

LEGACY OF THE

By Jennifer Ross-Nazzal

35 NEW GUYS



Guion S. "Guy" Bluford, Jr.
Philadelphia, Pennsylvania



Daniel C. Brandenstein
Watertown, Wisconsin



James F. Buchli
Fargo, North Dakota



Michael L. Coats
Riverside, California



Richard O. Covey
Fort Walton Beach, Florida



John O. Creighton
Seattle, Washington



John M. Fabian
Pullman, Washington



Anna L. Fisher
San Pedro, California



Dale A. Gardner
Clinton, Iowa



Robert L. "Hoot" Gibson
Lakewood, California



Frederick D. Gregory
Washington, D.C.



S. David Griggs
Portland, Oregon



Terry J. Hart
Pittsburgh, Pennsylvania



Frederick H. Hauck
Long Beach, California



Steven A. Hawley
Salina, Kansas



Jeffrey A. Hoffman
Scarsdale, New York



Shannon W. Lucid
Bethany, Oklahoma



Jon A. McBride
Beckley, West Virginia



Ronald E. McNair
Lake City, South Carolina



Richard M. Mullane
Albuquerque, New Mexico



Steven R. Nagel
Canton, Illinois



George D. "Pinky" Nelson
Willmar, Minnesota



Ellison S. Onizuka
Kealahou, Kona, Hawaii



Judith A. Resnik
Akron, Ohio



Sally K. Ride
Los Angeles, California



Francis R. Scobee
Cle Elum, Washington



Margaret R. Seddon
Murfreesboro, Tennessee



Brewster H. Shaw, Jr.
Cass City, Michigan



Loren J. Shriver
Paton, Iowa



Robert L. Stewart
Washington, D.C.



Kathryn D. Sullivan
Woodland Hills, California



Norman E. Thagard
Jacksonville, Florida



James D. A. "Ox" van Hoften
Burlingame, California



David M. Walker
Columbus, Georgia



Donald E. Williams
Lafayette, Indiana

George W. S. Abbey, Director of Flight Operations for NASA Johnson Space Center (JSC), pulled into the Center early on Monday morning, January 16, 1978, having recently chaired the board for the selection of the first class of space shuttle astronauts. He took the elevator to his office on the eighth floor of Building 1. After settling in, he began calling the men and women selected for the 1978 class, trying to reach everyone before NASA Administrator Robert Frosch released the thirty-five names that afternoon at 1 p.m.

This was quite a task, since everyone was spread out across the globe. Steve Hawley, an astronomer, was working on a post-doc in Chile; Kathy Sullivan was completing her PhD at Dalhousie University in Halifax, Nova Scotia; and Dave Walker, who could not be reached by phone, was on an aircraft carrier in the Mediterranean.¹ Others were scattered across the United States, from California to Florida. The conversations were brief. Abbey asked each candidate if he or she was still interested in working as an astronaut, offered jobs to those he called, and then asked everyone to withhold sharing the good news until the release had been issued.

Everyone was thrilled. Dick Covey, then working at Eglin Air Force Base in Florida, jumped on his desk after hearing the news; and when his secretary asked if he had been picked, he replied, "I can't tell you."² When Sally Ride answered the phone, she wondered if it was all a dream.³

That afternoon, the press learned the names of the thirty-five men and women NASA had chosen.⁴ The media had been waiting more than a decade for the selection of another astronaut class; the last time NASA named astronauts was in 1967, when it selected eleven scientist-astronauts, who called themselves the XS (pronounced excess)-11 and coincidentally did not fly until the space shuttle became operational in 1982. In 1969, the agency transferred seven pilots to NASA's Astronaut Corps when the Air Force cancelled their Manned Orbiting Laboratory Program.

The selection of the first class of space shuttle astronauts was historic because, for the first time, the group included women and minorities. They represented the new face of NASA astronauts, and the press was eager to meet them.

Ride, then a PhD student at Stanford University in California, was immediately thrust into the limelight, with the university arranging a press conference for the twenty-six-year-old physics major on the same day NASA released the announcement. To Ride, the event seemed surreal. As she explained, "I mean, my gosh, I was a PhD physics student. Press conferences were not a normal part of my day."⁵ *People*



