

A black and white photograph of a woman sitting on a large aircraft, waving to a crowd in a stadium. The woman is wearing a light-colored shirt and dark pants. The aircraft is a large, multi-engine plane with a high wing. The crowd is visible in the background, filling the stadium.

International Women's Air & Space Museum Presents:

Defying the Odds:

Exploring the Impact of Women and Aviation in the First Half of the 20th Century



About the Exhibit

“Defying the Odds” explores the lasting impact of women in the world of aviation. Developed with the aid of two members of the Ohio History Service Corps AmeriCorps program, the exhibit presents just the tip of the iceberg of women’s history. Through a lens of international and U.S. history, “Defying the Odds” showcases and provides additional context of the world in which these female trailblazers lived. This is the first installment of some new and engaging ways the International Women’s Air & Space Museum is adding to our mission to inspire, educate, and preserve the experiences of women in all areas of aviation and aerospace. For more exhibits and to learn more, schedule a visit to the museum by going to www.iwasm.org and plan a trip to Burke Lakefront Airport – home to the International Women’s Air & Space Museum.

Special Thanks to:



AmeriCorps
Ohio

Early Aviation and the Context of the 1900s

At the turn of the nineteenth century, a new era of imperial power, progressive reform, and technological advancement swept the globe. As the U.S. became a world power in Asia and Central America, European countries continued to colonize Africa causing growing tensions among the imperial countries that would eventually lead to war.¹ Meanwhile, industrial economies and the growth of cities fueled a group of reformers known as Progressives to push for the end of corrupt governments, suffrage for women, and better working conditions in factories.² Alongside these progressive efforts, however, southern states in the U.S. laid the foundation for Jim Crow laws that limited the rights and jeopardized the lives of African Americans for decades.³

Underlying the events of the 1900s was the continual improvement of technology. Throughout the decade, the use of telephones and electricity in homes and businesses was gradually increasing and the automobile was quickly becoming a viable mode of transportation. Amid the technological marvels came the Wright Brothers and their first successful flight of a heavier-than-air machine at Kitty Hawk, NC, in 1903. The Wright Brothers' success ushered in the era of aviation and prompted the first decade of flight -- a time period plagued by the unstable, dangerous airplanes available but full of experimentation in a new form of travel.⁴

Katharine Wright (1874-1929)

Wilbur and Orville Wright invented the first airplane but they may not have received this recognition if not for their sister. Katharine Wright was a teacher, suffragist, and advocate for her brothers. In addition to financially assisting their research, Katharine often spoke on behalf of her reserved siblings.⁵ In 1909, she traveled around Europe with Wilbur and Orville to promote their aircraft. Katharine impressed those she met to the point that many speculated she had played a greater role than she let on in her brothers' invention. Although Katharine helped run the family's bike shop to support her brothers' research and occasionally served as a passenger in their airplanes, it is likely that she was a soundboard for her brothers' ideas rather than a co-inventor.⁶

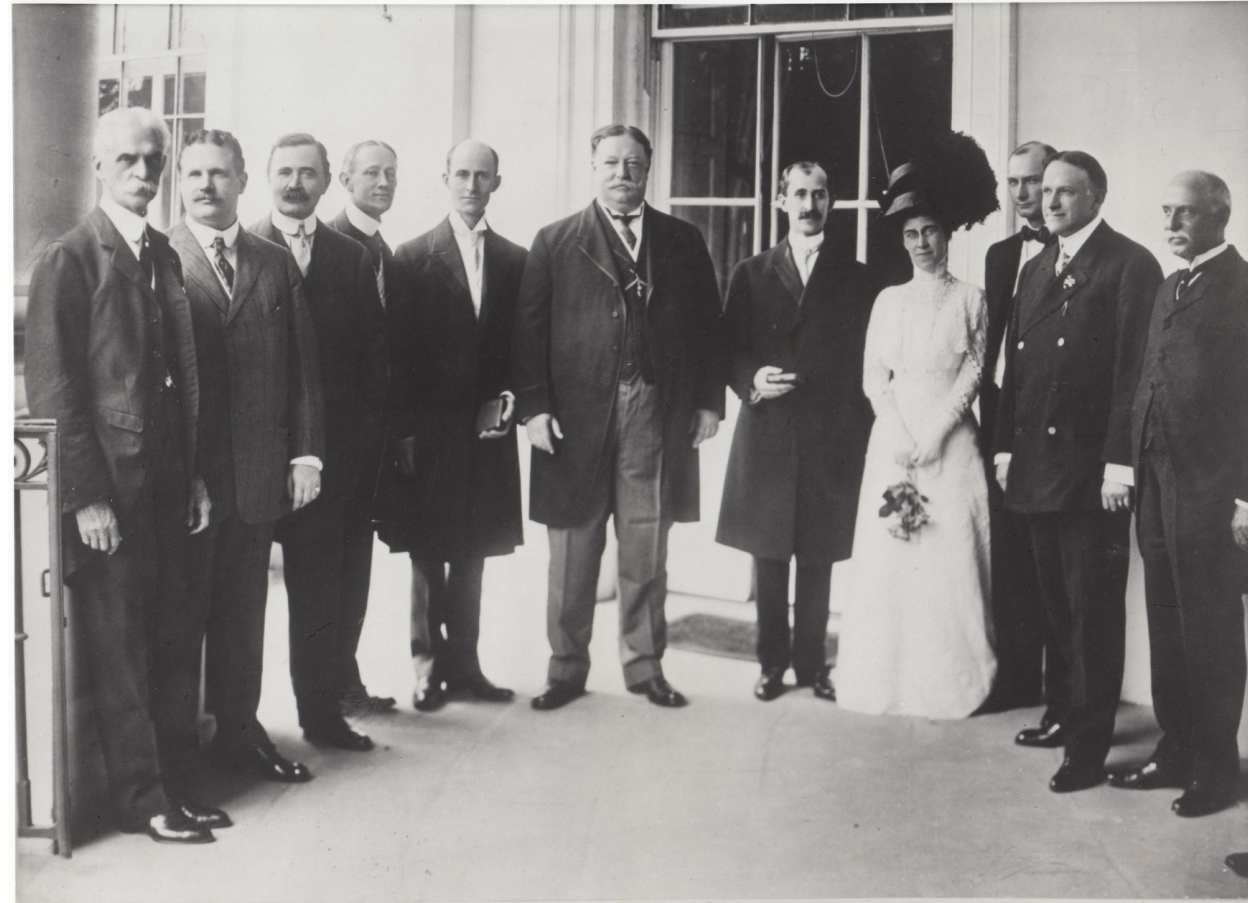


Image 1

Katharine White at the White House with President William Howard Taft (Center), with brothers Orville (left of Taft) and Wilbur (between Pres. Taft and Katharine).



