



STAR AND BAR MOSQUITOS

Prized for its speed and altitude capabilities as well as its versatility, the Mosquito gave valuable service with US Army Air Force units from summer 1944, as **Paul E Eden** explains.

De Havilland flew the Mosquito for the first time on November 25, 1940. Conceived and designed by a manufacturer of light aircraft and esoteric airliners, it attracted little official interest and was generally considered a pointless distraction from the serious business of building Hawker Hurricanes and Supermarine Spitfires.

History, nonetheless, records that de Havilland's wooden twin quickly evolved into a warplane of incredible performance and unprecedented versatility, although it took several demonstrations by company and service pilots before the Air Ministry became convinced of its potential.

Several senior US officers were among

Above: For the crew on an unarmed PR Mosquito, evasion was the only chance of escaping fighter interception. A Messerschmitt Me 262 attacked 654th BS (SP) Mosquito PR.Mk XVI NS569 on January 1, 1945. The aircraft escaped while its escorting P-51 Mustangs engaged 13 Me 262s, but there were no losses on either side. David Ails/www.ailsavionart.com

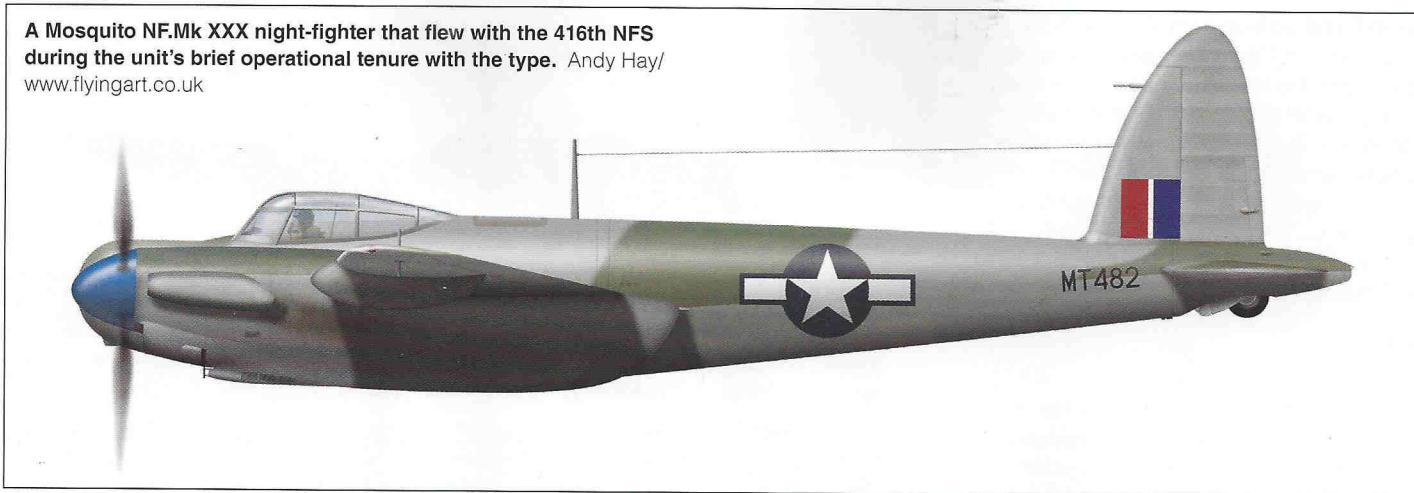
the audience for a demonstration on April 20, 1941, when Geoffrey de Havilland Jr flew the aircraft for Lord Beaverbrook, the UK's Minister of Aircraft Production. Chief of the US Army Air Corps (USAAC) General Hap Arnold was the most important of the American delegation; he left de Havilland's Hatfield, Hertfordshire, airfield impressed. There was already considerable US interest in the Mosquito,

which the USAAC wanted to build in Australia and Canada, having no indigenous aircraft of similar capability.

By now it was clear even to the British that the Mosquito had potential as a reconnaissance aircraft, but in the US the F-4 variant of the early-model Lockheed P-38 Lightning was expected to take on the same role. Combined with a lack of familiarity with the Mosquito's airframe technology and a natural distrust of foreign equipment, this caused USAAC interest to wane.

