ST. ANN & THE HOLY TRINITY CELEBRATES

FEATURING

THE UNSUNG WOMEN OF S.T.E.M.*

*SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS
From the first settlers who came to our shores, from the first American Indian families who befriended them, men and women have worked together to build this nation. Too often the women were unsung and sometimes their contributions went unnoticed. But the achievements, leadership, courage, strength and love of the women who built America was as vital as that of the men whose names we know so well.

President Jimmy Carter’s Message designating
March 2-8, 1980 as National Women’s History Week
TABLE OF CONTENTS

● CAMILLE WARDROP ALLEYNE, AEROSPACE ENGINEER
● JUNE DALZIEL ALMEIDA, VIROLOGIST
● DR. PATRICIA BATH, OPHTAMOLOGIST & INVENTOR
● ROXCY BOLTON, FEMINIST CRUSADER
● LINDA BROWN BUCK, BIOLOGIST
● ROSALIND FRANKLIN, CHEMIST & CRYSTALLOGRAPHER
● DIANE HARTLEY, CIVIL ENGINEER
● THE "HIDDEN FIGURES" ENGINEERS AND MATHEMATICIANS OF NASA
● DR. SWATI MOHAN, AEROSPACE ENGINEER
● POPPY NORTHCUTT, APOLLO MISSION CONTROL ENGINEER
● MARTHA ROUNTREE, PIONEER BROADCAST JOURNALIST
● MAGGIE LENA WALKER, AFRICAN AMERICAN BANKING PIONEER
● ROGER ARLINER YOUNG, ZOOLOGIST
● “UNSUNG GROUPS”
● “UNSUNG INVENTORS”
You might have thought I was a strange kid for the things I did. I buried my hamster after it died, then dug it up a while later to see what it looked like. I was always curious.

-Linda Buck, 2004

“When we empower and inspire girls to believe in themselves and dream big dreams, they will be the catalyst for positive and lasting change in their environment, country and world.”

CAMILLE WARDROP ALLEYNE, AEROSPACE ENGINEER
Submitted by Winifred Murtaugh

Dr. Camille Wardrop Alleyne was born on October 12, 1966, in Port-of-Spain, Trinidad-Tobago, and came to the United States in 1985. She is a United States aerospace engineer, space scientist, internally acclaimed speaker, educational leader, and science ambassador. She is the only woman of Caribbean descent in a top position at NASA, one of the most recognized women in the field of aerospace engineering and one of the few women of color to serve in a senior technical management position at NASA. Alleyne is the Associate Program Scientist for the International Space Station at NASA’s Johnson Space Center in Houston, Texas.

Alleyne studied at Howard University in Washington, D.C., where she earned a Bachelor of Science degree in mechanical engineering with an aerospace option. She pursued and earned a Master of Science degree from Florida A&M in mechanical engineering with a specialization in composite materials. Alleyne worked at the Kennedy Space Center as a flight systems engineer for two years before attending the University of Maryland to pursue a second Master of Science degree in aerospace engineering with a specialization in hypersonic aerodynamics and propulsion. After graduating, she was recruited to work at the Naval Sea Systems Command on ship missile systems. She was then offered a position at the Missile Defense Agency under the U.S. Department of Defense to work on several ballistic missile defense projects as an aerospace systems engineer, where she worked for eight years.
Alleyne applied to NASA’s Astronaut Program in 2003, was one of the hundred finalists and interviewed, but did not make the final 12 astronaut candidates list. She worked on the Constellation and Orion programs as a lead system engineer and crew module systems engineer and test manager respectively. She currently serves as an associate program scientist for the International Space Station (ISS), based at NASA’s Lyndon B. Johnson Space Center in Houston, Texas. Her roles include communicating with the ISS’s scientific accomplishments with the general public, the leaders at NASA, the U.S. Congress, and scientific communities. Alleyne also plays a leading role in international education programs across the ISS Partners. During her tenure, she pursued and earned her Doctorate in Educational Leadership from the University of Houston. She is also renowned for her work on global STEM education for girls, which she does through “The Brightest Stars,” a non-governmental organization founded in 2007, dedicated to educating, empowering and inspiring young women to be future leaders through the study of science, mathematics, and technology. The organization provides mentorship globally, providing young women with the necessary tools to select careers in science, technology, engineering, and mathematics fields.
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-Linda Buck, 2004

"Virus, virus shining bright, In the phosphotungstic night, What immortal hand or eye, Dare frame thy fivefold symmetry."

-JUNE DALZIEL ALMEIDA, VIROLOGIST
June Almeida (1930-2007) discovered the first coronavirus in 1966 while working at St. Thomas’ Hospital in London. The virus was an infectious bronchitis, and due to her methods with the electron microscope, she was able to identify viruses that were difficult to see under standard microscopes.