Image 2
Katharine, Orville, and
Wilbur Wright in 1909.

"If you ask me, there was no reason, and never has been, why women should sit around and wait for men to turn up."⁷

Katharine Wright

Thérèse Peltier (1873-1926)

In the early years of aviation, people from all walks of life dabbled in flying planes. For Thérèse Peltier, aviation was a hobby of her friend and fellow French wax sculptor, Leon Delagrance. Delagrance brought Peltier with him on a trip to Italy and on July 8, 1908, Peltier became the first woman on record to be a passenger in a heavier-than-air craft.⁸⁻⁹ After this taste of flight, Peltier decided to learn how to fly by accompanying Delagrance around Italy and observing his flights. By September 1908, Peltier completed her first solo flight, however her aviation career was short-lived. In 1910, Delagrance died in a plane accident and Peltier vowed to never fly again.¹⁰ Peltier's experience of loss in plane accidents was a common occurrence in the early, dangerous years of aviation.

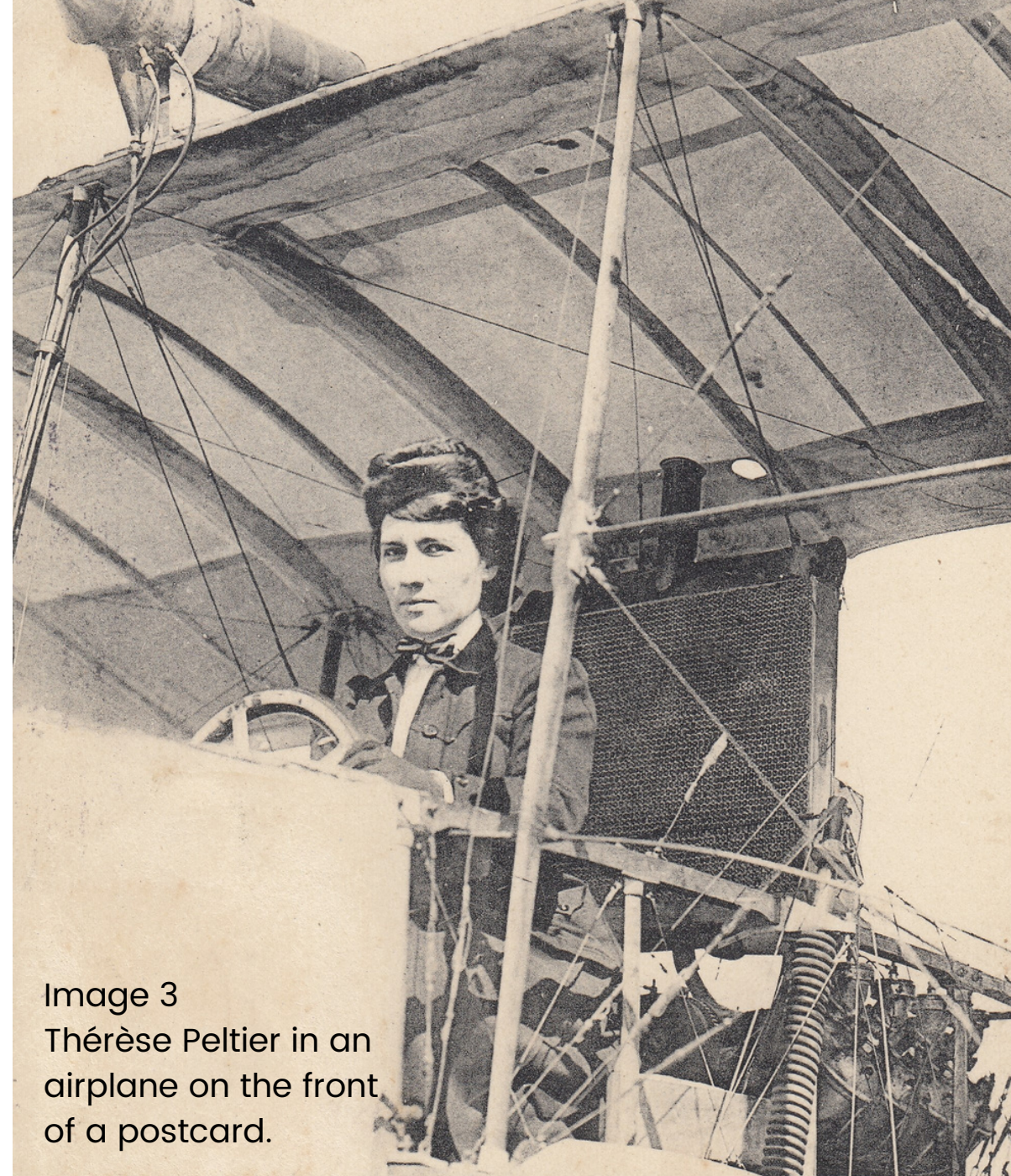


Image 3

Thérèse Peltier in an airplane on the front of a postcard.

Emma Lilian Todd (1865-1937)

In 1909, The New York Times described Emma Lilian Todd as “a little woman who has invented and built one of the handsomest aeroplanes in existence.” Todd spent years studying dirigibles and the properties of equilibrium before attempting her full-scale airplane design. Her final product consisted of an automobile engine, aluminum, spruce, silk, and piano wire and had curved wings based on the shape of an albatross’s wings. There is no record of Todd successfully flying her aircraft, however this could be credited to the fact that she was repeatedly denied a pilot’s license in the U.S. because of her gender. Despite this setback, Todd continued to share her wealth of knowledge by creating the Junior Aero Club of the United States. The club included boys from across the country who came to Todd’s house to learn about aeronautics.¹¹



Image 4
"Miss Todd" near one of her
airplane prototypes in 1906.