During 1942 the US began basing aircraft in the UK in preparation for a strategic bombing campaign against Nazi Germany. By now the USAAC had become the US Army Air Force (USAAF) and in September the

A Mosquito NF.Mk XXX night-fighter that flew with the 416th NFS during the unit's brief operational tenure with the type. Andy Hay/
www.flyingart.co.uk



newly redesignated organisation despatched two squadrons of F-4s and a third of Boeing B-17F Flying Fortresses under the 3rd Photo Reconnaissance Group (3rd PRG), commanded by Col Elliott Roosevelt, the US President's son.

The unit worked up towards combat readiness alongside the RAF, by which means Col Roosevelt obtained a Mosquito B.Mk IV bomber for evaluation. It was easily more capable than the F-4 and offered around five times the range of the Lockheed twin.

Arnold pushed for an all-Mosquito PR force in the UK, requesting 200 aircraft and being allocated 120, although not until October 1943, when aircraft were delivered from Canadian production. In fact, just 40 Mosquitos were received – six to Mk VII standard and 34 built as the Mk XX, both Packard Merlin 31-powered variants equivalent to the British B.Mk VI Series II.

After fitting out with cameras and other equipment at the Bell Niagara Modification Center in Buffalo, New York, the unarmed aircraft were redesignated as F-8s and some 16 reached the UK from July 1944. With their single-stage superchargers they lacked power in the thinner air at high-altitude and quickly proved unsuitable for the reconnaissance work the USAAF had in mind. Soon withdrawn from the front line, at least ten passed to the RAF and were flown successfully after deconversion to bombers.

By now the high-altitude, unarmed Mosquito PR.Mk XVI was available in some numbers with the USAAF's 25th Bombardment

Group (Reconnaissance) (25th BG [R]) and the F-8 was quietly forgotten.

BORROWED AIRCRAFT

Meanwhile, USAAF units had gained Mosquito experience in the North African and Mediterranean theatres. The 3rd PRG had relocated to Algiers in preparation for Operation Husky, the invasion of Sicily. In December 1942 it borrowed a pair of RAF aircraft, most likely Mk IVs from 540 Sqn, which had a detachment on Gibraltar.

In February 1943 two more were loaned, this time under the control of Gen Eisenhower, newly appointed Supreme Commander Allied Expeditionary Force for the North African Theatre of Operations.

In March, the 3rd PRG combined with the RAF's 680 Sqn to create the North African PR Wing. Mosquitos were not among 680 Sqn's fleet, but were sorely needed for mapping operations. Two arrived after pressure from General Arnold and Air Marshal Tedder, Commander-in-Chief, Mediterranean Air Forces.

Back in the UK, Eighth Air Force (8th AF) heavy bombers had flown their first independent mission on August 17, 1942 and, as the daylight campaign intensified into 1943, means were sought to improve efficiency.

The bombers regularly reached their targets to find less than ideal weather – contrary to the clear conditions predicted in pre-mission meteorological briefings – and urgently needed a means of accurately predicting local weather.

Colonel Bud Peaslee, commanding the

384th Bombardment Group, was familiar with the issue and pushed for the creation of a specialist unit to fly ahead of the bomber stream, reporting actual weather from over the target and observing conditions throughout an attack.

Peaslee reported his ideas to Maj Gen Ira Eaker, commander 8th AF, in August. Eaker thought them worthwhile, briefly considering and quickly dismissing the Lockheed F-5 Lightning for the mission.

