

Naval Aviation History

Glenn H. Curtiss, a young entrepreneur from Hammondsport, N.Y., was someone who craved speed. Racing bicycles in the local area led to a passion to go faster and, eventually, he produced lightweight, powerful engines that garnered the attention of “Captain” Thomas Baldwin. Baldwin, a former trapeze artist turned aviator, created the “California Arrow” – a dirigible that became the first aircraft to complete a circuitous flight in 1904. Between 1908 and 1910, Curtiss helped build a number of aircraft and set several early aviation records, including the first long-distance public flight from Albany to Governors Island in New York using the Curtiss “Hudson Flyer” May 29, 1910 - distance of 134 miles.

As the Navy’s interest in aviation heated up in the fall of 1910, Capt. Washington Irving Chambers, Officer in Charge of Aviation Matters for the Navy, arranged for a demonstration of flying an aircraft from the deck of a ship. November 14, 1910, Curtiss’ demonstration pilot, Eugene Ely flew the “Hudson Flyer” from a temporarily erected flight deck on the fo’c’sle of USS Birmingham while at anchor in Chesapeake Bay. Just two months later, Ely demonstrated the ability to land on a ship as well, this time on a temporary deck erected on the fantail of Armored Cruiser USS Pennsylvania in San Francisco Bay.

At nearly the same time these experiments were taking place and hoping to secure an order, Curtiss offered to train Army and Navy Officers for free. The Army and Navy both took up the offer and detailed officers to join Curtiss at his newly-obtained winter

flying school on North Island in San Diego Bay. Lt. Theodore Ellyson would arrive just after New Years 1911.

An event pivotal to Naval Aviation, February 17, 1911, Curtiss flew his “hydroaeroplane” in San Diego Bay, landing next to USS Pennsylvania. The ship’s crew hoisted the aircraft aboard, lowered it back to the water, meeting the requirements set by the Secretary of the Navy, convincing him to appropriate money for aviation.

May 8, 1911, Chambers placed the requisitions for the Navy’s first aircraft – the A-1 Triad – delivered to Hammondsport July, 1, 1911. This day would later be adopted as the official birth of Naval Aviation.

Marine Corps Aviation began a year after the Navy. May 22, 1912, Alfred Cunningham reported to the Naval Academy for flight instruction, becoming the fifth Naval Aviator and the first Marine Corps aviator.

April of 1914, Navy aircraft were ordered to sea aboard Navy ships to support American forces involved in the Mexican revolution. On the 25th of that month, Lt. Pat Bellinger and Lt. Richard Saufley would take fire from enemy forces, becoming the first American aviators to do so.

With the onset of America’s involvement in World War I, Naval Aviation expanded tremendously. While American industry lagged far behind that of the European powers, the U.S. contribution came in the form of anti-submarine aircraft, namely from the Curtiss Company. World War I did see several Naval Aviation firsts, including the first Naval Aviator Medal of Honor and first Ace, Lt. j.g. David Ingalls.

Perhaps the most notable technical accomplishment in the first decade of Naval

Aviation was the conquest of the Atlantic by air. Three Navy Curtiss (NC) flying boats embarked on the journey May 8, 1919. 19 days later, the NC-4 landed at Lisbon, Portugal, completing the flight.

Naval Aviation's formal recognition as a war asset came in 1921 with the establishment of the Bureau of Aeronautics (BuAer) with Rear Adm. William Moffett as its Chief. Moffett would remain in this capacity until his death in the crash of USS Akron in April 1933. His death spelled the end of major effort in the rigid airship program in the Navy.

The 1930s saw the rapid advance of both airframe and powerplant technology in aviation. At the beginning of the decade, most military aircraft were constructed with methods not terribly different than those in World War I. With the introduction of the Grumman, FF-1, the Navy embarked on incorporating modern construction techniques into aircraft. With semi-monocoque aluminum construction, enclosed cockpits and retractable landing gear, the FF-1 was far in advance of contemporary aircraft in its class.

Coupled with technological advances, the Navy also used its robust "Fleet Problem" exercises to develop carrier tactics. Fleet Problem IX in January 1929 established the versatility of a carrier-based fast attack force, while subsequent Fleet Problems reinforced and developed the tactical and strategic doctrines that would serve the Navy's fleet well in the upcoming Pacific War.

As the decade drew to a close, another revolution in aircraft construction took place. The biplane, staple of all military air arms since the beginning, made way for the low-wing monoplane.

December 7, 1941, the military forces of Japan embarked on a massive military operation to disable the U.S. Pacific Fleet and expand their empire. The Japanese attack on military installations on Oahu, Hawaii, in particular was meant to deal a death blow to the U.S. Pacific Fleet. A majority of the fleet was caught in port, but no aircraft carriers were in port and were thus available to conduct operations. In the early months of the war, raids in the Marshall and Gilbert Islands were conducted by the carriers, giving ship and plane crews experience in combat operations.

Several events in the following months would change the fortunes of the belligerents in the Pacific War. The first of these was the “Doolittle Raid,” a strike on the Japanese mainland April 18, 1942. 16 U.S. Army Air Force B-25B Mitchell medium bombers launched from the deck of USS Hornet flew 600+ miles to strike targets in the Tokyo area. While tactically insignificant, the psychological effect was tremendous, to the point where Japan withdrew equipment in the combat zones to defend her homeland. The second event was the Battle of the Coral Sea. This battle marked the first time in naval history where the opposing forces were not in sight of each other. A tactical victory for the Japanese, it was a strategic win for the Allies, since it cancelled plans for further expansion into New Guinea and likely saved the northern coast of Australia from sustained attack. The third event of significance that year was the Battle of Midway. In this four-day battle, the Japanese lost four aircraft carriers to American SBD Dauntless dive bombers, in turn losing the aircraft carrier USS Yorktown. Finally, in early August 1942, Marines landed at Guadalcanal in the Solomon Islands. The Japanese attempted to re-take the island and its airfield – Henderson Field- each time being bitterly opposed by Marine, Navy and Army Air Force defenses. The defenses held, largely due to American

airpower, and it was this battle that marked the beginning of the slow march up the Pacific to Japan.