Early Aviation and the Context of the 1910s

While Progressive reforms and industrial advancement continued in the 1910s, the decade was defined by the First World War. During WWI, women, many of whom had never worked outside the home before, took on factory jobs and joined the war effort as volunteers in the Red Cross and ambulance corps. This new found freedom for women was mirrored for African Americans who were allowed to serve in all branches of the U.S. military during the War. By the war's end, however, women had achieved the right to vote with the passage of the 19th Amendment whereas African Americans led a fruitless push for expanded civil rights into the 1920s.¹²

The 1910s were a period of great growth in the aviation industry. After a handful of horrific plane crashes, airplane manufacturers began to take safety features more seriously and included seat belts as an essential part of flight. For women at this time, increased accessibility to cars often served as a first step towards taking on the challenge of flying. With the outbreak of WWI, over 25,000 women worked in airplane production. Initially, these women were only allowed to sew parachutes, but gradually they were allowed to weld and participate in other aspects of assembly. At the end of the War, however, societal expectations forced women in airplane factories to return to the domestic sphere, a trend that also impacted female pilots who often had to give up flying once they had a family.¹³

Harriet Quimby (1875-1912)

Harriet Quimby was a young New York City journalist in 1910 when she covered the story of a pilot on Long Island and fell in love with the idea of aviation. Quimby enrolled at the Moisant Aviation School and she quickly became the first woman to earn a U.S. pilot's license. During her brief flying career, Quimby continued to work as a journalist and hoped to make enough money through aviation to become financially independent and start her creative writing career. Quimby was a popular figure in the aviation community and she was known for her purple silk jumpsuit that could button into pants while she flew and unbutton into a dress when she was outside the plane.¹⁵ Quimby's aviation career was cut short when she tragically died in a plane crash during an exhibition in Boston on July 1, 1912.¹⁴



Image 5
Autographed image of
Harriet Quimby.



Image 6
View of Quimby's
famous flight suit.

"The men flyers have given out the impression that aeroplaning is very perilous work, something that an ordinary mortal should not dream of attempting. But when I saw how easily the men flyers manipulated their machines I said I could fly."¹⁶

Harriet Quimby

Katherine (1892-1977) and Marjorie Stinson (1895-1975)

Katherine and Marjorie Stinson were part of an aviation-minded family. In 1912, Katherine became the youngest woman at the time to earn her U.S. pilots license, and two years later, her younger sister also earned her license at Wilbur Wright's flying school.¹⁷ Once the sisters had their licenses, their mother financially helped them open Stinson Flight School in San Antonio, Texas. The school was a true family affair with the sisters' siblings, Jack and Eddie, assisting as flight instructors and mechanics. In addition to running their school in the 1910s, Katherine was a popular stunt aviator known as the "flying schoolgirl" and Marjorie was part of the U.S. government's early attempts at air mail service.

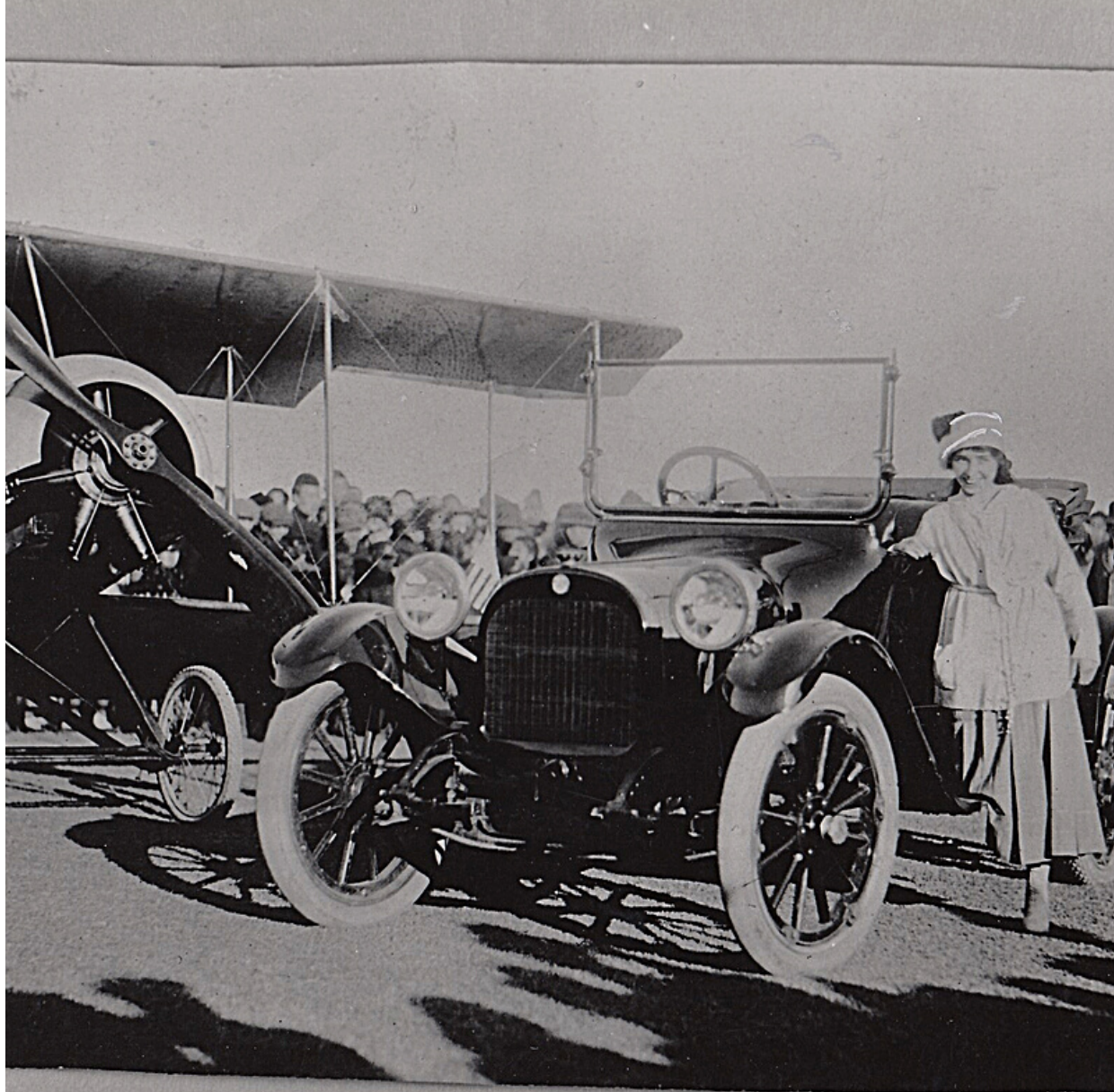


Image 7
Katherine Stinson visits China in 1916.