NASA S79-30302

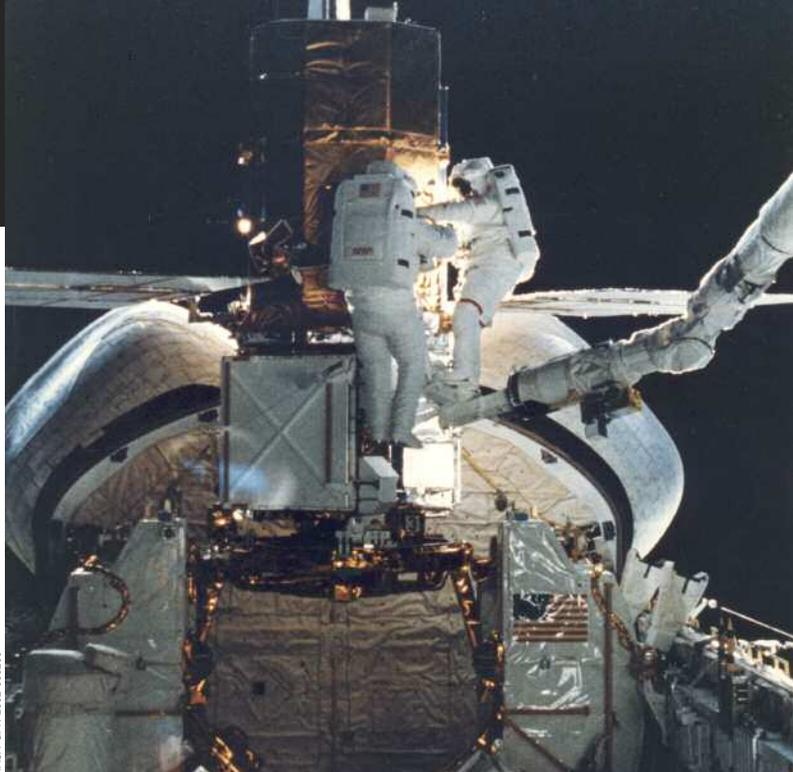
Astronauts Rhea Seddon and Ronald McNair experience the thrill of zero-gravity in NASA's KC-135 airplane.

Magazine traveled across the country and even to Canada, to speak with all of the female astronauts for an article that ran in the first week of February.⁶

On January 31, two weeks after NASA had announced the selection of thirty-five astronaut candidates, JSC Center Director Christopher C. Kraft welcomed the astronaut candidates, who had traveled to Houston for a three-day briefing and orientation period.⁷ Public Affairs introduced the thirty-five pilots and mission specialists to JSC employees and the press. One member of the group, Mike Mullane, an Air Force flight test engineer, remembered how anxious he was, sitting on the stage in the Teague Auditorium in Building 2. Bewildered, he expected the Public Affairs officer to announce that there had been a mistake and that "two burly security guards" would drag him off the stage and drop him at the front gate.⁸ But, that did not happen.

Few in the audience knew the men and women then on the roster, but certain members of the class had been friends for several years. Covey and Ellison Onizuka had attended test pilot school and were in the same flight test engineering course, and Steve Nagel and Covey had flown A-7s together.⁹ Both Rick Hauck and Dan Brandenstein worked at the Naval Air Station

STS 41-C astronauts Ox van Hoften and Pinky Nelson repair the captured Solar Max satellite in the shuttle's payload bay.



NASA GPN-2002-400056

in Whidbey Island, Washington, and some in the group had met during their week-long interview and physical examinations.¹⁰

Immediately following their introduction, the press had a chance to speak with the candidates. The press members were most interested in interviewing the atypical astronaut candidates—the women and minorities: Ride, Sullivan, Onizuka, Shannon Lucid, Anna Fisher, Judy Resnik, Rhea Seddon, Guy Bluford, Ron McNair, and Fred Gregory.

Sullivan recalled that Carolyn Huntoon, a member of the astronaut selection board and mentor, talked with the first American women astronauts about what to expect when they were introduced to the press and encouraged them to think about how much personal information they would share with the media. Would they discuss whether or not they might wear makeup on the shuttle or who they were dating? Recognizing that they were now in the public eye, they understood that their professional work would be open to analysis, but they wanted to keep their personal lives as private as possible. After each interview, the women met up and exchanged information about the interviewer, his questions, and how each of them had responded. As day wore into night, the women of the class developed a group approach about how public their private lives would be.¹¹

The next day, articles about the ten women and men peppered the country's newspapers. The *Houston Post* highlighted a reversal of roles, of sorts. The husbands of Fisher, an emergency room physician, and Lucid, a research chemist, intended to leave their prestigious and professional jobs in California and Oklahoma to come to Houston with their wives, who had just accepted positions as astronaut

candidates. The names of the other women, who were single, were not mentioned.¹²

When the class reported for duty in July, they were welcomed warmly by the Gemini- and Apollo-era astronauts. The Thirty-Five New Guys (TFNGs), as they came to be called, more than doubled the size of the office then headed by veteran John Young, who commanded the Apollo 16 moon flight and was slated to fly the first shuttle mission. The size of the office had dwindled over the years, and the corps needed some new hands to jump in and help. The “real astronauts,” as Hauck called them, “couldn't have been better to us,” he recalled. They realized that they didn't have enough people to do everything that had to be completed before the first shuttle flight, and they wanted to integrate the new class as quickly as possible into the program.¹³

