

First in Flight



Centennial Celebration of the First Flight

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by Miguel Chirinos, I.B.N.S. #5992

North Carolina and the National Park Service were proud to host centennial events at Wright Brothers National Memorial. As a tribute to Wilbur and Orville Wright's incredible contribution to the world, a fitting celebration was planned throughout 2003, leading up to the big day on Dec. 17, 2003.

Events leading up to the centennial celebration featured not only aviation heroes, but a celebration of aircraft that proceeded and contributed to the invention of the airplane. Celebrations featuring the Tuskegee Airmen, Women in Aviation, the unveiling of the United States Postal Service's First Flight Stamp, ballooning, gliding and hang-gliding events, kite flying contests and a summer concert series make up the pre-December programming.

To accommodate the influx of thousands of visitors from around the world, the park made extensive



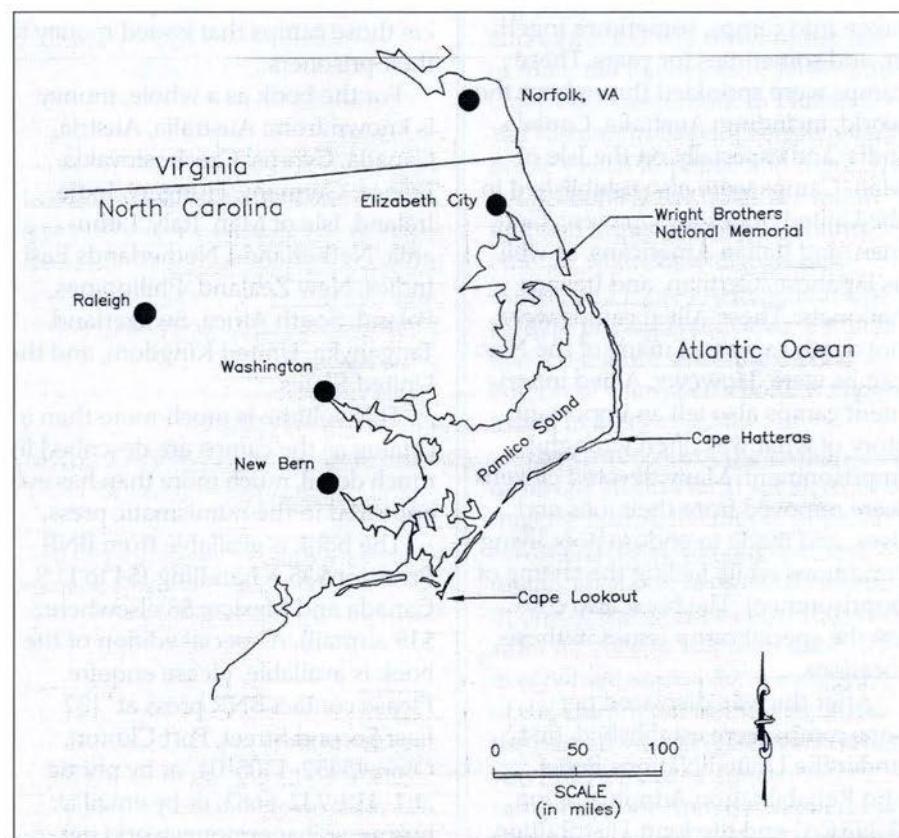
site improvements and planned an impressive array of programming throughout the year.

For the first flight centennial

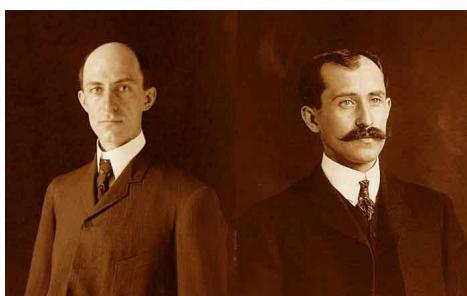
celebrations, an estimated \$4,865,000 of improvements have been made to the park's entrance road, fee booths, the Visitor Center, historic-reproduction furnishings for the Wright brothers' camp buildings, park trails on Big Kill Devil Hill, monument rehabilitation, and improvements to the Pilots' Booth and First Flight Airstrip.

