

ACES

by W. Wayne Patton



squadron/signal publications

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Illustrated by W. Wayne Patton



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Hauptmann Werner Mölders of III/JG 53 is bounced out of the sun by *Sous Lieutenant* Pommier-Layrargues of Group de Chasse (GC) II/7 on 5 June 1940. Mölders bailed out of his Bf 109E-3 shortly after the engine caught fire. Mölders' score at the time stood at six (with another 14 scored during the Spanish Civil War). After his release from a French POW camp, Mölders went on to score a total of 115 kills. Pommier-Layrargues was flying a Dewoitine D 520 (white 6) and claimed another Bf 109E before being shot down and killed later that day.

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Institutions:

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Publications:

"Air Aces", C. Shores, Presidio Press, 1983.
"Japanese Naval Aces and Fighter Units in WW II", Airline Publ., 1993.
"Medaled Pilots of the Japanese Army Air Force in WW II", Model Art Extra #416, 1993.
"Above the Lines", "Above the Trenches" and "Over the Front", N. Franks, F. Bailey and R. Guest, Grub Street, 1992 and 1996.
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"Tiger Ace", Gary L. Simpson, Schiffer, 1995

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Dedication

This book is dedicated to Kevin who helped tame all the computer demons.

(Title Page) Manfred, Freiherr von Richthofen stands with his *Jasta* 11 squadron mates in 1917.

(Back Cover) Rittmeister Manfred, Freiherr von Richthofen — the Red Baron — claims his 63rd victory on 30 November 1917. The victim was an S.E. 5a (B644) flown by Lt Donald MacGregor of No. 41 Squadron, Royal Flying Corps. MacGregor did not survive the crash of his burning fighter. The 'Baron' was flying his red-nosed Albatros DV (4693/17), but soon switched to the new Fokker Dr1 triplane.

Aces

The Aces series is about air aces, their aircraft, and their tactics. Aces from various nations and wars are profiled. Their aircraft are described with an emphasis on their performance, how they were flown, and how the combination of pilot and aircraft stood up to the opposition.

The series will feature color profiles and paintings of documented aircraft flown by each ace. The color schemes are as accurate as possible and are mainly documented with photographs. In some cases, the color schemes are documented using pilot diaries or by direct communication with the ace. The author wishes to hear from readers with information about aircraft colors and/or markings which could result in more accurate illustrations. Notes are included to cross-reference the colors to Federal Standard (FS) color numbers to aid military and aviation history enthusiasts.

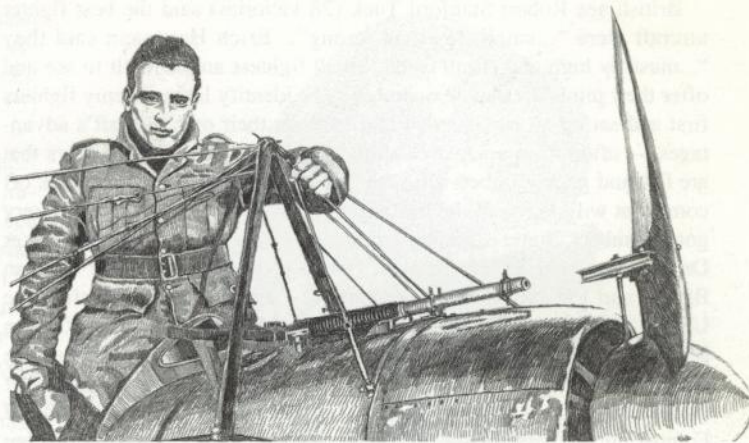
What is an ace? The question is both simple and complicated. Many countries have publicized 'tank aces' and 'flak aces' and have allowed fighter pilots to get credit for ground kills. Bomber gunners and back seat radar operators are not considered aces. The aces addressed in this book are fighter pilots with five or more air-to-air victories over enemy aircraft.

One of the first aces to be acclaimed as such was the World War One French fighter pilot Jean Navarre (12 victories). The French newspapers made a hero out of Navarre and started the 'ace' or 'top card' concept. At the time Navarre had five aerial victories to his credit. That number became the official mark at which point a fighter pilot could be designated an ace.

The first German ace was the great teacher and tactician Max Immelmann (15 victories). The Germans called their aces 'experten' (experts) and a score of ten victories, rather than five, was required to achieve the title. The first British ace was Lanoe Hawker (9 victories), a great tactician and inventor who ultimately met his end at the hands of Manfred von Richthofen — the Red Baron. The first American ace was Raoul Lufbery (17 victories) who scored most of his victories while flying for the French.

Air Forces worldwide maintain a selection and training process to determine the best candidates for fighter pilot training. Due to the fact that the fighter pilot profession is often looked upon as 'glamorous' there have been many more candidates than pilot openings. Sometimes, it seems, the selection processes have not been very effective. During the 20th Century, fifty percent of all air-to-air victories have been scored by a mere five percent of the fighter pilots. Most of the top aces were ranked well down in their pilot training classes and many were slow starters. Some, such as Sada-aki Akamatsu (27+ victories) of the

Max Immelmann scored a total of 15 aerial victories before he was shot down and killed on 18 June 1916.



Jean Navarre, in the cockpit of his Morane Type N fighter, was the first great French ace of WW I. The deflectors bolted to the propeller were an early, and not too effective, method of protecting the propeller from bullets fired from the non-synchronized guns. Navarre scored 12 victories before being seriously wounded.

Japanese Navy and George Beurling (31 victories) of the RAF were loners and complex individuals who were kept on flying status only because they could shoot down more enemy aircraft than most other pilots. Some German aces of World War I even wore spectacles until eyesight was determined by headquarters staffs to be a way to weed out prospective pilots!

What drives a person — some Russian aces were female — to become an ace is a kind of hunter instinct coupled with situational awareness, shooting ability, and technical mastery that allows a pilot to become one with his aircraft. Situational awareness is the ability to know instinctively where friend and foe alike are during a dogfight. Some of the best fighter aces were so familiar with their enemy's battle tactics that they could fire into open air space knowing that seconds later an enemy fighter would occupy the space!

Erich Hartmann (352 victories), the all time top scoring ace, said there were two types of fighter pilots: those that used their heads and those that used their muscles to score victories. The so-called 'head' flyers stalked their victims and waited for the most favorable instant to attack. Often, they would dive through an enemy formation, firing as they passed through, and would not stay to fight a running battle. Muscle fly-

The 'Eagle of Lille', Oswald Boelcke, scored 40 aerial victories before dying in a collision with an Albatros fighter flown by Erwin Bohme (later to score 24 victories). Boelcke is wearing the 'Blue Max' award at his throat.



ers tended to wade right into the melee and usually got involved in swirling dogfights with enemy fighters. The head flyers tended to live longer and many piled up tremendous scores.

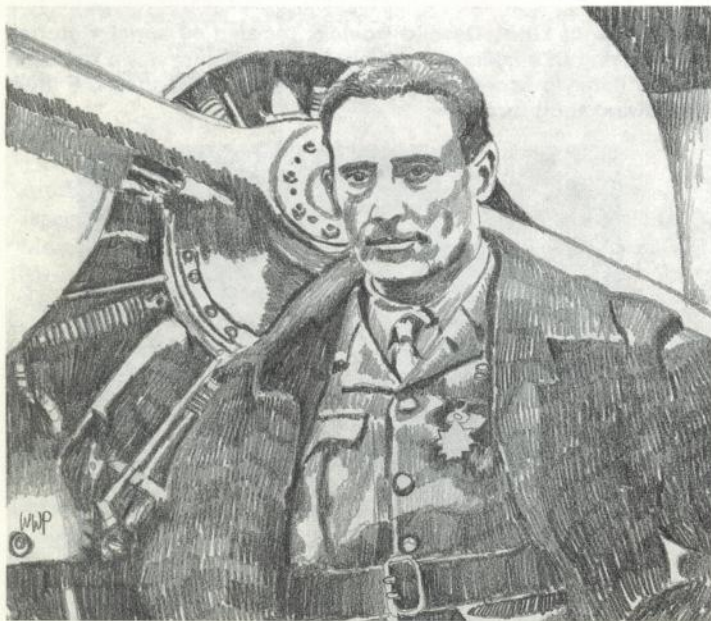
British ace Robert Stanford Tuck (28 victories) said the best fighter aircraft were "...small, fast and strong". Erich Hartmann said they "...must fly high and climb well". Small fighters are difficult to see and offer their pilots a valuable opportunity to identify larger enemy fighters first and set up an engagement that exploits their own aircraft's advantages — often from a superior altitude and out of the sun. Fighters that are fast and good climbers allow their pilots the opportunity to break off combat at will. Some of the best fighters were very small, fast, and very good climbers. Some examples from across time are the German Fokker Dr 1 triplane and British Sopwith Camel of World War I; the German Bf 109 and Fw 190, the Japanese A6M2 Zero, the British Spitfire, the US P-51 Mustang, and the Russian Yak-3 of World War II; the Russian MiG-15 of the Korean War; and the French-built Mirage IIIC of the Arab/Israeli Wars. Pilot training and skill have often allowed pilots of inferior fighters to succeed as well. During the early years of WW II Finnish pilots flew cast-off, obsolescent fighters, but managed to score heavily against the Russians due to their superior tactics and training.

