

CHAPTER 3

Wing walking,
a favorite barnstormer stunt



Expanding the Horizon

Chapter Outline

LESSON 1

The Barnstormers

LESSON 2

Flight Goes Mainstream

LESSON 3

Commercial Flight,
Airmail, and Helicopters

"Ours is the commencement of the flying age, and I am happy to have popped into existence at a period so interesting."

AMELIA EARHART

The Barnstormers

Quick Write



If you're trying to reach a goal, it helps to have a supporter, as Bessie Coleman did—someone who has confidence in you and convinces you that you can achieve your dream. Describe an experience when you or someone close to you got support in reaching a goal.

Bessie Coleman was an unlikely pioneer.

She was one of 13 children born to a former slave in Texas sometime in the 1890s. Her father was part African-American and part Cherokee and Choctaw Indian. Her mother, an African-American, didn't know how to read. But she had big ideas for her little girl. She made Bessie want to "become somebody."

It took a while, but Coleman figured it out. The "somebody" she wanted to become was an airplane pilot.

Coleman managed to graduate from high school. She even had a semester of college in Oklahoma. She loved to read. One of the things she read about was aviation. During World War I, she was living in Chicago, working as a manicurist. The newspapers were full of stories about the air war in Europe.

Coleman decided she didn't want to remain on the ground. She didn't want only to read about aviation. She wanted to fly.

When she went to sign up for lessons, doors closed in her face. Yes, there were a few women pilots—but a black woman? No one she talked to could imagine such a thing.

But she had a powerful friend—Robert S. Abbott. He was the editor of the *Chicago Weekly Defender*. His newspaper had sponsored a contest to find the best manicurist in black Chicago. Coleman won that contest.

Learn About...



- the barnstormers
- the major contributions of the barnstormers
- how the barnstormers contributed to public awareness of aviation

So Coleman had an “in” with Abbott. She went to see him. He liked her idea of flight lessons. And he had an idea of his own. Go to Europe, he said. People there will be more accepting of you. He had another tip: Learn French before you go!

So Coleman went back to school—night school this time. She learned French and traveled to Europe.

After a few months, she ran out of money. So she returned to the United States. She went back to work. She saved as much money as she could. Finally she had enough to return to Europe. She looked for the best flight teacher she could find. She ended up studying with the chief pilot for Anthony Fokker, the famous aircraft manufacturer.

Fokker saw Coleman’s talent and encouraged her. He became her mentor.

A **mentor** is a trusted coach or guide.

On 15 June 1921, Bessie Coleman got her license. She was the first licensed black woman aviator in the world.

Vocabulary



- mentor
- barnstormer
- spectator
- altitude
- aerodynamic
- enthusiast
- amphibian



BESSIE COLEMAN

Bessie Coleman was the first black woman to get a pilot’s license.

Courtesy of the Smithsonian Institution/Corbis

The Barnstormers

Bessie Coleman's story is inspiring to anyone striving to make a dream come true. Her story is also important because of the kind of aviator she was. Coleman earned fame as a **barnstormer**—*a pilot who travels around the country giving exhibits of stunt flying and parachuting*. The term barnstorming comes from the time pilots would fly over a small rural town to attract attention, then land at a local farm. In the 1920s, the term became attached to stunt flying. Historians give stunt pilots like Bessie Coleman credit for sustaining the aviation industry during its early years.

Significance of the Barnstormers

Barnstorming shows drew crowds of **spectators**—*people who come to see an event or show*—during and after World War I.

These daredevil pilots, along with the stuntmen and parachutists who worked with them, entertained people in the days before there were theme parks or television. Some pilots worked in teams. Their acts were called “flying circuses.” Once the war was over, these pilots became the public face of American aviation.

The aircraft industry had boomed during the war. Britain, France, Germany, and Italy produced tens of thousands of planes. And the United States was catching up. By the war's end, it had almost 4,000 planes and about 9,500 men in the air service.

But on 14 November 1918, three days after the war ended, the US government canceled \$100 million worth of airplane contracts. The country's leaders didn't yet see how important aircraft could be for national security in peacetime.

THE CURTISS JN 4 “JENNY”

The Curtiss “Jenny” became available as Army surplus after World War I and was popular with barnstormers.

Courtesy of the EAA/Jim Koepnick



Within three months, 175,000 workers in the aircraft industry lost their jobs. Aircraft production dropped by 85 percent. The Army dumped its surplus warplanes onto the market. That was a big blow to the aircraft companies. Who would buy their new planes when Uncle Sam was selling old ones at bargain prices?

