Ages of Aviation

B-52 STRATOFORTRESS

B-17 Flying Fortress

F-16 Fighting Falcon

F/A-18 HORNET

F4U-Corsair

TBF/TBM AVENGER

P-51 MUSTANG

The Phabulous Phantom

UH-1 IROQUOIS
Hello! Welcome to the April issue of Ages of Aviation! The year 2015 is a very important year for historic aviation. This year marks the 70th year since the end of World War II, the 75th anniversary of Dunkirk and the subsequent fall of mainland Europe to German aggression. Here at Ages of Aviation we are going to commemorate these milestones with a series of issues dedicated to warbirds, past and present. Each issue will focus on a few warbirds that played significant roles in the wars in which they were used. We will be able to delve into details about manufacturing, first flights, and war uses. This issue will explore aircrafts that were flown during World War II, Vietnam, and current fighter jets. I will be signing off now, but I sincerely hope that you enjoy reading about ages of aviation.
**B-17 Flying Fortress**

The B-17 Flying Fortress is one of the most famous aircrafts that was ever built. Initially this aircraft was going to be called the Boeing 299. During the Boeing 299’s initial flight the prototype crashed due to a human error. Since the government was in the practicing of funding aircrafts that crashed they would have refused to continue funding this project. But, the Air Force saw that this aircraft had a lot of potential, so they renamed the prototype the B-17 Flying Fortress and found a loophole so that they could continue its development. The B-17’s first flight was on July 28, 1935 and was a huge success.

There were not many B-17’s in service before the start of World War II production quickly accelerated once the United States entered the war. Over the course of nine years 12,731 B-17’s were built to service the Air Force in war. This aircraft was very dependable and was known for its ability to sustain a great amount of damage and still make it home safely with its crew. This aircraft required a crew of ten service members; the pilot, co-pilot, navigator, bombardier/nose gunner, flight engineer/top turret gunner, radio operator, 2 waist gunners, ball turret gunner, and tail gunner. The aircraft could travel over 2,000 miles before it needed to return home for fuel and during its usage these aircrafts dropped over 640,000 tons of ordnance on Germany. The famous Eighth Air Force extensively used these aircrafts during their battles.
A F4U Corsair belonging to the Commemorative Air Force launches to start an airshow performance.

The F4U-Corsair was an aircraft that was primarily used by the United States Navy on aircraft carriers. This aircraft’s prototype was first flown on May 29, 1940. The plane was not introduced to the Navy until December 28, 1942. This aircraft was mainly used in World War II and the Korean War. Originally the plane was manufactured by Chance Vought, but the demand for the aircraft quickly overwhelmed his manufacturing capabilities so Goodyear and Brewster helped pick up the slack. In the 39 years that these planes were in use 12,571 were built for the armed forces. This aircraft was famous for several reasons, it was the first aircraft to break the 400 mph barrier and it was the first US Navy aircraft to have retractable landing gear. The F4U-Corsair was known for its inverted-gull (or bent) wing design that accommodated a larger propeller and also for its engine that was powered by the Pratt & Whitney Double-Wasp engine.

### Specifications

**General Characteristics**
- Crew: 1 Pilot
- Length: 33' 4"
- Wingspan: 41’
- Height: 16’ 1”
- Wing Area: 314’ 2”
- Empty Weight: 8,982 lb
- Loaded Weight: 11,432 lb

