

The Ninety-Nines, Inc., International Organization of Women Pilots, and the History of Women in Aviation and Space



Presented By:
Linda Bangert

99s Slide credits:
Finger Lakes Chapter

Some Context

- The Wright Brothers first sustained, controlled, powered, piloted flight - December 17, 1903.
- First powered, piloted flight with unaided takeoff in Europe - October 23, 1906 by Alberto Santos-Dumont (200 ft).
- Wilbur Wright demonstrated their flyer in France in August 1908, making a 1.75-minute flight with banking turns and flying in a circle.
- Meanwhile, Orville Wright demonstrated to the U.S. Army at Fort Myer, VA starting September 3, 1908. On Sep 9, he made the first hour-long flight (62:15).

Woman Pilots in History



Thérèse Cochet Peltier

- First woman to pilot an aircraft - 1908 in France in a 1907 Voisin biplane
- She completed several solo flights, but did not complete her license.

Blanche Stuart Scott

- First female pilot to solo an airplane in the United States - September 1910
- Only woman taught to fly by Glenn Curtiss





Raymonde de Laroche

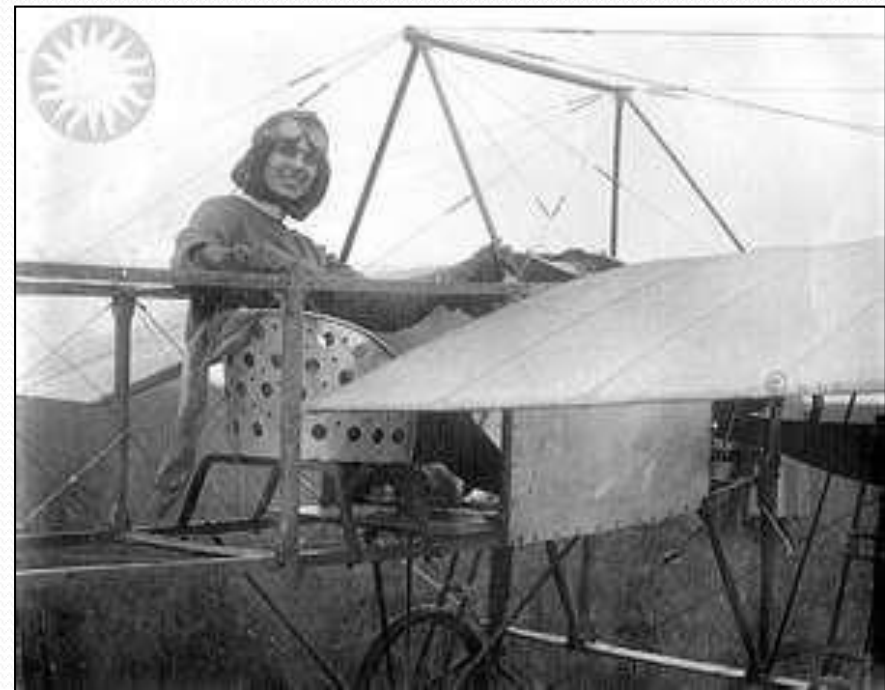
- World's first licensed woman pilot in the world (France) in March 1910 - Fédération Aéronautique Internationale license #36.

Harriet Quimby

- 1911: 1st woman licensed as a pilot in the US
- 1912: 1st woman to fly solo across the English Channel
- During an exhibition in Boston, she and her passenger fell out of her plane – no seat belts!



Harriet Quimby on a 1911 Postage Stamp (Source: National Postal Museum)



Bessie Coleman

- First black woman to earn a pilot license - in France
- First licensed black woman aviator in U.S.
- Pursued a career as an aerobatic stunt pilot



1929 Women's Transcontinental Air Derby

20 women, 9 Days, 2,800 miles

Santa Monica, CA to Cleveland, OH



Challenges

- **No aeronautical charts**
- **Open cockpits / engine exhaust**
 - **Pre-race, Louise Thaden had suffered carbon monoxide poisoning from the exhaust. Her crew rigged a fresh-air tube for her. She said she stayed glued to that tube the whole race.**
 - **Marvel Crosson crashed and died during the race, probably from carbon monoxide**
- **Margaret Perry - caught typhoid fever, did not finish**
- **Exhausting schedule - each overnight stop had media attention and dinner banquets**

Challenges (cont.)

