

Eugene Ely

First Flight From Ship to Shore



On November 14, 1910, Eugene Ely¹ in a Curtiss built "Hudson Flyer," utilizing a specially constructed platform with an uptilt at the end, took off from the cruiser *USS Birmingham* anchored off Fort Monroe, Virginia and landed at Willoughby Spit, 2½ miles distant, thus completing the first flight from ship to shore and the first flight to utilize the "Ski Jump" deck. This was the birth of Naval aviation.

Eugene Ely, the self-taught flier from the Williamsburg, IA, was an exception to the daredevil fliers of the day. Unlike the daredevils, Ely had a logical theory of flight and a keen interest in the machines. He spent a lot of his time on the ground working with airplane builder Glenn Curtiss. Both men were interested in producing aeroplanes that would be more useful than merely providing sport.

In October 1910 Captain Washington I. Chambers, who was responsible for aviation matters at the Navy Department, traveled to Belmont Park, New York, to inspect aircraft and meet with pioneer aviators at the International Air Meet. While discussing the prospects for the taking aircraft to sea,

¹ Eugene Ely was born October 21, 1886 and grew up on the family farm near Williamsburg, Iowa. It is rumored that he attended Iowa State University where his interests "in all things mechanical" intensified. In 1904 (at age 18), he moved to San Francisco, California where he became active in the automobile business.

In 1907 he married Mabel Hall, of Corte Madera, California. She would go on to play an active role in his subsequent aviation career, acting as both manager and publicist. But in 1909, the two moved to Portland, Oregon, where the couple purchases a home, and Eugene took up work as an automobile mechanic which led to an unusual relationship with E. Henry Wemme, a local auto dealer.

In February 1910, following America's First International Air Meet in Los Angeles, Wemme had purchased one of Glenn Curtiss' first 4-cylinder Biplanes and took the agency for them in the Northwest. However, never having flown himself, nor having any actual knowledge of aeroplanes, Wemme found himself unable to fly the Curtiss Biplane.

Eugene, believing that flying was probably as easy as driving a car, offered to try to fly the little 4-cylinder biplane, but only wound up crashing it instead. Feeling so badly about the mishap, Ely bought the wreck from Wemme. Eugene spent several weeks making repairs to the Curtiss biplane and then cautiously proceeded to teach himself to fly.

Eugene quickly acquired the feel of the aeroplane and was in the air by April 1910 making short straightaway hops. For the next two months he would continue to practice with this new contraption until he felt he had mastered the little flying machine. Ely was awarded Aero Club of America's Pilots Certificate No. 17.

he was impressed by the technical abilities of Eugene Ely, a demonstration pilot working with Glenn Curtiss. Early the following month, the Captain visited another air show, near Baltimore, Maryland, and again saw Ely. Upon hearing that Captain Chambers was interested in having a plane fly from a ship², Ely volunteered for the task.

In less than two week's time, with financial help from wealthy aviation enthusiast John Barry Ryan, official backing from Assistant Secretary of the Navy Beekman Winthrop, and Eugene Ely's drive and initiative, Chambers managed to generate a historic achievement that marked the physical beginning of U.S. Navy flying. At the Norfolk Navy Yard, Virginia, a wooden platform was quickly constructed over the foredeck of the scout cruiser *USS Birmingham*. Designed by Naval Constructor William McEntree and paid for with a few hundred dollars of Ryan's money, this structure sloped down five degrees from the cruiser's bridge to her bow to provide a gravity-assisted 57-foot takeoff run for Ely's Curtiss pusher airplane.



The plane, placed on board by the morning of November 14, 1910, had its engine installed by Ely and his mechanics as the ship prepared to leave port. Shortly before noon, *USS Birmingham* steamed down the Elizabeth River toward Hampton Roads, where the flight was to take place. However, the weather was dreadful, with squalls rolling by and threatening to thwart the affair. *USS Birmingham* anchored to await improved conditions.

By 2:30pm the sky looked lighter to the south. Captains Fletcher and Chambers decided to get under way. Iowa-born Ely could not swim³, feared the water, got seasick on ferryboats, and knew nothing about ships. He thought the cruiser would get under way as quickly as a ferry. He had no idea that the windlass he heard wheezing and clanking under the aeroplane platform might take half an hour to heave 90 fathoms of chain out of the mud. So he paced first the bridge, then the launching platform. Then he

climbed into his seat and tried the controls. Sixty fathoms of chain were still out. Henning spun the propeller. Ely opened the throttle and listened approvingly to the steady beat. Under the plane's tail, the helmsman at the wheel took the full force of the blast.