**Performance**
- Maximum Speed: 417 mph
- Range: 1,015 mi
- Service Ceiling: 36,900 ft
- Rate of Climb: 2,890 ft/min

**Armament**
- 4 x 12.7mm AN/M2 Browning Machine Guns
- 2 x AN/M2 Browning Machine Guns
- 4 x 12.7cm High Velocity Aircraft Rockets
- 2,000 lb Bombs
The P-51 Mustang was built by North American Aviation when the British Purchasing Commission sought out the Americans to help build a superior aircraft. Once the NAA signed a contract with the British for the plane it was completely built and ready for its first flight in 102 days. The prototype was called the NA-73x and its first flight was on October 26, 1940. The first flight demonstrated that the aircraft flew well and could handle a heavy load. This aircraft was armed with four 7.62mm M1919 Browning machine guns. The two of the guns were located on each of the aircraft’s wings and the other two guns were mounted under the planes engine. The Mustang also had a K24 camera behind the pilot so they could photograph the enemy and provide support to the ground with up to date invasion targets. Once the plane was tested by the British they were impressed with its capabilities, but that the Americans equip the plane with a Rolls Royce Merlin 60-series engine that was better suited for high altitudes. In November 1942 the first Mustang with a Merlin engine was tested in the P-51B. The new engine increased the aircraft’s altitude capabilities and speed. This second prototype flight showed that at 30,000 feet the plane reached 440 miles per hour, which was almost 100 miles per hour faster than the plane traveled with the previous engine. This version of the aircraft with the Merlin engine also had some other modifications such as a four-bladed propeller, stronger underwing racks, a strengthened airframe, an intercooler radiator, deeper scoop under the rear fuselage, and removal of the nose-mounted guns. Once all of these changes were made to the aircraft it was time to start the manufacturing process. The British air force was searching for a plane that could escort and protect long range bombers and they believed that the P-51B Mustang was the perfect aircraft for the job. Production was moved to a plant in Inglewood, Kansas City and Dallas, Texas. All together over 15,000 planes were built to fight in World War II and the Korean War.
The TBF Avenger was the very first fighter to have a compound angle wing-folding mechanism. This was created by Leroy Grumman and it was used to help maximize storage space on aircraft carriers. This was unique in comparison with other aircrafts from that era because the wings folded to the side and rewards instead of up onto the top of the aircraft. Since this aircraft was the largest and heaviest carrier based aircraft during World War II, so if its wings were not able to fold a specific way it could not have been used on carriers.

The Avenger’s landing gear was designed so ruggedly gravity would be enough force to lock the main struts in place in the event of hydraulics failure.
The McDonnell Douglas F-4 Phantom II was originally developed for the United States Navy by McDonnell Aircraft. The planes first flight was May 27, 1958. This aircraft was originally created for Navy use, but since it proved to be highly adaptable the US Marines and the US Air Force also began using this warbird in the early 1960s. The Phantom can travel faster than Mach 2.2 or 1,674 miles per hour, it can also carry more than 18,000 pounds of weapons. In 1959 this warbird broke over 15 world records for aviation performance including the speed record and the absolute altitude record. This aircraft was also the first of its kind to be completely dependant on its own radar and detection systems instead of depending on ground based fighter controls. The Phantom was retired from US combat use in 1996, but before it was retired it was sold to twelve other nations including Great Britain, Germany, Spain, Australia, Greece, Turkey, Israel, Egypt, Iran, Japan and South Korea.

Although the Phantom is over 55 years old the Air Force still actively uses them.

Some of the remaining Phantoms are being converted to drones for target practice.

To avoid brake fires, the Phantoms used drag chutes to slow down when landing.

Most current-day Phantoms are based at either Holloman or Tyndall. This one is from Holloman.

The world's only civilian owned F-4 Phantom belongs to the Collings Foundation and is based at Ellington Field in Houston, Texas.
In 1952 the Army came to the decision that they needed to have a new helicopter designed that was smaller, better powered, and easier to maintain than their current helicopters. They received designs and bids from 20 companies hoping to secure the Army contract. After much review the Army selected Bell Helicopter to build three copies of the Model 204 for evaluation and they designated these helicopters as the XH-40.