- **At race stops, there was no crowd control, leading to accidents or possible sabotage**
 - **Blanche Noyes had an in-flight fire, landed and put it out with sand. A cigarette butt was found in her baggage compartment. She didn't smoke. Completed race.**
 - **Pancho Barnes crashed into a car that drove onto the runway as she was trying to land. Did not finish.**
 - **Claire Mae Fahy - wing wires snapped - possibly acid. Withdrew from race.**

Challenges (cont.)

- **Opal Kunz's 300 horse power Beech Travel Air was deemed by the judges to be 'too fast for a woman to fly', even though she owned and flew it. Forced to borrow a less-powerful plane for the race, she finished eighth.**
- **Crashes**
 - **Amelia Earhart damaged her propeller on the first leg, and the race was held up until she could get a new one. (Pancho Barnes was peeved that she did not get similar consideration after her crash.)**
 - **Ruth Nichols - crashed, did not finish**



1929 Women's Transcontinental Air Derby Participants

Heavy Division (510 - 875 in³ engines), in order of Finish

Louise Thaden
Gladys O'Donnell
Amelia Earhart
Blanche W. Noyes
Ruth Elder
Neva Paris
Mary Haizlip
Opal Kunz
Mary von Mach
Vera Dawn Walker

1929 Women's Transcontinental Air Derby Participants

Light Division (275 - 510 in³ engines), in order of Finish

Phoebie Omile

Edith Foltz

Jessie Keith-Miller - Australian

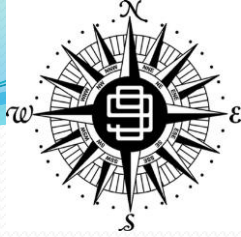
Thea Rasche - German

Bobbi Trout - finished, but was un-timed

After the race, the women met under the bleachers at the Cleveland Air Race and decided that they should form a club of women pilots.



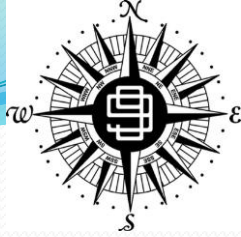
First Meeting of The Ninety-Nines
Curtiss Field, Valley Stream, Long Island, New York
November 2, 1929



Opal Kunz

- **Acting President of The Ninety-Nines prior to first election**
- **Organization formed in her living room**





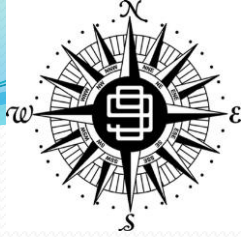
Amelia Earhart

- Born in Kansas in 1897
- Set many records, including **first woman to fly solo across the Atlantic**
- Along with others, formed The Ninety-Nines in 1929 to promote women in aviation.
- **First elected president of the 99s**

“I fly for the fun of it”

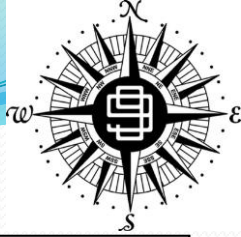


Louise Thaden



- Winner of "The First Women's Transcontinental Air Derby"
- First pilot to hold the women's altitude, endurance and speed records simultaneously (1929).
- Founding member of The Ninety-Nines, served as Vice-President and Treasurer.

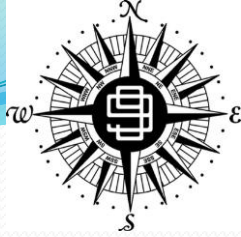




Florence “Pancho” Barnes

- Born in California in 1901
- Competed in races, set speed records and **performed stunts for motion pictures** (*Hell's Angels*)
- Became so incensed at the needless deaths of her movie-pilot friends that she formed the Movie Stunt Pilots Association.
- Organized the Women's Air Reserve, an organization of female pilots that participated in emergency responses in WWII