Fighter forces of most nations during World Wars I and II required confirmation by a witness or gun camera film before credit was given for a victory. The Japanese army and naval air forces as well as the Italian Regia Aeronautica frowned on individual scores. Sources for these countries' aces are sometimes personal diaries which often include probabilities. For this reason, these scores are not as exact as those of other nations. Gun camera film and eye witnesses were also used to confirm victories during the Korean Conflict, the Vietnam War, and the Arab/Israeli Wars. Some missile kills, however, occur so far away from the launching fighter that confirmation by gun camera is difficult. As a result, witness reports are more frequently being used just as in World War I.

Aces from all nations counted one victory for each aircraft shot or forced down. Large, non-maneuvering targets such as bombers, transports, and observation aircraft counted as one kill just like fighters. One USAAF P-51 Mustang pilot surprised a German instructor and his students in training aircraft and claimed them as victories after shooting them down.

A destroyed enemy aircraft had to have a pilot on board to count as a kill. Victories over World War I observation balloons and Dirigibles could be counted, but unmanned barrage balloons used in WW II could

Jean Navarre, who provided the French newspapers with the prototype 'air ace', stands in front of a Morane Type L Parasol.



not be counted toward a pilot's ace status. Likewise, skill and bravery were necessary to shoot down an unmanned German V-1 'Buzzbomb' during WW II, but these kills were not counted in ace tallies because there were no pilots on board. The V-1 was simply a crude, non-maneuvering tactical missile.

Beginning in late World War II, air-to-air missiles became more effective and enemy aircraft shot down by missiles were counted in an ace's tally just like aircraft brought down by gunfire. Additionally, World Wars One and Two both saw the use of aerial burst bombs. In WW I the aerial bombs were first used to bring down observation balloons and ace Albert Ball (44 victories) claimed at least one in this manner. Both German and Japanese fighter pilots are known to have scored victories over US bombers using aerial burst bombs. The final score of German ace Heinz Knoke (44 victories) and one of Japan's top aces, Tetsuzo Iwamoto (80 victories), includes bombers brought down by dropping bombs on them.

Some Japanese aces deserve special mention because these pilots flew increasingly obsolete fighters against B-29 bombers and their P-51 Mustang escorts during the final days of World War II. Attacking the Boeing B-29 Superfortresses with their remotely directed guns was almost suicidal in aircraft like the Ki.45 Toryu (Nick) and the Ki.61 Hien (Tony) fighters. Some of these pilots like Teruhiko Kobayashi (10 victories) actually landed on top of B-29s causing both aircraft to spin out of control. The Japanese fighter pilot would try to bail out of his aircraft and live to fight another day.

During World War I both sides had good aircraft, but the Germans had better tactics. The Germans also tended to wait for the enemy to come to them and, with the prevailing winds blowing toward German lines, the Germans could use their ground based anti-aircraft guns to their advantage. The chance of recovering a surviving German pilot was also a factor — along with capturing a downed British or French pilot. Aside from occasional technological advantages enjoyed by either side, the air war tended to be just as stagnant as the trench war on the ground. The top scoring aces of WW I were Manfred von Richthofen (80 victories) and Ernst Udet (62), Frenchmen Rene Fonck (75 victories) and Georges Guynemer (54), British Empire pilots William Bishop (72 victories), Mick Mannock (68), and Raymond Collishaw (62); Americans Eddie Rickenbacker (26 victories) and William Lambert (22); Italians Francesco Baracca (34) and Silvio Scaroni (26) and the Russian, ace Alexander Kazakov (17). The top Austro-Hungarian pilots were Godwin Brumowski (40 victories) and Julius Arigi (32).

During World War II the warring nations either rotated combat flyers in and out of battle or put them into combat and left them there. Many Japanese, German, and Finnish day fighter pilots ran up tremendous scores for this reason. American and British aces did not score as much as the German *experten* or Japanese 'eagles' due to their constant rotation back to training units where they passed on their knowledge to new pilots. As a result many Allied pilots achieved ace status, but did not have the large numbers of kills scored by many Axis pilots.

The top scoring day fighter aces of World War II were German pilots Erich Hartmann (352 victories) and Gerhard Barkhorn (301); Japanese pilots Hiroyoshi Nishizawa (87 victories) and Tetsuzo Iwamoto (80); and Finnish pilot Eino Juutilainen (92 victories). The top British aces were Johnnie Johnson (38 victories) and possibly Marmaduke St. J. Pattle (believed to be 40+). The top American aces were Richard Bong (40 victories), Tommy McGuire (38), David McCampbell (34) and Francis Gabreski (28+6.5 in Korea). The top Italian ace was Adriano Visconti (26+7 with RSI), while the top French ace was Marcel Albert (23 victories).

Night fighter aces played a key role in World War II. They often flew converted bombers, obsolete day fighters, and later in the war, purpose built night fighters like the He 219 Uhu (owl) and the Northrop P-61 Black Widow. Most night fighter kills were against bombers and other night fighters. The top nightfighter aces were the Germans Heinz Schnauffer (121 victories) and Helmut Lent (102) and the Englishmen Brance Burbridge (21) and John Cunningham (19).

Arguably, the world's first jet ace was Heinz Bär (220 victories including 16 flying jets during WW II). During the Korean War, Russian pilot Yevgeni Pepelyaev scored 23 victories while flying MiG 15 fighters. Joseph McConnell (16) was the top US ace in the Korean War flying F-86 Sabre Jets. Since then, the Vietnam War, the Indo/Pakistani War, and the Arab/Israeli Wars have produced jet aces. Israeli aces Iftach Spector (15), Amir Nahumi (14) and Ashir Snir (13.5) are the top scoring aces of the Arab/Israeli Wars.

Well known soldiers have been decorated and given the title of 'ace' for victories other than those scored by fighter pilots against enemy aircraft. Perhaps the most famous air-to-ground specialist was the ace Stuka dive bomber pilot Hans Ulrich Rudel who destroyed a Russian battleship, over 500 Soviet tanks, 800 soft-skinned vehicles, 150 artillery positions, four armored trains, and numerous bridges. Rudel also shot down nine enemy aircraft which also qualified him as an air ace. He flew Fw 190D and F fighter bombers towards the end of World War II.

The most famous tank 'ace' was arguably the German tank commander Michael Wittmann. While commanding Sturmgeschutze III assault vehicles and Tiger I heavy tanks, Wittmann destroyed 138 tanks, 132 anti-tank guns, and hundreds of soft-skinned vehicles. He is most famous for his role at Villers-Bocage, France, during which he and his crew knocked out an entire British tank column and slowed the Allied advance from the Normandy beachhead during June of 1944. Michael Wittmann and his Tiger crew were killed on 8 August 1944 when they were surrounded by British Shermans and their Tiger destroyed. Wittmann was awarded the Swords and Oak Leaves to the Knight's Cross and was designated a 'Tiger Ace' by the German news media during WW II.



(Above) SS Obersturmführer Michael Wittmann was the leading German 'tank ace' by virtue of his continued success against Allied armor and artillery while commanding a PzKpfw VI 'Tiger' tank. Wittmann and his crew died trying to stem the flood of Allied forces breaking out of the Normandy beachhead in early August of 1944.

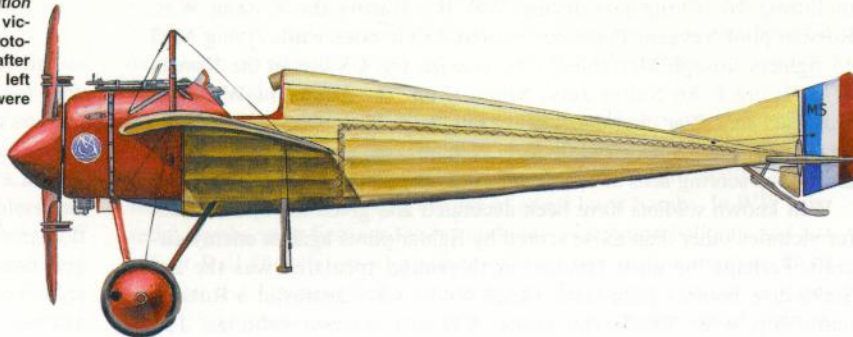
(Left) Lanoe Hawker, the first British ace, scored 9 aerial victories before he was shot down and killed by Manfred von Richthofen — the Red Baron.



(Below) Eugeniusz Horbaczewski of the *Deblinski* Squadron, RAF stands in front of his Mustang III. He ended World War II with 16.5 victories over manned aircraft and had a number of V-1 buzz bomb kills as well.



