

A forgotten story: Black women helped land a man on the moon

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This photo, unearthed by NASA historic preservationist Mary Gainer in 2011, was taken at the NACA Langley Memorial Aeronautical Laboratory (now NASA Langley Research Center) on November 4, 1943, during a visit by Frank Knox, then secretary of the Navy. NASA Langley Research Center

It all started with a photograph.

In 2011, Mary Gainer was a historic preservationist for NASA when she stumbled on a mysterious picture from 1943 that showed a thousand people standing in a huge building. Gainer figured that the black men posing in the front were probably machinists, and the rest of the group was mostly white men in suits and ties.

But scattered here and there was something unexpected. The picture showed women, some white and some black, in knee-length skirts.

Who Were These Women?

Gainer, who worked at Langley Research Center in Hampton, Virginia, asked her new intern, Sarah McLennan, to get to the bottom of it. There were too many to be the few secretaries employed then, so who were they, she wanted to know?

Little did Gainer know that another person was on a similar hunt. Margot Lee Shetterly was already a step ahead. Shetterly's father was a scientist who worked at Langley, so growing up in the 1970s and '80s, she was aware of the history of black women at NASA.

"There are these women and I knew them, and my dad worked with them and they went to our church and their kids were in my school," she said recently over the phone from her home in Charlottesville.

NASA Needed Math Whizzes

She suddenly realized this was a special story. Black women who lived in segregation-era Virginia were hired by NASA to do math and research that would launch men into space.

Shetterly started poking around and linked up with Gainer. Gainer's intern had already begun collecting stories from former employees and their families. Shetterly wrote a book about those math whizzes called "Hidden Figures." In January, a movie will be released with a cast that includes Taraji P. Henson, Octavia Spencer and Janelle Monáe.

With the movie, a piece of history that was nearly lost could become common knowledge.

Shetterly and her neighbors all knew the stories of these women. "Growing up in Hampton, the face of science was brown like mine," Shetterly writes in her book.

"Computers" Used Pencil And Paper

But at the very place where these smart women were employed, at NASA, the history was fading.

Everyone knows what a computer looks like. It has a hard drive, a monitor, a keyboard and a mouse. But in the middle of the last century at Langley, it looked different. Langley was, until 1958, part of the National Advisory Committee for Aeronautics (NACA), before it became NASA. Women who used pencils and paper to work on research were called computers. The first of their kind were hired in 1935, and their ranks swelled during World War II. Many male workers during that time had to leave their jobs to join the war effort. At most companies, men returned to their jobs after the war, and women returned to the home. But not at Langley. The female computers were essential as the needs for better aircraft gave way to a different kind of battle — the country wanted to beat Russia to the moon.

The women who had these jobs may not have felt remarkable. They were just happy to have work that paid better than the alternatives, like teaching and nursing. The jobs were considered easy, even though they required math skills.

Now 98, She Has Medal Of Freedom

One such woman was Katherine G. Johnson. At 98, she still lives in Hampton, Virginia. She has become one of the most famous of the computers. In the last year, she's won the Presidential Medal of Freedom, saw a building named after her and had a bench dedicated in her honor.

Like a lot of the other computers, Johnson studied math in college. At NACA, she worked on the life-or-death task of determining launch timing. Her calculations helped send Alan Shepard into space and guided him successfully back to Earth. They landed Neil Armstrong on the moon and brought him home.

Women On Team Were Segregated

Johnson was a trailblazer during a time of discrimination. The earliest group of black women who worked at NACA were segregated from another computing pool of white women. They had to use different bathrooms. At lunch in the cafeteria, they had to sit at a table with a white cardboard sign that read "colored computers."

One woman, Miriam Mann, snatched the sign off the table and hid it in her purse, throwing it out at home. It was always replaced, but Mann kept taking the signs and they stopped appearing. It was the first of many victories.

Shetterly is happy that people will know not just about the John Glenns of the world, she said, but the whole team that helped him get where he was going.

Quiz

- 1 Read the first two sections of the article. Which selection BEST shows that Gainer made an assumption about the photograph?
- (A) In 2011, Mary Gainer was a historic preservationist for NASA when she stumbled on a mysterious picture from 1943 that showed a thousand people standing in a huge building.
 - (B) Gainer figured that the black men posing in the front were probably machinists, and the rest of the group was mostly white men in suits and ties.
 - (C) Gainer, who worked at Langley Research Center in Hampton, Virginia, asked her new intern, Sarah McLennan, to get to the bottom of it.
 - (D) Little did Gainer know that another person was on a similar hunt. Margot Lee Shetterly was already a step ahead.
- 2 Select the paragraph from the section "NASA Needed Math Whizzes" that explains how the movie about black women at NASA will be more important than an average movie.
- 3 What is MOST likely the reason why the author included the details about Katherine Johnson's math calculations for NASA?
- (A) to show how black women were responsible for very important work
 - (B) to show why Johnson thought her job was easier than teaching or nursing
 - (C) to show why NASA used the word "computers" when referring to the women who worked on research
 - (D) to show how Alan Shepherd and Neil Armstrong got home from their space mission
- 4 Which answer choice accurately characterizes Miriam Mann's reaction to segregation in the section "Women On Team Were Segregated"?
- (A) She joined the earliest group of black women in the computing pool.
 - (B) She decided to use a different bathroom than the white women.
 - (C) She threw out the sign that labeled black women.
 - (D) She stopped appearing at the lunch table in the cafeteria.