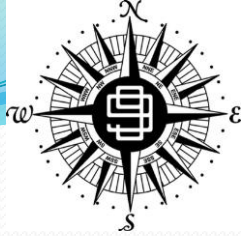


Jacqueline Cochran

- Born in Florida in 1906
- To this day, Cochran holds more distance and speed records than any pilot, living or dead, male or female.
- Earned her private pilot license in 3 weeks!
- Organized the **Women's Air force Service Pilots (WASP)** during WWII



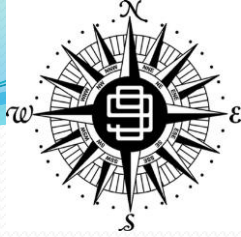
Mercury 13



- **Eisenhower believed military test pilots would make the best astronauts - also barring women.**
- **William Randolph Lovelace II developed tests for astronauts, but wondered how women would do with the same tests. He invited Geraldine (Jerrie) Cobb, a pilot with 7,000 hours at the time, to take the tests - which she passed.**
- **Lovelace and Cobb recruited 24 more women pilots to take the tests - 12 more passed.**



Jerrie Cobb (a 99) pictured

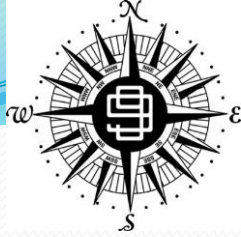


Valentina Tereshkova

- First Woman in Space
June 16, 1963.
- Non-pilot

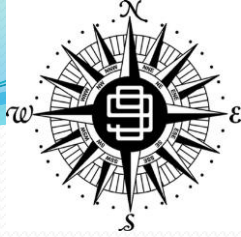


Sally Ride



- **1983: First American woman in space**
- Youngest American to go into space at 32 years old
- Left NASA in 1987 to work at Stanford.
- Past President & CEO of Sally Ride Science, creating entertaining science programs encouraging young women to study science & math

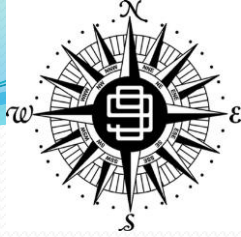




Eileen Collins

- During college, joined the ROTC and joined the Air Force Training program
- Became an astronaut in 1991
- **In 1999, first woman to command the space shuttle**





Pam Melroy

- During college, joined USAF ROTC and was commissioned, logging > 6,000 hours > 50 aircraft before retiring, including > 200 combat & combat support hours.
- One of only two women to command the space shuttle, she logged > 38 days in space.
- Recent NASA Deputy Administrator until the new President.
- And a 99!



Wally Funk

- The youngest of the Mercury 13, she is the last surviving member, and the only one to have flown in space.
- Flew a sub-orbital flight on Blue Origin's New Shepherd spacecraft July 20, 2021
- Broke John Glenn's record for being the oldest person in space (82).
(William Shatner broke her record in October of the same year. He was 90.)
- First female FAA and NTSB inspector



Women in Aviation Today

- **5% of US airline pilots, 4-6% of airline pilots worldwide ***
- **10% of US pilots ***
- **3% of aircraft technicians worldwide ****
- **20.6% of air traffic controllers worldwide ****

* <https://centreforaviation.com/> August 4, 2024

** ICAO, 2021

Ninety-Nines Today

The Ninety-Nines is the international organization of women pilots that promotes advancement of aviation through education, scholarships and mutual support while honoring our unique history and sharing our passion for flight.

Approximately 7,000 members in 44 countries
across the globe

-- and 157 Chapters in the USA and Canada

The Ninety-Nines Headquarters and Ninety-Nines Museum of Women Pilots



Oklahoma City, OK

Ninety-Nines Museum of Women Pilots





Amelia Earhart Birthplace Museum
Atchison, Kansas

Airmarking



Other events

- Women Can Fly (free airplane rides for women and girls) - Next September 13, 2025 at Suffolk airport
- Girl Scout Badge Day
- Fly-in Pancake breakfasts
- FAA Safety Talks
- Fly-Outs, Fly-Ins
- Airventure (Oshkosh, WI), Sun-N-Fun (Lakeland, FL)
- Picnics, Hangar Parties
- Hangar Flying



We are ALL Pilots and we like to have fun!