June was born in Glasgow, Scotland, to a working-class family, leaving school at 16 since her family could not afford to send her to university. She took a job as an electron microscope technician in Glasgow and later at St. Bartholomew’s Hospital in London. June met and married a Venezuelan artist, Enriques Almeida, and moved to Canada. She was surprised to get a job as an electron microscope technician at the Ontario Cancer Institute in 1954, where she was able to advance in her work without having a college degree. Her adaptation of the microscope by using negative staining enabled her to detect virus particles in organ samples that could not be visualized previously. June returned to London in 1966, by which time she had earned her Doctor of Science degree.

Shortly thereafter, a scientist by the name of David Tyrrell, who was studying the common cold, identified a virus that could not be seen or photographed. It was called B814, and since he had heard of June’s work with the electron
microscope, he sent her the sample. She was confident that she would be able to reveal the structure of the virus. What she found was a virus with a spike-like appearance that resembled a solar corona, which she named a “coronavirus.” Since the virus was a “common cold,” no specific importance was given to the discovery until 2002 with the emergence of SARS. Her other accomplishments included visualizing the rubella virus and later, the virus that causes Hepatitis B.

It is likely that June Almeida was an unsung heroine because she did not publish many papers in her own name since she collaborated with eminent scientists of the time. However, in 1963, she started a journal. When she first saw the coronavirus, she was moved to write the following, with apologies to William Blake:

Virus virus shining bright.
In the phosphotungstic night
What immortal hand or eye
Dare frame their fivefold symmetry.

You might have thought I was a strange kid for the things I did. I buried my hamster after it died, then dug it up a while later to see what it looked like. I was always curious.

- Linda Buck, 2004

“Do not allow your mind to be imprisoned by majority thinking. Remember that the limits of science are not the limits of imagination.”

DR. PATRICIA BATH, OPTHAMOLOGIST & INVENTOR
Submitted by Jacqueline de Weever

Patricia E. Bath (1942-2019) was the inventor of laser cataract surgery, a method called Lazerphaco Probe. She became several “firsts”: the first female member of the Jules Stein Eye Institute, the first woman to lead a post-graduate training program in ophthalmology, the first woman elected to the honorary staff of the UCLA Medical Center, the first African American person to serve as Resident in Ophthalmology at New York University, and the first African American female doctor to receive a patent for a medical purpose. She also founded a nonprofit American Institute for the Prevention of Blindness in Washington, D.C.

Dr. Bath was born in Harlem, daughter of Rupert and Gladys Bath. Rupert Bath was an immigrant from Trinidad, and Gladys was descended from African slaves and Cherokee Native Americans. Her mother bought her first chemistry set, and both parents gave her a motto: “Never settle for less than the best.” With her brother, she attended Charles Evans Hughes High School, where they both excelled in math and science. Bath won a National Science Foundation Scholarship in 1959 at Yeshiva University in New York, and discovered a mathematical equation to predict cancer cell growth. This discovery was published in a scientific paper and shared at the International Fifth Congress of Nutrition in 1960. In 1964, Bath graduated from Hunter College with a degree in chemistry and went on the Howard University College of Medicine, graduating with honors in 1969.
At Howard, she co-founded the Student National Medical Association, becoming its first female president. In the summer of 1968, influenced by Dr. Martin Luther King, Jr.’s Poor People’s Campaign, she organized medical students in providing volunteer health care services in Resurrection City on the National Mall.

When Harlem Hospital Center affiliated with Columbia University College of Physicians and Surgeons, Bath became an intern. There she observed that Harlem Hospital had larger numbers of blind patients with glaucoma than Columbia University Eye Clinic. A one-year fellowship led her to collect data on blindness and visual impairment at Harlem Hospital. She published the first scientific paper showing such observations. Persuading her Columbia professors to operate on blind patients without charge, she was part of the team that first performed eye surgery there. While Bath served her residency at New York University from 1970 to 1973, she married and had a daughter, Eraka.

Bath joined the UCLA Jules Stein Institute to become the first woman on the ophthalmology faculty and established the Keratoprosthesis Program to provide advanced surgical treatment for blind patients. Also recruited by Charles R. Drew University, she co-founded an ophthalmology residency program at Martin Luther King, Jr. Hospital.

In 1983, Bath was appointed Chair of the KING-DREW-UCLA Ophthalmology Residency Program, the first woman in the U.S. to hold this position. When the National Institute of Health and the National Eye Institute denied her grants
for research, Bath resigned her position as chair in 1986, and studied laser cataract surgery as visiting professor in France, England and Germany.

Returning to UCLA, Bath developed the Laserphaco Probe that improved the use of lasers to remove cataracts, and patented it in 1988—the first African American woman to receive a patent for a medical device. She received three patents for this method, along with a patent for a method for using pulsed ultrasound to remove cataracts, and, in 2003, another.