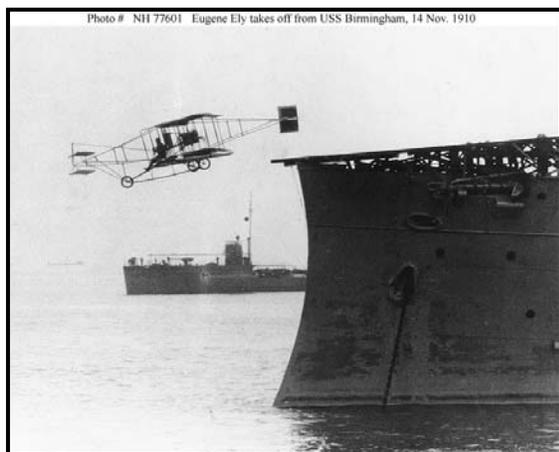
Ely was ready. He idled the engine and waited. Then he gunned the engine to clear it, twisted the wheel for a feel of the rudder, rechecked the setting of the elevator, and looked back at the captains on the bridge wing. They looked completely unhurried.

Then Ely noticed the horizon darkening with another squall and he began to wonder why the *Birmingham* did not start. He looked at Chambers, and pointed at the approaching blackened. The captain nodded. He knew it would be close, but he could do nothing. Thirty fathoms of chain were still in the water. Ely checked everything again, and stared at the squall ahead. He seemed about to lose his chance because the Navy was so slow. At 3:16pm he decided he would wait no longer for the ship to start steaming into the wind. If ever he was going to fly off that ship, it had to be now. He gave the release signal.

² Captain Chambers had earlier asked Wilbur Wright for a pilot and a plane to fly from a ship. Wright had flatly refused all help, saying it was too dangerous.

³ Ely crafted the life jacket out of a set of inner tubes. The helmet he wore was a football helmet.

Harrington, who knew the plan, hesitated, Ely emphatically repeated his signal. The mechanic yanked the toggle, watched the plane roll down the ramp and drop out of sight. Water splashed high in front of the ship. Then the plane came into sight, climbing slowly toward the dark clouds. Men on the platform and bridge let out the breath they had held. One of them spoke into a voice tube, and the wireless operator tapped out, "Ely just gone."



In 1910, Curtiss pilots steered with their rudder, balanced with their ailerons and kept the elevator set, by marks on its bamboo pushrod at a climb, level, or a glide position. In order to dip and pick up a bit more speed, Ely took off with his elevator set for glide. Off the bow he waited the fraction of an instant too long to shift to climb. The machine pointer up, but squashed down through the air.

Eugene felt a sudden drag. Salt water whipped his face. A rattle, like hail on a tin roof, was louder than his engine. He tried to wipe the spray from his goggles but his glove hand only smeared them, so he was blinded. Then the splashboard pulled the wheels free of the

water. The rattle stopped. He snatched off his goggles and saw dirty, brown water just beyond his shoes.

The seat shook. The engine seemed to be trying to jump out of the plane. Ely's sense of direction left him. There were no landmarks, only shadows in the midst, and that terrifying water below. He swung left toward the darkest musty shadow. He had to land quickly. On the ground he might stop the vibration, take off again, and find the Navy Yard. He wondered if the bulky life jacket that fouled his arms would keep him afloat if the plane splashed.

A strip of land bordered by gray, weathered beach houses loomed ahead. Five minutes after the mechanic had pulled the toggle, Ely landed on the beach at Willoughby Spit. "Where am I?" he asked Julia Smith, who had dashed out of the nearest house. "Right between my house and the yacht club," she said.

It sounded funny but it wasn't. He knew the splintered propeller would not take him to the Navy Yard. He had failed. He blamed himself bitterly for the split second delay in shifting the elevator. Now he knew how to do it without hitting the water, but would he ever get another chance?

Boats full of people converged on the yacht club dock. Their enthusiastic congratulations confused him. "I'm glad you did not head for the Navy Yard," Chambers told him. "Nobody could find it in this weather." Captain Fletcher agreed. John Barry Ryan offered him \$500 for the broken propeller. "A souvenir of this historic flight," he explained.

Ely figured that in not making the Navy Yard, he had failed, and Chambers and Ryan spent the evening trying to convince him that he had succeeded. His particular landing place was unimportant. It would soon be forgotten. The world would remember that he had shown that a plane could fly from a ship, and that navies could no longer ignore aeroplanes. Ely did not cheer up until Chambers promised to try to arrange a chance for him to do it again. "I could land aboard, too," was Ely's comment.

The next morning John Ryan's valet wrapped the splintered propeller in a bathrobe and carried it into Ryan's Pullman drawing room. There Ryan gave a champagne party until train time, presented Ely with

a check for the propeller, and made him a lieutenant in his U.S. Aeronautical Reserve. After the train pulled out, Eugene spent the check on a diamond for Mabel.