Commercial and private aviation did not exist. There were no regularly scheduled flights for business or vacation travelers. Cars weren't yet popular either. Most people traveled from one city to another by train. In fact, even though aviation had been important during the war, by 1918 most Americans had still never seen an airplane.

The barnstormers changed that. Many of them were former Army pilots. Since military aviation had been cut back, a large number lost their jobs. They leaped at the opportunity to keep flying.

These pilots enjoyed showing off the skills they had mastered in combat. They excelled at tight turns and daring maneuvers. And they often flew the same aircraft—planes such as the Curtiss JN-4 (“Jenny”)—that they had trained on in wartime.

Significant Barnstormers

Bessie Coleman was just one of several Americans who gained fame as barnstormers and helped move aviation into the public eye. Like the pilots of World War I, the barnstormers were a special breed.

For the barnstormers, flying was in some ways less risky than it had been for combat pilots. No enemy guns fired on them as they performed maneuvers over fields and county fairgrounds. But flying, especially stunt flying, was still dangerous. Many of the barnstormers died in air accidents. Among them were Bessie Coleman and another pilot named Lincoln Beachey.

Born in San Francisco, Beachey (1887–1915) was one of the top barnstormers. At one point, Orville Wright called him “the greatest pilot of all time.” In his Curtiss biplane, Beachey thrilled crowds with his dives. He could snatch a scarf or a handkerchief off the ground using the tips of his wings. For an exhibition at Niagara Falls, New York, he drew 150,000 spectators.



LINCOLN BEACHEY

Courtesy of Corbis Images

A Barnstormer Arrives



WING-WALKING

Wing-walking was a favorite stunt barnstormers performed to demonstrate to the public the thrill of flying.

Courtesy of Museum of Flight/Corbis

to get people's attention. Then he'd land in a nearby field. Word would spread. People would gather to get a look at the aircraft. The pilot would offer rides. Some hardy souls would volunteer to go up. They would typically get a five-minute flight for \$5—the equivalent of about \$50 today.

Barnstormers liked to show what they could do wherever crowds gathered at places like county fairs and carnivals. Flying circuses, conducted by teams of pilots, became a popular form of entertainment.

Pilots who weren't part of the circuses often teamed up with stuntmen. The stuntmen had an amazing bag of tricks. "Wing walking," for example, was a real crowd pleaser.

With the pilot flying a biplane in a circle, the stuntman would leave the cockpit. He or she would walk out on the edge of the lower wing, then climb to the upper wing and walk back toward the cockpit. To give viewers an extra thrill, some wing walkers would stand on their heads.

Someone on the ground would first notice it as a buzz or a whine. Much too loud for an insect, they said. It sounded like an engine. But what was an engine doing up in the sky? Could it be one of those newfangled flying machines?

Or maybe a farmer would see a shadow fall across his field—a shadow much too big to be that of a bird.

It's an airplane! A barnstormer had come to town!

The pilot would typically circle over a village or a small town

Even Charles A. Lindbergh, best known for his 1927 solo flight across the Atlantic Ocean, was a barnstormer at the beginning of his career. (You'll read more about Lindbergh in the next lesson.)

As you read earlier, most barnstormers were former military aviators. But a number of women also were taking to the skies. Among them was Phoebe Fairgrave Omlie. She ran her own flying circus. She was the first woman in the United States to become a licensed transport pilot. In 1933, she also became the first woman appointed to a federal government job in aviation—special assistant for air intelligence for the National Advisory Committee for Aeronautics, the agency that eventually became the National Aeronautics and Space Administration (NASA).

Skynotes

Omlie's Air Markers

In 1935, Phoebe Fairgrave Omlie made one of her biggest contributions to American aviation when she developed the “air marker” system. This was a network of black and orange navigational markers in which names of towns were painted in 12-foot letters on the roofs of buildings all across the country. These markers identified the location, showed which direction was North, and indicated the distance and direction of the nearest airport. Eventually 16,000 markers—one every 15 miles—guided pilots along every air route in the United States.

Phoebe Fairgrave Omlie (center), special assistant to the intelligence division of the National Advisory Committee for Aeronautics, with Edna Gardner, a leading speed pilot, greet Elly Beinhorn, Germany's foremost woman flyer, in her low-wing monoplane.



PHOEBE FAIRGRAVE OMLIE

Courtesy of Underwood & Underwood/Corbis

For pilots such as Coleman and Omlie, as well as for women across the nation, it was an exciting time. Opportunities were widening. With passage of the 19th Amendment to the US Constitution, women won the right to vote. Many cast ballots for the first time in the 1920 presidential election.

