



Two Wings, Many Prayers for Wright Brothers

By Dan Schlossberg

A piece of wing fabric from the Flyer, the airplane that made the first manned flight, later flew to the moon. Astronauts Neil Armstrong and Buzz Aldrin took it with them to the lunar surface on July 20, 1969—66 years after Orville and Wilber Wright got their primitive flying machine airborne.

You can see the piece that went lunar on a visit to the Wright Brothers National Memorial, along with plenty of other historic exhibits and interactive attractions at this somewhat under-appreciated monument located near Kill Devil Hills in the Outer Banks of North Carolina.

Everyone knows the age of aviation began with the Wright Brothers' first flight from Kitty Hawk—just a shade north of where the memorial is located—and I visited the site this past August with my family to see what it was all about.

What You'll Learn

Volunteers at the site's Visitor Center present daily lectures about the Wright brothers, while the nearby First Flight Centennial Pavilion features films, shows and demonstrations—even allowing kids to apply newly learned aeronautics dynamics to simple kite flying. There's also an extensive National Park brochure that goes in depth about the brothers and what led to their aviation quest in case you want more details.

Wilbur and Orville Wright owned a bicycle shop in Dayton, Ohio, for seven years, but they were enamored by reports of experiments in aeronautics. They eventually turned their attention to flying and temporarily relocated to Kitty Hawk, N.C., where the isolation, sand dunes, open spaces and wind conditions were perfect for flying experiments, which often ended in crash-landings.

The brothers learned about the science of flying by watching birds, flying kites and constantly rebuilding their experimental glider. After more than 1,000 glides and the introduction of an engine that depended on gasoline power and two rear propellers controlled by bicycle-style chains, they were ready to fly in December 1903.

Puny and primitive by modern standards, the double-winged Flyer measured 40 feet across, weighed 605 pounds, and generated only 12 horsepower. After repairs were completed from a failed attempt at flight a few days earlier, the brothers were ready to try again on December 17.

Even with a strong headwind blowing of 27 miles per hour, the brothers proceeded to perform the most noteworthy experiment since Ben Franklin flew a kite with a metal key attached in a lightning storm. Like Franklin, the Wrights were risking their lives in the interest of science. They remembered that German glider guru Otto Lilienthal had been killed while attempting to fly just seven years earlier.

At 10:35 a.m., Orville, lying flat in a position perpendicular to the wings, kept one hand on the vertical joystick that controlled the up-and-down movements of the airplane elevator, and started the engine. Unable to talk because of the noise, the brothers shook hands, signaling Orville to release the restraining wire.

Wilbur ran alongside while witnesses from the U.S. Life Saving Service snapped pictures of the historic moment as the Flyer slid down the starting rail, lifted off and stayed airborne for 12 seconds before hitting the sand 120 feet away. Its ground speed was 6.8 m.p.h.

The Wright brothers made three more flights that day, with the fourth spanning 852 feet in 59 seconds. Although the original flyer was damaged beyond repair by wind later that same day, the brothers never looked back. They realized they had made a discovery that would change the world.

Returning to Ohio, they made more than 100 flights in 1904 and devised the first practical airplane a year later. After signing a development contract with the U.S. Army in 1908, the brothers entertained crowds in the United States and abroad. They were thrilled when throngs of New Yorkers cheered their 20-mile roundtrip over the Hudson River from Governors Island to Grant's Tomb.

French refinements to the original Wright design led to the 1911 Wright Model B, the prototype for all planes that followed—including those of the 21st century.

What You'll See

The Wright Brothers National Memorial features reproductions of the brothers' experimental 1902 glider and 1903 Flyer (the original is on display at the Smithsonian's National Air and Space Museum in Washington, D.C.), plus a towering granite obelisk that marks the summit of a giant sand dune called Kill Devil Hill, where the brothers performed their first glider flights. When completed in 1932, it was the largest American monument ever dedicated to a living person. Orville Wright attended that dedication.

Not far from the base of the massive vegetated dune, visitors view markers showing the take-off and landing points for each of the brothers' first four flights. A boulder marks the liftoff point for each. Not far away are

wooden buildings reconstructed to look like the Wrights' workshop, living quarters and hangar (they actually shared their bedroom with the 1902 glider).

I was surprised by how spread out the site is; it's a long walk from the Visitor Center to the monument on top of the giant sand dune—so far, we actually wound up driving from one to the other.

Also on site, below the monument, is a sculpture of the 1903 plane that gave the gift of flight to man. Orville and Wilbur could have been first to say, "One small step for man. One giant leap for mankind."

If You Go

The Wright Brothers National Memorial

Located in Kill Devil Hills, N.C., 3 miles south of Kitty Hawk and 2 miles north of Nags Head, on U.S. 158. The site is open seven days a week, year-round and costs \$4 per person. For more information, visit www.nps.gov/wrbr/, or call 252-441-7430.

Other nearby sites of interest:

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Cape Hatteras Natl.

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Local CVB/Tourism office:

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