WEATHER, CHAFF AND LORAN

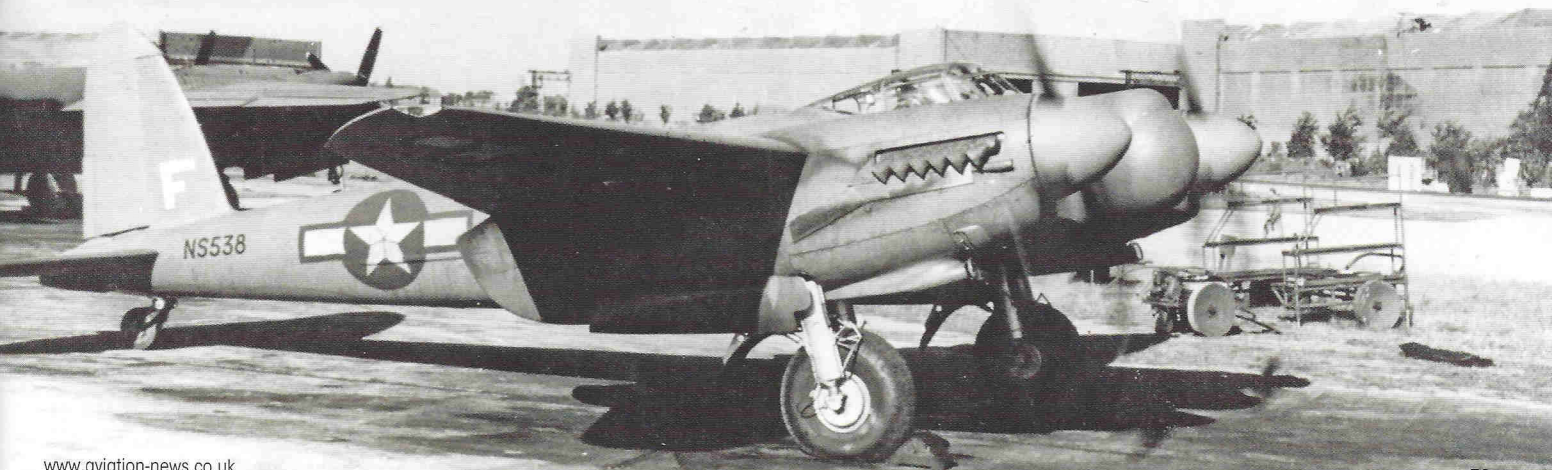
A long-ranged, high-speed aircraft was essential, and a two-man crew would be useful, effectively excluding the later F-5 reconnaissance variant of the P-38. Since the Lightning was the only USAAF aircraft close to delivering the required specification, in September Eaker requested the release of 30 Mosquito FB.Mk VI aircraft from RAF stocks.

The intention was to form a weather reconnaissance squadron within the 7th Reconnaissance Group at Mount Farm, Oxfordshire, but the role modifications required for the Mk VI were too extensive and none were delivered.

The Mosquito PR.Mk XVI was much better suited to the mission and seemed likely to be available from February 1944; training on the type actually commenced in March.

By now the proposed weather reconnaissance mission was also known as target weather scouting and the PR.Mk XVI had been allocated intelligence gathering roles, including radar and night work. Pilots ▶

Below: **Mosquito Mk XVI NS538/F was among those modified with H2X radar for the 654th BS. The aircraft was photographed at Watton, although operations were also flown from Alconbury.** Philip Birtles Collection

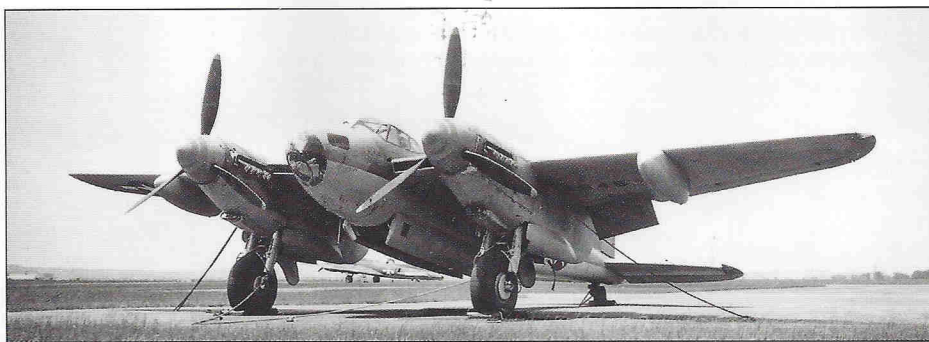


for the initial work-up came from the P-38-equipped 50th Fighter Squadron, relocated from Iceland to Nuthampstead, Hertfordshire.

All USAAF PR.Mk XVI's retained their RAF serials, beginning with the first, MM338. This became the prototype, fitted with new radio and other equipment at the USAAF's Burtonwood, Cheshire, modification centre.

Meanwhile, the 8th Reconnaissance Weather Squadron (Light) (Provisional) was established on March 4, 1944 to fly the Mk XVI's from Cheddington, Buckinghamshire, although it moved to Watton, Norfolk, on April 22. Operations began on May 23 under the 802nd Reconnaissance Group (Provisional) (802nd RG [P]) and by June the squadron was at full strength, performing weather reconnaissance under the code name Scout.

