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PHOTOGRAPHY

CAMERA-TOTING F-4 AND F-5 RECCE VERSIONS OF THE P-38 LIGHTNING FIGHTER WERE HUGE SUCCESSFUL IN USAAF AND FOREIGN SERVICE. MALCOLM V LOWE TELLS THEIR STORY

Right One of the best-known recce Lightnings, F-5B 42-67332, was used for air-to-air publicity images while flying from Lockheed's Burbank facilities. The original colour print of this photo shows the US national insignia with a red surround, a marking feature introduced during summer 1943. **KEY COLLECTION**

Bottom right USAAF Lightnings sported various special camouflage schemes in the high-level recce role. Several 'Haze'-painted aircraft are in this line-up, led by F-5A-10-LO 42-13078 standing beside two F-4A examples, with another F-5A furthest away. The Haze schemes relied on low-visibility blue and bluish-white shades. **KEY COLLECTION**

Lockheed's distinctive P-38 Lightning was often celebrated for its exploits as a frontline warplane with the USAAF during World War Two. Possibly christened the fork-tailed devil by the Germans due to its twin tail booms, it served with credit over Europe and the Mediterranean and with much greater accomplishment in the vast Pacific theatre against the Japanese. Less well known was the Lightning's additional, specialised role as a fast and highly versatile photo-recce aircraft. Under the designations F-4 and F-5, comparatively large numbers of recce Lightnings were built or created through conversion and they served worldwide with the USAAF in the mid- and latter stages of the war. The type was also employed on a limited basis with some export customers.

RADICAL DESIGN

The P-38's development dates to the second half of the 1930s and this radical and for its time very advanced twin-engined aircraft made its maiden flight on January 27, 1939. It eventually formed a third of the triumvirate of major

fighter types (alongside the P-51 Mustang and P-47 Thunderbolt) flown with aplomb by USAAF pilots later in the war.

Over Northern Europe the Lightning served as a long-range escort fighter for heavy bombers with the Eighth Army Air Force, based in England, although it was far from a star performer in this role due to technical issues arising from local weather and high-altitude use. The type was also operated by the tactical Ninth Army Air Force, which employed it mainly as a fighter-bomber, firstly from England before D-Day and then from continental bases when these became available after June 6. At lower altitudes the type performed better, but the P-38 really came into its own in combat against the Japanese in the Pacific, where it excelled in aerial fighting at lower altitudes than those needed by the Eighth Air Force.

NOSE JOBS

The Lightning's layout was ideal for the long-range photographic task. It already had good endurance capabilities and, after removal of

the guns and cannon, the large nose of the Lightning's fuselage pod had ample room for various cameras and their related equipment as well as optically flat transparent panels through which the cameras could photograph. These were mounted in front of the pilot so it was easy for him to aim them accurately.

Lockheed's designers realised the potential of the P-38 as a recce platform early in the type's genesis. A considerable amount of development went into the creation of the optimum layout, and in the





Right
The 'business end' of an F-5A. Photo Lightnings were unarmed, except for occasional local modifications, because camera installations had replaced the fighters' nose machine guns and cannon. The number and type of cameras varied between versions, and sometimes from one sortie to the next.

KEY COLLECTION

subsequent years an array of different camera fits was trialled. This led to several versions of photo Lightnings under the designations F-4 and F-5. The US Army Air Corps and later Army Air Force(s) designated recce aircraft 'F', because the more obvious 'P' title was used to signify fighter (Pursuit) types.

During wartime manufacture of the P-38, almost all major production marks had an associated recce version, each of which was generally like the normal model in terms of engine and general equipment. Early recce airframes were completed as such



Above
The 28th PRS was one of several recce squadrons in the Pacific, in this case as a part of the Seventh Air Force. One of its aircraft, F-5B 42-68226, illustrates the black tail with white diamond that adorned the unit's Lightnings. USAAF

Right
A recce version of the P-38L was the F-5G, which featured a redesigned nose and modified camera installation. This example was an F-5G-6-LO, 44-25067.

on the line alongside their fighter counterparts, but the reconfiguration of later marks to recce standard was made at specialist depots, including Lockheed's Dallas Modification Centre. Operationally, recce Lightnings were normally unarmed (except for some local alterations) and relied on their speed to escape enemy interception. In effect their pilots were the 'eyes' of the USAAF and their only weapon was a battery of cameras – apart from any sidearm the pilot might carry for protection if baling out over unfriendly territory.