Visitors had access to two Jumbotron monitors, affording a close-up view to everyone in the park. The Visitor Center's exhibits tell the story of the Wright Brothers, and includes full-scale reproductions of the 1902 glider and the 1903 flying machine. One of the 1903 camp buildings is a duplicate of the one used by the brothers as a hangar for the 1903 flyer. The other building is similar to the one used as a workshop and living quarters in 1903.

The triangular pylon 60-foot Wrights Brother Monument atop Big Kill Devil Hill honors the Wright brother and marks the site of hundreds of pre-flight glider experiments. Construction was begun Feb. 4, 1931, and the shaft was dedicated



Map of the state area near
Kitty Hawk, North Carolina.



Nov. 19, 1932. Its sides ornamented with outspread wings in bas-relief, the pylon gives to the eye the impression of a gigantic bird about to take off into space. Stairs lead to the top of the shaft an observation platform which offer a good view of the surrounding country –magnificent dunes, the Atlantic Ocean, Albemarle Sound, and even West Hill, a quarter of a mile west of the shaft, in the direction of the sound.

Pioneers

Without the discoveries made by the Wright Brothers, any kind of sustained, controlled, and powered flight would have remained impossible. Their realization that the published figures of air pressures on curved surfaces were wrong, and their subsequent experiments with model wings in a wind tunnel, resulted in the first reliable air pressure tables. The brothers' second innovation, a flight control system, was no less important to the future of aviation. For the first time, balance in flight and control over an aircraft's ascent and descent could be exercised.

The achievement of that cold Thursday, 17 December 1903, has been told so many times that much of excitement has gone. Except, perhaps, for those who have learned to fly; who understand that moment of magic when the aircraft loses contact with the ground and becomes a living creature, free in three dimensional space: so very nearly a bird in flight.

The Wright brothers' plane

"The Flyer" is depicted in the air –its wooden propellers churning; its unique landing runners clearly visible; the pilot, Orville Wright, stretched out on the biplane's lower wing. Of the five flights they made the historic day, Orville ascended first and flew 120 feet. Wilbur made the longest of 852 feet.

After the initial success at Kitty Hawk, the Wright brothers continued to experiment with and improve upon their plane. They had no idea of the tremendous impact their achievements would eventually have on civilization, but the enthusiastic interest in mechanics and flight led them to persevere despite public disinterest.

The states of Ohio and North Carolina both take credit for the Wright Brothers and their world-changing invention. Ohio because the brothers developed and built their design in Dayton, and North Carolina because Kitty Hawk was the site of the first flight. With a spirit of friendly rivalry, Ohio has adopted the informal slogan "Birthplace of Aviation" (later "Birthplace of Aviation Pioneers," with a tip of the hat to not only the Wrights, but also the astronauts John Glenn and Neil Armstrong, both Ohio natives). North Carolina has adopted the informal slogan "First In Flight." Also on both slogans it is common to see the respective license plates. As the positions of both states can be factually defended, and neither state played an insignificant role

in the history of flight, neither state truly has a complete claim to the Wright Brother's accomplishment.

On the commemorative quarter dollar of North Carolina appears the Wright Brothers flying. Also the U.S. Post Office issued a commemorative stamp in 1949 in tribute to this event.

In Australia, a researcher Lawrence Hargrave designed the original box-kite wings. Hargrave had perfected the design of the box-kite in 1893, and the light-weight and robust construction of this device, together with its good characteristics, encouraged a number of Europeans designers to adopt this form of structure for their early attempts to build the ideal aircraft. This configuration has earned the name "canard," because such craft have some resemblance to a duck in flight. Hargrave's portrait is on Australian 20 dollars (1980-85) at left on back.

