



# MUSEUM HIGHLIGHTS

## A Significant Addition to the Early Aviation Hanger

The *Spirit of St. Louis* (Registration: N-X-211) is the custom-built, single engine, single-seat monoplane flown by **Charles Lindbergh** on May 20–21, 1927, on the first solo non-stop transatlantic flight from Long Island, New York, to Paris. Lindbergh won the \$25,000 Orteig Prize for this accomplishment. Known as the "Ryan NYP" (for **New York to Paris**), the plane was named the "*Spirit of St. Louis*" in honor of Lindy's supporters from the St. Louis Raquette Club in his then hometown of St. Louis, MO.



Lindbergh took off in the *Spirit* from Roosevelt Airfield, Garden City, New York, and landed 33.5 hours later at Aéroport Le Bourget in Paris, France, a distance of 3,600 miles. One of the best known aircraft in the world, the *Spirit* was built by Ryan Airlines in San Diego, California. The *Spirit* is now on permanent display at the Smithsonian Institution's National Air and Space Museum in Washington, D.C.

This *Spirit of St. Louis* monoplane was acquired by the SMF from the **Octave Chanute Aerospace Museum** at Rantoul, IL where their museum volunteers painstakingly constructed the static replica of this famous historical aircraft. It is now a centerpiece of the SMF's **Early Aviation Hanger**.

Come visit this fine replica and be impressed.

## Birmingham's Blue Angels

The SMF's new **A-4F "Skyhawk"** is a veteran of the Vietnam conflict having served with Navy Attack Squadron VA-164 'Ghostriders' while assigned to the aircraft carrier USS Hancock. Additionally, the aircraft was also assigned to the US Navy's Fighter Weapons School (TOPGUN). The aircraft's last service was with the 'Challengers', VF-43 which was based at NAS Oceana, VA.



The Quonset Air Museum transported the aircraft from Oceana to their location in Rhode Island and restored the aircraft in striking Blue Angels livery.

Heavy snowfall during the winter of 2015 collapsed the museum's roof and the building was condemned. Following an unsuccessful search for a new home, the museum announced on the 16th of December 2016 that it would not reopen and the aircraft in their collection would be transferred to other museums. The SMF was fortunate to acquire this aircraft on loan from the **National Naval Museum**, Pensacola, FL and received the Skyhawk from Quonset in July 2017.

Although the striking paint scheme lends impressive credibility to this aircraft, it never actually flew with the Blue Angels.

*But one can imagine!*

## The World's Biggest Bi-Plane !

*How can a winged aircraft hover like a helicopter, and even fly backwards under certain conditions?*

The SMF has such an aircraft now awaiting its opportunity for restoration. The **Antonov An-2 Colt** is a large bi-plane with a 9-cylinder radial engine that was developed from the Wright R-1820. This aircraft has remarkable durability and high lifting power. The An-2 was designed back in 1947, and manufactured until 2001. The An-2 was the longest produced aircraft in the world but now that title belongs to the C-130. The An-2 remains in service with military and civilian operators around the world today.



The key to the plane's ability to hover, and even fly backwards in the right conditions, is due to the control surfaces on the wings. Leading edge slats and flaps bring down the aircraft's speed and also increase lift by altering the shape of the wing. With a headwind of 15 to 20 knots, a pilot can "hover" the airplane, and if the headwind is strong enough, the aircraft can move backwards very slowly. A pilot can still fly the plane under full control at around 25 mph. In fact, the flight manual does not have a published stall speed!

Over 20,000 An-2s were built and the number still airworthy is unknown but believed to be at least 2,000.