Dr. Patricia Bath died in San Francisco on March 30, 2019.
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-Linda Buck, 2004

“No matter what anyone tells you, one person can make a difference.”

ROXCY BOLTON, FEMINIST CRUSADER
Submitted by Colleen Heemeyer

**Roxcy Bolton** (1926-2017) Roxcy Bolton changed the way we think about hurricanes. Starting in the late 1960s, she began lobbying the National Hurricane Center, based near her home in Dade County, Florida, to include men’s names in their annual lists of hurricanes.

The Weather Service began naming hurricanes and tropical storms in 1953 and continued the long naval tradition of using female pronouns for both watercraft and storms. This practice encouraged meteorologists and weather reporters to suggest the storms were unpredictable or “temperamental” and were “flirting” with barrier islands or coastlines. In 1969, the National Organization for Women passed a resolution urging that the National Hurricane Center stop naming the storms exclusively after women. The practice was finally adopted in 1978.

Bolton was born in Duck Hill, Mississippi, in 1926, eventually moving to Florida, and she died at the age of 90 in 2017. In addition to her work lobbying the National Weather Service, she was instrumental in founding the nation’s first rape treatment center in Miami in 1974, which served as a model for similar centers nationally. That center was eventually named for Bolton in 1993. During the 1970s, she also campaigned for the ill-fated Equal Rights Amendment.
The *Washington Post* commented on the new storm names in 1986, “Eight years, and still this nonsexist nomenclature has a funny ring to it. Somehow many of the male names don’t convey either the romance or the urgency that circumstances might warrant.” Yet in 2014, a study published in the *Proceedings of the National Academy of Sciences* found that storms named after women have historically killed more people. Why? The study concluded that people do not take those storms as seriously as those named for men, which are viewed as stronger and more violent.

*Sources: New York Times obituary, Florida Memories*
“You might have thought I was a strange kid for the things I did. I buried my hamster after it died, then dug it up a while later to see what it looked like. I was always curious.”

LINDA BROWN BUCK, BIOLOGIST
Submitted by Terry Randazzo

I first heard of Linda Brown Buck when I read this article recently in the *New York Times* “What Can Covid-19 Teach Us About the Mysteries of Smell?” What caught my eye at first was her last name, Buck, which was also the last name of my great-grandmother, Lena Buck. I may owe my existence to Lena Buck, but we all owe Linda Brown Buck thanks for her important contributions, particularly now, since most likely no one would have heard of her outside of the scientific community if not for Covid-19 and one of its symptoms, the loss of smell.

Linda Brown Buck (born January 29, 1947) is an American biologist best known for her work on the olfactory system. She was awarded the *2004 Nobel Prize in Physiology or Medicine*, with Richard Axel, for their work on olfactory receptors. She is currently on the faculty of the Fred Hutchinson Cancer Research Center in Seattle and an Affiliate Professor of Physiology and Biophysics at the University of Washington, Seattle.

Buck was born in Seattle, Washington, the second of three children. Buck's parents raised them to believe that they had the ability to do anything they wanted with their lives. She attributes her affinity for science to her parents’ interest in puzzles and inventions.

In 1980, she began postdoctoral research at Columbia University. In 1982, she joined the laboratory of Dr. Richard Axel at Columbia’s Institute of Cancer Research. Influenced by the research of Sol Snyder's group at Johns Hopkins University, Buck set out to map the olfactory...
process at the molecular level, tracing the travel of odors through the cells of the nose to the brain. Buck and Axel worked with rat genes in their research and published the findings in 1991.

This is what they discovered:

- Humans have about 350 different odor receptors—protein molecules, which are found on nerve cells in the upper part of the nose.
- Each cell has only one type of receptor, which can detect only a small number of different odor molecules.
- Each receptor changes when an odor molecule attaches to it, sending an electrical signal via nerve cells to the brain’s olfactory bulb—the part of the brain responsible for our sense of smell.
- There is a large gene family, up to 1,000 genes, that controls production of specialized protein odor receptors.

In 1991, Buck became an assistant professor in the Neurobiology Department at Harvard Medical School, where she established her own lab. She published her findings in 1993 on how the inputs from different odor receptors are organized in the nose. Her primary research interest is on how pheromones and odors are detected in the nose and interpreted in the brain, and later discovered that a single smell recognized by our brains, for example, apple pie, is generally made up of many different odor molecules. Our brains recognize apple pie using messages sent by combinations of receptors, like specific sets of numbers form that the combination to unlock a safe.

Sources: Wikipedia, nobelprize.org; scientificwomen.net
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-Linda Buck, 2004

“Science, for me, gives a partial explanation for life. In so far as it goes, it is based on fact, experience and experiment.”

