

WINGS OF GOLD

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Test Pilots

By VADM Jerry Miller, USN (Ret.)

The term "test pilot" usually evokes images of macho men exhibiting courage and daring, be it Chuck Yeager breaking the sound barrier or the late Alan Shepard doing loops around the Chesapeake Bay Bridge. Test pilots have been a major factor in the success of aviation, simply because they provide answers to two questions. What works - and what doesn't work?

One of the most challenging aspects of the test pilot business has been that associated with aircraft carriers. Designing, producing, and operating aircraft that will meet the demands for carrier operations have relied a great deal on test pilots. Their reactions and reports about a particular vehicle are often

deliver nuclear weapons from aircraft carriers. After successful practice landings at the test site, using a tialhook-configured airplane, Feightner was ready to "take it aboard." However, a senior pilot in the squadron who would be assigned the nuclear weapon delivery mission, took his turn at an arrested landing. After several touch and gos, he extended the hook for a trap. Unfortunately, he failed to flare the plane a bit after cutting power. The plane caught the arresting wire but was high. It crashed with "rivets everywhere." The point is, although test pilots might have

low-level pass in front of a gallery of leaders from Washington D.C., Hyland's aircraft struck a large bird - an osprey. The impact sheared off much of the plane's vertical stabilizer. Using his high speed for stability, Hyland took the plane to altitude. While checking the plane's landing abilities, it went into a spin and Hyland had to bail out. This was before the days of ejection seats. He landed in the Patuxent River, was picked up by an amphibian airplane, returned to shore, went to the dispensary for a check-up and then returned to the visitors gallery where the master of ceremonies handed him a microphone and asked him to explain the test that the visitors had just observed. His



the determining factor in the future of that vehicle. The infamous F-111B Navy interceptor went down the drain mainly because of the reaction of the test pilots that evaluated the airplane. The loss of one of Grumman Aircraft's leading pilots in an early test was not enough to kill the airplane, but subsequent reports from follow on tests doomed the aircraft to the scrap heap. In the opposite vein, the recent glowing test pilot reports on the new joint strike/fighter (JSF) concept demonstrator have provided much of the incentive for funding the continued development of that airplane.

Many of the unique tests for carrier aviation have been conducted at the Naval Air Test Center at Patuxent River, Maryland. For example, RADM "Whitey" Feightner, USN (Ret.) tested the famed large land based P2V ASW aircraft for carrier landings as part of the Navy's early efforts to develop a realistic capability to

Among the inductees in the Test Pilot Hall of Honor are RADM "Whitey" Feightner, in photo at left, and CAPT Bob Elder, right in the picture above, with James Taylor. At right P2V Neptune similar to one Feightner tested. (Left and middle photo, above, plus bottom photo on facing page were taken by Jim Vickers.)

been able to take the P2V aboard ship, it was decided the risk was too great for those not at the test pilot level of competence. The concept was terminated.

Another spectacular flight occurred in the late 1940s at Patuxent River when the late ADM John Hyland, then a young test pilot, was demonstrating the impact that jet aviation was going to have on both the offensive and defensive elements of naval warfare. While making a high-speed

actions may have been the origination of the term "cool." Not long after, most military jet aircraft were equipped with ejection seats.

Test pilots from Patuxent River were a key element in the adoption of the angled deck for carriers as they made landing and take off tests on the specially modified flight deck on the USS *Antietam* in the early 1950s. Further, a team of test pilots from Patuxent River conducted catapult takeoffs alongside a pier at the Philadelphia Navy Shipyard from a British carrier equipped with the new steam catapult. Those tests resulted in the installation of the steam catapult in the new USS *Forrestal*. The favorable endorsement by the test pilots was sufficient for the Navy to make the major decision to incorporate that British innovation into U.S. carrier aviation.

One of the earliest test pilots for Naval

Aviation, particularly for aircraft operating from carriers, was James Blackstone (Jimmie) Taylor, Jr. He was born in 1897 and learned to fly in 1914 when he was 17 years of age. When the U.S. entered WWI, he left Princeton University and joined the Navy, winning his wings as Naval Aviator No. 437. He served briefly as an instructor in floatplanes and then was assigned to experimental flight testing. He soon became "America's premier test pilot." In 1918 he flew the initial flight of the Navy's first monoplane. The following year he was one of the first to fly scout planes from platforms built over the gun turrets of battleships. He also was one of the first pilots to test new types of landing and launching gear on the Navy's first aircraft carrier, the USS *Langley*. In 1922 he left the Navy and became a contract test pilot for a number of early aircraft manufacturers. This was a time when test pilots worked closely with the emerging corps of aeronautical engineers, providing answers that now come from wind tunnels and flight simulators.

