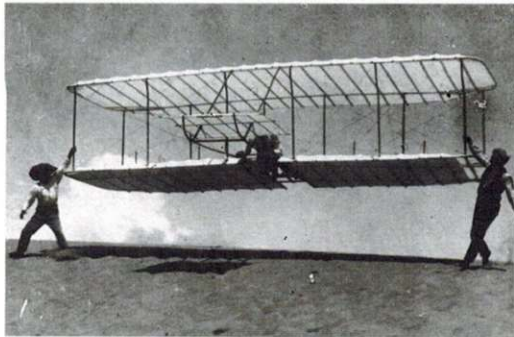


34 The Birdmen



The first machines the Wright brothers tested at Kitty Hawk were gliders. They experimented on these before trying a powered plane.

Today, it is hard for us to understand what people thought when they first heard that men had flown. Mostly, if they hadn't seen it themselves, they didn't believe it. Why, if people were foolish enough to say men could fly, the next thing they might say was that someday men would walk on the moon!

But on December 17, 1903, two men flew. They were brothers from Dayton, Ohio, and they owned a bicycle shop. Neither had graduated from high school. Their names were Wilbur and Orville Wright. It was not luck that made them the first persons in all of history to build and fly an airplane that lifted off the ground with its own power. It was hard work and determination. Before they built that plane they studied all that was known about flying. They thought, argued, and experimented. They built a wind tunnel and tested 200 differently shaped wings. Then they drew plans and built carefully.

When they flew, it was from Kill Devil Hill at Kitty Hawk, on North Carolina's Outer Banks. The Outer Banks are islands that run like a row of beads along the Carolina coast. Back in the 17th century, Sir Walter Raleigh planted a colony there, the Lost Colony. In the 18th century, the Outer Banks were home base to Blackbeard the pirate.

Today the islands are filled with tourists and hotels and cottages.

Suppose, tomorrow, you open your front door and there before you is a flying saucer. A spaceman steps out and smiles.

The next day you go to school and tell your friends what you saw. Do you think they will believe you?



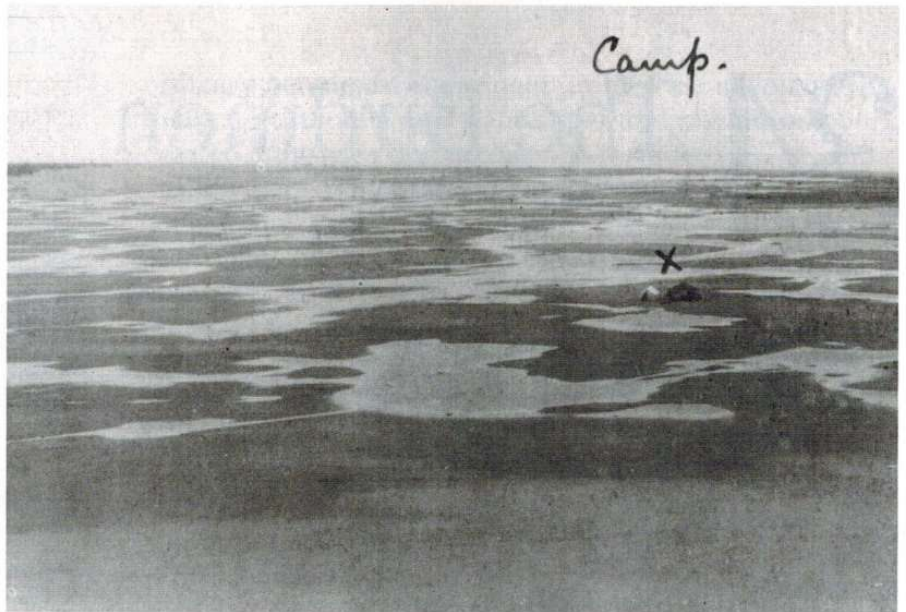
"From the time we were little children my brother Orville and myself lived together, played together, worked together, and, in fact, thought together," wrote Wilbur. "We usually owned all of our toys in common, talked over our thoughts and aspirations so that nearly everything that was done in our lives has been the result of conversations, suggestions, and discussions between us."

A HISTORY OF US

X marks the spot where Wilbur and Orville set up camp in 1902. "I chose Kitty Hawk," Wilbur wrote his father in 1900, "because... there are neither hills nor trees, so that it offers a safe place for practice. Also the wind there is stronger than any place near home and is almost constant."

[The balloon] appears, as you observe, to be a discovery of great importance, and what may possibly give a new turn to human affairs. Convincing sovereigns of the folly of wars may perhaps be one effect of it; since it will be impracticable for the most potent of them to guard his dominions. Five thousand balloons, capable of raising two men each, could not cost more than five ships of the line; and where is the prince who can afford so to cover his country with troops for its defence, as that ten thousand men descending from the clouds might not in many places do an infinite deal of mischief, before a force could be brought together to repel them?