Image 8
Marjorie Stinson
operating a plane.

When WWI broke out, the women applied to be pilots in the War but they were denied because of their gender. Undeterred, the women helped the war effort by training male pilots. After WWI, Katherine retired from aviation after suffering from a prolonged illness while Marjorie became a draftsman in the Aeronautical Division of the U.S. Navy.¹⁸

"My mother never warned me not to do this or that for fear of being hurt. Of course I got hurt, but I was never afraid."¹⁹

Katherine Stinson

Amalia Celia Figueredo (1895-1985)

As a nineteen-year-old in Argentina, Amalia Celia Figueredo lived near the Villa Lugano aerodrome, where she befriended Paul Castaibert, a French aviator and airplane builder.²⁰ Castaibert started to give Figueredo flight lessons, however Figueredo was frustrated that all of her training took place on the ground, so she enrolled in the San Fernando School where she earned her pilot's license in 1914.²¹ Figueredo was the first woman in Argentina and possibly in all of Latin America to become a pilot. In her short career, she participated in air shows and was a popular air performer. Despite Figueredo's love for flight, the societal expectations of the time intervened in 1916 when she married Alejandro Pietra. Once she was married, Figueredo gave up aviation and even after her husband's death in 1928, she never returned to the air.²²



Image 9

Amalia Celia Figueredo sitting in an airplane.

Princess Eugenie Mikhailovna Shakhovskaya (1889-1920)

It can be difficult to discern fact from fiction in records of early aviation accomplishments as Princess Eugenie Mikhailovna Shakhovskaya demonstrates.²³ Although her early years are poorly documented, she was believed to be related to the Russian royal family and thus a princess, but it is more likely she was a duchess due to her brief marriage to Andrey Shakhovskaya. Eugenie was known to have an affinity for “men’s hobbies” including shooting, swordplay, and cars, and in 1912 she earned her pilot’s license in Germany.²⁴ She briefly gave up aviation in 1913 after a crash in which her passenger, Vsevolod Abramovich, died, but she quickly returned to aviation with the start of WWI. Eugenie served in the Russian Air Force for a month until she was accused of espionage. Despite the brevity of her service, Eugenie is the first woman on record to fly an aircraft in a war.²⁵



Image 10
Princess Eugenie with
Vsevolod Abrmaovich
in 1913.

Early Aviation and the Context of the 1920s

Known as the “Roaring Twenties” and “The New Era,” the 1920s were full of opportunities and change.²⁶ Throughout the decade many people saw an increase in their wages and found ways to spend this new, ‘disposable’ income on entertainment, automobiles, radios, movies, and home appliances. However the 1920s were also full of conflict and limitation. In the U.S., the passage of the 18th Amendment enforced prohibition and led to an increase in organized crime and speakeasies. At the same time, Jim Crow laws fueled a surge in KKK activity and lynchings of African Americans throughout the U.S.²⁷

Following World War I, women had new freedoms and the aviation industry boomed. Women began entering the mainstream workforce in higher numbers and experienced significant societal changes. While these freedoms helped women earn some acceptance in aviation, it also presented new pressures for women to perfect their bodies and old pressures to remain in the domestic sphere.²⁸

Pilots during the 1920s fixated on setting new records, air racing, and barnstorming. Large crowds attended aviation demonstrations, such as the first National Air Show in 1920, to awe at the stunt pilots. Women, however, struggled to find support for their flight careers. In particular, aircraft manufacturers refused to endorse female pilots, leaving women with planes that had inferior maintenance and equipment. Despite these setbacks and the difficulty of making money from flying,²⁹ women pushed the boundaries during the 1920s.

Bessie Coleman (1892-1926)

At the same time that Amelia Earhart was starting her aviation career, Bessie Coleman was a young black woman from Texas trying to find a school in the U.S. that would teach her to fly. After facing repeated rejection based on her race and gender, Coleman traveled to France where she became the first African American woman to earn her pilot's license in 1921.³⁰ When Coleman returned to the U.S., she flew in exhibitions around the country and gained the moniker "Brave Bessie." Coleman's dream was to save enough money to one day open a flight school for African Americans. However in 1926, Coleman died in a plane crash before an exhibition in Orlando, FL.³¹