Rosalind Franklin, Chemist & Crystallographer
Submitted by Barbara Gonzo

Rosalind Franklin (1920-1958), who photographed DNA in the famous Photograph 51, and later photographed the structure of viruses, was born in 1920, in London, to a prominent Jewish family. As a child, she went to St. Paul’s Girl’s School in west London, which was one of the few girls’ schools that taught physics and chemistry. She studied chemistry at Newnham College, and during the Second World War, worked for the British Coal Utilisation Research Association, studying the permeability of coal and measuring its density. She demonstrated the molecular “sieve” quality of coal, leading to development of carbon sieves, used today to separate nitrogen from oxygen in the air. In determining the structure of coal, she used a photographing technique known as X-ray diffraction, later useful in studying DNA.

After the war she went to Paris, where she worked for the French government using X-ray diffraction to study rayon and other amorphous substances. In 1950, she returned to England to work at King’s College at the Medical Research Council’s Biophysics Unit,
where its director, John Randall, assigned her to work on DNA fibers. It was there that she made her famous Photograph 51 of DNA. Her colleague Maurice Wilkins showed the photograph to James Watson and Francis Crick, who used the photograph to develop their structural model of DNA — leading to their Nobel Prize in 1962.

Meanwhile, Rosalind Franklin moved in 1953 to Birkbeck College, recruited by the physics department chair John Desmond Bernal, known for promoting women. That year, she and Raymond Gosling published the first evidence of the double helix structure of DNA in the magazine *Nature*. She also studied RNA and used her X-ray technique to determine the structure of the tobacco mosaic virus for the 1958 World’s Fair in Brussels. She completed the model, and the exhibit opened on April 17, 1958, one day after her death.

In 1956, she visited the University of California at Berkeley, where she was asked to research the polio virus. In 1957, she obtained a three-year grant from the National Institute of Health to research the polio virus. She was working on that project in 1958, with Aaron Klug, when she died of ovarian cancer on April 16, 1958. Klug later won the Nobel prize in chemistry in 1982.

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-Linda Buck, 2004

“IT’S NOT THAT I DID SOMETHING, BUT THAT PERHAPS MY QUESTIONS HELPED SOMEONE FIGURE SOMETHING OUT.”

Diane Hartley, Civil Engineering Student
Submitted by Benjamin Spier

Twenty-three years before 9/11, a defining New York skyscraper was in danger—and a young woman student discovered it. In the spring of 1978, Diane Hartley, an engineering major at Princeton, was writing her senior thesis on the newly completed 59-story Citicorp Center, when she noticed a puzzling anomaly. Hartley was intrigued by the building’s bold design, raised on columns and cantilevered over a church located at the corner of 54th Street and Lexington Avenue. Poring over blueprints she had obtained from the office of William LeMessurier, Citicorp’s structural engineer, she reproduced the engineering calculations and found that the skyscraper’s radical innovation concealed a troubling flaw: The support columns, placed at the midpoint of each side to accommodate the church, left the building vulnerable to 70-mile-an-hour winds striking the corners—enough to topple it in a hurricane. LeMessurier had underestimated wind loads by as much as 40 percent.

Upon making this discovery, Hartley called LeMessurier’s office to check her math and spoke to a junior engineer, who assured her that the building’s design was perfectly safe. That was the end of it for Hartley: She submitted her thesis, graduated from Princeton, and went to work for an engineering firm. Unbeknownst to her, word of her
inquiries trickled up to LeMessurier himself, who rechecked his calculations—and realized, to his horror, that she was right. In the event of a catastrophic collapse, as many as 200,000 lives would be at risk. That summer, with hurricane season approaching, he took action to fix the problem: After alerting Citicorp, the mayor’s office, and the NYPD, he hired a small army of welders to shore up the building’s structural steel bracing. They worked in the dead of night, after Citicorp’s occupants had gone home, and in strict secrecy. (It helped that New York’s newspapers were shut down by a strike in August.) By Labor Day weekend, his fears were realized when Hurricane Ella came barreling up the Eastern Seaboard, packing winds up to 125 miles an hour. In a stroke of good fortune, however, the hurricane veered out to sea, sparing the city and enabling the welders to finish the job by the following month.

Citicorp’s brush with disaster remained unknown to the wider public until 1995, when *The New Yorker* broke the story. LeMessurier spoke to the magazine, but never mentioned Hartley’s name, recalling merely that he’d realized the problem when he spoke with an engineering student from New Jersey. She herself found out only when her husband stumbled upon a PBS documentary about the Citicorp building. Hartley—who transitioned from engineering into real estate, earned an
MBA, and went on to build her own boutique real estate firm in Washington, D.C.—remarked in a [2019 YouTube interview](https://www.youtube.com/watch?v=example_video_id) with engineering professor Tyler Ley, “I wish I could have been part of the solution.” She did, however, note that her role in the Citicorp saga, which has become a widely taught case study in engineering and professional ethics, is a source of great pride to her two sons. And one of them is now an engineer.