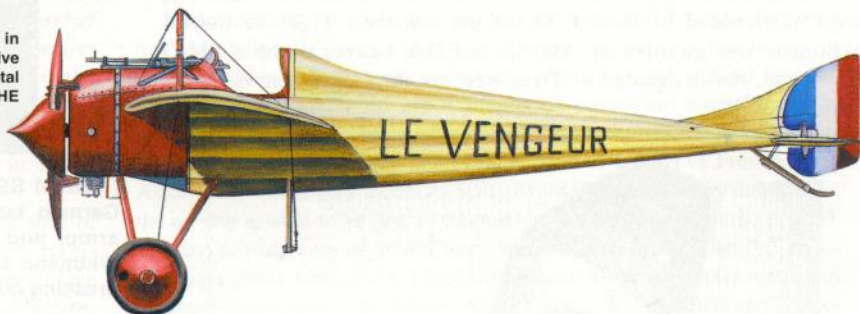
Morane Type N 'Bullet' flown by Sgt Jean Navarre of *Escadrille MS 23, Aviation Militaire Francaise*, Verdun in February of 1915. Navarre's final score was 12 victories. Navarre was the third French pilot to score five kills and was the prototype 'ace' in the French media, since the first two airmen were killed shortly after scoring their fifth kill. Navarre's Type N was painted with clear dope which left the fabric its natural color (FS 33717). The metal cowl and wheel covers were painted red (FS31105).



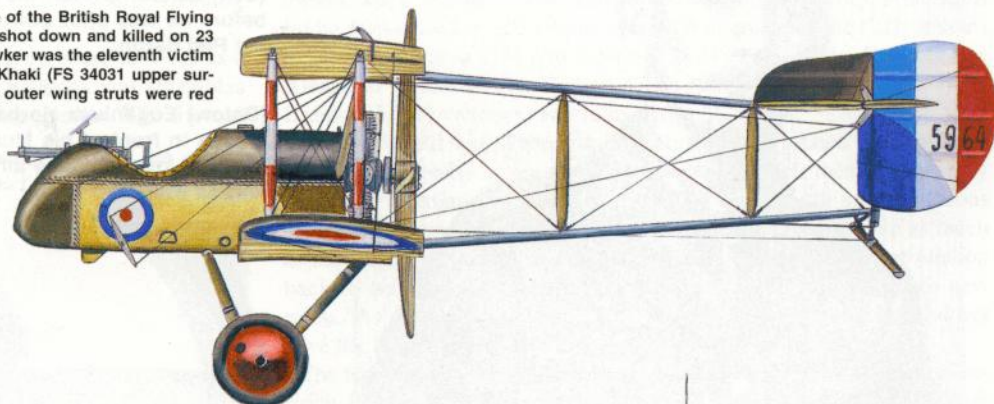
Fokker E1 (3/15) was flown by Leutnant Max Immelmann and Leutnant Oswald Boelcke, *Feldfliegerabteilung 62*, Douai, France in August of 1915. Immelmann's final score was 15 kills and Boelcke's score was 40 victories. Immelmann was the first German ace. The Fokker E1 was natural fabric (FS 33717) with a swirled aluminum cowling. The national markings were black and white.



Sgt Eugene Gilbert of *Escadrille MS 23* flew this Morane Type N 'Bullet' in January of 1915. Gilbert was France's first ace and had a final score of five kills. The aircraft was natural fabric (FS 33717) with a red (FS 31105) metal cowl, spinner and wheel covers. The slogan on the fuselage reads "THE REVENGE".



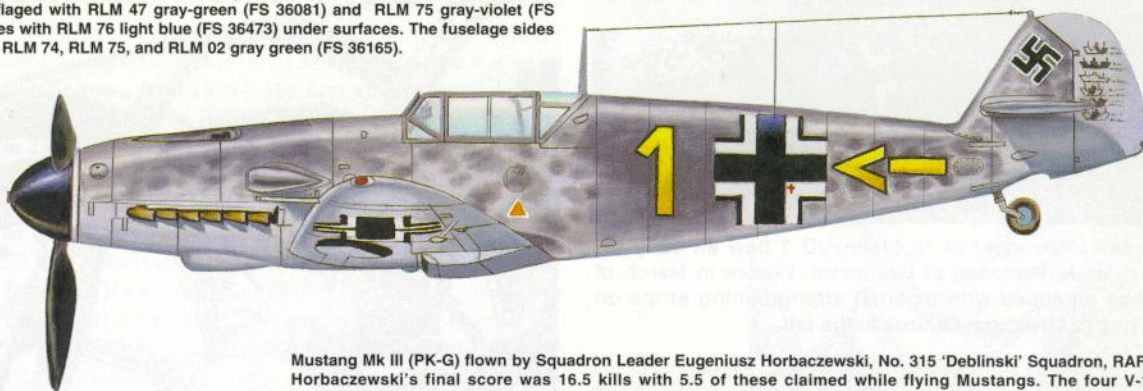
Maj Lanoe Hawker of No. 24 Squadron was the first ace of the British Royal Flying Corps. Hawker scored a total of nine kills before being shot down and killed on 23 November 1916 while flying DeHavilland DH 2 (5964). Hawker was the eleventh victim of Manfred von Richthofen. Hawker's DH 2 had British Khaki (FS 34031) upper surfaces and natural fabric (FS 33717) under surfaces. The outer wing struts were red and white.



Untersturmführer Michael Wittmann of SS Panzer Division 'Leibstandarte Adolph Hitler' commanded this PzKpfw VI Ausf H, Tiger I (S05) at Berdichev, Russia, on 13 January 1944. Wittmann was designated a "Tiger Ace" by the German propagandists. His final score was 138 tanks and 132 anti-tank guns. The Tiger was painted overall panzer yellow (FS 33434) with a roughly applied whitewash camouflage for winter operations. The turret numbers were red with a white outline. The 'S' stands for 'Stab' indicating the vehicle was assigned to a headquarters unit.



Bf 109F-1, Yellow 1, flown by *Oberleutnant* Frank Liesendahl, *Staffelkapitän* of 10 (Jabo)/JG 2, at Beaumont, France, 31 March 1942. The ship silhouettes on the rudder represent vessels sunk or damaged. Liesendahl was an air-to-ground expert, but not an air ace. The Bf 109F-1 was camouflaged with RLM 47 gray-green (FS 36081) and RLM 75 gray-violet (FS 36132) upper surfaces with RLM 76 light blue (FS 36473) under surfaces. The fuselage sides had a soft mottle of RLM 74, RLM 75, and RLM 02 gray green (FS 36165).



Mustang Mk III (PK-G) flown by Squadron Leader Eugeniusz Horbaczewski, No. 315 'Deblinski' Squadron, RAF. Horbaczewski's final score was 16.5 kills with 5.5 of these claimed while flying Mustangs. The four V-1 Buzzbomb kills were not counted in his final score. The aircraft was camouflaged with Dark Green (FS 34097) and Ocean Grey (FS 35240) upper surfaces with Medium Sea Grey (FS 36628) under surfaces.