In Europe, a wealthy Brazilian named Alberto Santos-Dumont had built quite a reputation since the turn of the century for taking to the air in a series of dirigibles. Santos-Dumont was born in São Paulo, Brazil in 1873. As a child, he went with his wealthy coffee-planter father to watch a balloonist at a local fair and was captivated. However, at the age of eighteen, move to Paris and a generous private income enabled him to lead the enviable life of a well-to-do emigré. He wanted to conquer the air and navigate where he chose, as Jules Verné's heroes had.

In 1898 he built and flew a



1,000 cruzeiros note from Brazil with Santos-Dumont.

cylindrical balloon with a gasoline engine. He was an instant hero and very nearly a dead one, too, for during the descent a valve jammed and the airship's gasbag began to collapse. Santos survived the crash-landing unhurt. In the summer of 1901 his airship won a prize for making the first flight from St. Cloud around the Eiffel Tower and back — a distance of about 12 km (7 miles) — in under 30 minutes. In 1903 he erected at Neuilly the first airship station, where he kept his dirigibles.

In 1904 he visited the St. Louis Exposition in America and there met Octave Chanute, from whom he learned of the great advances in powered flight which had been made by two Dayton bicycle manufacturers named Wright. Here at last was news of real aerial conquest to tempt Santos away from his beloved dirigibles in favor of the powered aeroplane.

By 1906 Santos and his mechanics had built what was ostensibly a heavier-than-air companion to his Dirigible No. 14, and he called it 14 bis. It was in this odd, duck-shaped biplane that Santos-Dumont made what is generally recognized as the first two flights in Europe. This was because the flight was observed by thousands, photographed and recorded in the world's newspapers. Among the witnesses to that flight was Antoinette Gastambide, the daughter of the manufacturer company director, Jules Gastambide, famous for his earlier flight trials in the Gastambide-Magin monoplane.

In 1909 Santos-Dumont produced the "Demoiselle" or "Grasshopper" monoplanes, forerunners of the modern light plane. In the short term, more powerful engines were

the key to success. Santos-Dumont's public flight preceded the Wrights' first such demonstration by several months. That was understood to be proof that others like Santos-Dumont and even an French engineer Clement Ader (1841-1926) who built a machine known as "batlike" had been the first to fly. Santos-Dumont returned to Brazil and died in 1932.

A portrait of Santos-Dumont appears on Brazil's 100,000 reis (1936) printed by Waterlow & Sons Ltd. Also, his portrait with hat is on notes of 10,000 cruzeiros (1966) in Brazil and later on 10,000 cruzeiros/10 novos cruzeiros (1967) printed first by ABNC and then by TDLR (see page 39).

Challengers

In the 1920's, right after World War I, a wealthy hotel owner Raymond Orteig offered a prize of \$25,000 to anyone who could fly across the Atlantic nonstop from New York to Paris. It was a lot of money. Several attempts had been made to capture the prize, notably by French WWI ace, Rene Fonck, in 1926.

Early in 1927, Rene Fonck was rumored to be preparing another attempt in a new Sikorsky biplane. Richard Byrd, of North Pole fame, had an expensive Fokker trimotor for his efforts. Levine and Chamberlain announced they would try it in the Wright Bellanca. Another pair of Americans, Noel Davis and Stanton Wooster, would also enter. The race was on.

In May of 1927, three planes were being made ready. Each was going for the prize. Newspaper were full of their stories. One of them, the young pilot, Charles Lindbergh, was a delivery man by plane. He took people

on plane rides for \$5 a spin. In that time, no one really used airplanes for transportation. But if a plane could fly safely across the ocean, it might have an important future.

Lindbergh was a good pilot. He was the first man to fly from St. Louis to Chicago, and the first to survive four forced parachute jumps. There was a bold, daring side to him, and another side that is careful and methodical. In crisis he didn't panic.

Essentially, the *Spirit of St. Louis* was a custom-built airplane, designed expressly to fly Lindbergh across the Atlantic. No parachute, no radio, no brakes, not even a forward-facing window. The rest of the airplane, the engine, and its pilot only weighed about 2500 pounds.