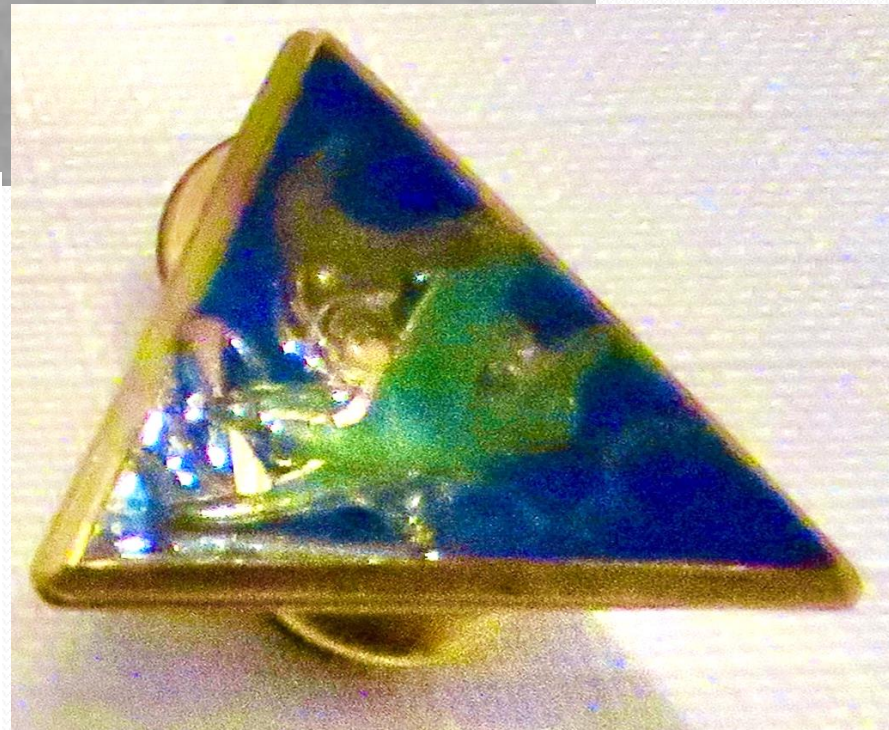
How did I get into flying?...



My Dad was a civilian flight instructor at Fort Stockton, Texas in 1943-44. Note the open-cockpit Boeing Stearman PT-17 biplane used as a primary trainer.



At Fort Stockton, the tradition was that when a student soloed, they had to kiss the donkey who was named Solo. A donkey in an airplane became the insignia of the Fort Stockton school.





**I still have
Dad's
Instructor
wings.**





Dad took me flying often when I was a kid.

I joined Civil Air Patrol (CAP) as soon as I was old enough - in 1973.

Received a CAP academic scholarship to college, which I used to get ground instruction and enough flight hours to solo.

Married a guy with a 1949 Cessna 170

**Got my private pilot license in 1985 through the
Langley Aero Club, and joined the 99s**



- **Went to Oshkosh and Sun 'n' Fun - a LOT (including our honeymoon)**

- Camped at Oshkosh, but not in sand at Sun 'n' fun



(Not our plane, but could have been, after a rainy night.)

Had a kid - took her flying.

