its way to the moon. Years later, after six successful landings on the moon, Betty Grissom, reflecting on her husband, said: "I hate it that Gus is gone, but I guess the program was worth it. He wouldn't have had it any other way."