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JULY 2003

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B-25 Special Section

Mohawks in Combat

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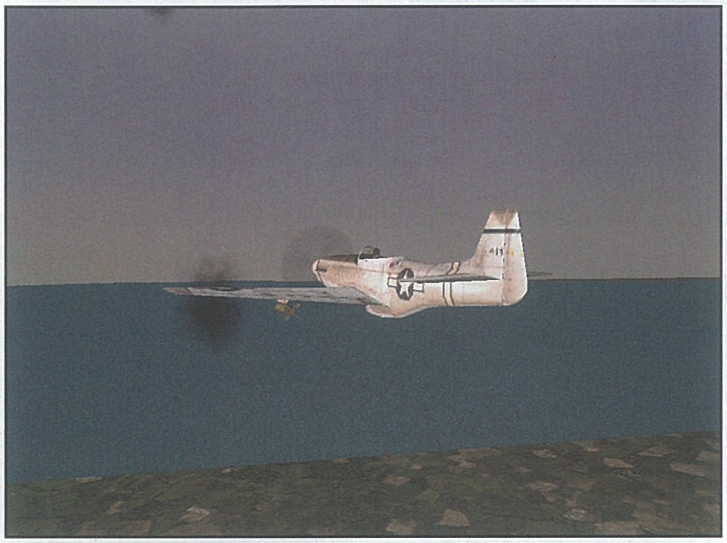
Photo courtesy of Sue Petersen

CFS3 for a while now, and having a soft spot in my heart for bombers, I gravitated early to a Martin B-26 Marauder mission supplied with the program. The mission calls for a flight of three B-26s to launch from the Dole airfield in France and bomb the ME-262 field at Sussenried, Germany. A flight of three Republic P-47 Thunderbolts provides cover for the bombers.

I am the flight leader, and as such, take off first. I don't know how a real B-26 handles, but acceleration seems realistic, and you really need to haul back on the stick to get it to fly. Left-turning tendency is there and a bit interesting to control without rudder pedals (more on the pedals later). The other members of the flight will join up.



Not a pilot at Duxford? CFS3 gives you the chance to "fly" a P-51 Mustang over the English coast.

Missions fly in real time, and this one is about 250 nautical miles to the target, and of course, 250 miles back. The route consists of three waypoints, with turns at each.

A radar-style tactical display, something that warbird pilots of the era could only dream about, takes care of the navigation duties. By flying the headings it directs, I will get to the target via the route the mission planners intended, and because they are supposed to know where the German defenses are, I should do as they say.

Not that flying such a mission isn't exciting, but sitting in front of a computer for an hour with not much happening may not be something one desires to do all the time. Thankfully, the programmers included a "warp" option. Pressing the "X" key on the keyboard quickly advances the flight until you either reach the last couple of miles before the target or are attacked by enemy aircraft.

Nearing the target, it is time to switch to the bombardier position (unless there are crew members flying with you over a network).

> The B-26's left-turning tendency is a bit interesting to control without rudder pedals . . .

Shift-B opens the bomb bay doors, and a quick press of the "Enter" key when the target is centered in the reticle releases the load. As the flight leader I am also responsible for commanding the rest of the flight to attack, a simple matter with the "A" key.

After the bombs hit their mark (or don't) CFS3 offers an immediate bomb-damage assessment. Of course, if I missed a fighter on the ground there's a good chance we will be dealing with it as we turn for home. Again, if there were a crew flying with me over a network, the gunners would have the responsibility for fending off the fighters that get by the P-47 cover. When crewing solo, pressing F8 places the plane on autopilot and cycles me between all of the gun positions.

Should a fighter or the flak manage to get me on the way out, three presses of the "O" key will bail my crew and me out of what used to be a perfectly good aircraft. I can fly again right away, as prison camp internment is not part of the program.

Landing isn't required for this particular mission (it is for others), but is an interesting challenge. The B-26 lands fast, and getting stopped without running off the end of the runway takes some practice.