Girls are capable of doing everything men are capable of doing. Sometimes they have more imagination than men.

-Katherine Johnson
While not exactly unsung (after all, they did get a major motion picture made about them) there is a lot about the “Hidden Figures” women that we don’t know and the odds they overcame in their lives and careers.

DOROTHY VAUGHAN (1910-2008)—NASA

Programmer. Vaughan joined the Langley Memorial Aeronautical Laboratory in 1943 after beginning her career as a math teacher in Farmville, Virginia. Her job during World War II was a temporary position, but thanks in part to a new executive order prohibiting discrimination in the defense industry, she was hired on permanently because the laboratory had a wealth of data to process.

Still, the law required that she and her black colleagues needed to work separately from the white female human computers. The first supervisors were white.

Vaughan became the first black National Advisory Committee for Aeronautics (NACA) supervisor in 1949, and made sure that her employees received promotions or pay raises when merited.

Segregation was ended in 1958 when NACA became NASA, at which point NASA created an analysis and computation division. Vaughan was an expert programmer in FORTRAN, a prominent computer language of the day, and also contributed to a satellite-launching rocket called Scout (Solid Controlled Orbital Utility Test). She retired from NASA in 1971. Vaughan died on November 10, 2008, at the age of 98.
KATHERINE JOHNSON (1918-2020)—NASA
Mathematician. Johnson showed early brilliance in West Virginia schools by being promoted several years ahead of her age group. She attended a high school on the campus of West Virginia State College at 13, and began attending the college at 18. After graduating with highest honors, she started work as a teacher in 1937.

Two years later, when the college chose to integrate its graduate schools, Johnson and two male students were offered spots. She quickly enrolled, but left to have children. By 1953, she was back in the workforce, joining the West Area Computing section at Langley.

She began her career working with data from flight tests, but her work quickly gained importance after the Soviet Union launched the first satellite in 1957. Some of her math equations were used in a lecture series compendium called Notes on Space Technology. These lectures were given by engineers who later formed the Space Task Group, NACA's section on space travel.

For the Mercury missions, Johnson did trajectory analysis for Shepard's Freedom 7 mission in 1961, and (at John Glenn's request) did the same job for his orbital mission in 1962. Despite Glenn's trajectory being planned by computers, Glenn reportedly wanted Johnson herself to run through the equations to make sure they were safe.

“When asked to name her greatest contribution to space exploration, Katherine Johnson talks about the calculations that helped synch Project Apollo's Lunar Lander with the moon-orbiting Command and Service Module," NASA wrote. "She also worked on the space shuttle and the Earth Resources Satellite and authored or coauthored 26 research reports."

Johnson retired from NASA in 1986. At age 97, in 2015, she received the Presidential Medal of Freedom, the highest civilian honor in the United States. Johnson died on February 24, 2020, at age 101.
MARY JACKSON (1921-2005)—NASA Engineer.

Jackson hailed from Hampton, Virginia, and received a bachelor of science degree from the Hampton Institute in Mathematics and Physical Science. Jackson began her career as a schoolteacher, and held several other jobs before joining NACA.

As a human computer with the all-black West Area Computing section, she was involved with wind tunnels and flight experiments. Her job was to extract the relevant data from experiments and flight tests. She also tried to help other women advance in their career by advising them on what educational opportunities to pursue.

After 30 years with NACA and NASA (at which point she was an engineer), Jackson decided to become an equal opportunity specialist to help women and minorities. Although described as a behind-the-scenes worker, she helped many people to be promoted or become supervisors. She retired from NASA in 1985. Jackson died on February 11, 2005, at the age of 83.

Source: space.com
You might have thought I was a strange kid for the things I did. I buried my hamster after it died, then dug it up a while later to see what it looked like. I was always curious.

-Linda Buck, 2004

"Touchdown confirmed! Perseverance is safely on the surface of Mars, ready to begin seeking the signs of past life"

DR. SWATI MOHAN, AEROSPACE ENGINEER
Dr. Swati Mohan, an Indian American, is credited with having delivered the news to us earthlings that NASA’s Perseverance rover had landed safely on Mars on February 18, 2021, stating, “Touchdown confirmed.”

Star Trek” inspired her interest in space at age 9, so being a pediatrician was no longer her goal. Dr. Mohan began her space trek at age 16 with a physics class and then moved on to studying engineering, building her career in space exploration “to find new and beautiful places in the universe.”

Mohan was born in India in 1981 and emigrated to the United States with her family when she was one year old. She studied Mechanical and Aerospace Engineering at Cornell University, known for its strength in this field and history of working with NASA. She then went on to Massachusetts Institute of Technology to complete a masters and Ph.D. in Aeronautics and Astronautics (the science and technology of human space travel and exploration).