So useful was the Lightning for recce that it became by far the most numerous of US wartime surveillance types, with eventually more than 1,400 F-4s and F-5s being intended for USAAF service – and they were in great demand.

The first recce Lightning was the F-4 (F-4-1-LO, 99 built, LO standing for Lockheed production at Burbank, California), evolving from the P-38E fighter and fitted with K-17 vertically mounted cameras. These initial recce Lightnings were manufactured as far as possible on the line as dedicated photographic aircraft. They were followed by the F-4A (F-4A-1-LO, 20 airframes – based on the P-38F), which was the first recce Lightning to normally include oblique (slanting) as well as vertical cameras – although photographic evidence suggests that



some F-4 examples could also do this.

The F-5 line blossomed from the F-5A series (some 180 or 181 built), an extension of the P-38G fighter and with vertical and oblique cameras. Next, the considerably improved P-38J spawned several photo Lightnings. The initial model was the F-5B (200 manufactured), which was the first recce Lightning to have the pronounced and distinctive 'chin' design beneath each engine, introduced on the J model. The F-5B featured a similar camera arrangement to the F-5A and was the last photo Lightning version built on the production line as such.

All subsequent recce airframes were re-manufactured from already- or near-completed P-38 fighters. The first was the F-5C, converted from early production P-38Js, but it was

followed by the F-5E series, featuring a prominent aerodynamic fairing on each side of the nose for oblique cameras, besides vertical optics. The F-5E-2 and F-5E-3 were made from later P-38J production blocks compared to the F-5C conversions. Completing the line, several recce variants were based on the improved P-38L fighter. These were the F-5E-4, which was similar to the preceding F-5E-2 and -3 but with

P-38L improvements, including better superchargers and a higher War Emergency Rating from the type's Allison engines. The F-5F was a P-38L-5-LO-based model with vertical and oblique cameras and a slightly altered nose configuration. Some 63 late-war F-5Gs were converted from the P-38L-5-LO and sported a completely redesigned nose, with vertical, forward-looking and oblique cameras. By that time the F-5 had developed into highly specialised recce and photo-mapping roles, which it performed with distinction.

WIDESPREAD 'EYES'

It was in the role of photo-recce that the Lightning really came into its own over Northern Europe and the Mediterranean. Initial employment over the former was with the 5th



Photographic Reconnaissance Squadron (PRS) from the summer of 1942 in England, with early F-4 series Lightnings, but this squadron was sent out to North Africa soon after to join the Twelfth Air Force, where it became a part of the 3rd Photo Group. This unit subsequently developed into an important user of recce Lightnings over North Africa, the Med and eventually Central Europe.



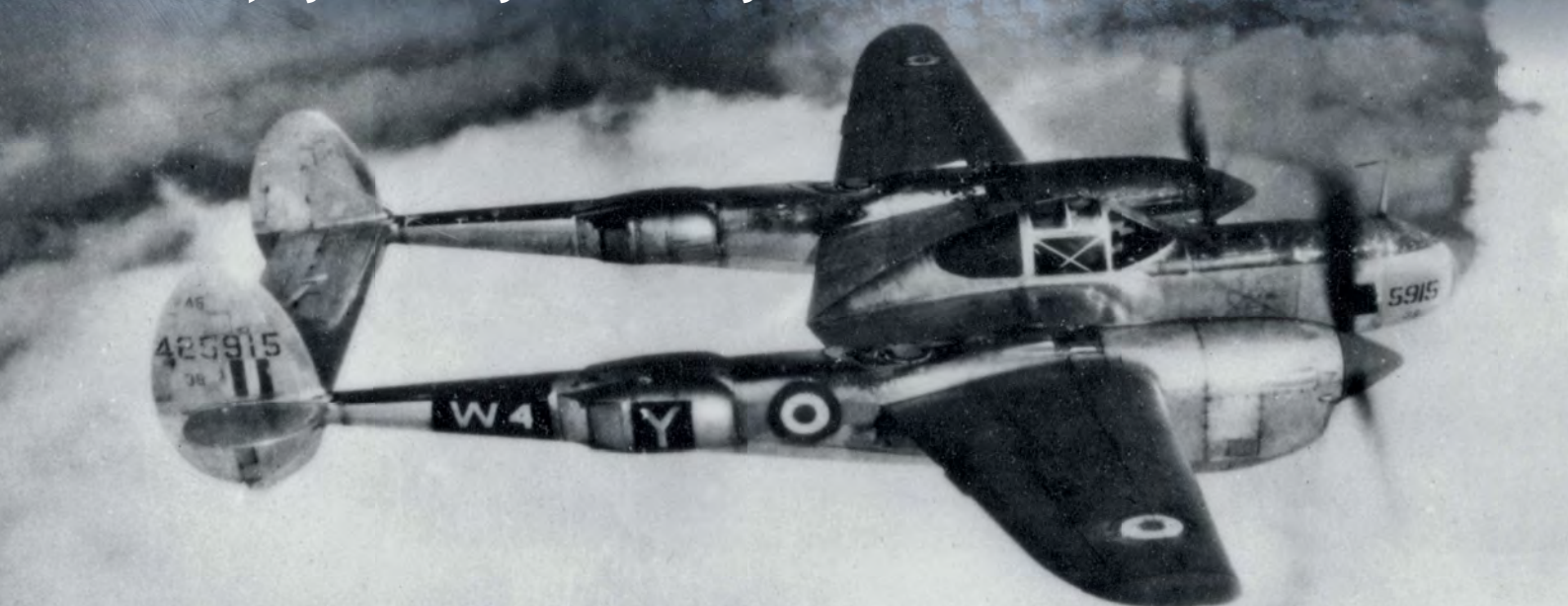
Indeed, USAAF photo-recce over North Africa and the Med was carried out primarily by the 3rd Photo Group. This unit fought a long and difficult war, with parts of its subordinate squadrons sometimes detached and operating from austere locations. Constituted as the 3rd Photographic Group on June 9, 1942 and activated later that month, the 3rd – like other USAAF photo units – went through several name changes during the war. It was redesignated the 3rd Photographic Reconnaissance and Mapping Group in May 1943, the 3rd Photographic Group (Reconnaissance) during November 1943, and became the 3rd Reconnaissance Group in May 1945. The unit moved from the US, via England, to the Mediterranean, primarily in November-December 1942, where it was assigned to the Twelfth Army Air Force. Its initial HQ was at La Sénia (later known as Es Sénia) in Algeria. The group used F-4s and F-5s, its Lightning