—BENJAMIN FRANKLIN, IN A LETTER TO JAN INGENHOUSZ, 1784



But in 1903, Kitty Hawk was empty sandy beach, with a few fishermen and a lifeboat station where men stood by to aid shipwrecks. Kill Devil Hill, which is just a big sand dune, was a good place to test an airplane.

On that windy December day, Orville won the toss of a coin. He got to fly first, lying flat on his stomach on the wing of the kite-like biplane. Wilbur ran beside him; the plane lifted a few feet above the sand and stayed in the air for 17 seconds. The brothers took turns and flew four flights that day. The longest lasted 59 seconds. It was enough. They had flown. The men from the lifeboat station had seen them and taken a picture.

The headlines in the morning newspaper in nearby Norfolk, Virginia—the *Virginian Pilot*—told of the flight, although most of the details in the story were wrong. The brothers were upset about the poor reporting, but it didn't much matter: no one paid attention, and other newspapers didn't carry the story. No one understood that birds now had competition: people would soon be flying.

Orville and Wilbur went home to Dayton and set to work. They knew they could fly, but they also knew their plane needed improving. Besides, they needed to learn to be pilots; they needed time in the air.

So they flew around a big pasture in Ohio. Neighbors saw them and talked about the flights. But only a few other people believed that men were actually flying. In 1904 a group of newspaper reporters came to see for themselves.

Now, the Wright brothers were not daredevils. They were very methodical and precise. They did everything as well as they could. They checked and tested and checked and tested again, each time

AN AGE OF EXTREMES

they flew. That made sense. They didn't want to get killed.

When the reporters arrived, the brothers were having mechanical problems with the plane. The reporters stayed two days. The Wright brothers wouldn't fly on those days; the plane wasn't ready. The reporters left. Some wrote that the Wright brothers were fakes.

One writer did stay and see them fly. He was the editor of an apary journal. An *apiary* (AY-pee-ary) is a place where bees are raised for their honey. Yes, you read that right: the first long article about the Wright brothers' flight was in a beekeepers' magazine!

Finally, in August 1908, Wilbur went off to Europe and flew his plane at a racetrack in France. This time he sat on the wing (instead of lying on his stomach). There were 24 witnesses. They went wild—hugging and kissing him and throwing their hats in the air. They begged Wilbur to fly again the next day. But it was Sunday, his sabbath, and he wouldn't do it. On Monday, 4,000 people were at the racetrack to watch him fly. "*Il vole, il vole*" ("He flies, he flies"), they cried—and that soon became the title of a popular French song.

A month later, in Virginia, Orville showed Americans that people could fly. He lifted his plane into the air and swung around an army



The Wrights stayed with Kitty Hawk's postmaster, William Tate. They took a picture of his nephew Tom with the glider and a drum fish. "He can tell more big yarns than any kid his size I ever saw," Orville wrote.

Working with the glider, "we laid it down on the ground to change some of the adjustments of the ropes, when without a sixteenth of a second's notice, the wind caught under one corner, and quicker than thought, it landed 20 feet away. We dragged the pieces back to camp and began to consider getting home."