Soon after arriving in Houston, the astronaut candidates dove into training and NASA orientation with astronaut Al Bean, the Apollo 12 Lunar Module pilot and commander of the Skylab 3 mission who was head of the astronaut candidate (AsCan) training program. Their class was much larger than any of the previous selections, so the office split the class into two groups: the red and blue teams, headed by Hauck and John Fabian (affectionately called “Father John” by the younger AsCans). The oldest and most senior men in their class, they addressed any problems that were identified or encountered with the class and its training.¹⁴

The new class members traveled to the various NASA Centers scattered across the United States to familiarize themselves with NASA functions and its various organizations. Their curriculum also included lectures on space shuttle systems, geology, space physics, physiology, biology, orbital



NASA GPN-2002-400214

Five of the first female astronauts take a break during water survival training at Homestead Air Force Base, Florida.

mechanics, and astronomy. A few of the candidates even participated in water survival training. At times, the curriculum seemed overwhelming, and Brandenstein equated AsCan training with “drinking water out of a fire hose; it just kept coming and kept coming and kept coming.”¹⁵ After a thirteen-month candidacy period, they graduated and officially became astronauts in August 1979.

From that point on, everyone in the class followed the progress of the orbiter’s subsystems, a highly complex machine that had not yet flown. Terry Hart, a mechanical and electrical engineer, monitored the Space Shuttle Main Engines for the office, traveling regularly to Huntsville, Alabama, and Bay St. Louis, Mississippi. “Failures on the test stand” at that point were “too frequent,” and he had the unfortunate task of delivering the bad news to the corps at the Monday morning meetings.¹⁶ Others verified software in the Shuttle Avionics and Integration Laboratory at JSC or the Flight Systems Laboratory in Downey, California. Some traveled to Toronto, Canada, where they helped to develop the procedures and user’s input for the Shuttle Remote Manipulator System (or arm). Others were tasked to monitor extravehicular issues, which included the Shuttle Extravehicular Mobility Unit (or spacesuit).

Dr. Norm Thagard performs a medical experiment during STS-7 to learn more about space sickness.



NASA SRS-35770

Though they had been selected in 1978, members of the TFNGs continued to attract media attention throughout the 1980s and well into the 1990s. Like the Mercury 7 (the first class of space flyers), the first class of shuttle astronauts were celebrities of sorts, partly because the 1978 class had a multitude of firsts—the first American woman in space, the first African American in space, and so on. In 1980, for instance, the Fishers made history when Bill—Anna’s husband—was selected as an astronaut candidate, and they became the first married couple in the office. Known as Mr. and Mrs. Astronaut, they passed that title on to Seddon and Hoot Gibson, who married in May of 1981. The news of their engagement intrigued the media, who hoped to cover the wedding of two astronauts. Upon hearing that the couple was engaged, *Bride’s Magazine* contacted the office, hoping to secure an interview with Gibson, and classmates teased him, calling him Mr. Seddon.¹⁷ The couple remained in the public eye well into 1982, when Seddon became the first pregnant astronaut.

When the shuttle was finally ready to fly for the first time in April of 1981, every one of the TFNGs, with the exception of Fabian, supported the flight in some capacity.¹⁸ Bluford and Sullivan—the new face of the agency—provided technical commentary during the launch and landing of *Columbia* for ABC News. Loren Shriver helped to secure Commander Young and Pilot Bob Crippen into the shuttle. In the Mission Operations Control Room, where flight controllers had manned the flights of Gemini, Apollo, and Skylab, others worked as Capsule Communicators (CapComs). NASA paired several classmates and assigned them the task of literally chasing the orbiter when she landed. As this was the first flight of the space shuttle, the agency planned for a host of contingencies—possible aborts and landings at several sites. With so many astronauts then in the corps, the TFNGs worked at Cape Canaveral, Edwards Air Force Base, and El Paso (close to the Northrup Strip landing site in New Mexico).

The launch of the orbiter on April 12, 1981, was a success, and the crew returned safely two days later. Though the flight had gone well, there were three other test flights scheduled, and no one from the 1978 class would fly until



NASA 51A-46-0857

Riding the Manned Maneuvering Unit during STS 51-A, Dale Gardner prepares to capture the faulty Westar satellite so that it can be returned to Earth.