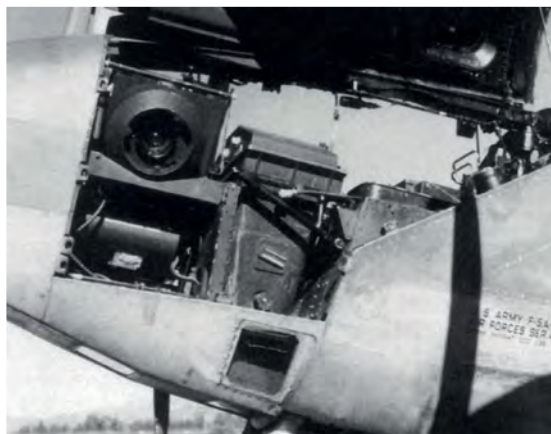
squadrons including the 5th, 12th and 15th, and it provided photographic intelligence that assisted the campaigns for Tunisia, Pantelleria, Sardinia and Sicily. It was active throughout the bitterly fought Italian campaign, covering allied landings at Salerno and Anzio, especially exploring the territory ahead of the US Fifth Army in its arduous drive northwards through the country. It also made recce missions for the invasion of the southern French coast in August 1944, but the unit's Lightnings, with their excellent range, flew far and wide – sometimes venturing as far as Central Europe and the Balkans. The group received a Distinguished Unit Citation for exceptional operations during August 1944. Ending the war in Europe in May 1945 with its HQ at Florence in Italy, the 3rd was inactivated during September 1945, and was finally disbanded in March 1947, its work well and truly done.

Above
Wearing the '59' code of the 34th PRS, this F-5E (43-28624) featured in a series of publicity photographs. Barely visible on its extreme forward fuselage, ahead of the camera window with its aerodynamic fairing, was the name 'Margy'. ALL MALCOLM V LOWE COLLECTION UNLESS STATED

Below
Besides the USAAF, the most important user of recce Lightnings was France. French pilots flew the type during and after World War Two. Here, F-5G 44-25915 operates with what eventually became the 33rd Escadre de Reconnaissance of France's peacetime Armée de l'Air.

"The group was active throughout the bitterly fought Italian campaign, covering allied landings at Salerno and Anzio"





Above
The camera installation in the forward fuselage of an F-5A Lightning, in this case an F-5A-10-LO. The lens of the sideways-looking port oblique camera is visible, ahead of a vertically mounted camera.

Above right
A prominent radio mast located on the forward fuselage was a distinguishing feature of recce Lightnings. Here, work is being carried out inside the dark-painted camera bay of either an F-5A or F-5B. The deep cowling line appears to confirm that this was an F-5B, the first of the photo Lightnings with the deeper 'chin' associated with the P-38J series.