There were a couple of issues I ran into when running the software. I happen to have CH Products' USB control yoke and USB rudder pedals, a combination that works very well with Microsoft's Flight Simulator 2002. Power settings seemed to change randomly when I used the throttle on the yoke, though that didn't seem to happen when I adjusted power with the keyboard. Additionally, CFS3 apparently won't support the rudder pedals at all, making the aforementioned left-turning tendency a bit difficult to control.

Simulation is important. With time it will become more and more of a privilege to fly World War II-era aircraft for a number of reasons, including cost and preservation. CFS3 is a wonderful way to "experience" flight and combat in these wonderful airplanes. Although CFS3 is a commercial venture, Microsoft should be applauded for its efforts.

EYES

Grumman OV-1 Mohawks served various theaters

KIM ROSENLOF WB #549220

Like many airline pilots, American Airlines captain Ed Finnegan (WB #20266) began his career in the military. But not many airline pilots get to fly their military aircraft in civilian life. Flying the Grumman OV-1 Mohawk for Blaine, Minnesota-based American Wings Air Museum (AWAM), the former U.S. Army helicopter and fixed-wing pilot regularly revisits the cockpit of his favorite military aircraft in a civilian setting.

THE MOHAWK IN SERVICE

The Mohawk served more than 30 years as a surveillance asset using side-looking airborne radar (SLAR) and infrared (IR) technology to scout out enemy positions in various combat and Cold War engagements. Grumman built more than 375 Mohawks between 1957 and 1969. The majority served with the U.S. Army, the primary user of the beefy tri-tailed twin, which found surveillance duties for the aircraft up through the mid-1990s. Mohawks also found use in U.S. Customs, U.S. Geological Survey, U.S. Navy Test Pilot School, National Aeronautics and Space Administration, and other government agency duties.

Mohawks and their crews saw service in Vietnam, Korea, Europe, Central and South America, and other venues. The two-man crew consisted of a commissioned pilot or warrant officer and an enlisted technical observer (TO). Equipped with radar data transmission equipment, Mohawks even as early as Vietnam sent streaming data to ground controllers, allowing Army commanders to see exactly what the observers saw. Mohawks were the Army's "eyes in the sky."

Several different models were built to accommodate changes in photo observation and reconnaissance equipment, and in armament. For instance, the JOV-1A added an XM-14 .50-caliber machine gun pod and either 7- or 19-round 2.75-inch rocket pods to the otherwise lonely

in the Sky

LEEANN ABRAMS

LEEANN ABRAMS

forward-looking panoramic camera on the OV-1A. The OV-1B replaced the panoramic camera with the SLAR, OV-1C with an IR system, and OV-1D added both SLAR and IR to the camera. Additional models included an electronic intelligence version, the RV-1D, that had all cameras removed and newer electronic surveillance equipment installed. The last Mohawk model, the OV-1E, converted OV-1Ds to glass cockpits, including global positioning system (GPS), updated avionics, and weather scope.

A Mohawk Pilot Begins His Career

Ed learned to fly in high school and soloed on his 18th birthday. At the time he had the rotorcraft bug and researched flying helicopters as a civilian. As he "preferred not to starve," Ed felt that the military was a good way around the Catch-22 of "no job without experience, no experience without a job." After graduating from high school, he enrolled as a cadet in the Army Reserve Officers Training Corps (ROTC) at Clarion University in Pennsylvania and, at the same time, joined a helicopter unit in the Pennsylvania National Guard.

As luck would have it, by the time Ed graduated from college, the Army had formed a new aviation branch at Ft. Rucker, Alabama, and in 1984, Ed reported and began training in the single-engine piston Schweizer TH-55 (civilian equivalent: Schweizer 300) helicopter. He soon moved up to the venerable single-engine turbine Bell UH-1H Huey, and ended the course by graduating first in his class of 60 students. This honor allowed Ed the choice of assignments, and the helicopter buff chose to go to fixed-wing school!

"In the Air Force, helicopter pilots are rare," Ed said. "In the Army, fixed-wing pilots are rare. I wanted to do both."