'Buzzbomb' kill marking



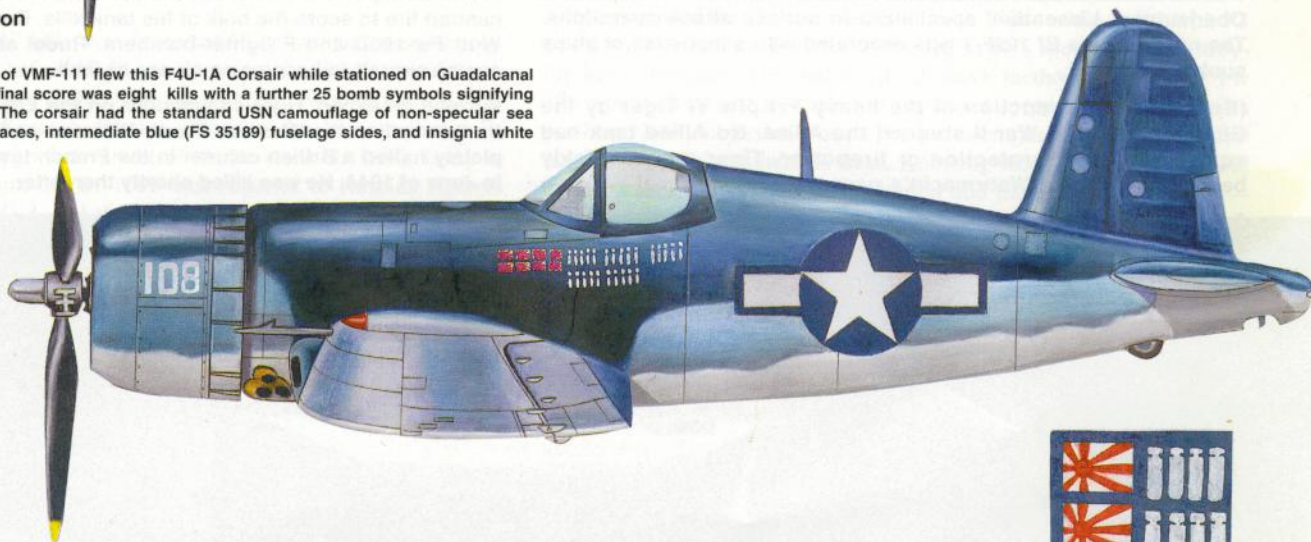
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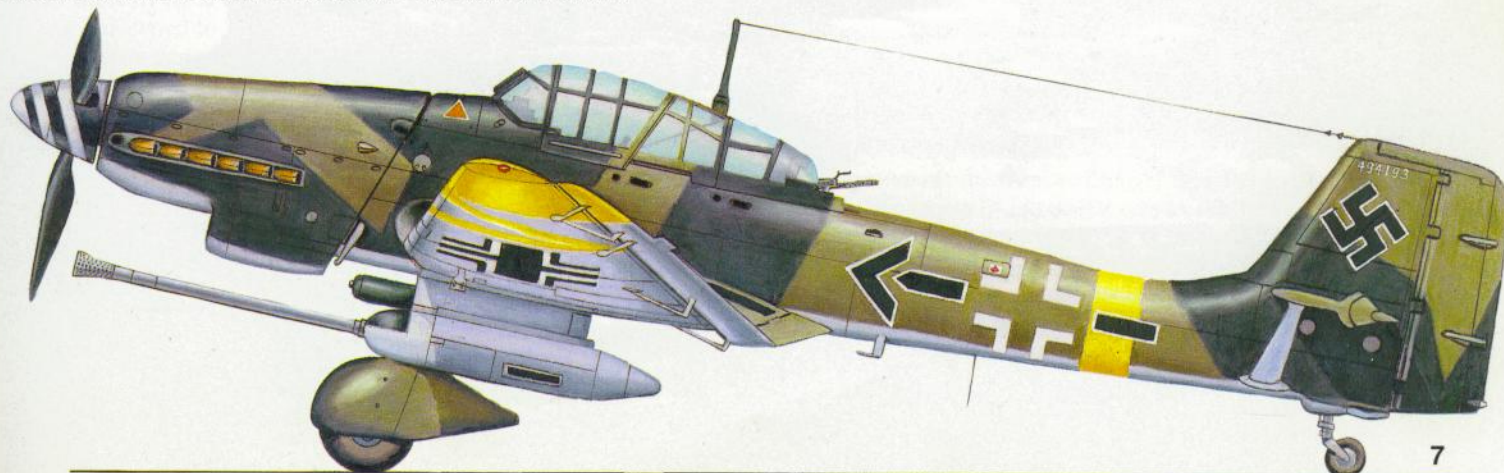
'Deblinski' Squadron

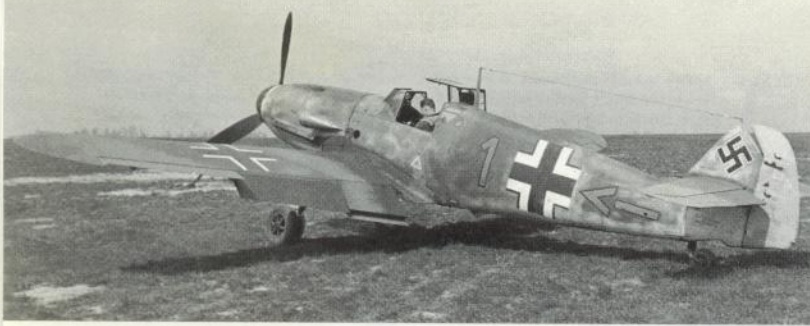


Major George L. Hollowell of VMF-111 flew this F4U-1A Corsair while stationed on Guadalcanal in November of 1943. His final score was eight kills with a further 25 bomb symbols signifying fighter-bomber missions. The corsair had the standard USN camouflage of non-specular sea blue (FS 35042) upper surfaces, intermediate blue (FS 35189) fuselage sides, and insignia white under surfaces

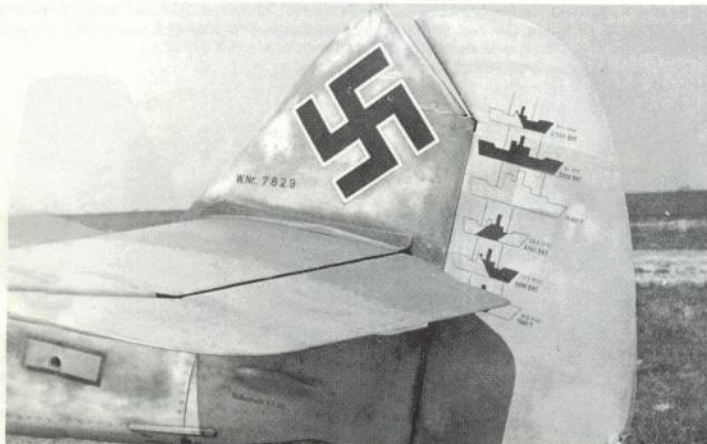


Black chevron-bar, a Ju-87G-2 Stuka, was flown by *Oberstleutnant* Hans Ulrich Rudel, *Kommodore*, Schlactgeschwader 2 on the Eastern Front during 1944-45. The Stuka was camouflaged in an RLM 70 black green (FS 34052) and RLM 71 dark green (FS 34079) splinter pattern on the upper surfaces with RLM 76 light blue (FS 36473) on the under surfaces.





Oberleutnant Frank Liesendahl of 10 (Jabo)/JG 2 flew an early Bf-109F-1 (Yellow 1) while stationed at Beaumont, France in March of 1942. The F-1 was equipped with external strengthening strips on the aft fuselage due to structural failures in the tail.



Oberleutnant Liesendahl specialized in surface attack operations. The rudder of his Bf 109F-1 was decorated with silhouettes of ships sunk or damaged.

(Below) The introduction of the heavy PzKpfw VI Tiger by the Germans in World War II stunned the Allies. No Allied tank had equivalent armor protection or firepower. Tiger crews quickly became the elite of Wehrmacht's panzer forces. Michael Wittman



(Above) Hans Ulrich Rudel flew the Junkers Ju 87 Stuka dive bomber and scored a total of 500 tank kills in the target rich Eastern Front during WW II. Rudel used a combination of bombs and heavy cannon fire to score the bulk of his tank kills. Rudel later flew Focke-Wulf Fw-190D and F fighter-bombers. Rudel also shot down nine enemy aircraft to become an air ace as well.

became an expert Tiger commander on the Eastern Front and then transferred to the Western Front. Wittman and a few Tigers completely halted a British column in the French town of Villers-Bocage in June of 1944. He was killed shortly thereafter.



Oberstleutnant Heinz 'Pritzl' Bär

Heinz 'Pritzl' Bär began World War Two as a *Luftwaffe Unteroffizier* (Sergeant) assigned to *Jagdgeschwader* (JG) 51 and ended the war as an *Oberstleutnant* (Lt Colonel) with JV 44. His first victory was a French *Armee de l'Aire* Curtiss Hawk 75 fighter which he shot down over the Maginot Line on 25 September 1939. Bär's last victory, a USAAF P-47 Thunderbolt, came on 29 April 1945, while flying a Messerschmitt Me 262 jet fighter. Heinz Bär fought continuously throughout WW II and was awarded the Swords to the Knight's Cross by Adolph Hitler. His final score of 220 confirmed victories ranks him as number eight on the list of German *Experten*. He was also one of the few German pilots who fought and scored well on the western, southern, and eastern fronts.

Heinz Bär flew a Bf 109E-3 (white 13) during the 1940 Battle of France and Battle of Britain. Bär, a highly competitive pilot, tended to close with Spitfires and Hurricanes on many occasions. This technique was not often considered a prudent thing to do since the two British fighters were more maneuverable than the Bf 109. Bär learned the hard way that the Bf 109 did not do well in a turning engagement with Spitfires. As a result Bär crash-landed badly shot up Bf 109s in France several times — after barely making it across the English Channel. On 2 September 1940, he was limping back to France with a thoroughly shot-up fighter when he was bounced by a Spitfire and shot down into the water. As luck would have it Hermann Göring, the *Luftwaffe* Commander-in-Chief, observed the action and asked to see the young fighter pilot. Göring asked what he was thinking about while swimming in the Channel. Bär reportedly replied, "*Your speech Herr Reichsmarschall, that England is no longer an island!*" It appears that young Heinz Bär lived on the edge while on the ground as well as in the air.