Judy Resnik completes her T-38 jet training with pilot Richard Laidley.

NASA S78-29250

1983, even though President Ronald Reagan declared the program operational—or ready for regularly scheduled flights—after the landing of STS-4.

On April 19, 1982, nearly three weeks after the landing of STS-3 at Northrup Strip in New Mexico, NASA announced the crews of STS-7, -8, and -9. Seven members of the class received assignments. Fabian, Hauck, and Ride would fly onboard *Challenger* with Crippen as part of STS-7; Norm Thagard, a medical doctor, would later be added to the crew. The next shuttle flight included Bluford, Brandenstein, and Dale Gardner, with Brewster Shaw named to the first flight of the Spacelab (a reusable laboratory that fit in the payload bay of the orbiter, which allowed researchers to conduct scientific studies in space) or STS-9.¹⁹

NASA recognized that Ride might be unnecessarily burdened by all the media attention. Before the space agency released the names of the seventh, eighth, and ninth crews, she met privately with Abbey, who told her that she had been selected for a flight, and then with Kraft, who promised her that the Center would provide whatever assistance she needed. “It was a very reassuring message, coming from the head of the space center,” she later recalled.²⁰

In fact, NASA protected her from much of the media frenzy by holding a press conference right after the announcement and then holding all requests until the preflight press conference, which fell about one month prior to liftoff. Following the press conference, an entire day was dedicated to interviews with the crew. Hauck, the pilot for the flight, and Crippen, commander of the mission, often sat in with Ride, shielding her from the media. After she landed, Ride recalled that the “protective shield was gone. I came face-to-face with a flurry of media activity. There was a lot more attention on us than there was on previous crews.”²¹

Bluford followed Ride’s historic flight, becoming the first African American in space in August of 1983. Recalling the interest in his first mission, he believed he was fortunate, having followed Ride’s flight. Bluford witnessed firsthand how the crew of the seventh shuttle flight dealt with training and media events, and he saw how America’s first female in space worked with the Center and NASA Public Affairs. “I gained some insight into what I would face as I was preparing to fly on STS-8. So in some cases, that worked in my favor,” he later explained.²²

Between 1983 and 1986, the TFNGs flew on every mission, with the exception of STS 51-F. They flew some of the most exciting and interesting missions of the program,

which included several satellite repair and retrieval missions: STS 41-C, STS 51-A, and STS 51-I. All members of the 41-C crew, with the exception of Commander Crippen, were members of the first class of space shuttle astronauts. They rendezvoused with the ailing Solar Max satellite and then with assistance of two spacewalkers, Ox van Hoften and Pinky Nelson, repaired and released the satellite. STS 51-A deployed two satellites and then recovered Palapa B-2 and Westar VI, two malfunctioning satellites, and brought them back to Earth. Except for Joe Allen, all of the 51-A astronauts had been selected in 1978. The five-man crew of STS 51-I, which included Covey (the last pilot in his class to fly), repaired and redeployed a Syncom IV-3 satellite in Earth orbit.

Others deployed numerous satellites into orbit, while some in the class flew on classified Department of Defense flights. Several classmates flew Spacelab flights.

Though Ride and Bluford made history as the first American woman and African American in space, other notable firsts were bestowed upon other members of the TFNGs. In 1984, Sullivan became the first American woman to walk in space, and when the crew of STS 51-A circled the Earth, Fisher became the first mother in space. STS 51-C featured the first Asian American in space, Onizuka.

He and three other classmates, Dick Scobee, Resnik, and McNair, were members of the ill-fated *Challenger* flight, which lifted off the pad on January 28, 1986. They and three other crew members perished when the *Challenger* was torn apart by aerodynamic and inertial forces.

President Ronald Reagan, a staunch supporter of the space program who, just two years earlier, had directed NASA to build a space station within a decade, appointed a commission

Ellison Onizuka enjoys his first flight in space while Loren Shriver sleeps on the middeck of Discovery during STS 51-C.



NASA S1C-08-0025



Guy Bluford sits in a rescue ball, which was designed to safely transport crew members from one orbiter to another in the case of an emergency, but was never used.

NASA S79-26584

to investigate the accident. William P. Rogers headed the commission along with former astronaut Neil Armstrong, Brigadier General Chuck Yeager, and Nobel laureate Richard Feynman and many other distinguished scientists and engineers, including astronaut and physicist Ride. Two other members of her class, Fabian and Shaw, joined her in the investigation, serving as members of the support staff.