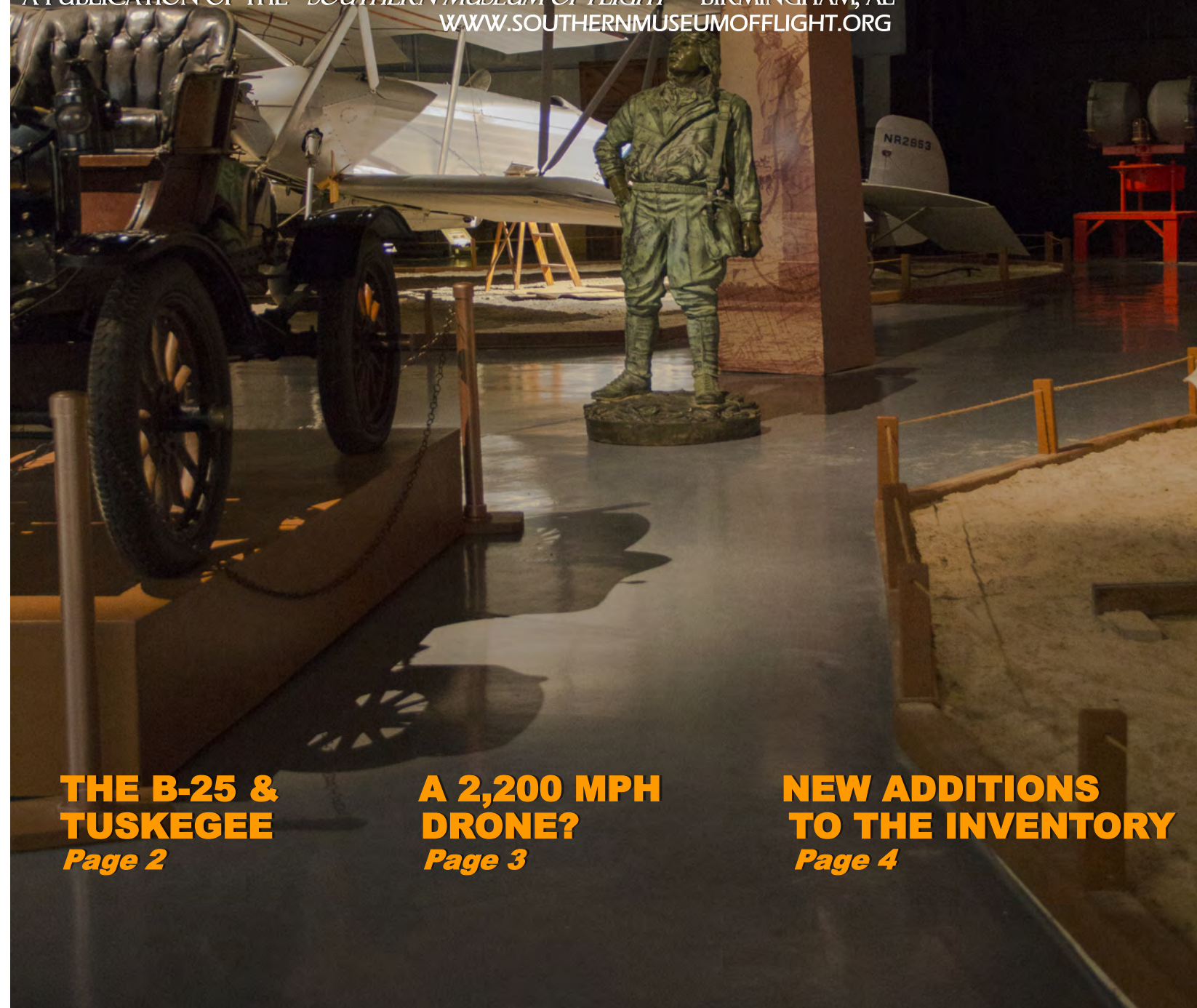
Approximately 5 are flown as warbirds in the USA and Europe.

