

Wally Funk is still determined to get her shot at space...

By Martha Ackmann

Standing in the dark outside her home near Fort Worth, Wally Funk scanned the skies last July, seeking a flash of light. Many people would have missed it but not Funk. Her eyes have been trained by years of studying the sky from a cockpit. And she didn't miss the light that night. Racing across the heavens like a comet was the space shuttle Columbia, descending for a landing at Cape Canaveral. "Eileen, go girl, go!" Funk called out, offering encouragement to Eileen Collins, who was concluding her mission as NASA's first woman commander. To Funk the sight was spectacular and a long time in coming.

Funk is a member of the Mercury 13, a testing program for potential female astronauts in the early 1960's. Along with 25 other women, she was selected to take part in a series of trials to determine whether women could measure up to the same rigorous mental and physical test that the famous first corps of male astronauts had experienced.

Funk, now 61, did well. "I scored higher than John Glenn" on at least two tests, she says proudly. The program was abruptly canceled, however, when NASA refused to endorse further testing, even though the women's scores were unexpectedly high. Although disappointed, Funk viewed the cancellation more as a detour than as a dead end on her road to becoming an astronaut. "As a professional pilot," she says, "I was always taught to have an alternative plan."

Now nearly 40 years after the Mercury 13 test: Funk continues to dream of being launched into space, and in 2003 she just might get her shot in a commercial space venture.

If it happens, it won't be the first time Funk has found alternatives to reach goals. When her long given name, Wallace, wouldn't fit on her girlhood Christmas stocking, she became, simply, Wally. Not a conventional girl's name, but today it seems to fit this plain-speaking, lively and confident woman with an easy laugh.

Funk's family moved to the Midwest to Taos N.M. in 1938 in search of a restorative climate for her father's poor health. The move worked, and the family stayed, operating Funk's Five and Ten on Taos Plaza. Lozier Funk encouraged his daughter's entrepreneurial spirit and allowed Wally to set up an extension of the store out front where she sold rabbit, squash, strawberries, corn, and bows and arrows to tourists. For Wally, the vast, open Taos environment proved to be more than just a healthy place to live. It was and has always been her sacred center. It's where she started testing limits—jumping off barn roofs, for example, to see if her Superman cape would keep her aloft. It was in Taos that she remembers crouching in the sagebrush to catch sight of Mabel Dodge Luhan's Lavish parties for Frieda Lawrence, walking across the street to Frieda's and being invited to read D. H. Lawrence's original manuscript of *Lady Chatterley's Lover*, plus hunting, fishing, riding, skiing and exulting in recordings from the Metropolitan Opera. And never did her parents try to reign her in, although others—such as the Rainbow Girls—thought she pushed things too far. When Wally showed up in Levi's for a meeting at the somber Masonic Hall, she was asked to leave.

"That was fine with me," she says not without regret.

Regret has never been a familiar emotion to Funk, whose mother always instructed her to take a broad view. "Look down, far out and far ahead," her mother said.

As much as Wally loved Taos, her parents felt their daughter also needed to experience other areas of the country, and when it came time for college, Wally boarded the Wabash Cannonball for Stephens College in Missouri. In the '50s Stephens was a girls' school, sending each new student a letter indicating what was expected, The dictum was "hathoseheelsgloves," Funk says, reciting the phrase as one long, still rather curious edict.

She found it difficult to fit in at first, but when a skiing accident made fulfilling a college sports requirement impossible, she found a substitute in aviation classes. Gradually she began to see her future unfold as she stood in the back of the classroom, her back broken, her torso restrained by a plaster half-body cast. After the cast came off, Wally sought out Stephen's Flying Susies, a flight team that provided young women with pilot training and intercollegiate competition. She finished her two-year degree and enrolled at Oklahoma State University in Stillwater, where she became a highly rated college pilot. Although Funk had a secondary-education teaching certificate in hand, it was her skill as a pilot that she wanted to use after graduation in 1960. But not every door was open to her.

"I was told by United and Continental Airlines I couldn't be hired as a commercial pilot because there were no ladies' bathroom's in the training facilities. " Not until 1973 would a woman be hired as a commercial pilot.