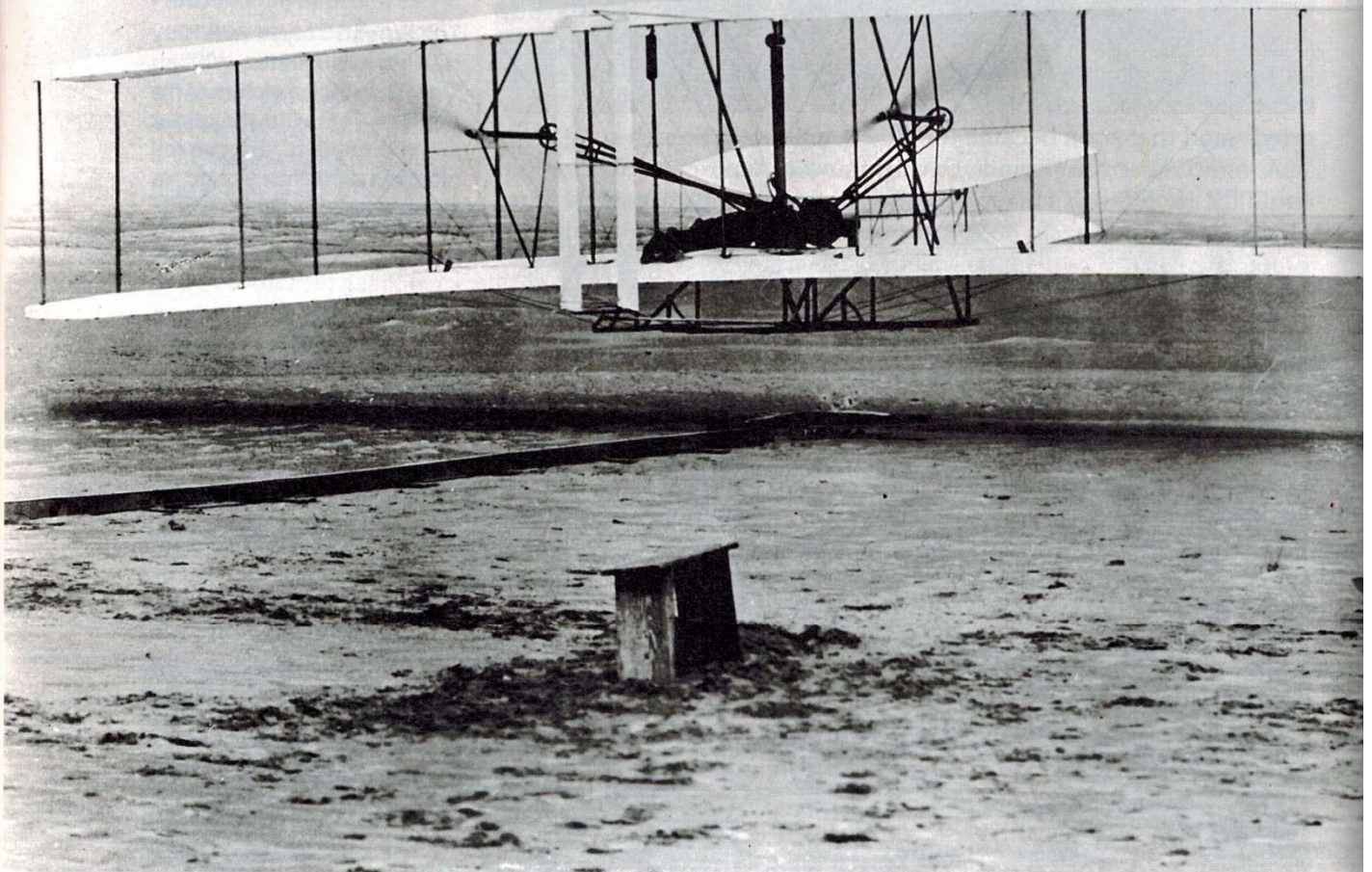


A HISTORY OF US

If ever there lived a Yankee lad,
Wise or otherwise, good or bad,
Who, seeing the birds fly, didn't jump
With flapping arms from stake or stump,
Or, spreading the tail
Of his coat for a sail,
Take a soaring leap from post or rail,

And wonder why
He couldn't fly,
And flap and flutter and wish and try—
If ever you knew a country dunce
Who didn't try that as often as once,
All I can say is, that's a sign
He never would do for a hero of mine.

—JOHN TOWNSEND TROWBRIDGE,
"DARIUS GREEN AND HIS FLYING MACHINE"



On December 17, 1903, John Daniels of the Kill Devil lifesaving station snapped this historic shot of Orville and the Flyer as they left the ground.

field one and a half times before he landed. The crowd of watchers rushed forward "screaming as loudly as they could, overwhelmed by the miracle that had taken place before their eyes."

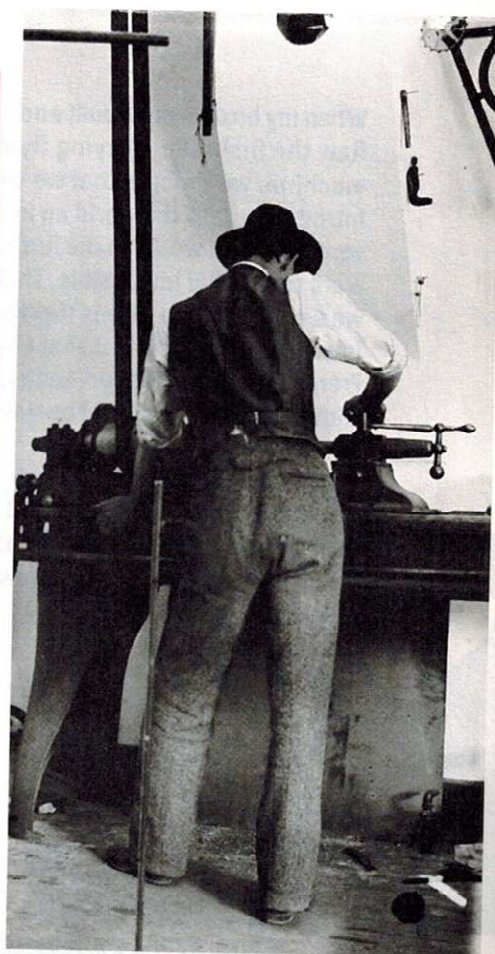
Try to imagine that scene in 1908. For thousands and thousands of years, men and women looked at birds and dreamed that they, too, could lift themselves into the air. Some tried. Mythical Icarus, back in ancient days, took birds' feathers and a frame and made something like a hang glider. But when he soared into the air the sun melted the wax that held the feathers and Icarus fell into the sea. Others, who we know were real, had built gliders, or hot-air balloons that floated on the wind. What the Wrights did was different. They didn't depend on the wind. They used their intelligence to build a machine that conquered the skies. They solved the problem of flight.