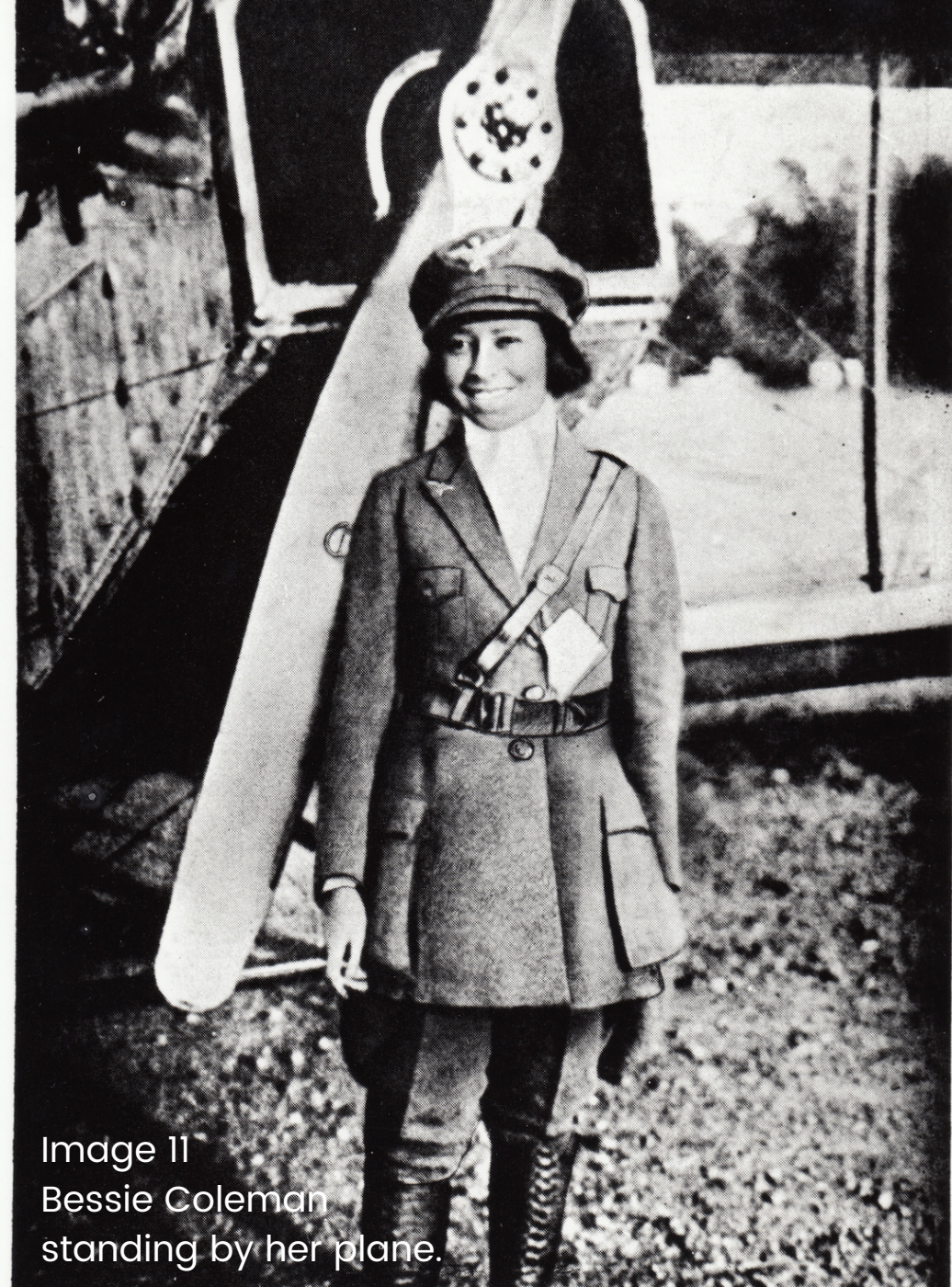


Image 11
Bessie Coleman
standing by her plane.



Image 12
Portrait of Bessie Coleman.

Although Coleman never saw her flight school come to fruition, her legacy has inspired others to follow her dreams of flight. For example, Coleman was close with her nieces and nephews and one of her nephews, Arthur Freeman, became a pilot and mechanic for the Tuskegee Institute.³² In 1931, pilot William J. Powell founded the Bessie Coleman Aero Club with the purpose of promoting flying and trade education to all races and to women as a way to break down racial barriers.³³

**"The air is the only place free from
prejudices."³⁴**

Bessie Coleman

Nellie Zabel Wilhite (1892-1991)

Nellie Zabel Wilhite was the world's first deaf pilot and the first female to earn a pilot's license in South Dakota. Wilhite became deaf at age two after contracting measles and while many people with a disability in the 1920s found themselves outcasts in society, Wilhite persevered with the unwavering support of her father, brother, and friends. In 1927, she decided to take flight lessons in secret.³⁵

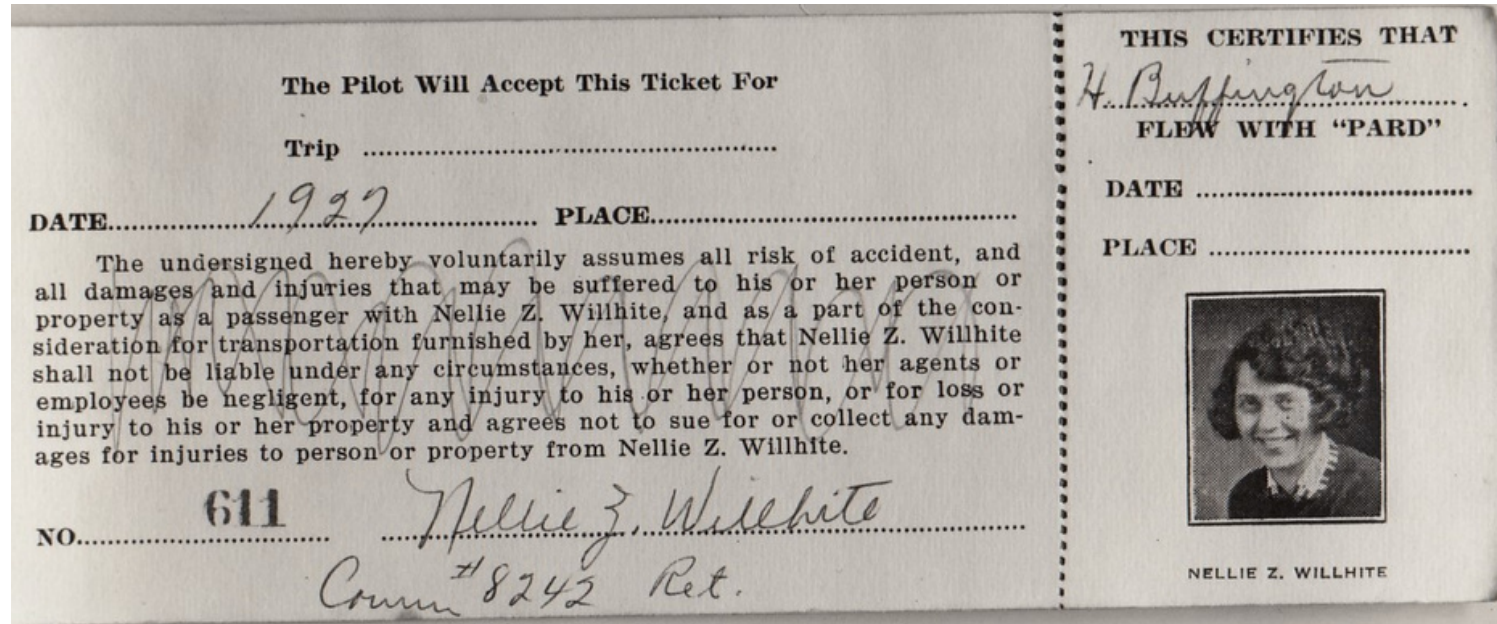


Image 13

Passenger ticket for a ride with Nellie Zabel Wilhite in 1927.