After the 3,610 miles, 34 hours after leaving the United States, he circled the Eiffel Tower in Paris. He was even worried that no one would be at the airport to meet him. Then he looked at the ground and saw a crowd of people. They were waving and screaming. The young flier, who had brought nothing with him but the paper bag (which still had some sandwiches), was carried about on shoulders and hugged and kissed and cheered.

Lindbergh wanted to stay in Europe and see the sights, but Pres. Coolidge sent the U.S. Navy cruiser Memphis to Europe just to carry "Lucky Lindy" and the *Spirit of St. Louis* back to America. He went first to Washington, where Pres. Coolidge received him, and then to New York City and its largest ticker tape parade ever.

In December 1927, he flew the *Spirit* to Mexico, Belize, Guatemala and other Central American countries. On his return to the U.S. he devoted himself to the development of



Darius and Girenas, flying heroes, died flying to Lithuania in 1933.

aviation, helping to start the airline that would become TWA. Today, his airplane, the *Spirit of St. Louis*, hangs in the atrium of the National Air and Space Museum in Washington, D.C.

After bursting into international fame with his transatlantic flight, Lindbergh remained in the public eye, often the subject of controversy. Retiring in later years to the islands of Maui, Hawaii, he died in 1974 at the age of 72. The U.S. Post Office issued an unprecedented commemorative airmail stamp in his honor.

In the history of American aviation, the era between 1919 and 1939 is called the era of "Atlantic Fever." In the days when aeronautical technology progressed rapidly, the establishment of a regular air traffic over the Atlantic was only a matter of time. Many nationalities living in the United States and having their roots in Europe tried to contribute to the building of this aerial bridge. Stephen Darius and Stanley Girenas, two Lithuanian-American pilots living in Chicago, decided to fly non-stop from New York to Kaunas, Lithuania. Their goal was to emphasize the close spiritual ties between Lithuanian-Americans and their homeland.

Stephen Darius was born on January 8, 1896 in Lithuania. In 1907, he immigrated to United States with the rest of his family. In 1917, Darius entered the armed forces and during World War I served in the American Expeditionary Forces in France. He was awarded two medals for distinctive service and bravery.

In July 1920, Darius went to Lithuania and entered military school, and later, he joined the Air Force of the

newly independent country. In 1927, Darius returned to the United States and bought a three-seater airplane. While flying in Chicago, Darius met another talented and enthusiastic pilot of Lithuanian descent named Stanley Girech (who later changed his name back to Girenas).

Stanley Girenas was born on October 4, 1893, in Lithuania. The 16th child in his family, he and his brother Peter, immigrated to the United States in 1910. When World War I broke out, he joined the armed forces and served as an airplane mechanic in Love Fields in Texas. In 1924, he learned to fly and became a very proficient pilot, excelling in aerobatics.

In June 1932, Darius and Girenas pooled their assets and purchased a Bellanca CH-300 Pacemaker airplane. Both pilots announced their intention to fly non-stop from the United States to Lithuania and their famous "testament" was also announced. The risk of death to the transatlantic flyers was at least as great as the risks modern astronauts face today. In January 1933, the Bellanca was moved to the E.M. Laird workshops near Chicago's Municipal airport. On May 6, the rebuilt airplane was baptized the "Lituanica," and the following day Darius and Girenas lifted off for New York.

They waited for favorable weather conditions and finally on July 14th, they took off on their 4466-mile, 40-hours flight to Kaunas, Lithuania. After successfully crossing the Atlantic, the Lituanica crashed in a pine forest near Soldin, Germany, and both pilots were killed. Rumors spread about the possibility that the pilots had been shot down by the

Nazis. However, the actual cause of the crash has never been determined.