All shuttle flights had been halted after the accident, and during the first year of inactivity several members of the 1978 class of astronauts decided to leave the agency. Gardner, a veteran of two spaceflights, returned to the U.S. Navy and began working at the U.S. Space Command in Colorado Springs. A promotion encouraged Robert L. Stewart to return to the U.S. Army as a Brigadier General. Van Hoften, who realized that it would take at least two years to begin flying again, joined Bechtel Corporation. Most, however, remained in Houston and hoped for a quick return to flight.²³

As early as 1986, NASA began planning the return to flight effort. Richard Truly, NASA's Associate Administrator for Space Flight, and Abbey met privately with Hauck, to tell him that he would command the mission, but prohibited him from sharing the news with anyone. Two other members of his class would fly: Covey and Nelson. Mike Lounge and David Hilmers from the 1980 class would round out the crew that flew in 1988.²⁴

Sullivan served as the planning shift CapCom for the flight and selected wake-up music for the crew. Thrilled that the shuttle would finally be flying again and recognizing the importance of the mission, she wanted the music and wake-up calls to reflect her enthusiasm. Remembering the exuberant opening shout of the radio announcer in the movie *Good Morning, Vietnam*, she set about contacting Robin Williams. Eventually the comedian agreed to record several variations of "Gooood Morning, *Discovery!*" for her to use.²⁵

Discovery and her all-veteran crew finally lifted off the pad on September 29, 1988, thirty-two months after the *Challenger* accident. Twice, the crew woke up to Williams'

greeting. During their short flight, the crew deployed a Tracking and Data Relay Satellite and paid homage to the fallen *Challenger* crew. Following the flight of *Discovery*, Nelson and Hauck retired from NASA. Though fewer in number, the TFNGs continued to fly many of the agency's high-profile missions.

They helped to deploy many of NASA's Great Observatories: the Hubble Space Telescope, the Gamma Ray Observatory, and the Chandra X-Ray Observatory. Several in the class flew on servicing missions to the Hubble Space Telescope and participated in the first phase of the International Space Station Program, known as the Shuttle-Mir Program. In 1996, Lucid broke all U.S. space records when she resided for six months onboard the Russian Space Station, *Mir*. The flights of the TFNGs ended in 1999, when Hawley flew onboard STS-93, more than twenty years after their class had been announced.



NASA GPN-2000-001036

Dale Gardner proudly displays a "For Sale" sign after he and Joe Allen successfully captured and stowed two ailing satellites during STS 51-A. Allen can be seen in the visor of Gardner's helmet.

Today, only a handful of class members remain at JSC: Lucid, Fisher, Nagel, and Mike Coats, who returned to the agency in 2005 to head the Center. Many still remain in the Clear Lake area and actively support the program as contractors. Covey is president and CEO of the United Space Alliance, which handles a variety of space shuttle operations—mission design and planning, crew training, and flight operations to name a few, and his second in command is Brandenstein. Shaw serves as vice president and general manager of the Boeing's NASA Systems business unit.



NASA S79-28218

Rick Hauck proudly displays his class T-shirt on the KC-135.

Others have scattered across the country, with many of the PhD scientists now working for universities as faculty members or in other capacities. In the fall of 2008, Hawley returned to his home state of Kansas to teach astronomy and promote education in science and mathematics. America's first female spacewalker currently serves as director of the new Battelle Center for Mathematics and Science Education Policy at Ohio State University. Located in the John Glenn School of Public Affairs, the center's initial work is focused on generative leadership and the mechanism of innovation in science education. Jeff Hoffman teaches at the Massachusetts Institute of Technology, and Ride works for the University of California at San Diego.

Though many worked only a short time for the space agency, the importance of the class of 1978 cannot be overlooked. They literally reshaped America's image of the astronaut. Like those who came before them, they had the "Right Stuff," but they were more than test pilots. The TFNGs represented the diversity present in American society, and they helped pave the path for future classes of space shuttle astronauts, which now include female pilots and commanders.

Aside from this legacy, the first shuttle astronauts also had a tremendous impact upon the Space Shuttle Program itself. When they came onboard, a great deal of work had to be completed

before the first flight of *Columbia*. In some way, everyone in the first class of shuttle astronauts helped to get the orbiter off the pad and into Earth orbit. Much later, as they began leaving the Astronaut Office, some continued to influence the Program as they moved into senior management positions within the agency and as contractors. Their impact can still be felt today. ★

Sally Ride looks out the windows of Challenger's flight deck during her first flight, STS-7.



NASA GPN-2006-001083