Heinz Bär scored 17 kills over France and England and was commissioned as a *Leutnant* before JG 51 was transferred to Russia to take part in OPERATION BARBAROSSA — the German invasion of the USSR. During his time at Kertsch, Russia, Bär flew the Messerschmitt Bf 109F-2 fighter, an upgraded variant of his previous Bf 109E. Early in the Russian campaign, the Bf 109F was superior to Russian fighters such as the I-16, MiG-3, and the LaGG-3. The Bf 109F was generally faster — especially at high altitude. Bär quickly learned to bounce Russian aircraft from above and get in close before squeezing the trigger. He scored 96 kills against the Russians and was regarded as a sharpshooter and proficient at deflection shooting. The aggressiveness Bär demonstrated during the battles on the western front carried over to the eastern front. While in Russia Bär was promoted to *Hauptman* (Captain). He was hospitalized with a back injury he suffered during a crash after he was shot down by Russian fighters.

Following his stay in the hospital, Bär was transferred to Sicily to lead I/JG 77 as the *Geschwader Kommodore* and, at the time had 103 victories. While in Sicily Bär was promoted to Major and flew the upgraded Bf 109F-4. These fighters were painted in the same two-tone gray schemes used in Russia. Bär claimed another 20 British and American aircraft while flying in the Mediterranean Theater of Operations (MTO). Bär was transferred to Tunisia where he was in continuous action until the Axis defeat during the spring of 1943. By this time, Heinz Bär had 158 kills having scored an additional 35 times. Combat and climate had taken its toll, however, and Bär was taken out of action due to malaria and intestinal problems.

On his return to combat in 1944, Bär was a Major commanding II Group JG 1 'Oesau' and began flying Focke-Wulf Fw 190 fighters as part of the *Luftwaffe* defense of Germany against Allied heavy bombers. Due to difficulties with his superiors, Bär was 'demoted' to *Staffelkapitän* (Squadron Commander). Bär responded by saying that while in the cockpit of his fighter he was a *Kommodore*. This became a *Luftwaffe* legend and added to Bär's fame.

Following his service with JG 1 he was assigned to JG 3 at Stormede



Heinz Bär wears the Oak Leaves and Swords to his Knights Cross.

— once again as *Kommodore* leading a *Geschwader* — where he flew Fw 190A-7/R3 fighters. Bär flew two Fw 190s — Red 13 and Red 23. Bär was flying his back up machine, Red 23, when he shot down a USAAF B-24 for his 200th kill. These fighters were painted with the standard two-tone gray scheme used during 1944, but the effectiveness of the scheme was often negated by the colorful red and yellow markings worn to indicate the various *Luftwaffe* units.

Bär accounted for 21 American B-17s and B-24s while flying with JG 1 and JG 3 — making him one of the *Luftwaffe's* specialists at destroying heavy bombers. He used a frontal attack method in which his Fw 190 would close with a bomber at combined speeds of over 600 miles per hour. Bär's objective was to put a concentrated stream of gun fire into the bomber's vulnerable nose. Knowing when to pull up to avoid collision took hair-trigger concentration and many *Jagdwaiffe* units — including Bär's — painted full size frontal profiles of B-17s on their hangars in order to better estimate the precise moment to break off.

Bär was chosen to command the jet fighter school at Lechfeld during January of 1945. He flew both the Heinkel He 162 single jet fighter and the Messerschmitt Me 262 twin jet fighter. While with the school, Bär had opportunity to test new weapons systems such as an Me 262C-1 jet which was equipped with the rocket motor from the Me 163 rocket-powered interceptor. The rocket motor was used to improve climb and acceleration. The Me 262C-1a fighter had a phenomenal climb rate of 10,000 feet per minute — a rate not matched by many modern fighters. Bär flew the hybrid Me 262C-1a to a new altitude record of 48,000 feet and shot down at least two Mosquitoes while 'testing' the jet fighter. Bär also flew the Me 262A-1a with Jagdverband (JV) 44, a special jet fighter unit commanded by General Adolph Galland. The Me 262 outperformed all other fighters of the time by such a wide margin that German pilots could engage and break off combat at will. Bär became commander of JV 44 after General Galland, an ace himself with 104 victories, was wounded in combat with USAAF P-47 Thunderbolts.

Heinz Bär's incredible wartime career ended when he was the commanding officer of the *Luftwaffe's* 'Squadron of Experts'. He flew over one thousand combat missions and fought against every Allied fighter and a very wide variety of pilots. Bär considered the P-38 Lightning to be 'easy meat', but the P-47 Thunderbolt a tough customer because it was so rugged. The P-51 Mustang and the Spitfire were the hardest Allied fighters to meet in combat due to their high speed and maneuverability and difficulty in seeing and recognizing them. Mustang pilots alone shot Bär down once and caused him to make six forced landings. Bär shot down more aircraft flown by the western Allies than any other

Heinz Bär flew this Bf 109E-3 (white 13) while assigned to JG 51 in the early stages of the Battle of France. The aircraft was camouflaged with an upper surface splinter pattern of RLM 70 black-green (FS 34052) and RLM 71 dark green (FS 340879 over RLM 65 light blue (FS 36473) under surfaces.



Unteroffizier Heinz Bär of I/JG 51 flew this Bf 109E-3 (White 13) while stationed at Pihen, France in September of 1940. Bär's fighter carried seven kill markings on the tail.



I/JG 51



I/JG 51

This Bf 109F-2 (black chevron/triangle) was flown by Hauptman Heinz Bär when he was the Gruppen-Kommandeur of IV/JG 51 at Kertsch, Russia during 1942. The camouflage consisted of an RLM 74 green-gray (FS 36081) and RLM 75 gray-violet (FS 36132) splinter pattern on the upper surfaces and RLM 76 light blue (FS 36473) on the under surfaces. The score on the rudder stood at 103 victories.

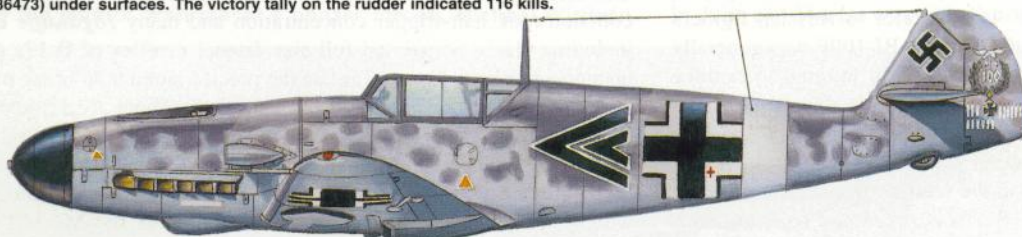


JG 51



IV/JG 51

Black double chevron, a Bf 109 F-4, was flown by Major Heinz Bär while he commanded I/JG 77 in southern Italy in July of 1942. The fighter is camouflaged in RLM 74 green-gray (FS 36081) and RLM 75 gray-violet (FS 36132) on the upper surfaces over RLM 76 light blue (FS 36473) under surfaces. The victory tally on the rudder indicated 116 kills.



Major Heinz Bär, Gruppen-kommandeur II/JG 1 based at Stormede, Germany, flew this Fw 190A-7/R3 (red 23) in April of 1944. The fighter was painted RLM 74 green-gray (FS 36081) and RLM 75 gray-violet (FS 36132) on the upper surfaces with RLM 76 light blue (FS 36473) on the under surfaces. Red (FS 31140) and yellow (FS 33538) were used for the aircraft markings.



JG 1



Major Bär also flew this Fw 190A-7/R3 (red 13/wk nr 431007) while stationed at Stormede, Germany. The camouflage colors were identical to red 23 above. The rudder score had increased to 200 victories.



Oberstleutnant Heinz Bär, Kommandeur of III/EJG 2, flew this Me 262A-1a (red 13/wk nr 110559) while stationed at Lechfeld, Germany during March of 1945. Bär's final score was 220 victories, but the kill markings were not carried on the aircraft. Bär's Me 262A-1a was camouflaged in the late war Luftwaffe colors of RLM 81 brown-violet (FS 30118) and RLM 83 light green (FS 34128) upper surfaces with RLM 76 light blue (FS 36473) under surfaces. The nose markings were RLM 23 red (31140)