Military jet training was also off-limits to women, she says. The morning after commencement, she went to Fort Sill, Okla., to see if the Army needed a flight instructor for propeller-driven aircraft. It did, and a \$4 an hour Funk trained military personnel to fly. She reveled in the spit-and-polish atmosphere of the post.

"I've always been a regimented soul," she admits, walking across the open, sunny living room of her contemporary home, a cordless phone tucked into her slacks, her right foot guiding a paper towel to dust a small area of the floor. At Fort Sill, she remembers, "they had a very professional marching battalion and did the most exquisite tank maneuvers."

Besides teaching, Funk completed more specialized aviation training and kept racking up flying hours. Then, in the fall of 1960, her life changed. Life magazine broke a story that was startling news to most Americans, including Funk. In Albuquerque, near her Taos home, at the Lovelace Clinic for Education and Research, Dr. W. Randolph Lovelace II and his colleagues were testing female pilots to see if they might qualify as astronauts. Jerrie Cobb, a widely respected pilot out of Oklahoma, was the first woman being tested at Lovelace. Life named her America's best hope in beating the Russians, who were already talking about launching a woman into space.

Funk was acquainted with Cobb and greatly admired her talents as a pilot. But it was the opportunity to take aviation to its next level that most directly grabbed her attention. She typed a letter to Lovelace from her small apartment near the post and offered her credentials.

"I am most interested in these tests to become an Astronaut," she wrote, capitalizing Astronaut and double-striking letters in her rush to convey her eagerness. A series of inquiries and letters ensued. Lovelace checked Funk's record, reviewed her accomplishments, and invited her to Albuquerque.

As chairman of NASA's Special Advisory Committee on Life Sciences, Lovelace was responsible for testing and selecting the Famous Mercury 7 Astronauts, Whose faces were then blanketing publications across the country. In his return letters to her, he described the project as the "Woman in Space program" and the "examination of potential women astronauts."

The extent to which NASA was officially involved with the Mercury 13 testing long has been debated. Although Lovelace was affiliated with NASA and his opinions carried tremendous weight, he also was operating, in this case, out of his own medical and scientific curiosity and with the Lovelace Foundation's money. He wanted to determine whether women would test as well as if not better than men. And he sincerely hoped some of the women would become astronaut candidates.

Famed World War II aviator Jackie Cochran, a former member of Women Air Force Service Pilots, also lent her name to the enterprise. She supported Lovelace's effort and paid for candidates' lodging and meals while they were being tested. Lovelace referred to Cochran as a "special consultant" in the program.

Dr. Donald Kilgore is president emeritus of the Lovelace Center for the Health Sciences (a descendent of the former institution) and was one of the staff physicians who helped Lovelace administer the test. He emphasizes that in the early '60s the space program was in its infancy and lacked organization, chain of command and coherence it has today. "You have to remember, " he says, "NASA was much smaller then. There was no Houston." Kilgore notes that Funk, Cobb, and a couple of the other women impressed him as dead serious about hoping to become astronauts. "For others" he says, "they were curious about the testing but not as dedicated."

Funk especially stood out to Kilgore. "We knew she was from New Mexico, the youngest candidate and an Olympic-caliber skier," he remembers. "I was impressed with her motivation and vitality." The 77 year-old doctor says he still is impressed with Funk. She was invited to Albuquerque for a week of test Feb. 26, 1961. Lovelace asked her to arrive for the first day ready to be examined. "Report to the Clinic Monday at 8 a.m." he wrote, "without having anything to eat drink, smoke, or chew (i.e. gum) after midnight Sunday." He went on to advise, "it is hoped to have the candidates that pass the examination meet together late this spring."

Virginia Shy Funk drove her 22 year-old daughter from Taos in the family's wood-paneled station wagon and dropped her off at the Thunderbird Hotel across from the clinic. The next week, doctors performed 83 X-rays and 50 other physical exams on Funk. From 8 a.m. to 4.p.m. every day she went through a series of tests to assess her physical condition and determine her stamina and adaptability. She swallowed 3 feet of rubber hose, drank a pint of radioactive water and had 18 needles stuck into her head to record brain waves. At night she lay on the cool bathroom floor of the hotel and gave herself enemas that were required for the next day.