Suddenly the two shy brothers were celebrities. They were carried in parades and toasted at banquets. Kings and presidents invited them for visits. Stores sold Orville and Wilbur caps. Now everyone believed it—people could fly!

Who were these brothers who had made it happen?

In Dayton they were known as the minister's sons. Wilbur had planned to be a minister himself, but in his senior year in high school he was hit in the mouth by a fast-moving hockey puck. Besides knocking out teeth, it hurt him seriously. It seemed a terrible tragedy—he gave up his hope of being a minister—but it turned out to be a lucky break for the rest of the world.

Wilbur was the older and more serious of the boys. Orville had a mischievous side. Both were slim and tightly built. Both were quiet and modest. Their father had given them hardworking habits. It was their mother who taught them mathematics and how to make things. When the boys wanted a sled—one that would win races—she taught them about wind resistance and streamlined design. Then she helped them make a plan—on paper first—and taught them to build a model.



Wilbur in the workshop of the Wright Cycle Co. Later on, the brothers used bicycle chains and sprockets to link their airplane's motor and propellers.

A **biplane** has two wings, one above the other, a bit like a box kite.

*For a simple explanation of flight, look at **The Way Things Work**, by David Macaulay (Houghton Mifflin, 1988).*

A HISTORY OF US

When my brother and I built and flew the first man-carrying flying machine, we thought that we were introducing into the world an invention which would make further wars practically impossible. That we were not alone in this thought is evidenced by the fact that the French Peace Society presented us with medals on account of our invention. We thought governments would realize the impossibility of winning by surprise attacks, and that no country would enter into war with another when it knew it would have to win by simply wearing out the enemy.

—ORVILLE WRIGHT, 1917

They were different from each other, but their personalities balanced. They loved to argue back and forth, and out of those arguments came good ideas. One good idea, when they were boys, was to start a weekly newspaper. They built their own printing press, wrote articles, and sold advertisements. But what they really enjoyed doing was making and fixing things. So they went into the bicycle business. Bikes, back at the end of the 19th century, were high-tech items. The brothers built their own bikes and made them faster and better than their competitors'. Still, they weren't satisfied. They wanted to do something special; they wanted to be famous, like the great inventors of their day.

On September 3, 1900, Wilbur Wright wrote this to his father:

It is my belief that flight is possible and while I am taking up the investigation for pleasure rather than profit, I think there is a slight chance of achieving fame and fortune from it. It is almost the only great problem which has not been pursued by a multitude of investigators, and therefore carried to a point where further progress is very difficult. I am certain I can reach a point much in advance of any previous workers in this field.

Three problems needed solving in order for people to fly. Scientists call them *lift*, *propulsion*, and *control*. The Wright brothers needed to find a way to *lift* a plane into the air and keep it there; they needed to *propel* the plane forward; and they needed to *control* the flight—to turn, to climb, to land. Those problems had baffled some of the greatest scientific minds of all time. The Wright brothers solved them.

It was just three years after Wilbur wrote that letter to his father that he and Orville flew. Five years after that (in 1908), people believed it had happened.

If men and women could fly, anything might be possible.

Orville's telegram announcing the news. They misspelled his name.

Form No. 168.

THE WESTERN UNION TELEGRAPH COMPANY,
INCORPORATED
23,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.

This Company TRANSMITS and DELIVERS messages only on conditions limiting its liability, which have been assented to by the sender of the following. Errors can be guarded against only by repeating a message back to the sending station for comparison, and the Company will not hold itself liable for errors in transmission or delivery of Unrepeated Messages, beyond the amount of tolls paid thereon, nor in any case where the claim is not presented in writing within a reasonable time after the message is filed with the Company for transmission.
This is an UNREPEATED MESSAGE, and is delivered by request of the sender, under the conditions named above.
ROBERT C. CLOWRY, President and General Manager.

RECEIVED at

176 C KA CS 33 Paid. Via Norfolk Va
Kitty Hawk N C Dec 17
Bishop M Wright
7 Hawthorne St

Success four flights thursday morning all against twenty one mile
wind started from Level with engine power alone average speed
through air thirty one miles longest 57 seconds inform Press
home ~~2577~~ Christmas . Orevelle Wright 525P