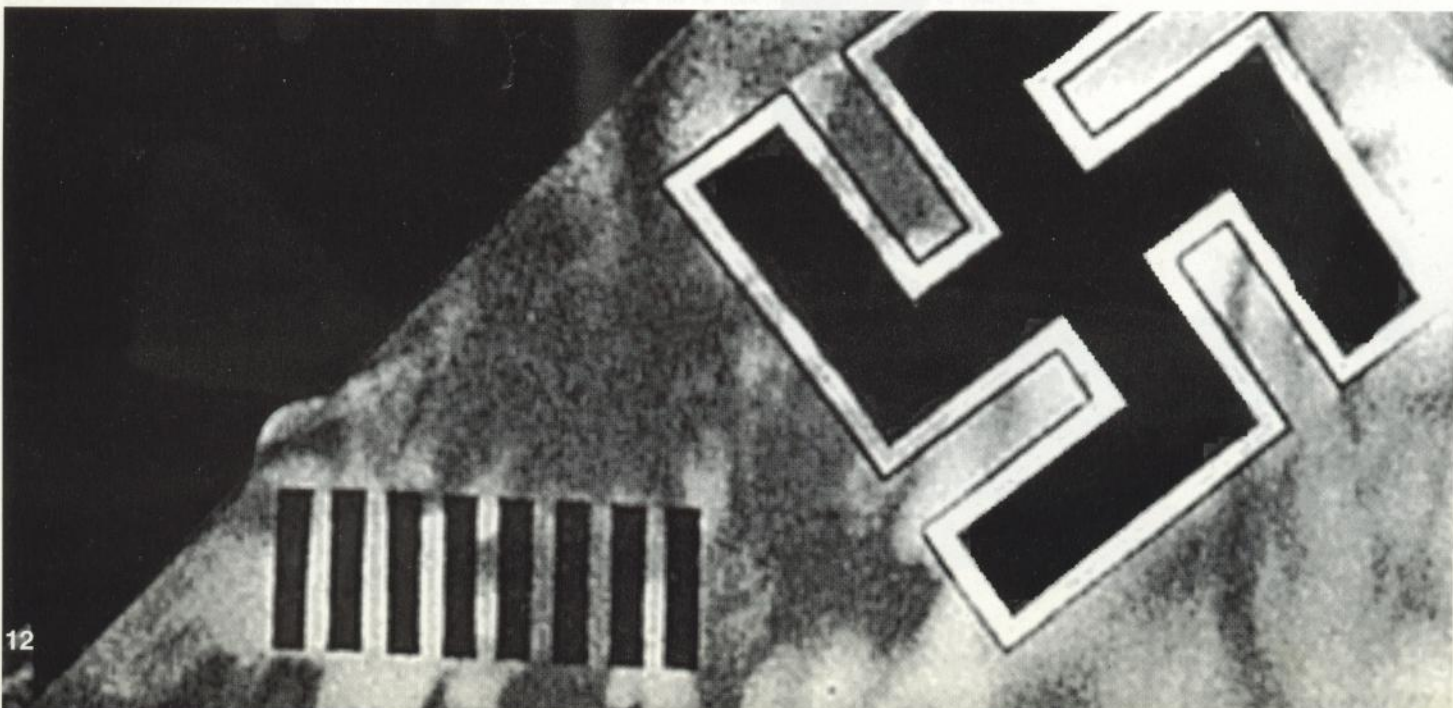
pilot except for Hans-Joachim Marseille who scored 158 kills before being killed in North Africa. Bär scored at least 16 of his victories while flying jets. Heinz Bär survived the war, but was tragically killed while flying a light plane in 1957

(Left) *Feldwebel* Heinz Bär flew Bf 109E-3 (white 13) in early 1940. The aircraft wore the early camouflage scheme of overall RLM 70 black green and RLM 71 dark green in a splinter pattern on the upper surfaces and fuselage sides with RLM 65 light blue on the under surfaces.



(Above) Heinz Bär flew Bf 109E-3 (white 13) while assigned to I/JG 51 at Pihen, France during the late summer of 1940. This aircraft carried the RLM 65 light blue up the fuselage side in order to render the aircraft less visible to another aircraft.

(Below) Bär, like most Luftwaffe pilots carried his victory marks in the form of vertical bars on the fin of his aircraft. These bars were usually moved to the rudder surface when the pilots' scores grew to the point where they needed more space. Many pilots also added the date, place and/or type of aircraft destroyed to the bar.



The European Theater of Operations

Major Anton Hackl

Anton Hackl began World War II as an *Unteroffizier* (Sergeant) with JG 77 and ended it as an officer and *Kommodore* of JG 11. Hackl scored his first victory during the Sitzkrieg or 'phony war' prior to the opening of the Battle of France in May of 1940. He served with JG 77, JG 26, JG 300 and JG 11 and served on both the Eastern and Western Fronts.

Anton Hackl scored a total of 192 victories, was shot down on eight occasions, and severely wounded at least once. Included in his victory tally were 32 Allied heavy bombers. His unit, III/JG 11 (stationed at Oldenberg) transitioned from Bf 109Gs to Fw 190As during early 1944. During this period Hackl had the luxury of using a Bf 109G-6 to engage enemy fighters and a Fw 190A-6 to engage bombers. The Me 109G-6 had better performance above 20,000 feet which allowed Hackl to position his flight for attacking escorting fighters from above. The Fw 190A-6's performance fell off above 20,000 feet which was about where American heavy bombers operated. The Focke-Wulf's heavier armament and better armor protection made it more suitable for attacking the bombers. Hackl was one of the few German Fighter pilots to score well on both Eastern and Western fronts as well as in the bomber interception role.

Squadron Leader Robert McNair

Robert McNair was a Canadian and, by the end of World War II, had shot down 16 German aircraft. He also damaged 14 and probably destroyed a further five. McNair flew Spitfire VB fighters with No. 249 Squadron during the wild and often desperate fighting over Malta — an island in the Mediterranean Sea within easy flying distance of Italy. While on Malta McNair scored one victory over a Bf 109 that was attacking an Allied bomber. His final tally includes 7 victories scored while flying Mk VB Spitfires.

Robert McNair transferred back to England where he flew the newer Spitfire Mk IX — a higher performance Spitfire developed to combat the Luftwaffe's new Fw 190 fighter. The Spitfire IX was faster than the Fw 190A-3, especially above 20,000 feet, and was more maneuverable, but had a slower roll rate. McNair claimed an Fw 190A over France while flying the Spitfire Mk IX on 24 June 1943.

Oberfeldwebel (Sergeant) Heinrich Bartels

Assigned to JG 51 during 1941, Heinrich Bartels scored two victories over the Channel and was then posted to Russia. He flew with 8/JG 5 in the White Sea area where he scored 47 victories against the Russians. Bartels received his Knights' Cross during November of 1942. During early 1943 he was posted to IV/JG 27 in the Balkans where he continued to score heavily. Bartels shot down over 20 Allied aircraft in a few weeks and scored his 70th victory over Athens.

Following his service in Greece, Bartels was transferred back to Germany with IV/JG 27 during the spring of 1944. On 23 December 1944 he claimed his 99th victory — a P-47 Thunderbolt fighter destroyed over Bonn, but was shot down and killed the same day. Records indicate he was shot down by P-47 Thunderbolt ace Lt Col David Schilling (22.5 victories) of the 56th Fighter Group.

Bartels was known as a good shot and a good tactician and flew using his head rather than instinct. It is somewhat puzzling that he was never promoted past the Non-Commissioned Officer ranks.



Anton Hackl scored 190 aerial victories while flying the Focke Wulf Fw 190 against both the USSR and the western Allies.

Captain Henry Brown

Henry Brown flew with the US 354th Fighter Squadron, 355th Fighter Group. He flew at least two Mustangs named "The Hun Hunter From Texas". The first was a razorbacked P-51B-10-NA (42-106448), while the second was a bubble canopied P-51D-5-NA (44-13305). Brown ended World War II with 14.2 aerial and 14.5 ground victories and was the top ace within the 355th FG.

Captain Henry Brown became a prisoner of war after being shot down by flak while on a strafing mission on 3 October 1944. Like so many aces, he was a ground to air victory of a German flak gun crew.

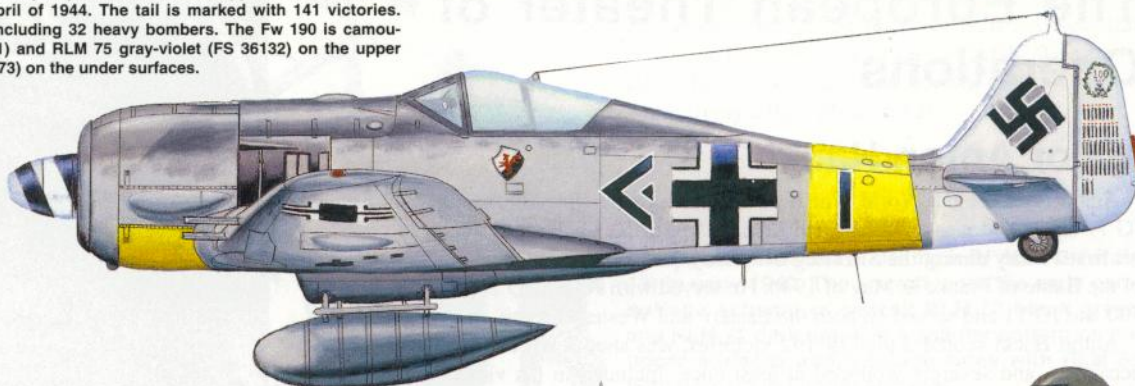
Heinrich Bartels, like most Luftwaffe 'experten', had the rudder of his Bf 109 decorated with a painting of his Knight's Cross and victory bars. Bartels was shot down and killed on 23 December 1944.