"I didn't go out for enchilada dinners," she says.

All those exams were relatively painless except the "ear test." Funk remembers being strapped in a dentist's chair while Kilgore, an ear specialist, injected 10-degree water 10-degree centigrade water into her ear, freezing it. The test was designed to simulate disorientation and measure a subject's ability to maintain her balance. Funk stared at an object on the wall to keep her muscles under control and her body from lurching, her eyes sipping left-right, left-right in an instinctive and involuntary reflex.

Throughout the many tests at Albuquerque, Funk assumed the same philosophic stance she had observed in many military personnel at Fort Sill. "Don't ask if your don't need to know," was her conscious approach to what at times seemed bizarre tests. "I didn't question the doctors," she says. "I just wanted to pass, and I wanted to pass with very high marks."

Funk says she did hear from medical personnel while at Lovelace that she surpassed all other candidates' marks—including Glenn's—on the bicycle test for endurance. The test measured a candidate's ability to keep going as technicians made the bike more difficult to pedal. The staff reported that the top mark for both male and female candidates was 10 minutes on the bike. Funk was determined to set a record. At Fort Sill she had been riding her bike to work every day, leaving her '59 Vauxhall at home, and was in top physical condition. A lifetime of exercise at high altitude didn't hurt either. After nearly 10 minutes of pedaling, she got her second wind, grits her teeth, closed her eyes and kept pumping. She made it to 11 minutes, set the record, and toppled off the bike exhausted.

When all the tests came to an end, Funk was excited to learn that she was one of 13 selected to continue. She awaited further word from Lovelace, who wrote that the next phase would begin sometime in June. Cobb, the only candidate already to have passed all phases of the clinic's testing, sent an additional letter stating that the Navy had arranged for a series of test to simulate space flight at its aviation medicine school at Pensacola, Fla.

That spring the whole country was wild with excitement about the space program after Navy Lt. Comdr. Alan B. Shepard hurtled 115 miles above Earth on a Redstone missile. Twenty days later, a resolute President John F. Kennedy stated, "I believe this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to Earth. No single space project in this period will be more impressive to mankind."

Thirteen women, including Funk, sat with airline tickets to Pensacola in hand and waited for their own chance at the future. But a snag developed. The Navy wanted NASA's official endorsement before tests could continue. Lovelace, in hopes an endorsement could be secured, wrote the women again and asked them to keep September free. Jerri Sloan Truhill, one of the 13 now living in Dallas, remembers the personal turmoil of waiting for tests that were first on and then off. "I bought a ticket to Pensacola and had my bags packed," Truhill says, her voice still filled with exasperation and anger. "I was a mother. It wasn't easy to get things ready to go and then dropped and rescheduled. But I was willing to do it. I wanted a chance."

Back at Fort Sill, Funk—single and with fewer personal obligations—used the summer of 1961 to take part in additional testing that she arranged independently. She knew Cobb earlier had undergone psychological testing for the program, and through her help she and Rhea Hurrle—another member of the 13—underwent tests comparable to what Cobb had already taken At Veterans Administration Hospital in Oklahoma City. "I told Jerri, I want to go as far as I can. I'll pay for additional testing if I have to," she recalls. Without promise or assurance that the tests would help her continue with the astronaut program, Funk pushed on, hoping to be ready in case NASA gave the green light.

Cobb opened her Oklahoma home to Funk and Hurrle, and the candidates went off for tests to the VA hospital on N.E. 13th Street in the morning and returned to the house at night for calisthenics and cookouts in the back yard.

At the VA, doctors were interested in Funk's mind: memories, reflections, fears, and regrets. She took Rorschach tests and answered multiple-choice questions. She ticks off a string of what to here were senseless questions." How you feel about your dog, your mother, your father, your sister. Who you hate. Who you love."