Ironically, the Scout work was short-lived as Mustangs took on the mission, leaving the Mosquitos available for other essential tasks. In August the 8th Reconnaissance Weather Squadron was redesignated as the 653rd



The National Advisory Committee for Aeronautics tested the flying characteristics of F-8 43-34960 at Langley Field, Virginia. The subsequent report was released in July 1945. Key Collection

APHRODITE, ANVIL AND BATTY

The varied missions of the 25th BG's Mosquitos included support to three experimental weapons programmes. Aphrodite was a USAAF project employing an explosives-packed B-17 whose crew baled out once it was in stable flight, leaving it to fly on to the target under remote control. Anvil was the US Navy's equivalent, using a Consolidated PB4Y-1 as the drone.

A 653rd BS Mosquito launched for a Blue Stocking mission before each of the planned drone operations, while a 654th BS Mk XVI carried a photographer to record the drone's progress and target impact.

The first Aphrodite mission, on August 4, 1944, employed four B-17 drones, none of them making it to the target. A second attempt on the 6th was also unsuccessful, as was the first Anvil sortie on the 12th. A few more missions achieved nothing, although several airmen were killed and at least one 654th BS Mosquito damaged.

The 654th BS was also involved in an attempt to strike Le Havre with TV-guided Batty GB-4 glide bombs on August 13. Dropped and guided by a B-17, each weapon was to be filmed by the Mosquito's cameraman. As its flight became unpredictable, 1st Lieutenant Dean H Sanner, the Mosquito pilot, pulled away from the first bomb, then struggled to maintain position with the second.

He was immediately overhead when the second weapon hit the ground and exploded, throwing him from the cockpit and killing the photographer. Badly injured, Sanner was taken prisoner of war.

SCOUT MISSION

Scout Mosquitos aimed to reach the target area 10 to 15 minutes ahead of the lead bombers – too soon and their presence might alert the defences to imminent attack; too late and their weather information would be useless. Cruising at 30,000ft (9,144m) and easily catching the bomber stream, the Mosquito crew began transmitting coded weather reports as they overtook the outbound B-17s and B-24s.

The weather aircraft occasionally surveyed a wide area, hoping to confuse German anti-aircraft and fighter defences as to the true target, but honed in on the objective as the raid began.

From his high vantage point, the Mosquito's navigator, having moved into the aircraft's glazed nose, reported on visibility over the target, which could easily become obscured by smoke, even on a clear day. The crew also kept watch for fighters, which could wreak havoc on the bomber formations and even threaten the high-performing Mosquito.

Should the weather prove difficult for the return

to England, the Mosquito again flew ahead of the formation, now helping the tired bomber crews navigate a safe path home.

A major threat to the scouts themselves came ironically from friendly fire, the Mosquito being mistaken for the Junkers Ju 188 and even for the Messerschmitt Me 262 jet, in spite of efforts to educate gunners and fighter pilots by displaying the aircraft at their bases.

Red-painted tails helped with the problem of recognition, but did nothing to reduce the threat of Luftwaffe fighters. When Me 262s and, from July 1944, Me 163 rocket interceptors began to appear in increasing numbers, the unarmed Mosquito became vulnerable and P-51 Mustang escort fighters were provided later in the year.

By September the scout mission had primarily passed to flights of P-51s, the fighters offering mutual protection and drawing less attention to the target area, since they could be 'lost' among the defensive Mustangs roaming ahead of the bombers.

Bombardment Squadron (Reconnaissance) (Light) (653rd BS [R] [L]), and the 802nd RG (P) became the 25th Bombardment Group (Reconnaissance) (25th BG [R]). Now the 25th BG (R) joined the 7th PRG under the 325th Photo-Reconnaissance Wing, commanded by Col Elliot Roosevelt, remaining at Watton until March 1945, when it moved to Harrington, Northamptonshire.

As the Scout mission declined, so the 653rd BS took on Blue Stocking duties, the Mosquitos flying alone to gather strategic weather reconnaissance to inform and confirm work done by meteorologists back in the UK. Four sorties were usually flown in every 24-hour period, providing continuous, overlapping coverage and obliging crews to fly by day and night.