The Bell UH-1 Iroquois helicopter, unofficially named the Huey, was manufactured in 1952. This helicopter was created because the Army needed a way to evacuate injured soldiers off the battle field. The helicopters first flight was on October 20, 1956 and it began mass production in 1960. The UH-1 Iroquois is called the Huey because the US Army adopted their own two letter designation system and called the UH-1 the HU-1 which meant Helicopter Utility. Over time the designation came to be known as Huey and the name has never changed. The UH-1 was first used in combat during the Vietnam War. Approximately 7,000 Huey helicopters were used for the wartime efforts. Since production of the Huey began in 1960 more than 16,000 have been produced worldwide and they have been used for aerial attacks, transporting troops, firefighting missions, humanitarian aid efforts, research operations, and search and rescue duties. This was the first turbine-powered helicopter in the United States.
The Boeing B-52 Stratofortress was designed and built by Boeing, who won a contract for its production in June 1946. The B-52 is a strategic bomber that is capable of carrying 70,000 pounds of weapons. The B-52’s first flight was in 1952 and this warbird was produced until 1962. Over the course of ten years 744 B-52’s were produce for use in the Strategic Air Command (SAC) and the Air Combat Command (ACC). Even though the B-52’s are no longer in production they are expected to be in use until well past 2030 due to extensive system and structural upgrades. As of today the United States Air Force only has 76 B-52’s in service and they are all stationed at Barksdale Air Force Base in Louisiana and at Minot Air Force Base in North Dakota. Even though the official name of the B-52 is the Stratofortress it is unofficially called the BUFF or the Big Ugly Fat Fellow. The aircraft received this nickname because it is a very large plane. The B-52 is 159 ft long and has a take-off weight of 488,000 pounds.
The Canadian Air Force Hornet Demonstration Team flies at air shows all over the world. This is their special anniversary paint scheme.

The F/A-18 Hornet is the preferred aircraft of the US Navy Blue Angel Flight Demonstration Team.

The F/A-18F Super Hornet sports more powerful engines, improved avionics, and a longer range.

This US Navy Hornet sports a legacy paint scheme in honor of the carrier-based fighters of WWII.

The Super Hornet was first ordered by the Navy in 1992 to be a replacement for the F-14 Tomcat. When the Navy went to Congress to request funds for the F/A-18 Super Hornet they presented it as a variation to the F/A-18 Hornet and kept the F/A-18 designation so that they could convince Congress that this project would be a low-risk “derivative.” The F/A-18 was initially designed and produced by McDonnell Douglas. Since the Hornet and the Super Hornet have very similar names they were given nicknames to use when informally referring to each aircraft or differentiating between the two on radio calls. The Hornet was called Legacy and the Super Hornet was named Rhino. The first flight of the Super Hornet was on November 29, 1995. The Super Hornet is an attack aircraft that is carrier based with the United States Navy. The Super Hornet is known for its air superiority, fighter escort, reconnaissance, aerial refueling, close air support, air defense suppression and precision striking abilities. The Super Hornet is equipped with an internal 20mm M61 rotary cannon and is capable of carrying air-to-air missiles and air-to-surface weapons. In addition, the Super Hornet is capable of aerial refueling for long missions and can carry up to five external fuel tanks. The Super Hornet weighs 32,100 pounds when it is empty, can weigh up to 66,000 pounds and travels at 1,370 miles per hour. This aircraft is currently being used by the US Navy and the Royal Australian Air Force.
The F-16 Fighting Falcon is a multirole fighter that was manufactured by Lockheed Martin Aeronautics. In late 1975 the United States Air Force ordered for 8 full-scale development (FSD) Falcon’s to be created and tested. After the aircraft passed all of its testing production was started in 1976. The aircraft was first introduced to the Air Force on August 17, 1978. Since production began in 1976 over 4,500 Fighting Falcon’s have been manufactured. The US Air Force has over 2,000 operational Falcons and there are more than 2,000 Falcons being used in 25 different countries. Falcons are currently being used in Bahrain, Greece, Israel, Egypt, New Zealand, United Arab Emirates, Singapore, South Korea, Oman, Chile and Poland. The F-16 is the first aircraft that is capable of withstanding higher g-forces than pilots are capable of living through. Even though the official name of this aircraft is the Fighting Falcon, pilots tend to call it the Viper. This nickname was selected because pilots believe that the plane resembles a viper snake and they also believe that it resembles the Viper Starfighter from Battlestar Galactica. The Fighting Falcon is 49.3 ft from nose to tail, it has a wingspan of 32.8 feet and weighs 20,300 pounds when it is empty.