Dr. Mohan works at NASA’s Jet Propulsion Laboratory and was the Guidance and Controls Operations Lead for the Mars 2020 mission, which she joined in 2013. In this role, she was responsible for ensuring that the spacecraft carrying Perseverance was properly oriented during its travel to Mars and, when landing on Mars, with solar arrays directed toward the sun.
and antenna directed toward earth. During entry, descent and landing, the guidance, navigation and controls team determines the position of the spacecraft and commands the maneuvers to help it land safely.

During the landing, Perseverance used Terrain-Relative Navigation, the first mission to do so. Using this Terrain-Relative Navigation, while descending on a parachute, Perseverance took images of the surface of Mars. These images were used to determine where to go, based on what Perseverance was able to “see,” allowing the rover to land in more challenging terrain than Curiosity, its predecessor, or any previous Mars mission.

As part of her experience in space exploration, Dr. Mohan previously had worked on the Cassini mission to Saturn and GRAIL, a mission that involved sending a pair of spacecraft around the moon to map its gravitational field.

Beam me up, Scotty!

Sources: Wikipedia, CNN, YouTube
"I started looking around at all these dudes that were working with me, and I thought ‘you know, I’m as smart as they are’"

POPPY NORTHCUTT, APOLLO MISSION CONTROL ENGINEER
Submitted by Rev. Katherine A. Salisbury

In the decade following the 1958 creation of the National Aeronautics and Space Administration (NASA), the US and Russia engaged in a space race to the moon. Frances “Poppy” Northcutt (b. 1943), a 25 year-old University of Texas math major, gained national fame as the first and only woman in NASA’s flight control room. Initially hired by the Apollo Program as a “computress,” after six months Northcutt was promoted to engineering work and tasked with calculating the return-to-earth trajectories for Apollo 8, NASA’s second crewed spacecraft.

In an interview that aired in 1968, she was asked, “How much attention do men in mission control pay to a pretty girl wearing a mini skirt?” Northcutt replied, “Well… after a while, they become a little bit more accustomed to you and pay more attention to the consoles.” She continued, “Was it sexist? Yes. But you got to start somewhere.”

Two years later, Northcutt was among the engineers who developed a computer program enabling Apollo 13 to return safely home following the explosion of an oxygen tank. She and her team members were awarded the Presidential Medal of Freedom.
While employed at XYZ, an aerospace contracting company, Northcutt served on the company’s affirmative action committee and became increasingly involved in the women’s liberation movement. In the early 1970s, Northcutt served on the national board of directors of the National Organization of Women (NOW.)

In her 40s, Northcutt changed the trajectory of her career to become a criminal defense lawyer. After attending night school, Northcutt graduated summa cum laude from the University of Houston Law Center in 1984.

Her legal career places emphasis on civil rights. Northcutt has worked for Jane’s Due Process, an organization dedicated to the protection of pregnant legal minors, and for the Harris County District Attorney in Houston as the first prosecutor in the Domestic Violence Unit.

Northcutt is currently self-employed, living in Houston, Texas.


"I think it is important that the public should hear its elected officers speak out and take their stand in answer to direct questions without preparation or oratory."

MARTHA ROUNTREE, PIONEER BROADCAST JOURNALIST
Martha Rountree (1911-1999) was the first and only full-time woman moderator in the 73-year history of Meet the Press, the oldest television show still on television.

Born in Florida and raised in Columbia, South Carolina, she worked for the Columbia Record to work her way through the University of South Carolina. She left school for financial reasons, taking a job as a reporter for the Tampa Tribune. In 1938, she moved to New York, where, with her sister Ann, she founded Radio House, which prepared singing commercials for radio. In 1945, she created a radio show for the Mutual Broadcasting System – Leave It to the Girls – in which a man asked questions sent in by listeners to a panel of female celebrities.

She worked as a roving reporter for the magazine The American Mercury, and was asked by its editor, Lawrence E. Spivak, to critique a radio show he used to promote the magazine. Critiquing the show as being mere self-promotion for Spivak, she created a new show, The American Mutual Presents: Meet the Press, which debuted on Mutual radio on June 24, 1945. On November 6, 1947, the show was first broadcasted on the National Broadcasting Company (NBC) television network, under the shortened name Meet the Press. Its first guest was James Farley, campaign manager for
Franklin Roosevelt in the first two terms of the New Deal. In 1952, she accepted the Peabody Award on behalf of the show and her “associate” Lawrence E. Spivak.

In 1953, she sold her shares in Meet the Press to Lawrence E. Spivak for $125,000, purportedly after losing a coin toss, and left the program. Spivak later sold the show to NBC for $1,000,000, and moderated it from 1965 until 1975.