Fixed-wing had one slot open, and Ed got it. He joined a fixed-wing reconnaissance battalion,

KIM ROSENLOF

Ed Finnegan at the controls of AWAM's RV-1D Mohawk running up at AirVenture 2002.

training in a Beech T-42 (civilian equivalent: Baron B55). Ed then went to Ft. Huachuca, Arizona, for intelligence training, where he learned how to employ sophisticated recon systems, how to recognize who and what a threat was, and what countermeasure systems recon units could expect in the field.

"We also learned what a surface-to-air missile (SAM) could do to an aircraft and how to avoid them," said Ed. "The 'how-to-avoid' was done with advanced aerobatics, as we would have no armament."

Sleepless in Seoul

Ed first started flying Mohawks with the 3rd Military Intelligence Battalion based at Camp Humphries south of Seoul, Korea, where he spent one year from 1986 to 1987 monitoring the still-tense cease-fire. Missions consisted of single-ship blacked-out night operations flying at altitudes of 10,000 to 18,000 feet on oxygen.

"We operated like combat because it was Cold War combat," Ed said. "We flew alone at night, unarmed, and with a major pucker factor."

Korea's mountainous terrain provided additional nervousness. Even daylight missions required night-like IFR operations with takeoff and landing ceilings routinely as low as 200 feet. Pilots had to exercise careful navigation around the mountainous terrain, especially while in heavy rain and clouds.

After Korea, Ed transferred to the 1st Military Intelligence Battalion at Wiesbaden, West Germany, a former Luftwaffe base near Frankfurt. Still in the throes of the Cold War, Ed's job was to electronically monitor East German activities. He happened to be flying a mission when the Berlin Wall came down.

"We knew something extraordinary had happened when the normally business-like German controllers became very excited," Ed said. "They yelled over the airwaves, 'The border is open! The border is open!' That's when we knew we were out of a job!"

The Beginning and the End

The end of the Cold War signaled the beginning of the end of the Mohawk's duty, and the Army retired the aircraft from inventory in 1996, but not before it participated in one


DEKEVIN THORNTON PHOTOS

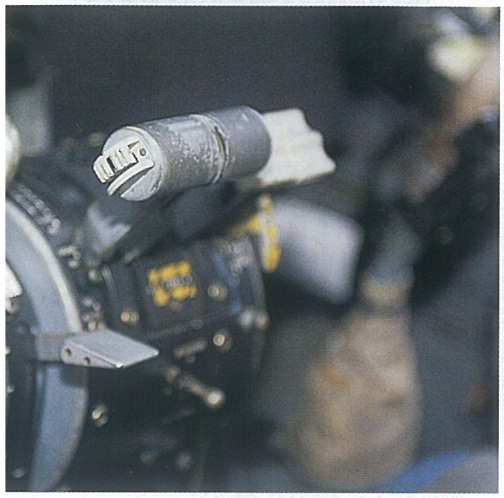
last conflict: Desert Shield/Desert Storm. Ed left the military in 1990, just before Desert Storm, hiring on with American Airlines to fly the Boeing 727. After earning his type rating in the Boeing 777, Ed then became captain on the Fokker 100, which he enjoys more than the heavy jets because he gets to do more "hand flying." But his favorite aircraft remains the Mohawk, which a fortunate set of events allows him to revisit on a regular basis.

Based in the Chicago area (ironically living on Mohawk Street), he once bumped into a Mohawk at a fuel stop in Palwaukee, Illinois. The OV-1 belonged to the Kenosha Military Museum in Kenosha, Wisconsin. With more than 1,000 hours in Mohawks, Ed did not have to talk long to convince the museum to allow him to fly their tri-tailed bird.

Ed soon learned about the additional Mohawks based at AWAM, which was founded to restore a particular Mohawk that one of the founders flew in Vietnam. The museum's mission, to preserve Mohawks and other reconnaissance and observation aircraft, can be seen through the multiple Mohawks in various stages of restoration, including a recent acquisition from a donor in Kentucky.

"I've never seen better maintained Mohawks," said Ed. "As I got to know the museum's core of dedicated volunteers that meticulously clean and maintain these aircraft, I knew that this was an organization that I wanted to join and support." Ed now flies all three of AWAM's airworthy Mohawks, including the RV-1D. Unlike in the military where the object was not to be seen, Ed's missions are now to get the Mohawks in front of as many people as possible.