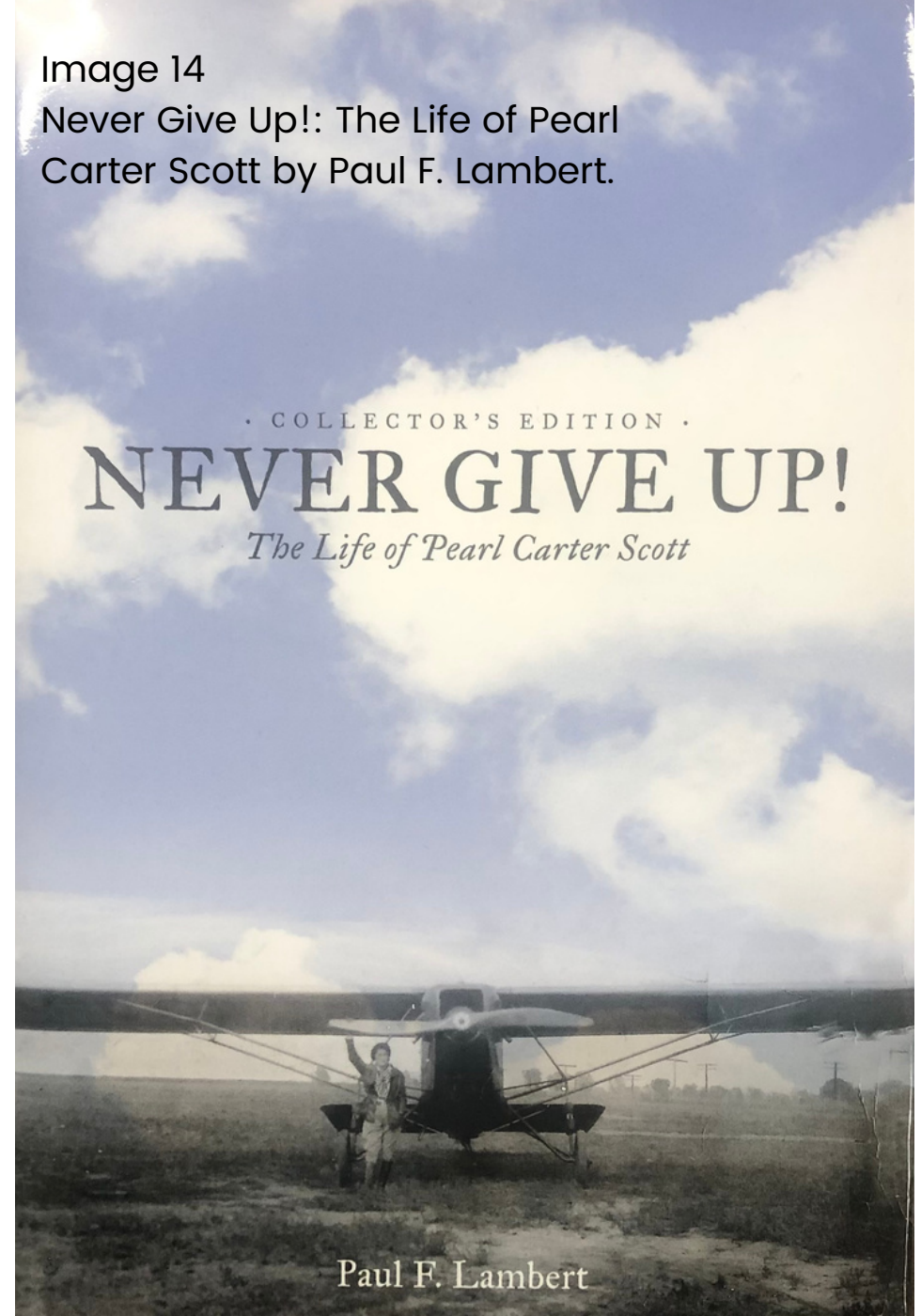
After earning her license, Wilhite's father bought her a plane, that she named "Pard" after her father, and she became a barnstormer.³⁶ Wilhite performed across the country and was known for her acrobatics, flour bombing, and balloon racing. During WWII, Wilhite served as a flight instructor and after the War, she became a commercial pilot. Despite continued oppression based on her gender and disability, Wilhite had a long and successful career in aviation.³⁷

Eula “Pearl” Scott (1915-2005)

In 1930, thirteen-year-old Eula “Pearl” Scott became the youngest licensed pilot in the U.S. and the first Chickasaw aviator. Scott had an adventurous upbringing learning how to drive at the age of twelve and how to fly with the guidance of famous pilot Wiley Post at age thirteen.³⁸ Scott’s father was blind and encouraged his daughter to take risks and live her life to the fullest. After earning her license, Scott performed as a stunt pilot and transported her father by air to his various business meetings around the country. As with many women at the time, however, Scott’s career was cut short when she married at age eighteen and quit flying. Scott felt that she could not fly without being tempted to perform stunts which was too risky with her children and husband to consider.³⁹

Image 14

Never Give Up!: The Life of Pearl Carter Scott by Paul F. Lambert.



1929 First Intercontinental Women's Air Derby

Although more women joined the aviation industry in the 1920s, they continued to be excluded from racing. In August 1929, this changed when the first Intercontinental Women's Air Derby took off from California for a nine day race to Cleveland, OH.⁴⁰ Twenty women competed in the competition, but only fourteen crossed the finish line after five dropped out due to plane issues and one woman lost her life. Some of the most famous female pilots of the day competed in the competition including Amelia Earhart, Pancho Barnes, and Ruth Elder. The young Louise Thaden won the competition and the \$25,000 grand prize after traveling over 2,759 miles.⁴¹



Image 15
Winner of the Derby,
Louise Thaden, poses
on her airplane.



Image 16

Photo of three airplanes in Terre Haute, Indiana, that flew in the 1929 Women's Air Derby.