Back then, she didn't know a psychiatrist from, well, a golfer, she says, pointing to the 10th hole of the course that runs alongside her current home in the Trophy Club area near Fort Worth. Among other things, doctors asked her who wrote Faust. "I knew the answer to that, being an opera lover," Funk says, "Knowing the answer to that question really threw the doctors back on their seats." The doctors also tested her to see how well she could withstand sensory deprivation. An 8-foot deep tank of warm water in a darkened, isolated, and silent room awaited her. Funk's body temperature matched the water temperature so that she could not feel the pool. Balancing on two small foam floaters, she lay suspended on top of the water for as long as doctors judged her able. The experiment was designed to take away all five senses and determine if and when a candidate would hallucinate. For 10 hours and 35 minutes—another record-breaker, Funk says—she floated. She did not hallucinate. She reported she was at "complete peace" and eventually sneaked a couple of quick naps. Doctors later told her that women, surprisingly, seem to withstand deprivation better than men. But the wait for the Pensacola tests went on. Then, on Sept. 12, five days before the women were scheduled for the second time to report Florida, Funk and the others received a telegram from Lovelace: "regret to advise arrangements at Pensacola canceled. Probably will not be possible to carry out this part of program...Will advise of additional developments when matter cleared further."

But the matter never cleared. NASA would not officially endorse the tests, and the Navy could not justify the expense. The women were instructed to stay home.

Cobb, who was waiting at the naval station in Pensacola for the women to arrive, received a call from Lovelace with the news that the test was canceled. "I immediately went to see the admiral to find out why," she says. "He said the orders came from (CNO) chief of naval operations) at the Pentagon. I flew to Washington, found a cheap hotel with a bath down the hall learned the D.C. bus system, and started knocking on doors at the Pentagon. When I finally got to see the CNO, he told me the tests were canceled because NASA did not want the tests run on the women."

According to NASA spokeswoman Peggy Wilhide, the tests were canceled because NASA was following a federal policy already put in place by President Eisenhower in 1959. His order stated that astronauts should come from the ranks of the military. "The decision had already been made at a higher level than NASA," she says, adding that, "unfortunately, at that time in many professions in the United States there was a glass ceiling for women."

Writing in a magazine article a year after the cancellation, Mercury 13 member Jan Hart was livid, outspoken, and emphatic in identifying sexism as the reason behind the cancellation. "Why is it so difficult for so many American to grasp the fact that women can be perfectly normal and also be doctors, scientists, engineers, lawyers, pilots, and astronauts? One would think that they were seeking to be--- tackles for the Green Bay Packers. It is inconceivable that the vast world of outer space should be restricted to men.

The Pensacola blow was devastating to many of the women. TO Funk it was disheartening. "I knew I would eventually go into space," She says, refusing to be defeated. Responding to the cancellation, she "threw it a fish," recalling a favorite Indian phrase she had learned in childhood. Let it pass, don't let others drag you down, keep moving forward, find an alternative, she vowed, and then tucked Lovelace's telegram into a folder that she has kept the last 39 years.

Kilgore recalls that he, too, was disappointed to receive the news that the program would not continue. Ultimately, though, he was not surprised. "They were ahead of their times," he says.

Cobb and Hart decided it was time to go public and began lobbying Vice President Lyndon B. Johnson. In the spring of 1962, just months after John Glenn's triumphant orbit aboard Friendship 7, the two women secured a meeting with LBJ. In a letter to the other women, Cobb reported that she found the vice president personally receptive to the idea of female astronauts but reluctant to take a public role in supporting their cause. Fighting sexism was not much of a priority for male public officials in 1962. Cobb remained determined but increasingly exasperated with NASA's rigid position and complained in a letter to the other women. "Honestly," she fumed, "I have talked with everyone from the janitor to Administrator

James Webb at NASA...In the middle of all this I keep hoping and praying that NASA will wake up and get these important projects started at once.”

Funk read Cobb’s letter with interest but left the lobbying to the more experienced Cobb and Hart. When a college friend notified her of a better job possibility in California, she pulled up stakes at Fort Sill and headed for a position as chief pilot at an aviation school in Los Angeles.

In July the lobbying paid off, and Funk received word that Congress finally had agreed to hold hearings on astronaut qualifications. Called to testify were John Glenn, Scott Carpenter, NASA officials, Jackie Cochran, Cobb and Hart. The fact that Hart’s husband was Sen. Philip Hart of Michigan certainly put some pressure on his Capitol Hill colleagues.