Mosquitos also complemented the work of the 652nd Bombardment Squadron

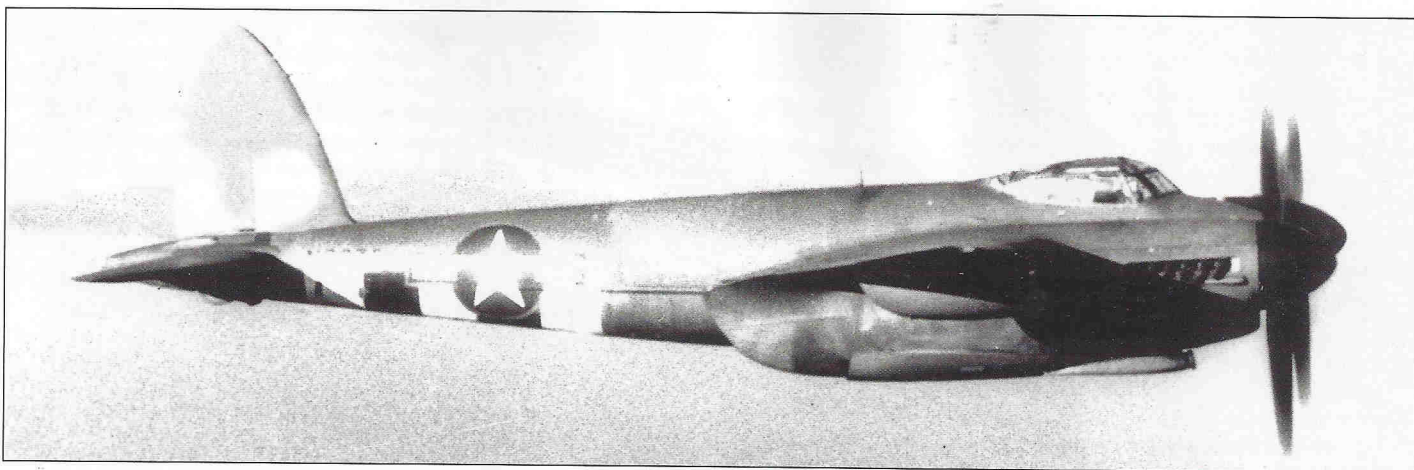
(Reconnaissance) (Heavy), a 25th BG unit flying weather reconnaissance missions over the Atlantic off the UK's west coast with B-17s and Consolidated B-24 Liberators.

But the Mosquito's performance, capacious bomb bay and ability to take a third crew member in the nose suited it well to other emerging roles, far removed from weather reconnaissance. By the end of 1944, the 653rd was flying Graypea chaff-laying sorties, dropping strips of metallic material from modified Mk XVI's to blind German radar. The peculiar mission code name came from the surnames of Col Leon Gray, 25th BG (R) commander from September 23, 1944 and Col Bud Peaslee.

From February 1945 the 653rd also began flying air commanders, who operated similarly to RAF master bombers, taking a bird's eye

Coming in to land at Watton on February 22, 1945, PR.Mk XVI NS591/S still has D-Day 'invasion stripes', albeit rather weathered. Philip Birtles Collection





British and US reconnaissance aircraft maintained a hectic pace of operations before, on and subsequent to D-Day. The Mosquito PR.Mk XVI was relatively new to the USAAF in June 1944. Key Collection

view of the raid and directing by radio to maximise its effect.

Another new task emerged early in the new year, with the need to calibrate the long-range navigation (LORAN) system. Based on the British Gee radio navigation aid, LORAN offered much greater range and relied on accurately calibrated signals.

The 653rd BS's Mosquitos performed the work and collected data for display on special maps under the code name Skywave, flying the first mission on February 13. Given the scope of its operations, by May 1945 the 653rd BS had expanded to have more aircraft than any other 8th AF squadron – 40 Mosquito Mk XVIs.

PHOTOFASH AND RADAR

The 25th BG's association with the aircraft did not end with the 653rd BS, however, because its 654th Bombardment Squadron (Special Purpose) (654th BS [SP]) also flew Mosquitos from Watton.

Under the code name Joker, the 654th BS received 11 Mk XVIs modified for night reconnaissance using 700,000-candlepower M-46 photoflash bombs. Twelve of these 60lb (27kg) stores were carried in the bomb bay. Fused to detonate at 4,000ft (1,219m) and dropped individually from 12,000ft (3,658ft) at 8-second intervals, they provided overlapping illumination sufficient for photography over a wide area. Operations began in July 1944 and continued into 1945.

