

# **High Performance Army Observation Aircraft**

## **HPAOA**

### **Project Long Arm**

High Performance Army Observation Aircraft was the program better known as Project Long Arm. Sponsored by the Army Aviation Test Board and the Aviation Combat Development Agency the feasibility of jet aircraft in the roles of artillery spotting, tactical reconnaissance, and close air support were to be investigated in depth. Criteria to which the winner would have to adhere included the capability for easy maintenance in the field capably of operation from semi prepared airstrips and to be of robust construction. Obviously size was also a major consideration as was simplicity of design. Working in close harmony, both agencies were endeavoring to find an aircraft that would lead to the replacement of many of the earlier piston engine powered support aircraft. In the 1950s the only flying design that came anywhere near to fitting the criteria was Cessna's T-37 jet. The US Army persuaded the US Air Force to lend them three early production T-37A's. All three were delivered to Fort Rucker at the Ozark Army Airfield in Alabama on 2 November 1956. Here they were named Santa Maria (56-3464), Nina [56-3465] and Pinta (56-3466) by the resident Commanding General, General Bogardus Snowden "Bugs" Cairns. Operational control of the HPAOA was vested in HQ 3rd US Army at Fort McPherson, Georgia with the unit that would operate the aircraft forming on the same date. Personnel for the unit consisted of 10 Officers and 32 Enlisted men under the command of Lt. Col Jack Ruby. Project Long Arm was divided into three distinct phases consisting of aircrew training, ground engineering training and combined arms and service testing. These in turn lead to further objectives, these being defined as the training and logistical problems concerned with introducing this kind of aircraft, organizational requirements, operational procedure development, evaluation of vulnerability and survivability of such an aircraft and the determination of the best performance characteristics. The first phase of Long Arm covered the essentials such as air and ground crew training which was undertaken at Fort Rucker and the Cessna Aircraft Company facility at Wichita. These were completed on 25 July 1957. Second phase testing began on 1 October 1957. Over the next two years evaluation and test flights saw the suitably marked Army T-37s turn up at Fort Sill in Oklahoma for artillery and guided missile observation and detection, Fort Knox, Kentucky for armor operations and Fort Benning Georgia for interaction with the infantry as well as operating at home at Fort Rucker. Flights were conducted during both night and day operating at altitudes ranging from 50 feet to 20,000 feet and were primarily aimed at target adjustment for artillery units. Other sorties covered detection, location and identification of suitable targets for ground units. Further sorties were flown for follow up duties such as damage assessment and the reconnaissance of enemy ground forces. Comparison sorties were flown by Army L-19 aircraft, another Cessna aircraft. The final and perhaps the most dramatic exercise was held in April of 1959 named Operation Bayou with large numbers of troops and equipment moving around test ranges creating scenarios for the T-37s to operate in. The final phase began May 25 1958 with an exercise named Operation Cumberland

Hills. Problems appeared that had not been contemplated in previous exercises. The biggest problem was communications caused by a lack of compatible FM radios so that pilots could not communicate directly with the ground forces. The lack of correct radios for the T-37 did reveal more parameters that would be required when defining the HPAOA aircraft. These included an operational speed of 275 knots to 350 knots, a cruising altitude of 15,000 feet, flight duration of 4 hours and, of course, compatible communication radios. On 15 January 1960 the Army Aircraft Review Board, guided by General Gordon Rogers, laid down a series of recommendations that would define the US Army's aircraft requirements for the next ten years. This resulted in the ordering of the Grumman OV-1 Mohawk. On 23 April 1960 the T-37 test unit was disbanded, its work with the Cessna jet completed. It was, however resurrected as the Aerial Surveillance and Target Acquisition Platoon (Experimental) which later became the 23rd Special Warfare Aviation Detachment. By 1964 it would be renamed again to the 73rd Surveillance Airplane Company.

Note: U.S. Army Major General Bogardus Snowden "Bugs" Cairns was killed when his Bell H-13 Sioux helicopter crashed minutes after takeoff in dense woods northwest of Fort Rucker, Alabama. He was en route to Matteson Range to observe a firepower rehearsal in preparation for a full-scale armed helicopter display. General Cairns was commander of the Aviation Center and Commandant of the Aviation School. Ozark Army Airfield at Fort Rucker was subsequently renamed Cairns Army Airfield in his honor in January 1959. The H-13 was taking off from a field site when it hit a wire extended between two tents causing pilot to lose control and fly into tree.

**Operation "Long Arm" tests T-37 for observation use**