DEKEVIN THORNTON PHOTOS



TOM COLE

An Eye for an Eye

The view from the right-seat of a Mohawk comes with a price

JEANA BURTON

While flying at low altitude over the pitch-dark Vietnamese jungle, Wayne Klotz became instantaneously blinded by a brilliant explosion of white light. It was 1967 and a Vietcong (VC) shell had shattered his OV-1 Mohawk's bug-eyed canopy. The resulting flash fried Wayne's (and the pilot's) wide-open eyes. "We had been flying in night vision for six to seven hours. We were both blinded. The autopilot was running the mission; it took a couple of minutes to get our vision back and we couldn't see the instruments."

Once their vision came back, Wayne and the pilot headed their Mohawk back to their base at Casto. They landed safely and lived to fly another day, or actually another night. Wayne flew 400 hours in the Mohawk during his 18-month tour of duty in Vietnam, 300 of which were after dark. The Mohawk's motto was "Eagles in the sky."

"We flew our missions at night, flying the delta, and the coastline," Wayne said during an interview at EAA AirVenture 2002. A volunteer on two Mohawks owned by the American Wings Air Museum at Anoka County/Blaine Airport in Minnesota, Wayne enjoys telling air show attendees about the often-forgotten combat role that the Mohawk and its crew played. "The Army had outposts to tell of coming threats. Our job was to do the imagery, with the side looking airborne radar (SLAR) and the infrared (IR), to find where targets had moved and to tell them which way, to give them an idea of what was happening."

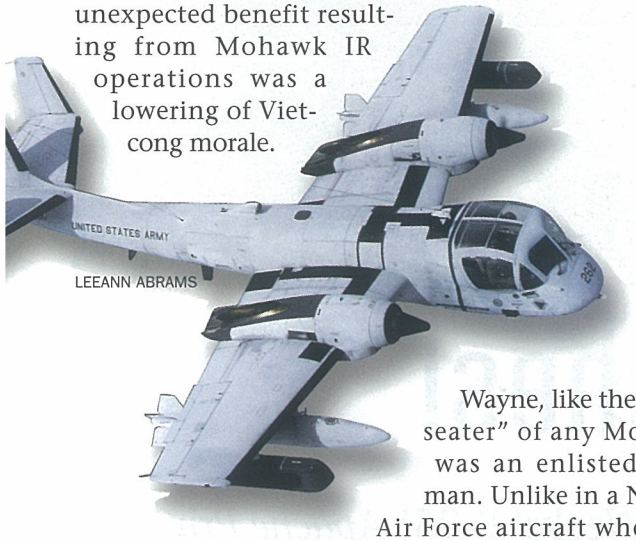
"We were being mortared while on the runway. We ran up one engine while taxiing, got the other engine running by the end of the taxi, and took off with no preflight."

The Vietcong had good reason to blow out the Mohawk's all-seeing eyes. They had been feeling the Mohawk's glare for six long years by the time Wayne left Louisville, Kentucky, for the dense green jungles of Vietnam. Supplied in real time to U.S. military intelligence by the SLAR and IR sensors, Mohawk surveillance was used with great efficiency to locate and attack the enemy.

"We would transmit a compacted data stream from air to ground," Wayne said. "The ground station could look at

what we were looking at, which was usually remote sites along the border. When I flew in 1967 and '68 we didn't have any restrictions. We could call in targets of opportunity to both the Air Force and Navy. Later on, they had to get permission to call in targets of opportunity."

The IR could detect slight variations in temperature even in the fetid jungle heat. Again and again, the Mohawk's IR led U.S. forces to the heart of VC encampments. The Mohawk was cooking the VC's goose, which might have been about the only hot meal an enemy soldier was getting towards the end of the war, as the Vietcong gave up their tell-tale nighttime fires (and hot suppers). An unexpected benefit resulting from Mohawk IR operations was a lowering of Vietcong morale.