Appalling accuracy had been a feature of the RAF's nascent strategic bombing campaign, a situation gradually remedied through training, tactics and technology. Radar capable of providing an image of the target area was developed under the designation H2S, and after the USAAF repeated the RAF's errors in its own campaign the Americans improved H2S as H2X.

Target images from the radar screen were necessary for the system to be fully effective and an aircraft was required to collect them. It was a dangerous task that once again relied on the Mosquito PR.Mk XVI's excellent performance. The first aircraft was delivered to the 8th AF's radar specialists at Alconbury, then in Huntingdonshire, on February 11, 1944 for a prototype installation.

A pre-production H2X scanner (the production item was too large for the Mosquito) was installed in a bulbous radome on the aircraft's nose and a radarscope for the navigator in its cockpit. A 16mm cine camera fitted behind the scanner recorded the radar display.

A second Mk XVI arrived in March and although both H2X aircraft were allocated to the 802nd RG on May 13, the prototype had

crashed at Alconbury the day before. The radar installation was susceptible to vibration, so that Watton, with its grass runways, was unsuitable for H2X work and operations were flown from Alconbury until a concrete runway became available at the Norfolk base on July 25.

The H2X aircraft were assigned to the 654th BS but, with only one aircraft available until June, flying was limited. More modified Mosquitos arrived from July, but work was curtailed in September after fuel vapour exploded in the rear fuselage of one of them.

Four remained with the unit and although similarly equipped P-38s were expected as replacements, they took some time to arrive – and by mid-October the fuel problem was solved and the Mosquitos were flying again.

NIGHT-FIGHTERS

Two USAAF night-fighter squadrons made brief acquaintance with the Mosquito, both operating the NF.Mk XXX. Equipped with AI.Mk X radar (SCR-729 in US parlance) in a bulbous nose radome, the Mk XXX featured two-stage Merlin 72, 76 or 113 engines and four 20mm cannon.

Having worked up in the US, the 425th Night-Fighter Squadron (NFS) arrived at RAF Charmy Down, Somerset, on May 26, 1944. Scheduled as the Ninth Air Force's second night-fighter squadron, it was due to be equipped with the Northrop P-61 Black Widow.

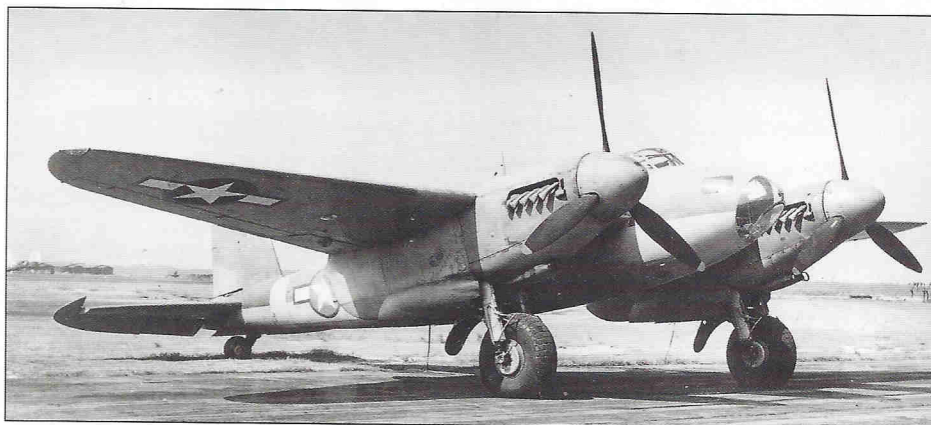
Delays in P-61 deliveries saw it take Mosquitos as a stopgap and although the first P-61 arrived on June 15, the unit was not declared operational on the type until late July. The Mosquito was withdrawn, having provided valuable currency training and experience.

The 416th NFS served with the Twelfth Air Force in Italy from August 1943. It flew Bristol Beaufighters before re-equipping and using the Mosquito from November 1944. The unit added a single kill to its four Beaufighter victories before transitioning to the P-61 in June 1945.