First Flight From Shore to Ship



Soon after Eugene B. Ely's historic airplane flight from the USS Birmingham Captain Chambers proposed that Ely try landing his plane on board ship. The aviator, always searching for new ways to generate publicity for his aerial exhibitions, enthusiastically accepted the proposition, offering to make the attempt in January 1911 at San Francisco, California, where he would be participating in an air meet.

The honor of hosting the landing was assigned to the Pacific Fleet's armored cruiser USS Pennsylvania, and the Mare Island Navy Yard constructed a temporary wooden platform over her after deck and gun turret.

Ely and others devised a method of stopping the plane within the platform's 120 by 30 foot dimensions: a series of ropes, with sandbags at each end, would be stretched across the temporary deck and held above it by boards laid along its length. Hooks were attached to the airplane's landing gear to catch the ropes, and the weight of the sandbags would bring the machine to a rapid halt. In case of an overrun, or a swerve off the platform's edge, USS Pennsylvania's crew rigged canvas awnings in front and to the sides to catch plane and pilot. This arrangement was a clever one, worked well, and in general pointed the way to the arresting gear and safety barrier system that is employed on the Navy's aircraft carriers to this day.



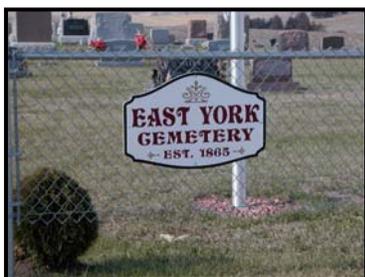
Shortly before 11:00am on the morning of January 18, 1911, after the usual weather-driven delays, Ely took off from Tanforan racetrack. The USS Pennsylvania was anchored off the San Francisco waterfront, in full view of thousands of spectators ashore, on ships at the city piers, and in a flock of small craft gathered around the cruiser. The little Curtiss pusher biplane came into view, flew around ship to check arrangements and set up the landing course, and then came in toward USS Pennsylvania's stern. Ely was prepared to handle the existing tailwind, but apparently did not expect the updraft that struck his lightly-loaded plane just as it reached the platform. Fortunately, he responded quickly, dove and snagged the arresting gear about halfway up its length. The Curtiss pulled ropes and sandbags to a smooth stop

before reaching any of the safety barriers.

Ely's wife greeted him with an enthusiastic "Oh, boy! I knew you could do it". USS Pennsylvania's Commanding Officer, Captain Charles F. Pond, took the pilot and important guests below for a celebratory lunch. While they dined, the landing platform was cleared and the plane turned around in preparation for takeoff. Then the Ely's, Pond and the others posed for photographs. The pilot then remounted his machine and, about an hour after the World's first shipboard airplane landing, made

history's second successful takeoff. Captain Pond sent a favorable report to the Navy Department, Eugene Ely added luster to his reputation as a smart and innovative aviator, and the Navy began the slow process of bringing "flying machines" into its force structure. For the next decade, however, the British Royal Navy would take the lead in the further development of aircraft-carrying warships.

Had Glenn Curtiss fully appreciated just how important Ely's flights would become, he might have preserved the *Hudson Flyer*. Unfortunately he did not, and not too long after Ely's historic flight, the plane faded from public view. Plans for the aircraft have long since vanished as well. Only a small number of photographs remain to show how the airplane was designed and constructed. Built by the Curtiss Aeroplane Company in Hammondsport, New York, it obtained its name, *Hudson Flyer*, when Glenn Curtiss personally piloted the airplane along the Hudson River from Albany to New York City in May of 1910. Subsequently, Curtiss always billed it as the *Hudson Flyer* whenever it made exhibition appearances.



Eugene Ely⁴, like the historic plane he flew, soon passed into history as well. He was killed in a flying accident two days short of his 25th birthday in Macon, Georgia on October 19, 1911.

He is buried about seven miles east of Williamsburg, Iowa in the East York cemetery⁵. The inscription on his head stone reads, "**Eugene Burton Ely, Born Oct 21, 1886, Gave His Life to the Science of Aviation at Macon, GA, Oct 19, 1911, R.I.P.**"

⁴ A large mural recognizing the achievement of Eugene Ely is located in the lobby entrance of the Williamsburg, Iowa Post Office. He is also recognized in the Hall of Honor at the National Museum of Naval Aviation located in Pensacola, Florida for his extraordinary contribution to Naval Aviation.

⁵ Directions to the Ely's grave site: Drive seven miles east from Williamsburg on 240th St (also called the IWW) to W Ave. Turn right on W Ave and drive about 4 tenths of a mile. Just past the grove of trees on the right, make a right hand turn onto a one-lane road and drive 2 tenths of a mile back into a field where the East York cemetery is located.