Cobb opened her statement by reviewing the accomplishment of each of the Mercury 13. In identifying Funk, she cited her university education, professional pilot’s experience, an array of ratings and 3,000 flying hours. Cobb concluded her remarks with a simple and eloquent request. “We seek only a place in our nation’s space future without discrimination. We ask as citizens of this nation to be allowed to participate with seriousness and sincerity in the making of history now.”

Rep. Victor Anfuso of New York, chairman of the committee, undercut Cobb’s dignified appeal with a joke that reduced the accomplished aviator to nothing but reproductive organs. “Miss Cobb, that was an excellent statement,” he began. “I think that we can safely say at this time that the whole purpose of space exploration is to someday colonize these other planets, and I don’t see how we can do that without women.” The audience erupted in laughter.

The second day of the hearings did not go much better. Glenn and Carpenter offered their insights into astronaut qualifications, adding to the emerging theme that women had to be better than rather than equal to men. “If we could find any women that demonstrated they have better qualifications than men,” Glenn asserted, “we would welcome them with open arms.” Already primed for jokes, the audience again roared in laughter. Glenn added, “For the purposes of my going home this afternoon, I think that should be stricken from the record.”

The day ended with Glenn and Carpenter signing autographs for star-struck congressmen. The next morning the final day of testimony was canceled and the hearings concluded.

Glenn, Carpenter, and NASA had done nothing to help open doors, for women. Cochran, seeing the overwhelming odds, did not push as fiercely as some supporters of the 13 had wanted. Congress quickly made up its mind. All future astronauts would be drawn from the ranks of military-jet test pilots. Since all women were excluded from jet-test pilot school, they were in effect excluded from being astronauts. Not until a decade later would women be allowed to become jet test pilots. For Funk and the other Mercury 13, Congress slammed the door shut that July, declaring that outer space was for men only.

Cobb worked as a NASA consultant for a few years, then packed her bags and headed for South America, flying medical supplies for missionaries in the Amazon rain forest. Truhill returned to her business in Texas. Hart became a founding board member of the Nation Organization for Women. Lovelace perished in a plane crash.

Funk looked for unofficial ways to continue testing and found supporters at El Toro Marine Corps Base and the University of Southern California. While not seeking to take on the political establishment, she still wanted to prepare herself for the possibility—remote thought it was—that NASA might reconsider. In 1963, with her military connections from Fort Sill and her power of persuasion, she convinced military and university official to allow her to take three additional tests similar to those at Pensacola. At El Toro she became the first woman to undergo the high-altitude chamber test and the Martin-Baker Seat Ejection test—an experiment in which Funk was strapped in a chair, shot upwards and dropped like an explosive carnival gong. At USC, scientists were acquainted with Funk’s Mercury 13 background and were supportive of her efforts. “They knew what my purposes were,” she says, “and they were curious. The centrifuge test they administered measured Funk’s ability to withstand increasing gravitational forces such as those encountered in space-flight liftoff and re-entry.

Funk knew that military personnel who took the centrifuge test were equipped with G-suits, apparel that helped them tighten muscles to avoid blacking out when the gravitational forces increased. But being a civilian, she was not entitled to a suit.

"I asked my mother if she would give me her worst merry widow. You know, one of those cowgirl girdles that cinch you into an hourglass figure."

Donning the "Wally G-suit" under her bulky flight gear, she walked in the test rather stiffly. No one noticed, and when the G's started increasing and Funk felt "the gray curtain" of unconsciousness begins to drain the blood from her head, she clenched up, tightening the merry widow. It helped keep "everything onwards and upwards," Funk says with a laugh. USC personnel were amazed to see anyone withstand five G's without a suit. Funk never let on about her secret.

NASA never changed its mind about the Mercury 13. Funk stayed in California and eventually moved into aviation safety inspection, becoming in the 1970s one of the first women to serve as a Federal Aviation Administration inspector and a National Transportation Safety Board investigator. After retiring from the NTSB, she moved back to Taos to build an adobe vacation home, then to Grapevine in 1992. She continues to give seminars around the country on flight safety. She speaks about women in the space program and, as she always has, mentors young pilots. She's a stickler with them on courtesy, respect, and proper appearance. When it comes to piercings, she tells them to "only have the holes that God gave you."