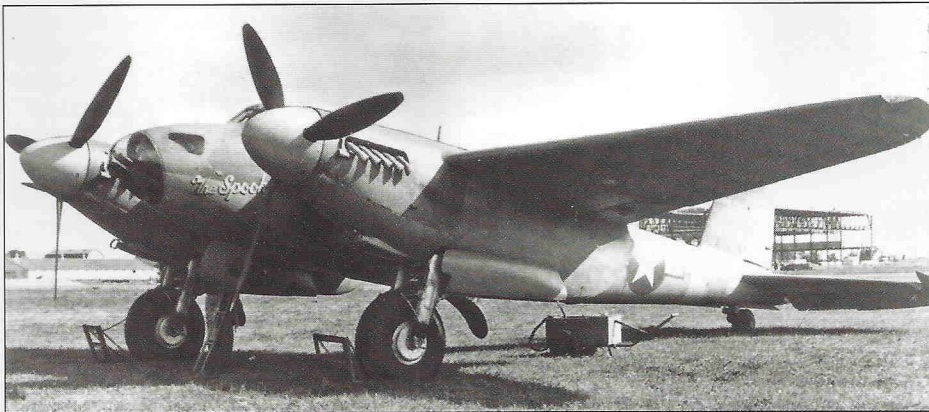
CARPETBAGGERS

The 8th AF's Special Operations Group, known as the Carpetbaggers and formally established as the 801st Bombardment Group (Provisional) on March 28, 1944, became the 492nd Bombardment Group (Heavy) (492nd BG [H]) on August 13. Its squadrons flew a variety of aircraft in support of resistance units and agents working behind enemy lines, dropping supplies and personnel and maintaining radio contact with operatives in the field.

During September 1944 an aircraft was sought to carry a new system designed to receive and record agents' UHF radio transmissions. It enabled considerably more information to pass in a short transmission ▶

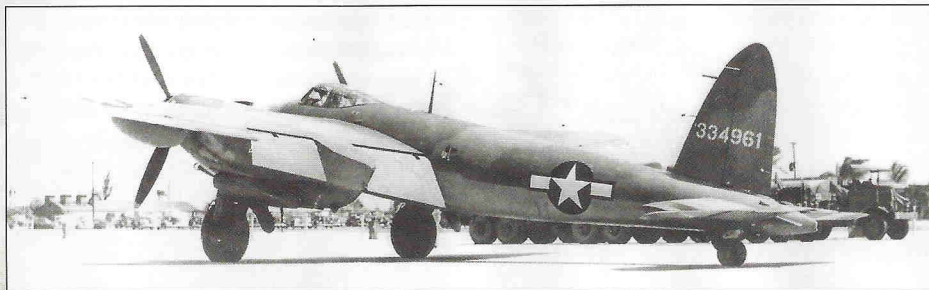


This aircraft appears to be 43-34928, the second F-8 assigned to trials work at Langley Field. Key Collection



Above: *The Spook* was Mosquito F-8 43-34926, flown by the 12th Air Force out of Oran, Algeria, on reconnaissance missions over Tunisia in 1944. Key Collection

Below: Unsuitable to the high-altitude work envisaged for it, the F-8 was nevertheless tested extensively in the US. Aircraft 43-34961 was with a trials unit at Miami on May 5, 1944. USAF via Andy Thomas



Mosquito Mk XVI MM345/Z served the 653rd BS. The unit flew Blue Stocking and Graypea missions, as well as weather and photographic reconnaissance. EN-Archive

than had been the case previously and five Mosquito Mk XVI's – three standard, one night-reconnaissance and one H2X aircraft – were modified with an operator in the bomb bay to control the receiving equipment. Crews from the 654th BS flew them under 492nd BG orders.

On March 19, 1945, the 492nd detached aircraft to Dijon, France, from where they dropped 82 agents into Germany. The trio of Mk XVI's modified from standard stock had been transferred to the 492nd BG the previous day, so that crews more experienced in special operations could support the newly deployed agents.

Forty of these daring Mosquito missions were flown, using the code name Red Stocking, an appellation probably chosen to dupe enemy intelligence into thinking they were an extension of the Blue Stocking weather sorties.

After a lacklustre beginning, the Mosquito proved immensely useful in USAAF service. Easily outperforming the F-4 and F-5 Lightnings in the reconnaissance role, it also lent itself to special missions where only a high-performance, multi-seat aircraft could offer the versatility and survivability necessary for success. **AN**