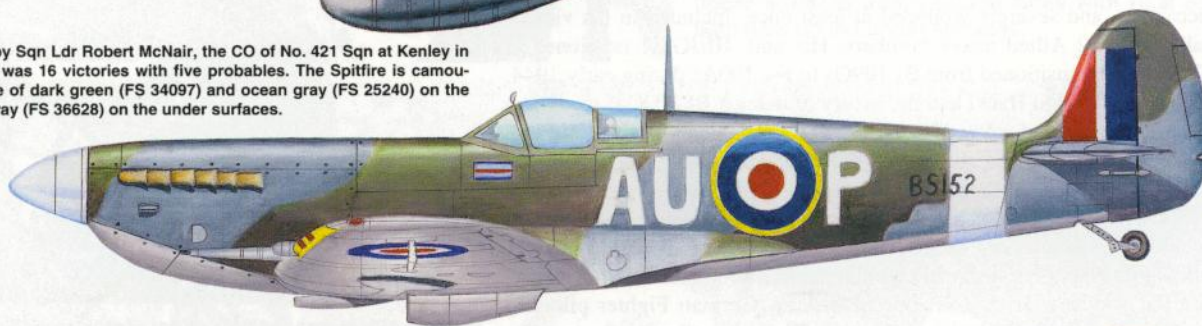
Fw 190A-6 (Black Double Chevron) flown by Major Anton Hackl, Gruppen Kommandeur of III/JG 11 at Oldenburg, Germany in April of 1944. The tail is marked with 141 victories. Hackl's final score was 192 victories including 32 heavy bombers. The Fw 190 is camouflaged in RLM 74 gray-green (FS 36081) and RLM 75 gray-violet (FS 36132) on the upper surfaces with RLM 76 light blue (FS 36473) on the under surfaces.



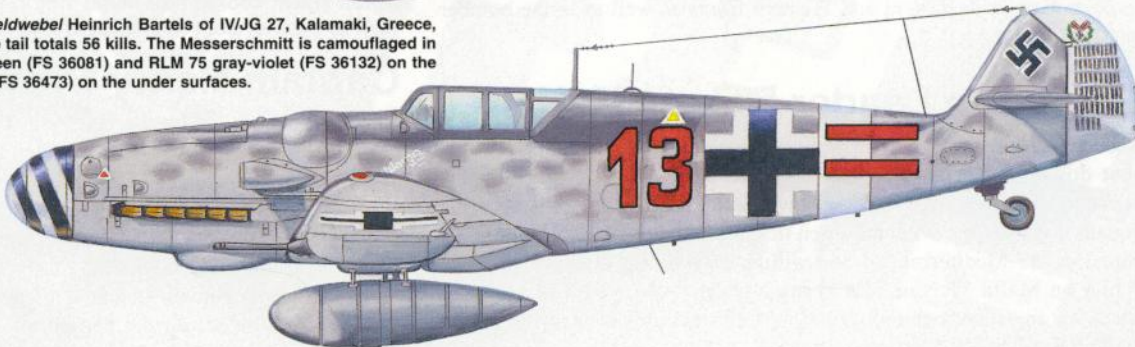
III/JG 11



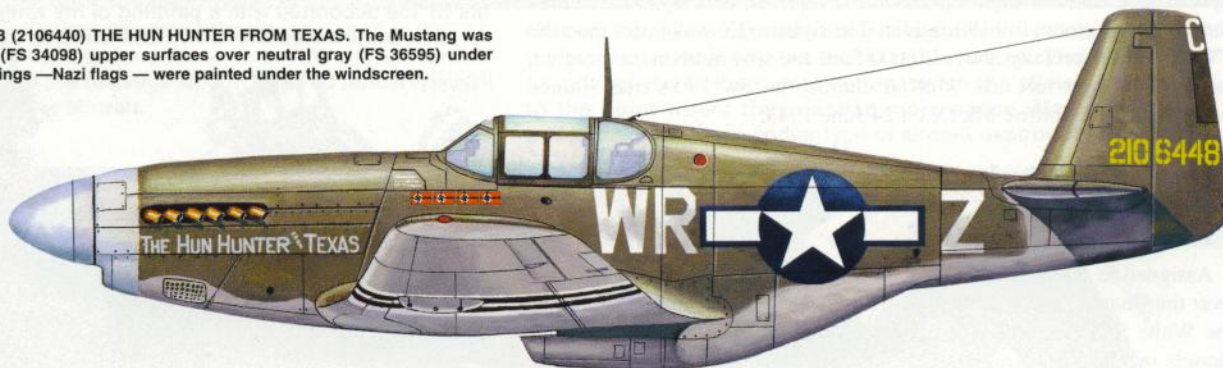
Spitfire Mk IX (BS152/AU-P) flown by Sqn Ldr Robert McNair, the CO of No. 421 Sqn at Kenley in June of 1943. McNair's final score was 16 victories with five probables. The Spitfire is camouflaged in the standard RAF scheme of dark green (FS 34097) and ocean gray (FS 25240) on the upper surfaces with medium sea gray (FS 36628) on the under surfaces.



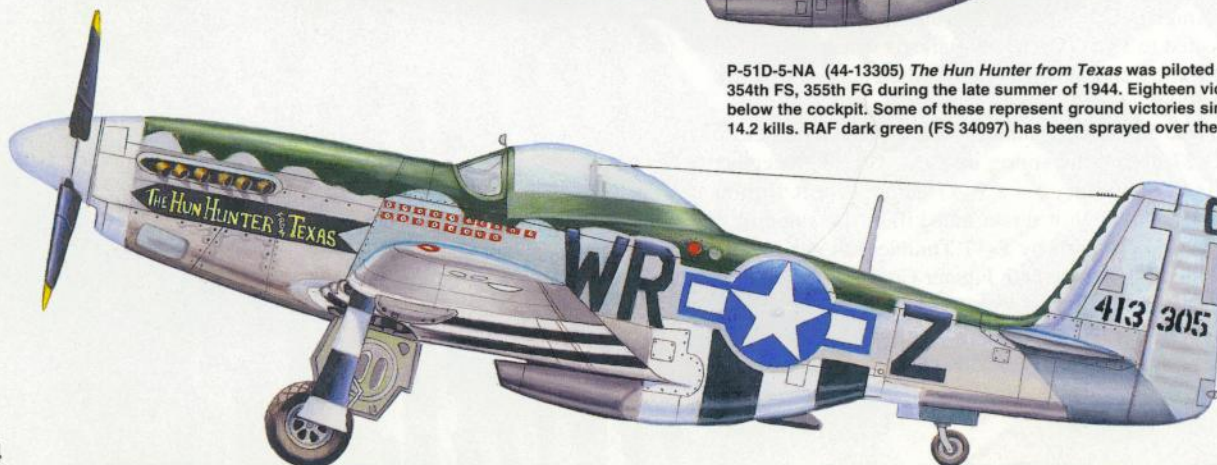
Bf 109G-6/R6 (Red 13) was flown by Feldwebel Heinrich Bartels of IV/JG 27, Kalamaki, Greece, in September of 1943. The score on the tail totals 56 kills. The Messerschmitt is camouflaged in the standard colors of RLM 74 gray-green (FS 36081) and RLM 75 gray-violet (FS 36132) on the upper surfaces with RLM 76 light blue (FS 36473) on the under surfaces.



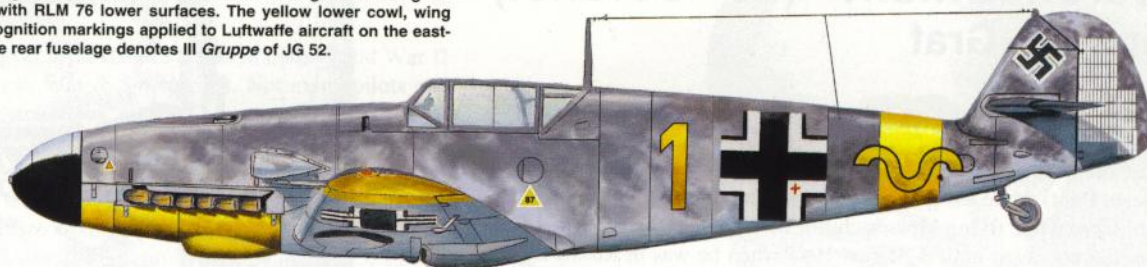
1Lt Henry Brown flew P-51B (2106440) THE HUN HUNTER FROM TEXAS. The Mustang was camouflaged in olive drab (FS 34098) upper surfaces over neutral gray (FS 36595) under surfaces. Four victory markings — Nazi flags — were painted under the windscreen.