She also keeps up with women who benefited from her trailblazing efforts and is an enthusiastic supporter of astronaut Eileen Collins, who made history last summer when she became the first woman to command a NASA shuttle mission. In 1998 at a White House ceremony to announce her upcoming launch, Collins seized the moment to pay an important debt.

"I've admired pilots, astronauts and explorers of all kinds," Collins remarked. "I also think it's important that I point out that I didn't get here alone. There are so many women throughout this century that have gone before me and have taken to the skies. From the first barnstormer through the women military Air Force service pilots from World War II, the Mercury women from back in the early 1960s that went through all the tough medical testing to become the first astronauts...all these women have been my role models and my inspiration."

President Clinton and the assembled dignitaries applauded—a far cry from the sneers and crude jokes Cobb and Hart endured in Washington a generation earlier.

Today Collins believes the story of the Mercury 13 has not received the attention it deserves. "Maybe we would have had more women astronauts sooner" if people had know of Funk and the other female pilots, she says. "Anyone who would do what they did believed in the cause. They wanted to be apart of the mission."

Collins says the 13 need to be recognized for the role they played in the space program. They "gave us history and opportunity. If those women had failed, it would have been a different story."

Even while orbiting Earth, Collins admits, Wally Funk crossed her mind. "I think about her," she says. "I think she would really enjoy it, and if she gets her chance, it will be the fulfillment of her dream."

While Funk is proud to be recognized as a role model for Collins she has never really thought of any women in her life as models of accomplishments and daring. As for aviator role models, she thought there just weren't any back in Taos. That is, until her mother revealed an untold story in 1995—a few years before she died.

Back in sleepy Olney, Ill. Where Virginia Shy Funk grew up, a barnstormer came through one spring afternoon in 1919. Virginia's brothers Frank and Dewit had ditched school that day and run off to a field where the pilot reportedly had landed.

Virginia, in horse and buggy, soon raced after them and came upon the spot just as brother Frank came whooping and jumping out of the plane after a 10-minute spin with the pilot. It looked thrilling. Virginia wanted a turn. So Frank borrowed a dollar apiece from each of 10 friends and handed the cash to the pilot.

Confidently the 17-year old young woman donned a duster, pulled down goggles, and climbed into the plane. Once aloft, she could see the checkerboard farmlands of Olney, the snaking curve of the Fox River, poplar trees, barns, and above her the expansive blue of the sky. She was ecstatic.

Virginia tore home to ask her father if she could take lessons and learn to fly. But Clifford Shy was unequivocal. "You are a young lady. You will learn to be a good wife and a good mother. That is your role in life." The skies were off-limits.

Funk doesn't claim any role models, but she does believe in genetics. "Mother carried the gene of flying all the years," she says. "and when I was born, I got her gene."

After four applications over the years to the Johnson Space Center astronaut program and four subsequent rejections, Funk has "thrown a fish to NASA." She's found another way.

Space Adventures in Arlington, Va., one of several such commercial ventures, is gearing up to offer interested paying passengers the chance to blast off. Chris Faranetta, sub orbital flight program manager, says the firm is thrilled to have Funk as one of its first passengers. "Wally Funk is one of the United States' female aviation heroes," he says. The launch proposes to take passengers 62 miles above Earth where weightlessness can be experienced and the planet's curvature seen. The hour and-a-half flight is offered at \$98,000 a person. Funk expects to lift off in 2003.

It is now not a matter of if, but when she'll get into space. Kilgore is hoping Funk will be given the chance. "It would be a fitting end to her quest," he says. "I thought she would have made a fine astronaut."

In the meantime, Funk spends her days teaching students to fly at an airfield near Fort Worth and keeping her 114-pound body in shape for 2003, and working on her house.

Buttering a tortilla, she rolls it as if she's made the curl a million times. She takes the quick lunch out to the deck to admire the view. It is a commanding sight with a 180-degree sweep of rolling Texas hills. Staring at the vista and the arc of sky above it, the energetic 63-year old Funk actually comes to a complete stop.

She squints her eyes at something in the distance on an unblocked horizon. Then, heeding her mother's advice from long ago, she "looks down, far out and far ahead."