Despite the grand entry of women into air racing, female pilots still faced skepticism from a society that thought flying was a man's sport. Instead of simply being called pilots, female aviators were referred to as ladybirds, flying flappers, sweethearts of the air, and girl fliers, and their first air race was referred to as the "Powder Derby".⁴² Realizing their shared experiences at the Air Derby, a group of female pilots gathered in November 1929 to form the 99's, a social and professional organization for female pilots that still exists today.⁴³

Early Aviation and the Context of the 1930s

The fourth decade of the 20th century produced some of the world's most iconic images of the Dust Bowl, long lines for jobs and food, and the establishment of many modern programs Americans still utilize today. After the U.S. stock market crash in October 1929, the effects reverberated across the globe. International markets were hard hit – especially in Europe which was still recovering from the lasting legacy of the First World War. American farmers struggled with a surplus for a decade leading into the 1930s. Shantytowns spread across the U.S. as the effects of the Great Depression take hold in the country. During the struggles of the Great Depression, radical politics take hold across the world and lead to the rise of facism, Naziism, and communism in Europe. Clothing during this era was less extravagant and manufacturers developed cheaper, new materials to accommodate the Great Depression economy. By 1930, Adolf Hitler and the Nazi Party, founded in 1920, had gained power in the Weimar Republic. Tensions were rising in the young Soviet Union after Josef Stalin's first Five Year Plan. Yet, innovation still found a way to influence geopolitical relations and the lives of every day people. It was during this decade that scientists in Argentina developed the formula for synthetic rubber, thus revolutionizing the aviation and automobile fields. Due to the staggering unemployment rates, many white women entered the workforce at record levels whereas Black women only held a slight hold on their previous employment opportunities.⁴⁴

Even with the deep impact of the economic and political unrest on the global scale, many women found enhanced opportunities to further their passion for flight. The 1920s and the advances in the world of aviation since World War I meant improved aircraft, more opportunities for speed records, competitions, and the wider availability for women throughout the world to become pilots themselves.

Katherine Sui Fun Cheung (1904-2003)

Katherine Sui Fun Cheung was the first Chinese-American woman to earn her pilot's license. Born in Canton, China in 1904, Cheung moved to California at the age of 17 to live with her father.⁴⁵ She originally pursued a career in piano performance, but her driving lessons at Dycer Airport soon ignited her passion for flying.⁴⁶

Cheung's interest in driving cars and flying planes was not typical of society's expectations for women at the time. In 1932, she began flying lessons at the Chinese Aeronautical Association and received her pilot's license the same year. At this time, only one percent of licensed pilots in the United States were women.⁴⁷ Cheung went on to become a member of the Ninety-Nines Club and participated in air races, stunt flying, and air shows. She became an American citizen in 1935, earned her commercial pilot's license, and joined the American Aviation Association.⁴⁸



Image 17
Katherine Sui Fun
Cheung preparing to
start her airplane in 1934.



Image 18
Katherine Sui Fun Cheung
posing with friends in 1931.

Cheung spent time encouraging other Chinese women to learn to fly, and hoped to open a flying school in China. The Chinese American community supported Cheung by fundraising and purchasing a Ryan ST-A plane for her to train new pilots. Little did they know, this plane would halt her flying career. Cheung's cousin, who took her on her first airplane ride in 1931, decided to take the brand new plane for a ride. On this tragic flight, her cousin crashed the plane and was killed. Out of fear, her father begged her to stop flying. Eventually, she respected her father's wishes and took her last flight in 1942 when she was just 38 years old. Although she stopped flying,⁵⁰ she remained active in organizations and is still a key figure in women's history in aviation to this day.

"I wanted to fly, so that's what I did."

Katherine Cheung



Image 19
Katherine Sui Fun Cheung in center.

**"I don't see any reason why
Chinese girls shouldn't be just
as good pilots as girls
anywhere."⁵²**

Katherine Cheung

Anne Morrow Lindbergh (1906-2001)

Ann Morrow Lindbergh is affectionately considered the “First Lady of the Air.” Lindbergh was born in New Jersey in 1906, and married well-known pilot Charles Linbergh in 1929. It was he who began teaching Anne how to fly, and she earned her pilot's license the same year they were married. By 1930, Anne was the first woman in the United States to receive a first-class glider pilot's license.⁵³

"Flying was a very tangible freedom. In those days, it was beauty, adventure, discovery – the epitome of breaking into new worlds."⁵⁴

Anne Morrow Lindbergh



Image 20
Anne Morrow Lindbergh in her flying gear.



Image 21
Anne Morrow Lindbergh
stepping into a glider plane.

Anne would accompany her husband on record breaking flights, acting as his co-pilot, navigator, and radio operator.⁵⁵ These trips made her the first woman to fly across the South Atlantic. She kept diaries of her travels, which would later help launch her career as a writer. Forward thinkers, Anne and Charles took these journeys scouting out potential airways and airports for commercial flight.⁵⁶

The pair's accomplishments thrust them into the spotlight, making them a celebrity couple of the 1920s and '30s known as the "First Couple of the Skies."⁵⁷ Anne received the National Geographic Society's highest award, the Hubbard Gold Medal, being the first woman to do so. Although it has been said that she didn't love the limelight, her feats in aviation and writing have influenced the lives of many women in the United States.^{52,56}

Lotfia El Nadi (1907-2003)

In 1933, Lotfia El Nadi became the first female in Egypt, and all of Africa, to earn a pilot's license. El Nadi, born in Cairo in 1907, received her pilot's license at the age of 26. El Nadi watched as female pilots began to appear in Western societies, and believed if they could do it, so could she.⁵⁸

Her dreams of flying became possible with the opening of the first and only flying school in the area. Her parents would not pay for her flying lessons, so she worked as a secretary for the school in exchange for lessons, although it was looked down upon for Egyptian women of her class to work. El Nadi did not let the pressures of social norms stop her from flying.⁵⁹



Image 22
Lotfia El Nadi ca 1933.



Image 23
Lotfia El Nadi

She entered international races in Egypt and was determined to make a solo flight from London to Cairo, but did not receive enough funding.⁶⁰ After retiring from flying, she worked with the Aero Club of Egypt. Her ambition paved the way for other Egyptian women to enter into the world of aviation. El Nadi challenged gender roles and played a large part in feminist movements across Egypt.