During the 1920s and 1930s, Taylor flew some of the most advanced designs of the time - airplanes built by Curtiss, Douglas, Boeing, Vought, Brewster, Grumman, and Seversky. He was one of the 10 pilots who performed terminal velocity dives and other high stress maneuvers - often for considerable monetary compensation. On April 3, 1939, while diving a Curtiss XSBC-4 Helldiver (no G suits then) he lost parts of his plane in a violent 13.5 G pullout.

In 1940, 16 months before Pearl Harbor, Taylor was recalled to active duty. He continued testing but was killed on 25 May 1942, while checking out a new flap system on an XF4F-6, then the Navy's front line fighter. He was awarded the Distinguished Flying Cross posthumously for "heroism and extraordinary achievement" as an experimental test pilot.

Jimmie Taylor's pioneering work paved the way for better and safer airplanes. An early aviation writer, Harry Bruno, wrote in his book, *Wings Over America*, that Taylor had "tested more planes, prevented more deaths and air disasters than any man who ever walked this earth. He set an example for all other test pilots, sharing his secrets with everyone." During his 25-year career he flew over 450 different aircraft, many of them fighters and attack types designed for Navy carriers. He pushed planes beyond their limits as he helped develop a whole new technology



Jimmie Taylor, right, swears in his son, James III, as an aviation cadet in 1942. Five days later, the father was killed on a test flight.



Test Pilot Hall of Honor ceremony in hangar bay aboard USS Yorktown in Mount Pleasant, South Carolina.

for proving new designs. Today's highly sophisticated flight test operations serve as a living tribute to the legacy of Jimmie

Taylor. Although many test pilots have died early in their careers, Taylor's death was particularly poignant in view of his great contributions to aviation and the close friendships he had developed with so many aviation leaders.

Despite his death, Taylor's contributions to aviation continued through the services of one of his sons, James Taylor III. Young Jim was more interested in athletics than academics, so he never attended college. However, in May 1942 he became the first Naval cadet accepted into flight training without a college education. His

father, who was killed just five days later, swore him into service. Following flight training, Jim III became involved in aircraft testing, but not with experimental models. Instead, because of his youth, he was assigned to a Navy overhaul and repair facility where refurbished aircraft had to be tested before being returned to the fleet. In one of his more interesting tests, the ailerons had been erroneously connected so that left aileron gave right bank and vice versa. The landing was interesting, as were several later dead stick landings following engine failures. Then he went on to combat training in the F4U Corsair. Pilots who flew with him were amazed at his smooth flying abilities. "You

could get under his tail and follow him through some of the most intricate maneuvers without having the slightest sensation of pressure or strain," to quote one of his team members.

Jim III never got into combat although he tried. Completing combat training in the late spring of 1945 just after VE day, LT Taylor requested an audience with VADM Marc Mitscher, who was about to take over as head of Naval Aviation in Washington. Mitscher had known young Jim's father. An interview was granted. Taylor pointed out that the war was about to end and that he had not had the opportunity to get into combat. He requested immediate assignment to a carrier in the far Pacific. The admiral ap-

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preciated the spirit and enthusiasm, but denied the request. Jim III finished the war in an air group awaiting assignment to the Pacific for the invasion of Japan.

Following the War, Jim returned to civilian life in order to run a family business. He soon became involved in the sale of business aircraft. One of his first sales was to famed television personality, Arthur Godfrey. Godfrey took flying lessons from Taylor and frequently referred to his friend "Jim" on his television shows. From that beginning, Taylor rose rapidly in the jet aircraft business, being a prime mover in the introduction of the Falcon for Pan American, the Citation for Cessna, the Challenger for Canadair, and then as the CEO of Gates Learjet. He became known as "Mr. Bizjet." Fortune magazine ranked him as one of the top-ten business aviation executives. Jim III died on 17 January 2003, consulting on aviation programs almost to the day of his death. Thus ended over 80 years of *Jim Taylors* in the forefront of aviation.