Below
Italy's post-war Aeronautica Militare was an important operator of recce Lightnings. Seen in this view is an F-5G leading an F-5E, both wearing Italian national insignia. They belong to 3^o Stormo.

What grew into the 7th Photographic Group (Reconnaissance) – often abbreviated to 7th Photo Group – of the Eighth Air Force was established in England from July 1943 onwards at Mount Farm, Oxfordshire. The 10th Photo Group (similarly abbreviated) of the Ninth Air Force based itself at Chalgrove in the same county, from early 1944. They both played a very important role in strategic and tactical recce respectively and each employed Lightnings. Aircraft of the 7th PG used their comparatively long range to obtain damage assessment imagery of heavy bomber raids over occupied Europe. For most of the war this was a task in which the Lightnings excelled, but during the final months they were often intercepted by German Messerschmitt Me 262 jet fighters. Losses mounted, and they had to be escorted by P-51D/K Mustang fighters assigned to the 7th PG.

RECCE 'IN THE WEEDS'

Once the 10th PG moved to England it provided tactical recce cover for US and other allied ground forces, over and behind the front lines. This included a task for which the Lightning will be forever famous. Nicknamed 'dicing' during the period leading up to D-Day, countless low-level recce sorties were flown by Lightnings along the northern French coastline to photograph German defences and assess possible landing sites. This was a significant factor in the subsequent success of the allied landings. Following D-Day, recce Lightnings were constantly over the



battlefields and above the enemy's rear positions and supply lines, aided by an increasing number of F-6 Mustangs (the photo-recce adaptation of the P-51 fighter). Later in 1944 some of the 10th PG's Lightnings moved over to the continent to continue their work nearer the front lines, and several other recce groups also came to fly photo Lightnings.

WORLDWIDE SERVICE

Additional to the excellent service with the USAAF in Europe and the Mediterranean, the type also flew successfully elsewhere in the world with the same air arm during World War Two. This included the Pacific and China-Burma-India (CBI) theatres. In the South West Pacific, Fifth Army Air Force usage included the 8th PRS, which was an early operator of initial Lightning F-4s during 1942, while a significant employer of photo Lightnings in the CBI was the 9th PRS, which began combat operations during late 1942 and early 1943. Meanwhile, F-5Gs of the 41st PRS flew very long-range recce missions in support of Twentieth Army Air Force B-29 Superfortress raids against the Japanese home islands, from Guam in 1945.

Recce Lightnings disappeared relatively quickly from the USAAF inventory with the end of World War Two. The type was rapidly superseded by jets that did not initially have the same range and endurance capabilities of their superb predecessors.

Recce-configured Lightnings were flown by several other air arms. Among these was the Royal Australian Air Force, which operated a total of seven or eight camera-carrying airframes during World War Two – although just three received Australian serial numbers (in the A55 range), the remainder being 'borrowed' from USAAF stocks and retaining their US serials. They were all of the F-4-1-LO type. In RAAF service, examples of these aircraft served with 75 Squadron and 1 Photographic Reconnaissance Unit, the latter including aircraft loaned by the USAAF's 8th PRS.

FROM ASIA TO EUROPE

After World War Two Lightnings participated during the fighting between different factions in China. They included recce examples flown in 'Nationalist Chinese' markings operated by forces loyal to the Western-leaning Chiang Kai-shek. A major operator both late in World War Two and afterwards was Italy, which obtained a mix of fighter and recce Lightnings. This began with the so-called Italian Co-Belligerent Air Force, which fought on the side of the Allies following the collapse of Mussolini's fascist regime during 1943. Post-war the F-5E was operated by such units as the 3^o Stormo of Italy's then new Aeronautica Militare (sometimes written as Aeronautica Militare Italiana). Some of the country's Lightnings soldiered on until the mid-1950s, being among the last of the type in service anywhere.

Arguably the most important operator apart from the USAAF was France, which flew them during World War Two and beyond. The type in its F-5A and later F-5B form was operated by Groupe de Reconnaissance (GR) II/33 in the Mediterranean area from 1943, flying alongside the 111th Tactical Reconnaissance Squadron, a federalised National Guard unit of the USAAF. The former included the pioneering aviator and writer Antoine de Saint-Exupéry (see p.82). France continued to operate recce Lightnings post-war, in what eventually became the 33rd Escadre de Reconnaissance of the peacetime Armée de l'Air.