1943 marked a turning point in Naval Aviation. Advanced aircraft designs, such as the F4U Corsair, F6F Hellcat and SB2C Helldiver entered squadron service, while the new Essex-class fast attack aircraft carrier and her smaller stablemates, the light and escort carriers also reached quantity production. While the carrier was the mainstay of airpower in the Pacific, the smaller carriers also provided much-needed anti-submarine support for Atlantic convoy escort, in concert with long-range, land based Navy patrol aircraft. Naval Aviation would lead the way to victory during the last two years of the war.

The close of the war saw several technical innovations take hold and prosper. First, the gas turbine engine – the jet- had reached a design maturity that allowed for new aircraft to take advantage of their power. The F9F Panther and F2H Banshee were soon in development and would play a significant role in the war ahead. Also, the helicopter, with its unique capabilities reached a level of technical competence that allowed for it to be a useful platform.

Naval Aviation was almost lost to history in 1949. Following the establishment of the United States Air Forces, an effort was made to place all U.S. military aircraft under that branch. In addition, the Secretary of Defense agreed with the Air Force that their strategic bombing force of B-36s intercontinental bombers could eliminate the need for shipboard naval aircraft, and by default, carriers. Several high-ranking Naval Officers publicly disagreed with this philosophy in what was known as “The Revolt of The Admirals.” The argument was rendered muted by the North Korean invasion of South

Korea. Navy and Marine Corps aircraft were first on the scene to support allied troops and would play a key role throughout the conflict. It was during Korea that the helicopter would prove its utility.

Naval Aviation did survive, and the mid-1950s another distinct technological revolution took place. Jet aircraft, with their slow throttle response times and higher landing speeds made carrier operations more hazardous than ever. In 1952, the USS Antietam (CVA 36) was fitted with an “angled” flight deck where landing aircraft were effectively separated from launching aircraft. This innovation, combined with improvements in arresting gear, catapults and landing signaling systems were essential to allow jets to operate safely. It was also during this time that the next generation of aircraft carrier with all these improvements was designed and built. USS Forrestal, (CVA 59) was the first supercarrier and was able to operate the larger aircraft being designed, such as the A3D Skywarrior.

Simultaneously with this was a raging “Cold War”. The United States and the Soviet Union, once allied in the defeat of Axis Powers in World War II had become fierce competitors as the world’s superpowers. Naval Aviation played a major role in monitoring Soviet submarine and fleet movements, including the attempt by the Soviet Union to deploy medium range ballistic missiles to Cuba in 1962.

As the 1960s began, the Navy commissioned its first nuclear-powered carrier and another regional war in Southeast Asia was brewing. American intervention in Vietnam began in the early 1960s and by 1962; the first Naval Aviation assets were deployed there in the form of Helicopter Medium Lift Squadron 362. More Naval Aviation would

follow over the course of the next 13 years, and would play a major part of combat operations both in the air and in support of troops on the ground.

The end of the Vietnam War signaled another revolutionary shift in aircraft and weapon development. New aircraft were procured, namely the S-3 Viking and F-14 Tomcat.

By 1980, the nation, under President Ronald Reagan, began an effort to rebuild the capabilities of the armed forces. Aircraft such as the F/A-18 Hornet and SH-60B Seahawk were developed and fielded during this decade. Also during the 1980s, the F-14 Tomcat demonstrated its air-to-air prowess by downing four Libyan Air Force jets on two separate occasions.

In August 1990, Iraq invaded neighboring Kuwait. The first offensive striking power on station was USS Independence, and by the time that the war began in January 1991, nearly 30 % of aircraft in theater were either Navy or Marine Corps. Eventually six aircraft carriers and numerous land-based Naval Aviation units would participate in combat operations in the 42-day war.

Several smaller, but equally important operations took place in the 1990s involving Naval Aviation. Operations Southern and Northern Watch ensured that Iraqi air power was held in check according to UN Resolutions. The Navy and Marines also played significant roles in Operations Deliberate Force in 1995 and Allied Force in 1999, the NATO-led military actions that took place in the Balkans region of Southern Europe.

Following the September 11, 2001, attacks against the Pentagon and World Trade Center, Naval Aviation again played a major role in taking the fight to the enemy. When Operation Enduring Freedom began on October 7, 1991, the only method of striking

targets was via carrier based strike aircraft, since no status of forces agreements were in place for land-based operations. The invasion of Iraq in March 2003 also saw a significant Naval Aviation presence that continues to this day.

Naval Aviation assets are increasingly being used for Humanitarian Assistance and Disaster Relief efforts. Operations in support of the Indonesian Tsunami in 2004, Hurricane Katrina relief on the U.S. Gulf Coast 2005, and Pakistani and Haitian Earthquake relief are just several of many such efforts where Naval Aviation played a key role.

As we begin the 100th year of Naval Aviation, it is still relevant and a uniquely American capability. No other nation has the depth of capability with a naval air arm as the United States. Naval Aviation will continue to serve well and faithfully through the next 100 years.

- CAPT Rich Dann, Centennial Director of History -