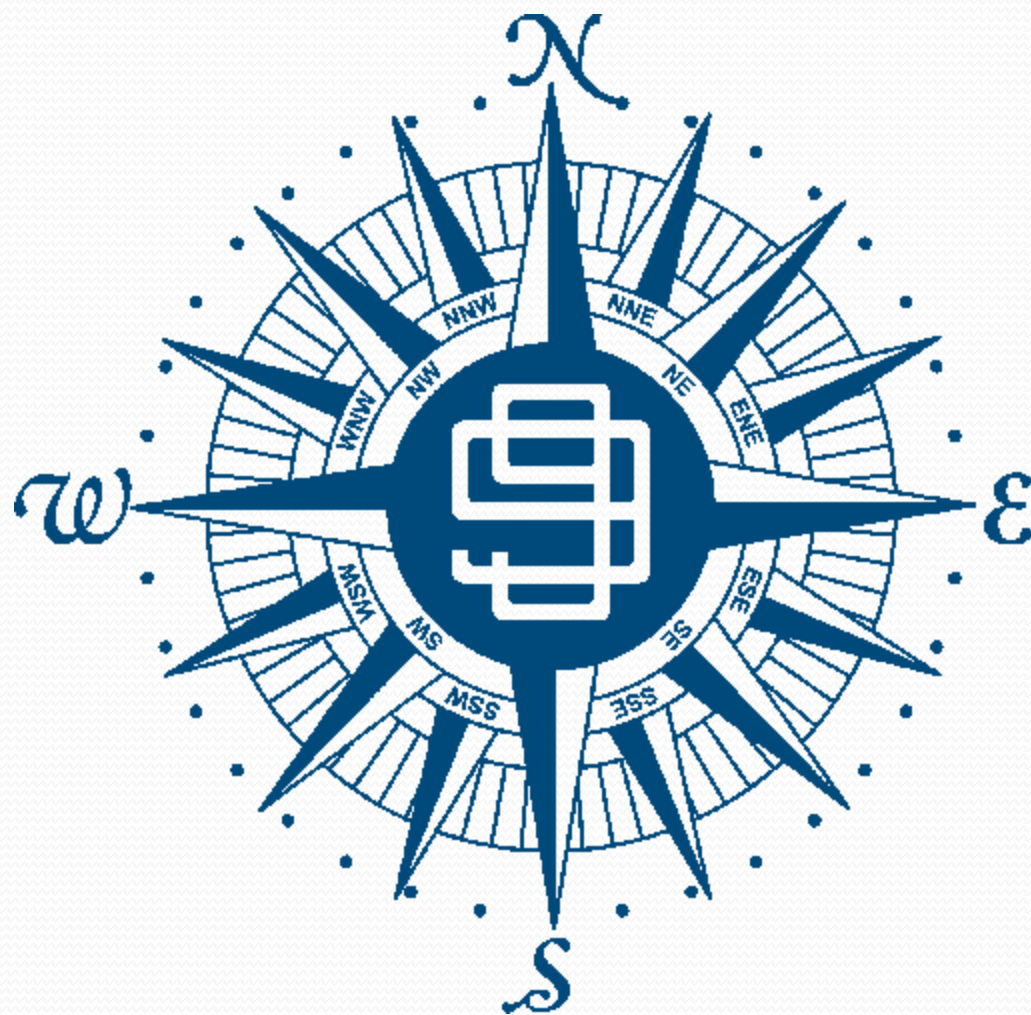


Got a dog - took her AND the kid flying.



And the rest, is history...







BACKUP

International Forest of Friendship - Atchison, KS



How Do You Become a Pilot?

- Take a flight to see if you like it.
 - Women Can Fly - September 13, 2025 at Suffolk Airport - **FREE**
 - Discovery Flight at any flight school (\$150-\$200)
- Study for and take a written exam.
- Fly with an instructor and practice on your own.
 - Need a minimum of 40 hours of flying time; average is 60-70 hours.
 - Cost will be \$10,000-\$15,000, but scholarships are available.
- Minimum age to solo (fly on your own) is 16 for powered planes and 14 for gliders.
- Minimum age to get a private pilot license is 17.

Scholarship Opportunities

- The **FLY NOW Award** is a progressive award up to \$6,000 given to Student Pilot Members with a need for financial assistance to become licensed pilots.

- **Amelia Earhart Memorial Scholarship**

Established in 1940 to help deserving members to further accomplishments, today the Amelia Earhart Memorial Scholarship Fund exceeds \$5 million and provides awards to deserving 99s with *at least one year of membership*, and with a need for financial assistance, so that they may complete advanced training and education to progress toward a specific goal in aviation and aerospace

Professional Pilot Leadership Initiative

- **The Professional Pilot Leadership Initiative (PPLI)** aims to accelerate the advancement of women in all pilot professions, facilitate mentoring, and enhance our leadership role in the aviation community.
- In this highly-structured, formal mentoring program, mentor and mentee will communicate on a weekly basis to discuss the mentoring prompts and guided activities during the 18-24 month program.