Margery Brown, another female barnstormer, wrote about why women wanted to fly: “Halfway between the Earth and sky one seems to be closer to God. There is a peace of mind and heart, a satisfaction that walls cannot give. When I see an airplane flying I just ache all over to be up there.”

The Barnstormers’ Major Contributions

Historians call the years between 1919 and 1939 the “golden age of aviation.” Pilots set one record after another. They flew faster. They attained greater **altitude**—*the height above Earth’s surface*. They served as test pilots. (It’s probably fair to say that in those early days, every pilot was a test pilot.)

During this period airplanes evolved from slow-moving, cloth-and-wood structures to faster aircraft made of metal. These planes were more **aerodynamic**—*designed with rounded edges to reduce wind drag*.

Engines became more reliable. This was another key advance. Soon wealthy aviation **enthusiasts**—*strong supporters or fans*—began to offer prizes for the first pilot to achieve a certain goal.

In 1911, for instance, newspaper owner William Randolph Hearst offered \$50,000 to the first pilot who could fly across the United States in 30 days or less. As you read in Chapter 2, Calbraith Rodgers was the first to fly the distance. But he didn’t win the prize. He took almost three weeks too long. Engine trouble, among other problems, slowed him down.

Another wealthy aviation enthusiast was Raymond Orteig. In the early 1920s he offered \$25,000 for the first nonstop flight from New York to Paris. Again, the engines weren’t up to the task.

But within a few years, engines had improved enough to make transatlantic flight possible. Some pilots then turned to a new challenge: polar exploration.

From childhood, Rear Adm Richard E. Byrd had longed to explore the North and South Poles. Trained as a flier, he advanced both aviation and polar exploration. In 1926 he and his pilot were the first to fly over the North Pole. Their aircraft was a Fokker monoplane with three Wright Whirlwind engines.

In 1929 Byrd flew to the South Pole. His expedition included three Loening **amphibian** planes—*aircraft designed to take off and land on either water or land*.

Flight Paths

Rear Adm Richard E. Byrd, Polar Aviator

After World War I, barnstormers brought the magic of flight to the American heartland. And beginning in the 1920s, Richard E. Byrd helped direct attention to the ends of the earth—the North and South Poles.

Born in 1888 to a famous Virginia family, he graduated from the United States Naval Academy in 1912. He was a naval aviator in World War I. Eventually he rose to the rank of rear admiral in the US Navy.

He developed plans and navigational aids for the Navy's first transatlantic flights. He also helped Charles Lindbergh prepare for his solo flight across the Atlantic Ocean.

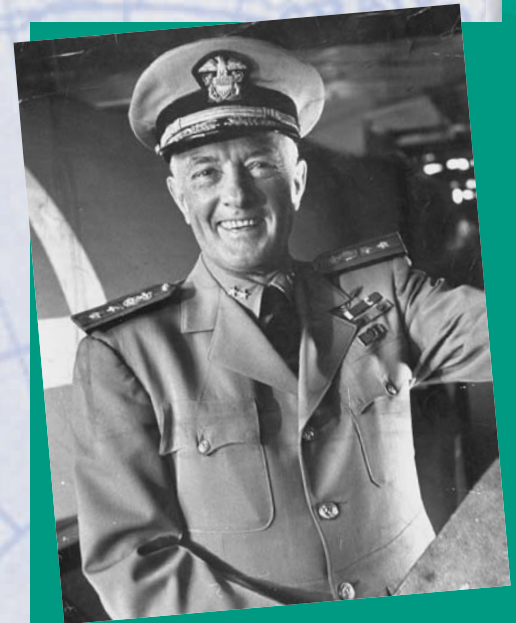
Byrd's polar adventures began with an assignment in western Greenland, in the North Atlantic. On 9 May 1926 he and his pilot, Warrant Officer Floyd Bennett, were the first people to fly over the North Pole. For their feat, both men received the Medal of Honor, not usually given in peacetime. Finally, Byrd turned his attention south. For the next three decades, he did more than anyone else to direct exploration of Antarctica.

On 28 November 1929, Byrd and his pilot Bernt Balchen flew to the South Pole. It was the first of many trips. The team carried out scientific research. They studied meteors, cosmic rays, weather, and Earth's magnetism.

In 1934 Byrd spent five months living alone in a hut 123 miles away from his main base. It was as far south as any human had ever lived.

He was a celebrity, and he liked being famous. He knew that interest in his exploits helped build public support for scientific exploration. He raised a great deal of money for research, too.

By the 1950s he was the senior US government official in charge of South Pole research. He was an active explorer until the last months of his life. He died in 1957 at the age of 68.

