Airplanes Under

Photo by Paul Kennedy

Photography by Guy Aceto, Art Director, **and Paul Kennedy**

Glass

Acres of aircraft, spacecraft, and artifacts of flight are on display at the Smithsonian's new Udvar–Hazy Center.

The SR-71 Blackbird dominates the entrance of the center.

The new Steven F. Udvar–Hazy Center has been a long time coming, but it is now open. At right and below are exterior views of the National Air and Space Museum's new facility. One of its hangars is longer than three football fields placed end to end. Plans call for the center to house 200 aircraft and 135 spacecraft.

Staff photos by Guy Aceto

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This photo provides a glimpse of the overall size of the center. USAF's SR-71 Blackbird is featured near the entrance. Above it hangs a World War II P-40 Warhawk. The Lockheed SR-71 was designed and built in the 1960s, but it is still the highest flying and fastest standard aircraft ever built. This SR-71 made numerous reconnaissance flights during its 24-year career. The Curtiss P-40 is one of the most famous aircraft of its era. It's perhaps best known in its Flying Tiger paint scheme, showing a shark's mouth. This particular P-40E did not fly in the war with US forces; instead it saw action with the Royal Canadian Air Force.

These two foes from the Korean War are an F-86 Sabre (left) and a MiG-15. This F-86 was assigned to the 4th Fighter–Interceptor Group, and most of its combat missions originated at Kimpo AB, South Korea. The MiG-15 is a Chinese-built MiG, dubbed F-2, acquired from another US museum.

Photo by Paul Kennedy

The B-29* Enola Gay *(above and right) has been fully reassembled. In the foreground, under a wing, is a P-38 Lightning. The B-29 was the most sophisticated propeller-driven bomber to fly in World War II and the first to offer pressurized compartments for its crew. In the Pacific, the twin-boom, twin-engine P-38 downed more aircraft during the war than any other fighter. This P-38 was converted to a two-seat trainer.

The P-26 "Peashooter," shown below, was a high-performance, all-metal monoplane but it still had older design elements such as an open cockpit and fixed landing gear. Peashooters were used in the 1930s for air defense. This one flew in the States until its transfer to the Panama Canal Zone in 1938. It eventually served in the Guatemalan Air Force.

Staff photos by Guy Aceto

The Spad XVI (left) was a two-seat version of the Spad fighters of World War I. About 1,000 of this type were produced, beginning in January 1918. This Spad was Billy Mitchell's personal aircraft, one he piloted on observation flights over the front lines during the last months of the war.

An ancestor of USAF's current B-2 stealth bomber is the Nothrop N-1M flying wing (right). N-1M stands for Northrop Model 1 Mock-up. The N-1M was developed in 1939-40 and was the first pure all-wing airplane. On July 3, 1940, it made its first test flight—accidentally—when it hit a bump on a dry lake bed and went airborne for a few hundred yards. It was flown for several years, and, although it was overweight and underpowered, it led to more advanced flying wing concepts.

Photos by Paul Kennedy

At left sits a Boeing 307 Stratoliner with the Bede BD-5B under its wing. The Stratoliner, first flown in 1938, was the first airliner with a pressurized cabin. It incorporated the wings, tail, and engines of the Boeing B-17C bomber. This aircraft was flown by Pan American Airways as the Clipper Flying Cloud. *The BD-5B is one of the smallest aircraft on exhibit. It is just over 13 feet in length. The museum calls it a build-it-at-home-from-a-kit aircraft. The prototype flew Sept. 12, 1971, and, by December, its designer, James R. Bede, had 4,000 orders for kits. Unfortunately, the kits proved difficult, taking many years and dollars to complete. According to the museum, about 150 were flying in 2002.*

The power plants at right are part of a collection of 35 aircraft engines on display at the museum. They range from an Aichi Atsuta to the Wright Cyclone GR-3350. The center has thousands of smaller artifacts, many of which are already on display. Others will be added later.

Staff photo by Guy Aceto

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Above is the Mercury Freedom 7 II capsule. It was to be the capsule used by astronaut Alan Shepard, the first American in space, if he had made a second flight. In the background is the first full-size space shuttle, the* Enterprise*—a test vehicle. Rockwell International rolled it out in 1976. It was used for approach and landing tests, then vibration tests, and launch complex fit checks. Below, the* Enterprise *is towed into its home at the Udvar–Hazy Center.