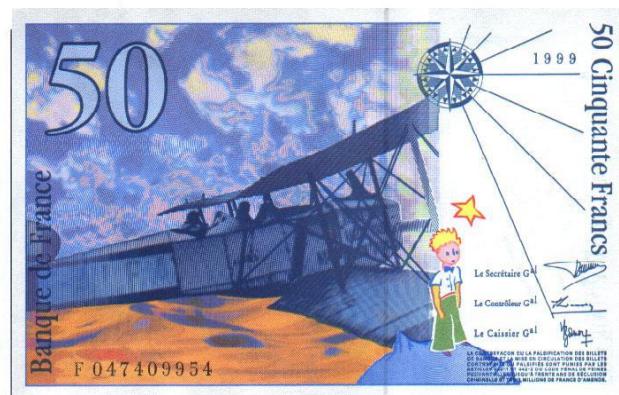
Around 60,000 residents in Kaunas participated in the funeral procession. Their remains are in the cemetery of Kaunas. Also the remains of Lituanica were placed in the War Museum in Kaunas, where they are still today. Monuments are standing in Chicago, Brooklyn, Lithuania and Poland in honor of Darius and Girenas.

Also, the Bank of Lithuania (*Lietuvos Bankas*) paid tribute to those notable aviators. In 1991, Darius and Girenas, on Lithuania's 10 litu note. In 1993, both pilots appeared but at the right and in 1997 a new note with similar design but multicolored was issued. The airplane Lituanica is on the back.

Meanwhile, in France, a respected author and aviation pioneer, came to international prominence after the publication of "The Little Prince," which he also illustrated.

Antoine de Saint Exupery was born in Lyon, France on June 29, 1900. Orphaned since he was two years-old, with his four brothers, he spent a good part of his childhood in the castle of his maternal grandparents. After finishing schools at Sainte-Croix-du-Mans he later studied in the University of Friburgo, Switzerland. In Paris, he tried to join the Navy, but he couldn't enter the Naval Academy. Obsessed with aviation from a very early age, Exupery joined the French Air Force in Strasbourg in 1921 as a mechanic.

Five years later at the age of twenty-six he became a pilot of the mail service from Toulouse, France to Dakar, Senegal and he was named a



Antoine de Saint Exupery appears on a French 50 francs note.



Face and back of 10 soles note of Peru with Jose Abelardo Quiñones.
Note the famous inverted airplane on the back, depicting the January 21, 1939 flight.

chief of the Port Juby office. Exupery flew to many countries in Europe, Africa and South America.

In 1931 Exupery met Consuelo Suncín in Buenos Aires, Argentina. He proposes to show her the city from the air, and in the heat of the flight, assured her that if she wouldn't marry him, he would crash the airplane. She accepted but it was a stormy marriage, marked by acts of infidelity by both. Trying to break a record in the passage Tierra del Fuego, Chile to New York, he suffered an accident and taking advantage of the convalescence in New York, he wrote a book about his memories of South America and North Africa as an aviator.

Also, he participated as a pilot during the Spanish Civil War, for several years until 1938. After German troops occupied France, he moved to the United States. During his exile in New York his house becomes the place of encounter of the French intellectuals and some Spaniards such as Salvador Dalí and Joan Miró.

His experiences during these flights and his numerous crashes in the then still unstable planes are well described in *Courrier Sud* (Southern Mail, 1929); *Vol de Nuit* (Nocturnal Flight, 1931); *Terre des Hommes* (Wind, Sand and Stars, 1939); *Pilote de Guerre*

(Flight to Arras, 1942) and *Lettre à un Otage* (Letter to a Hostage, 1943). During his life in USA, he wrote several novels among them one of his best knowing, *Le Petit Prince* (The Little Prince). That book written in New York City (1940) is according to some sources, the third most read book in the world during last century.

At the end of World War II, Exupery moved back to France and joined the army again. On July 31, 1944, during one of his missions over the Mediterranean Sea his plane was shot down. It was speculated the possibility that it had been a mechanical failure or even the suicide.

Also his last novel *Citadelle* (*Wisdoms of the Sands*) was published after he passed away. His extensive writings display great sensitivity and reveal the deep emotions experienced by flyers. His many novels, mostly on aviation, have been translated into more than 100 languages.