She received the Award of Achievement from The Ninety-Nines in 1992, the Order of Merit from the World Aerospace Education Organization, and was honored as the first lady of the aviation community in Egypt by EgyptAir.⁶¹

**"I learned to fly because
I love to be free."⁶²**
Lotfia El Nadi

Early Aviation and the Context of the 1940s

By 1939, Nazi Germany had annexed Czechoslovakia and were planning the invasion of the Soviet Union through Operation Barbarossa. American industry was back online thanks to the economic recovery part of the New Deal and wartime production part of the Lendlease agreements with American allies. December 7 and 8, 1941 witnessed the attacks on not only the U.S. Naval base at Pearl Harbor, but also the attack on British colony of Hong Kong by Imperial Japan. Throughout the decade, women once more found themselves at the center of wartime industry. However, while countries like the U.S. utilized flashy marketing strategies to redefine traditionally men's jobs to meet production's needs for female recruitment, one study showed that results did not meet expectations. Increasingly, women were recruited and hired, but faced discrimination in certain job placement based on sex. One report showed that 85% of women needed to continue working after the war and expected their work would provide seniority once veterans returned. This was not the case throughout, and only told the story of many middle-class women, who in larger droves first joined the industrial work. Women of color and lower socio-economic status had, in the 1930s been part of the modernization and unionization of typically blue-collar work. Women of color, also faced continuing discrimination in opportunities in aviation. The WASP, while accepting only two Chinese-American women with Hazel Ying Lee and Margaret (Maggie) Gee, were not accepting of African American women. Additionally, women served in other support roles within aviation including as air nurses, or domestically with the U.S. Women's Army Auxiliary Corps (WAAC) stationed at Army Air Bases such as Patterson Army Air Base in Dayton, OH.

Rebecca Chan Chung (1920-2011)

Born in 1920 in Guangzhou, China, Rebecca Chan Chung graduated from the Diocesan Girls' School of Hong Kong. At the time, Hong Kong was a British colony and on December 8, 1941 – the day after the Pearl Harbor attack on the United States' naval base in Hawaii – the Japanese laid siege to the city. Throughout what became known as the Battle of Hong Kong, Rebecca completed her nursing apprenticeship and worked with the Flying Tigers. The group, composed of former American military pilots, were officially known as the American Volunteer Group (AVG) and are frequently recognized with the planes bearing a shark's mouth. When the U.S. Army Airforce absorbed the Flying Tigers in 1943, Rebecca joined the China National Aviation Corporation (CNAC) as a stewardess. Her background and training in nursing was part of her prerequisite for the job. While with the CNAC, she flew over the Hump – the passage in the Himalayas between India and China – more than 50 times. After the war, she led the nursing school at the Tung Wah Group Hospitals and in 1974, immigrated to Canada. In 2012, shortly after her death, Rebecca Chan Chung was awarded an honorable discharge from the U.S. Army for her services.⁶⁴



Image 24
Rebecca Chan Chung in CNAC uniform.
Photo courtesy of Deborah Chung.

Women at War

With the war waging in Europe and the Battle of Britain underway, many women from the U.S., Canada, and four other continents went to England to join the Air Transport Auxiliary (ATA). These women included Betty Keith-Jopp from South Africa, and more than 164 women by the end of war. These 164 women were the only of the Western Allies to fly in active war zones. Among them was American Margaret Frost who, along with 24 other women, joined the ATA in 1942. ATA pilots flew torpedo bombers, Lancasters, and Spitfires.⁶⁵

In Fall 1942, American Nancy Love formed the Women's Auxiliary Ferrying Squadron (WAFS) whose duty was to fly trainers to Army training schools, and was modeled after the ATA. However, women like Teresa James and Betty Gillies had to have a minimum of 500 flight hours to be part of the WAFS compared to some of the newer pilots in the ATA. By 1943, Jacqueline Cochran was named Director of all Women Pilots and renamed the WAFS and WFTD (Women's Ferrying Transport Division) to the Women Airforce Service Pilots (WASP). In all there were 1,102 WASP. Women's role during wartime aviation was not just as ferriers and trainers.⁶⁶



Image 25
WAFS Teresa James and Betty Gillies at the P47
modification center in Illinois. Sept. 1943.

Women at War

The iconic symbol of domestic wartime production in the United States was Rosie the Riveter. With the need for greater output to support the war effort for American servicemen and allies, the war resulted in higher numbers of middle-class women entering the manufacturing sphere. Two women, Constance Bowman and Clara Marie Allen were among them. Two teachers, they joined thousands of others who spent their summer vacations “Keeping ‘Em Flying.” However, their wartime contribution and experiences were in stark contrast to women of color and lower socio-economic status who were already working and were part of unionization during the 1930s in manufacturing.



Image 26
The Douglas Aircraft Plant in Tulsa, OK.
Taken by Sally Porta

Willa Brown

The founder of the Coffey School of Aeronautics, Willa Brown and her husband trained African American pilots during the 1930s at their Harlem Airport in Chicago. Born in Kentucky in 1906, Brown was inspired by Bessie Coleman and other early aviators in not only pursuit of flight, but also activism on behalf of her community. In 1936, she proposed the idea of having an African American air show in Chicago which drew close to 300 people.⁶⁸

At a time when segregation was common practice, she successfully petitioned the U.S. Government to integrate the Army Air Corps, and Brown went on to train many of the celebrated African American pilots during World War II. Brown was not only an advocate for her community, but she also became the only woman to be both licensed in mechanics and as a commercial pilot by 1943.⁶⁹



Image 27
Willa Brown at Harlem Airport in Chicago.

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Image 1: Katharine Wright at the White House. n.d. Photograph. International Women's Air and Space Museum. Cleveland, OH.

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Image 4: E. Lillian Todd standing with her airplane. 1906. Photograph. Library of Congress. <https://www.loc.gov/item/2002722147/>.

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Image 5: Harriet Quimby in an airplane. n.d. Photograph. International Women's Air and Space Museum. Cleveland, OH.

Image 6: Marceau, Theodore C. Harriet Quimby, full-length portrait, standing, in aviation costume. Marceau, New York, ca. 1911. Photograph. Library of Congress. <https://www.loc.gov/item/99402707/>.

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Image 10: The duchess Eugenia Mikhailovna Shakhovskaya and Vsevolod Mikhailovich Abramovich. 1913. Photograph. <https://russkiymir.ru/upload/medialibrary/5f5/5f5c09fceb31ca4f06c4dcc96d612e9.jp>.

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- Image 11: Bessie Coleman standing by airplane. n.d. Photograph. International Women's Air and Space Museum. Cleveland, OH.
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Image 24: Rebecca Chan Chung in CNAC uniform. Photograph courtesy of Deborah Chung.

Image 25: WAFS Teresa James and Betty Gillies at P47 Modification Center on Sept. 24, 1943. International Women's Air & Space Museum. Cleveland, OH.

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Image 27: Willa Brown at Harlem Airport in Chicago. International Women's Air & Space Museum. Cleveland, OH.