Photo by Paul Kennedy

Above is one of four Airstream trailers used by NASA as mobile quarantine facilities to isolate astronauts returning from the moon, to prevent the spread of any lunar-based contagions. NASA ensured the integrity of the quarantine by maintaining negative internal pressure and filtering effluent air.

This unit was used by the crew of Apollo 11. It was carried aboard USS* Hornet*, then transported to the Johnson Space Center in Houston. There the crew remained in the trailer until deemed "safe."

The P-47 Thunderbolt was a premier fighter of World War II. This one (right and below) was flown as an aerial gunnery trainer.

A German Focke–Wulf FW-190 sits near the P-47. A prototype FW-190 first flew in 1939.

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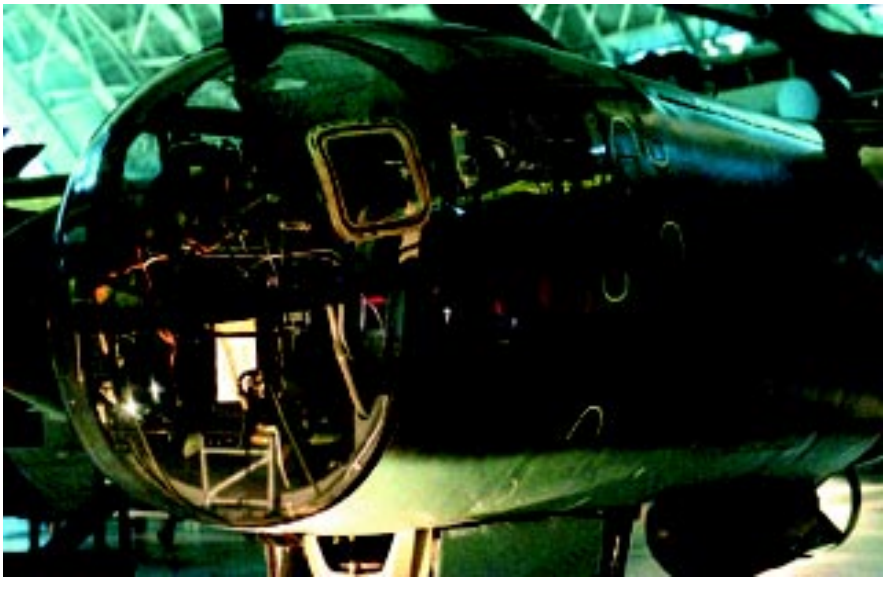

The German Arado Ar-234B Blitz (Lightning), at left, was the world's first operational jet bomber. Development began in 1940, but the first Ar-234 did not fly until 1943; Germany had diverted engines to its Messerschmitt (Me-262) jet fighters. The bomber prototype flew a year later. This aircraft was one of nine Ar-234s surrendered to British forces in Norway. According to the museum, it is the sole surviving Ar-234.

The newest aircraft at Udvar–Hazy is the Lockheed Martin X-35B short takeoff and vertical landing aircraft. It was a demonstrator for the new Joint Strike Fighter being developed for the US Air Force, Marine Corps, and Navy and Britain's Royal Air Force and Royal Navy. Flight testing of the JSF demonstrators ran from October 2000 to August 2001. The other two versions are the X-35A Air Force conventional takeoff and landing and the X-35C Navy carrier variants.

Staff photo by Guy Aceto

The sleek, delta-wing Concorde on display above saw service with Air France, flying its first Paris-to-Dakar-to-Rio de Janeiro route in January 1976. It flew around the world in 1998 in 41 hours, 27 minutes. It had made 6,966 flights, accumulating 17,820 hours, before it was donated to the museum.

The Concorde sits near the Boeing 307 Stratoliner and another Boeing airliner, the 367-80. The "Dash 80," as it is known, first flew July 15, 1954, and was the prototype for the Boeing 707 and Air Force KC-135 tanker. The Dash 80 also served as the test bed for the 727 and a variety of engines and airframe components. It was donated to the museum in 1972.

Photos by Paul Kennedy

Near the Dash 80 are several aerobatic aircraft (left).

Above, mounted on wires, are numerous small aircraft. The bright red* Little Butch *in the foreground is a Monocoupe 110 Special that flew in air shows beginning in the late 1940s. It was donated to the museum in 1981.

Even aircraft suspended in air are accessible to visitors by means of elevated walkways that rise to four stories above the floor. The vastness of the new center is astounding. ■