# FLIGHT LINES

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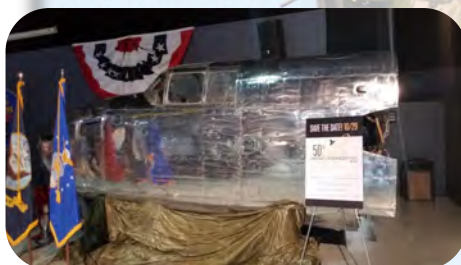
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## The Museum's B-25 Tuskegee Connection

The **B-25** medium bomber was one of America's most famous airplanes of World War II. It was used by General Doolittle for the "Tokyo Raid" on April 18, 1942. More than 9,800 B-25s were built during World War II.

This Mitchell bomber, delivered to the USAAF on 7 February 1945, is very special to Alabama and the SMF with its connection to the Tuskegee Airmen.

The B-25J served as a twin-engine trainer and was assigned to the 2143rd AAF Base Unit (*Basic/Advanced Pilot School*) at Tuskegee AAF in July 1945. The aircraft served at Tuskegee until being transferred to Sheppard AAF in Texas in January 1946. It is a remarkable coincidence that this impressive aircraft and Col. McGee may cross paths once again.



This B-25 went on to serve at other training wings and was returned to the **Birmingham Modification Center** in December 1954 for its conversion to a TB-25N, of which only 54 versions were made. After conversion, the aircraft was transferred to the 3345th Technical Training Wing at Chanute AFB in Illinois. In 1958, the B-25 was dropped from inventory and transferred to Museum status.

The "**Tuskegee B-25**" now proudly takes its rightful place as part of the SMF's **Tuskegee Airmen Exhibit**.

## Planning For A Famed Tuskegee Airman To Reunite With "His" B-25



**Charles McGee** attended the University of Illinois and in 1939 joined the ROTC.

After Pearl Harbor in 1941, McGee heard the US Army was recruiting to train African-American soldiers as mechanics at nearby Chanute Field, for the expected African-American flight program. He applied for a pilot's slot and passed the examination. In October 1942, he received his orders and soon was at Tuskegee Army Air Field in Alabama to begin flight training with his fellow black cadets.

On June 30, 1943, McGee graduated from flight school in Class 43-F. By the beginning of 1944, 2nd Lt. McGee had joined the pioneering all-black 332nd Fighter Group, 12th Air Force, flying P-39 Airacobras, P-47 Thunderbolts and later, P-51 Mustangs.

The 332nd, also known as the "Red Tails," soon earned the respect of their Luftwaffe counterparts and of the white bomber crews they protected. By November, 1944, with 136 missions and a Focke-Wulf to his credit, McGee was heading home and returned to Tuskegee as a twin-engine instructor. This is where McGee and the B-25 on exhibit first crossed paths.

Upon war's end, the Tuskegee Army Air Field was closed, and in 1946, McGee joined the 477th Composite Group at Lockbourne Air Base, near Columbus, Ohio.

In May 1950, after several stateside assignments, McGee was assigned as Base Operations Officer, Clark Field in the Philippines. In June 1950, the Korean War broke out. McGee soon found himself back in a Mustang and in combat. During this tour, he flew 100 bombing and strafing missions. Returning to Clark Field, McGee took command of the 44th Fighter-Bomber Squadron, and flew the F-80.

In 1953, McGee graduated from the Air Command and Staff College at Maxwell Air Force Base, and later flew F-89 Scorpions with the Air Defense Command.

McGee was promoted to Lieutenant Colonel in 1959. The McGee's and their three children spent the next few years on assignments in Italy, North Dakota and Missouri. By 1967, the Vietnam War returned McGee to combat. Leading the 16th Tactical Reconnaissance Squadron out of Tan Son Nhut Air Base near Saigon, he flew 173 missions in the RF-4C.

The Air Force next sent McGee to Germany, promoting him to Colonel in 1969. In June 1972, he commanded the 1840th Air Base Wing at Richards-Gebauer AFB, near Kansas City, Missouri. On January 31, 1973, after 30 years of military service, McGee retired from the Air Force. His 409 aerial fighter combat missions over three wars still stands is a record that still stands.