In remembrance of his father and as a tribute to carrier aviation test pilots, Jim III, his sister and surviving brother came up with money to establish the *Carrier Aviation Test Pilot Hall of Honor*, presently located aboard the ex USS *Yorktown*, in Charleston, South Carolina. The Hall contains many of Jimmie Taylor's artifacts plus quality plaques that detail the highlights in the careers of the inductees. Candidates for enshrinement in the Hall have been nominated by their peers, by senior officers of the U.S. Navy, and by chief executives of aircraft corporations that are engaged in the design and manufacture of carrier aircraft. They have been chosen for outstanding performance and personal accomplishments in the field of carrier aircraft flight-testing.

Taylor formed a committee of experienced aviation officials, who periodically reviewed records and chose those who were to be inducted into this Hall of Honor. The list of honorees is small so far, totaling only 25 at this writing, but many of the names are readily recognizable. A total of nine, including "Jimmie" Taylor, were inducted in 1987, starting with two pioneers of Naval Aviation, Eugene Ely and Theodore Ellyson. Others in the first group were VADM Fred Trapnell, sometimes referred to as the father of the Test Center at Patuxent River; MGEN Marion

Carl, the Marine Corps' first ace who did much in the introduction of jet aircraft to the carrier world: LTCOL. Charles Sewell, USMC, a combat veteran of Korea and Vietnam, who spent 17 years as a test pilot with the Grumman Aircraft Corporation; CAPT Robert Elder USN, a pioneer in the introduction of jet aircraft to carrier duty, who joined Northrop and became that corporation's chief test pilot; James Pearce, a Navy ace during WW II, who tested for North American Aviation following test flying in the Navy; and Robert Rahn, a member of the Army Air Corps during World War II, who joined Douglas Aircraft after the war and tested some of the Navy's most successful carrier aircraft. Subsequent inductees include VADM William O. Davis, a leader in testing in the 1920s, who later became involved in jet aircraft and much of the testing of early helicopters; CAPT Eric Brown of the Royal Navy; Paul Thayer, the former CEO of Vought and Deputy Secretary of Defense; VADM Donald Engen, formerly head of the Federal Aviation Administration and later the director of the National Air and Space Museum in Washington, D.C.; VADM Apollo Soucek, a holder of early altitude records; VADM Forest Peterson, X-15 test pilot; Corwin Myer, Robert Hall and Robert Smyth of Grumman Aerospace; Richard Wenzell of North American Aviation; and CAPT Larry Flynt, USN, fearless and flamboyant. The latest inductee was John Glenn, USMC hero, astronaut and U.S. senator.

At the 1998 inductee ceremony on board the *Yorktown*, the organizer and host for the event was RADM James Flatley USN (Ret.) who was then the overseer of the *Yorktown* Museum and all of its many activities. Flatley, son of a Naval Aviator and father of another, is a well-known test pilot. Among his notable experiences are 21 "touch and go" carrier landings and 20 full-stop landings in a large C-130 transport aircraft with *no tailhook*, conducted on board the USS *Forrestal* more than 30 years ago. Inducted at the 1998 Hall of Honor ceremony were: the late ADM John J. Hyland, who had memorable combat experiences in WWII, first in patrol planes in the Western Pacific and later as an air group commander during the closing phases of the war; RADM "Whitey" Feightner, combat ace, briefly CO of the Blue Angels demonstration team, and an

early member of the post WW II testing community; and Edward T. Schneider, born in 1948 and representing youth entering the ranks of honored test pilots. A former instructor at the Test Pilot School in Patuxent, he has served as a civilian aerospace research pilot and chief test pilot for NASA at the Dryden Flight Research Center.

In the past, older members of the aviation community have selected inductees. That function is now being taken over by the leaders in the active duty Navy, a fitting approach for recognition of individuals who have been among the best. The future will see names from the contingent of outstanding individuals who continue to perform the necessary function of proving designs.

Further, there is action being taken to relocate the Hall of Honor from the *Yorktown* to the Patuxent River naval facility, the home of Naval Aviation testing. As with any museum activity, funding is a major issue. Individuals wishing to donate money to continue this Hall of Honor, including the relocation of artifacts to the Patuxent River facility, should send those funds to: Test Pilot Hall of Honor, USS *Yorktown* Association, PO Box 1021, Mt. Pleasant, SC 29464. ■

VADM Miller, a founding member of ANA, was a close friend of Jim Taylor III and flew with him on many occasions. For several years Miller served as a member of the committee selecting inductees for the Hall of Honor.