**RICHARD E. BYRD**

Courtesy of George Silk/
Time Life Pictures/Getty Images

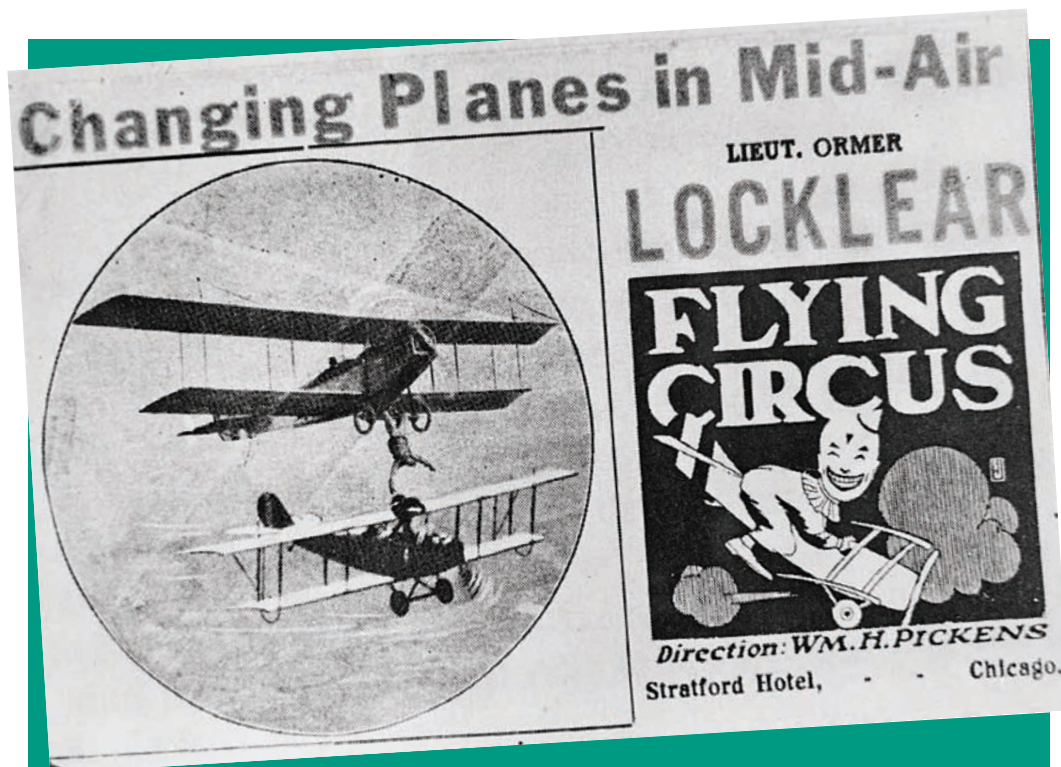
How the Barnstormers Contributed to Public Awareness of Aviation

Since most Americans had never even seen an airplane, whatever ideas they had about flying probably included many fears. The barnstormers' demonstrations didn't do away with people's fears. After all, spectators sometimes saw dreadful accidents. But the barnstormers' air shows certainly created an interest in flight, even in rural areas and small towns. They publicized the airplane and brought romance to flying. Some people believe that without the barnstormers, aviation might have died altogether in the United States.

Stanford University historian Joseph Corn describes the importance of the barnstormers in his book, *The Winged Gospel*:

Crowds assembled at the smallest airfield to watch planes take off and land, while the public voraciously consumed the many stories about aviation in newspapers and magazines. . . . So central was the airplane in the American imagination, in fact, that many people expected that they would soon take to the sky, flying their own family plane or helicopter. But more than anything, the airplane symbolized the promise of the future.

As the people around the world would soon find, that future was closer than most of them realized.



A 1919 NEWSPAPER ADVERTISEMENT FOR A BARNSTORMER EXHIBITION

Courtesy of the National Air and Space Museum, Smithsonian Institution (SI Neg. No. 85-12327)

CHECKPOINTS

Lesson 1 Review

Using complete sentences, answer the following questions on a sheet of paper.

1. How did Bessie Coleman learn about aviation?
2. Why did Robert Abbott suggest that Bessie Coleman go to Europe?
3. Why did aircraft manufacturers have a hard time after World War I ended?
4. What background did many barnstorming pilots share?
5. What was Phoebe Fairgrave Omlie's "air marker" system?
6. What did wealthy aviation enthusiasts offer that advanced progress in flight?
7. What technical improvements in aircraft made possible Richard Byrd's polar flights?
8. How did the barnstormers contribute to public awareness of aviation?

Applying Your Learning

9. Why do you think the barnstormers' air shows changed people's ideas about aviation?