Col. McGee's military honors include the Legion of Merit with Oak Leaf Cluster, Distinguished Flying Cross with Two Clusters, two Presidential Unit Citations, and many others. McGee went back to school, finally earning that long delayed degree. His civilian career included serving as VP of a real estate holding company, and Manager of the Kansas City Downtown Airport. He was instrumental to the growth of the **Tuskegee Airmen Association**. He remains a highly sought after speaker and, with his motto of "**Do while you can,**" continues to inspire young and old alike.

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## The First Black Military Aviator

In August of 1917, Eugene Jacques Bullard, an American volunteer in the French army, became the first black military pilot in history. Born in Columbus, GA on Oct. 9, 1894, Eugene Bullard left home at the age of 11 and by 1913, he had settled in France as a prizefighter. When WW I began, he enlisted in the French Foreign Legion and rose to the rank of Corporal. For his bravery as an infantryman in combat, he received the Croix de Guerre.

While recovering from combat wounds, he accepted an offer to join the French Air Force as a gunner, but then obtained permission to become a pilot. After completing flight training, he joined the 200 other Americans in the Lafayette Flying Corps, and he flew combat missions until November 11, 1917. He became known as the Black Swallow of Death!



Bullard remained in France as an expatriate after the war. When WWII began, he joined the French army, was wounded and returned to New York where he remained in relative obscurity, but in France, he remained a hero. In 1964, he was one of the veterans chosen to light the "Everlasting Flame" at the French Tomb of the Unknown Soldier under the Arc de Triumph and in 1959, the French honored him with the Knight of the Legion of Honor. On October 13, 1961, Eugene Bullard died and was buried with full military honors in the cemetery of the Federation of French War Veterans in Flushing, NY and on September 14, 1994, the Secretary of the Air Force posthumously appointed him a 2nd Lt in the USAF.

## Lockheed's "GTD-21B" Drone



In the 1960s, Lockheed's secret Skunk Works developed the Mach 3, **A-12** reconnaissance aircraft for the Central Intelligence Agency (CIA) along with the concept of a long-range drone that used much of the A-12's technology. The drone was intended to make a one-way trip, eject its camera payload at the end of the mission for recovery, then self-destruct. The camera and its film magazines were carried in a "hatch" below the drone's air intake and would be ejected at the end of the mission and snagged out of the air by a C-130. If the C-130 missed, the equipment was equipped with flotation devices so it could be recovered by ship if released over water. The **Q-12**, as it was identified, was to be air-launched from the back of an A-12.

Lockheed wanted to power the Q-12 with a BOMARC missile ramjet engine, modified to operate at high temperatures for at least an hour and a half at high altitudes. A full-scale mockup of the Q-12 was ready by 7 December 1962, and had already undergone preliminary tests to measure its radar cross-section.

However, the CIA was not enthusiastic about the Q-12, mostly because the agency was overextended at the time. The Air Force, however, was interested in the Q-12 as both a reconnaissance platform and a cruise missile, and the CIA finally decided to work with the USAF to develop the new drone. Lockheed was awarded a contract in March 1963 for full-scale development of the Q-12.

In late 1963 the project was named **Tagboard**. The Q-12 was re-designated **D-21** while the A-12 version launcher became **M-21** (*D- for "daughter" and M- for "mother"*). Two of the original 18 A-12 aircraft were designated as M-21s with serial numbers 60-6940 and 60-6941. The M-21 was a two-seat version of the A-12, with a pylon on the fuselage centerline between the vertical stabilizers to carry the drone in a nose-up attitude.

The first actual launch of a D-21 finally occurred on 5 March 1966, followed by two others on 27 April and 16 June that year. These were all moderately successful, but the fourth and final M-21/D-21 launch on 30 July ended in disaster. The D-21 hit the M-21's tail after separation, leading to the crash of both aircraft and the death of one of the two M-21 crewmembers. After this accident, the M-21/D-21 program was terminated.