In 2000, a diver found the remains of a Lockheed P38 plane; researchers confirmed the plane's serial number used by St-Exupery, although his body still has not been found. However, the mystery persists as to why St-Exupery's plane came down on a clear day after he had taken off from his base on the island of Corsica. Exupery's portrait is on the 50 francs

(1998) issued in France in tribute of this experienced pilot and notable writer.

A prominent aviator from South America is Jose Adalberto Quiñónez. He was born in the port of Pimentel, Peru on April 22, 1914. His parents were Don Jose Quiñones and Maria Gonzalez. At the age of 10 years-old he was an expert manufacturing *cometas* (kites) with his elder brother Raul.

Quiñones concluded his elementary studies in the National School of San Jose in Chidlayo. The principal of this school, Dr. Karl Weiss, impelled the activity of the flight in glider to Quiñones with other companions. Dr. Weiss always admired the work of a young German civil engineer, Otto Lilienthal, who began to build gliders which he controlled by leaning his body to and fro and from side to side. Some of Lilienthal's gliders were monoplanes, and others were biplanes. Lilienthal wrote up all his work very carefully and it was published in 1889, and essays on flying machines (1894), becoming the standard work on flight. His valuable work in aviation was cut short when he crashed and was killed in 1896.

Then Quiñones completed his secondary instruction in the schools *La Recoleta* and *Nuestra Señora de*



Netherland Antilles 2 1/2 gulden.



\$20 dollar Singapore with the Concorde on the face.

Guadalupe. In both schools he was a great sportsman and a very good student.

On January 21, 1939 when Lieutenant Jose A. Quiñones made his famous inverted flight to only a meter of the ground. With a biplane equipped with a radial motor Piaggio of double carburetor, had a great maneuverability that he demonstrated outside several times.

Quiñones integrated the first Squadron of High Acrobatics. When trained, the unit of parachutists intensely carried out jumps from the skies of Chiclayo. Like Lindbergh, he's been a barnstormer, a guy who does trick flying: circles and loops and daredevil showoff stuff.

By 1941 Peru invaded an area east of Ecuador. During this conflict, Cap. Jose Abelardo Quiñones was killed in his NA-50 during an air raid on Quebrada Seca in Ecuador on July 23, 1941. For that reason Quiñones is the patron of Military Aviation of Peru and Chiclayo airbase — which played a pivotal role in those early years of Peruvian Air Force — was renamed in honor of him. Furthermore, his sacrifice is honored by celebrating the Day of the Air Force every year on July 23rd.

In 1991 Banco de la Reserva del Perú issued a 10 new soles note in tribute to the "Father of the Aviation" in Peru. His famous inverted flight is on the back.

Modern Aviation

The coming of jet power changed every aspect of aviation. Not many years after the first jet-powered flight, speed of over 1216 km/h (760 mph, the speed of sound) were within reach.

The first jet-powered aeroplane to appear on the commercial routes was the British De Havilland Comet which began service in 1952. Unfortunately the Comet had two serious accidents caused by metal fatigue and the plane was grounded. When it was withdrawn from service, the American Boeing Company worked round the clock to perfect their airliner, the Boeing 707. In 1958 the 707 went into service, along with the return of the Comet.

From this point on, a bevy of airliners were produced. By 1971 few propeller-driven planes were left in commercial service. The 1970s also saw the structural change to wide-bodies jets like the Boeing 747, which could carry more than four

hundred people at over 1000 kmh (625 mph). With the rise in world oil prices since 1973, research on quieter, cost savings airliners began. It has produced yet another generation of commercial aircraft like the Airbus A310 and the Bae 146 and 147.

At the same time as the steady improvement in subsonic airliners was taking place, supersonic airliners were born, starting with the Anglo/French Concorde which went into service in 1976, and the Soviet Tupolev TU 144 (now all of them withdrawn from service). These could fly at twice the speed of sound.

The 2 ½ gulden note (1970) of Netherlands Antilles shows a Jetliner at center. Also the 20 dollars (1985) Singapore issue depicts the Concorde and an airport on the back.

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Collaborator: Francisco Chirinos