Martha Rountree produced other public affairs shows, such as Washington Exclusive and Capitol Close-Up. She also moderated Press Conference, with a format similar to that of Meet the Press.

In 1965, she founded the Leadership Foundation, a nonprofit conservative organization, which published a political newsletter Leadership Action Alert, and later worked closely with the Reagan Administration. She retired as the foundation’s president in 1988.

She died in 1999, survived by two children and three grandchildren.

“No person is your friend who demands your silence, or denies your right to grow.”

MAGGIE LENA WALKER, AFRICAN AMERICAN BANKING PIONEER
Maggie Lena Walker (1864-1934) was born in Richmond Virginia. Her mother, Elizabeth Draper, was formerly enslaved and the assistant cook for Elizabeth Van Lew, an abolitionist on whose estate Walker was born. Walker's biological father was Eccles Cuthbert, an Irish American who had met Elizabeth on the Van Lew estate. The two were never married, and shortly after Walker's birth, Elizabeth married William Mitchell, the butler of the estate. In 1870, the Mitchells had a child, Walker's half-brother Johnnie.

After the death of Maggie’s father, which left Elizabeth and her children in poverty, Elizabeth began a laundry business. It was during this time that Maggie first developed an awareness of the gap between the quality of life for white people and Blacks in the United States—a gap that she would soon devote her life to narrowing.

In her teens, Walker attended the Lancaster School and, later, the Richmond Colored Normal School, both institutions dedicated to the education of African Americans. While attending the latter, she also joined the Independent Order of St. Luke, a fraternal organization dedicated to the advancement of African Americans in both financial and social standing.
She graduated in 1883, having completed her training as a teacher. She returned to the Lancaster School to teach and remained there until 1886, when she married Armstead Walker Jr., a brick contractor, and was forced to leave her job, due to the school's policy against married teachers. Over the next decade, Walker's life was split between family and her work for the Order of St. Luke.

In 1895, Walker, who had been rising quickly through the ranks of the Order, became grand deputy matron. She also established a youth arm of the order to inspire social consciousness in young African Americans. Two years later, she became the grand secretary.

When Walker assumed control of the Order of St. Luke, the organization was on the verge of bankruptcy. In a speech she gave in 1901, she outlined her plans to save it, and in the coming years, she would follow through on each item she had described. In 1902, Walker founded the *St. Luke Herald* to carry news of the Order of St. Luke to local chapters and to help with its educational work. The following year, she opened the St. Luke Penny Savings Bank (of which she would be remain president until 1929). In 1905, she opened the St. Luke Emporium, a department store that offered African American women opportunities for work and gave the Black community access to cheaper goods.
In 1921, Walker ran for the seat of superintendent of public instruction on the Republican ticket, though she was defeated along with the other Black Republican candidates. Her work for the Order of St. Luke, however, was meeting with much more favorable results. By 1924, under Walker's continued leadership, the bank served a membership of more than 50,000 in 1,500 local chapters. Additionally, she managed to keep the bank alive during the Great Depression, despite the fact that many were failing, by merging it with two other banks in 1929.

For the last few years of her life, Walker suffered from diabetes, and was confined to a wheelchair. On December 15, 1934, at age 70, she died from complications of the disease. She was buried in Evergreen Cemetery in Richmond. In 1979, her home on East Leigh Street, in the Jackson Ward neighborhood of Richmond, known as the "Harlem of the South," was purchased by the National Park Service and became a National Historic Site.

Source: biography.com
You might have thought I was a strange kid for the things I did. I buried my hamster after it died, then dug it up a while later to see what it looked like. I was always curious."

- Linda Buck, 2004

“Not failure, but low aim is a crime.”

ROGER ARLINER YOUNG, ZOOLOGIST
Roger Arliner Young (1899-1964) was the first African American woman to receive a doctorate in zoology, granted in 1940 from the University of Pennsylvania. Her major contribution to science was discovery of the effect of direct and indirect radiation on marine creatures, especially on sea urchins, as well as on the structures controlling salt concentration, hydration and dehydration of living cells.

Young was born in Clifton Forge, Virginia, in 1899, but her family soon moved to Burgettstown, Pennsylvania. She enrolled at Howard University in Washington, D.C., in 1916, to study music, not taking her first science class until 1921. One of her teachers, Ernest Everett Just, a prominent scientist interested in marine biology and head of the Zoology Department, saw her promise and encouraged her. She graduated in 1923 with a bachelor’s degree. In 1926 she received her master’s degree from the University of Chicago, where she had been asked to join Sigma Xi, a scientific research society, an exceptional honor for a master’s degree student at that time.