LEEANN ABRAMS

Wayne, like the "right-seater" of any Mohawk, was an enlisted Army man. Unlike in a Navy or Air Force aircraft where the right-seat position was occupied by a co-pilot and officer, the Mohawk right-seat was filled by a Technical Observer (TO). The TO was a dedicated member of his team who worked and was paid like a crewmember but was never officially acknowledged as a crewman of the plane he was serving on, even if he died aboard the downed aircraft.

An important part of Wayne's training at Fort Huachuca, Arizona, was learning how to eject in order to avoid such an ignominious fate. "A hard slap across the chest was the signal to eject," Wayne said. "I had only one hour in the plane when a flying map caught me in the chest. I reached up to eject but first I asked the captain if the eject was real. I didn't eject, but in combat you needed to do what you needed to do. That kind of thinking got people killed. At the speed you were flying, sometimes you had a minute to eject, sometimes one or two seconds!"

The Mohawk was relatively safe from ground fire while flying the SLAR missions at 7,000 to 14,000 feet. "At 8,000 feet we weren't blacked out," Wayne remembered. "We ran with the lights on, but nothing hurt us." The Mohawk's IR missions, however, sometimes flown as low as 500 feet, brought the Mohawk crews dangerously close to the ground and ground fire. Wayne recalled the second time his Mohawk was hit on an IR mission, "We took a single round, a bullet through the hydraulic line in the speed brakes. We couldn't lower the wheels hydraulically; energizing air pressure blew the wheels down. We had to land at a nearby Air Force base."

The Vietcong viewed any parked U.S. aircraft as targets of opportunity and the Mohawk (along with the Huey and the Cobra) was on their most-wanted list. Wayne remembers one particular shelling. "When the Vietnamese began mortaring the base, we were ordered to get the Mohawks out of there. We expedited our departure by running up one engine while taxiing, getting the other engine running by the end of the taxi, and taking off with no preflight. We were even being mortared while on the runway." Of 22 Cobras that had recently arrived at the base to replace damaged Hueys, the VC got 19 and only missed the other three because the crews were able to get them off the ground.

In addition to risking his life in the air, Wayne and his fellow soldiers from the 225th, 244th, and 245th platoons pulled double-duty, building a runway and working construction at their base during "off" hours. "We had 30 pilots, we were heavy in officers, and the officers had their small jobs to do. Then there were 50 observers (TOs) who were working like everyone else. Everybody worked 16 hours on, 8 hours off. Having to build our buildings and runways while running missions prevented us from doing as much as we could. We could have done a better job."

Air Apaches!

Former Pilots Gather Around Kermit Weeks' B-25J *Apache Princess*

STORY AND PHOTOS BY DENNIS BERGSTROM
WB #6691

When Kermit Weeks, founder of the Fantasy of Flight museum in Polk City, Florida, brings one of his warbirds to EAA AirVenture Oshkosh, it's always a special treat. His restorers strive for complete accuracy down to the last detail of every one of his more than 150 restored aircraft. The *Apache Princess* nose art matches that of its namesake except for the new face (that of Teresa Weeks) and the addition of the champagne glass and necklace.At AirVenture 2002, Kermit treated us to a view of his then-recently restored B-25J Mitchell *Apache Princess*. Having survived being scrapped by becoming a workhorse, it's wonderful that this aircraft, which bore serial number 43-28059 in the U.S. Army Air Forces (USAAF), gets to fly again in such pristine condition as a warbird.

> The *Apache Princess* nose art matches that of its namesake except for the new face (that of Teresa Weeks) and the addition of the champagne glass and necklace.

The History of Kermit's Bird

The USAAF accepted serial number 43-28059 in July of 1944, but it remained stateside as a crew trainer. From 1947 until 1952, it remained in storage, and then returned to service with the U.S. Air Force (USAF). In 1954, the aircraft underwent a major rebuild during conversion to TB-25N status. It flew for a few more years before being sent to the Davis-Monthan bone yard, where it remained until the civilian owners purchased it in 1959. Converted to fight the war against forest fires, the aircraft also served as an air tanker for more than 20 years. Aero Trader, the B-25 specialists of Chino, California, purchased the air-