In 1927, Just invited Young to work with him during the summer at Marine Biological Laboratory in Woods Hole, Massachusetts. Together they worked on the fertilization process of marine organisms as well as on the process of hydration and dehydration in living
cells. In 1929, Young became interim department head for the Zoology Department at Howard University while Just was in Berlin, and oversaw experiments using ultraviolet rays. These rays permanently damaged her eyes. When Just returned, she continued to work with him at the Marine Biological Laboratory during summers. Although he listed her as assistant in his grant applications, her name never appeared as joint author in his published research. Later, there were upheavals with Just in the Zoology Department and Young was fired in 1939. She had already enrolled at the University of Pennsylvania in 1937. Encouraged by Lewis Victor Heilbrunn, another scientist at the Marine Biological Laboratory in Massachusetts, she graduated with her doctorate in 1940. After leaving Howard University and until 1959, Young taught at the North Carolina College for Negroes, Shaw University, and colleges in Texas, Mississippi and Louisiana. She supported her disabled mother until her mother’s death and never married. During the 1950s, she hospitalized herself for mental problems. Dr. Young died on November 9, 1964.

THE CALUTRON GIRLS—solute enriched uranium was one of the most difficult aspects of the Manhattan Project, which produced the first nuclear bombs during World War II. Wartime labor shortages led the Tennessee Eastman Company to recruit young women, who were mostly recent high school graduates, to operate the calutrons that used electromagnetic separation to isolate uranium. Despite being kept in the dark on the specifics of the project, the “Calutron Girls” proved to be highly adept at operating the instruments and optimizing uranium production, achieving better rates for production than the male scientists they worked with.

THE MERCURY 13—also sometimes known as the “Members of the First Lady Astronaut Trainees” (FLATs) was a group of women who participated in training to become astronauts for the country's first human spaceflight program in the early 1960s. FLATs was never an official NASA program, and was unfortunately eventually discontinued, but the commitment and determination of these women to get into space has been credited with paving the way for such astronauts as Mae Jemison, the first African American woman in space.

Source: obamawhitehouse.archives.gov/women-in-stem
THE ENIAC PROGRAMMERS—As part of a secret World War Two project, six young women programmed the first all-electronic programmable computer. When the project was eventually introduced to the public in 1946, the women were never introduced or credited for their hard work—both because computer science was not well understood as an emerging field, and because the public's focus was on the machine itself. Since then, the ENIAC Programmers Project has worked hard to preserve and tell the stories of these six women.

Source: obamawhitehouse.archives.gov/women-in-stem

THE CODE BREAKERS—The contributions of women in science have often been lost to history. During WWII, women were able to break into fields historically dominated by men while so many served overseas. In the field of cryptography, female students were recruited from around the country and trained to decode Nazi and Japanese communication. Women ran the machines that attacked the German Enigma ciphers, maintained wall maps that kept track of U-boat locations and Allied Convoys, and wrote intelligence reports that would be used by naval commanders. Their work played a crucial role in ending the war.

Sources: politico.com, washingtonpost.com, Code Girls: The Untold Story of the American Women Code Breakers of World War by Lisa Mundy
SARAH MARSHALL BOONE was born into slavery in Craven County, North Carolina, on January 1, 1832. After years working as a seamstress, on April 26, 1892, she obtained United States patent number 473,563[1] for her improvements to the ironing board, designed to improve the quality of ironing sleeves and the bodies of women's garments. The board was very narrow, curved, and made of wood. The shape and structure allowed it to fit a sleeve and it was reversible, so one could iron both sides of the sleeve.

MIRIAM E. BENJAMIN, born September 16, 1861, was an American school teacher and inventor. On July 17, 1888, she obtained a patent for her invention, the Gong and Signal Chair for Hotels. As its name suggests, the chair had both a gong and signal connected to it. The chair would "reduce the expenses of hotels by decreasing the number of waiters and attendants." It was eventually adopted by the United States House of Representatives and was a precursor to the signaling system used on airplanes for passengers to seek assistance from flight attendants.


Women who used their own life's experiences to make life easier for others.
ELLEN EGLIN was born in 1849, in Washington, D.C. While living in D.C., Eglin made her living as a housekeeper and a government clerk. In the 1800s, she invented a special type of clothes-wringer which was a machine that had two rollers in a frame that was connected to a crank. Clothes would be fed in between the two rollers and as the crank was turned the clothes would have the water pressed out of them. She feared no one would buy her product because it was patented by a African American, so she sold her invention to a white person for $18.

SARAH E. JACOBS GOODE was born into slavery in 1855. She was granted her freedom after the Civil War and married Archie Good, a stair builder. They later opened a furniture store. Goode recognized the need for furniture that could fit in small spaces, like tenement apartments, so she invented a cabinet bed, which folded into a roll-top desk which had compartments for writing supplies and stationery. It was the precursor of the more well known Murphy Bed. She was only the second African American woman to be granted a patent.