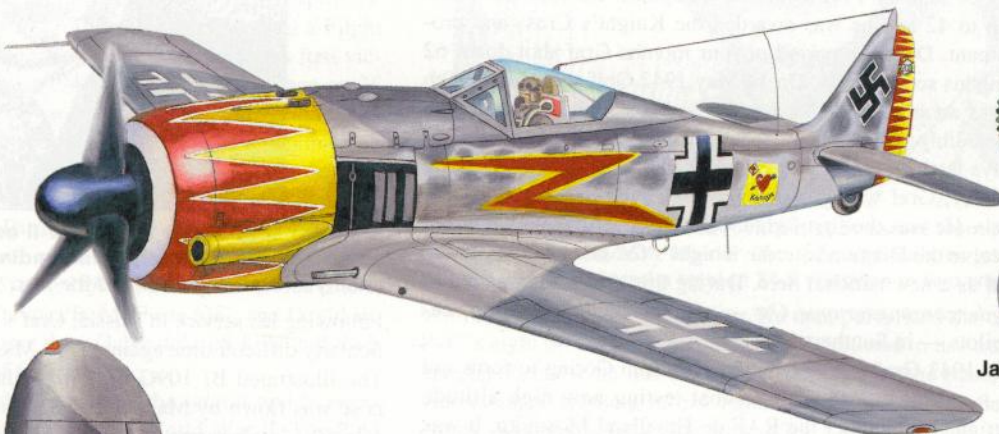
P-51D-5-NA (44-13305) *The Hun Hunter from Texas* was piloted by 1Lt Henry Brown of the 354th FS, 355th FG during the late summer of 1944. Eighteen victory markings are painted below the cockpit. Some of these represent ground victories since Brown's final tally was 14.2 kills. RAF dark green (FS 34097) has been sprayed over the natural metal finish.



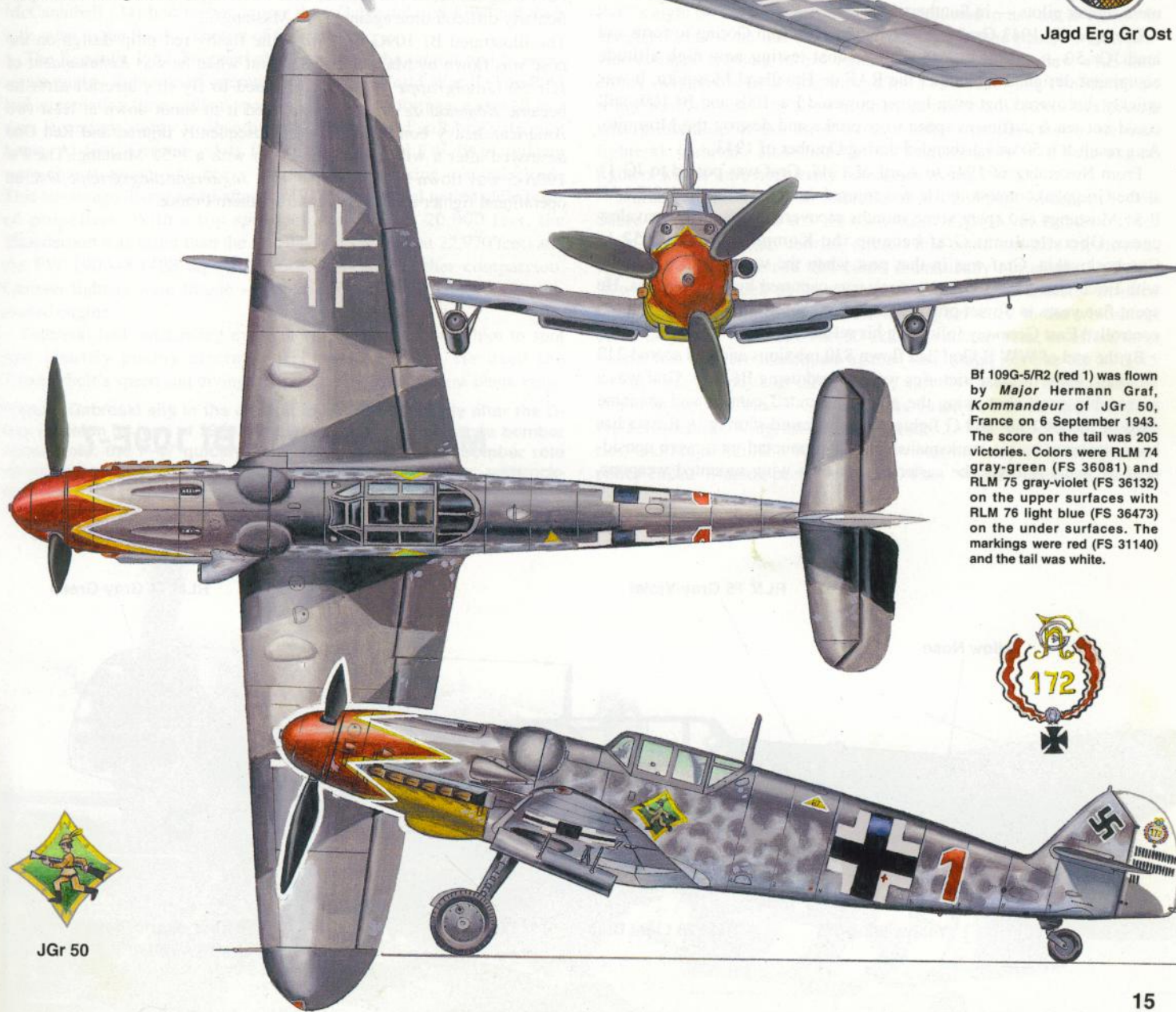
Leutnant Hermann Graf flew Bf 109F-1 (yellow 1) while while serving as the *Staffelkapitän* of 9/JG 52 on the eastern front during 1941 and 1942. His aircraft is wearing a camouflage of RLM 74 and 75 upper surfaces with RLM 76 lower surfaces. The yellow lower cowl, wing tips, and fuselage bands are recognition markings applied to Luftwaffe aircraft on the eastern front. The wave symbol on the rear fuselage denotes III Gruppe of JG 52.



A brightly painted Fw 190A-5 (Wk-Nr 2594) was flown by Major Hermann Graf, *Kommandeur* of Jagd Erg Gr Ost in Southern France. The score on the tail was 202. The camouflage scheme consisted of the standard mid-war colors of RLM 74 and 75 over RLM 76. The markings were red (FS 31140) and yellow (FS 33538). This was undoubtedly one of the brightest Fw 190s seen in the French or German skies during World War II!



Jagd Erg Gr Ost



Bf 109G-5/R2 (red 1) was flown by Major Hermann Graf, *Kommandeur* of JGr 50, France on 6 September 1943. The score on the tail was 205 victories. Colors were RLM 74 gray-green (FS 36081) and RLM 75 gray-violet (FS 36132) on the upper surfaces with RLM 76 light blue (FS 36473) on the under surfaces. The markings were red (FS 31140) and the tail was white.



JGr 50

Oberstleutnant (Lt Colonel) Hermann Graf

Young Hermann Graf took private flying lessons and was a reserve pilot when World War II broke out on 1 September 1939. He flew against the Western Allies — France and Britain — as a Feldwebel (Sergeant Pilot) while assigned to JG 51 during the Battle of France. He did not score while flying Messerschmitt Bf 109E-3 fighters. Graf's first victory did not occur until 3 August 1941 when he was in Russia flying a Bf 109F. By 24 January 1942 Graf's score against Russian-flown aircraft had risen to 42 and he was awarded the Knight's Cross and promoted to Leutnant. During a period of four months Graf shot down 62 aircraft to bring his score to 104. On 14 May 1942 Graf scored his 100th victory and was awarded the Oak Leaves to his Knight's Cross three days later. Incredibly, Graf's score reached 150 by 4 September 1942 and twelve days later he reached 172. On 2 October 1942, after scoring his 202nd victory, Graf was grounded by *Reich* Propaganda Minister Joseph Göbbels. He was the first fighter pilot to score 200 victories and the fifth to receive the Diamonds to the Knight's Cross. Göbbels wanted to exploit Graf as a new national hero. During this time Graf was put in charge of *Jagderganzungsgruppe Ost* — a unit which trained replacement fighter pilots — in Southern France.

During early 1943 Graf was ordered by Hermann Göring to form and lead JGr 50 — a unit tasked with combat testing new high altitude equipment designed to counter the RAF de Havilland Mosquito. It was quickly discovered that even higher powered Fw 190s and Bf 109s still could not reach sufficient speed to overtake and destroy the Mosquito. As a result JGr 50 was disbanded during October of 1943.

From November of 1943 to April of 1944, Graf was posted to JG 11 as the Gruppenkommandore. He was injured during combat with USAAF P-51 Mustangs and spent some months recovering. After his convalescence Oberstleutnant Graf became the Kommandore of JG 52 in Czechoslovakia. Graf was in that post when the war ended, and along with Erich Hartmann (352 victories), was captured by the Russians. He spent five years in Soviet prison camps. He chose to live in Communist-controlled East Germany following his release.

By the end of WW II Graf had flown 830 missions and had scored 212 victories. Most of these victories were scored using Bf 109s. Graf was a reasonably good shot using the engine mounted cannon and machine guns of the Bf 109F and G fighters and his rapid scoring in Russia has been attributed to his marksmanship. Nose mounted guns were considered by many pilots to be easier to aim than wing mounted weapons.

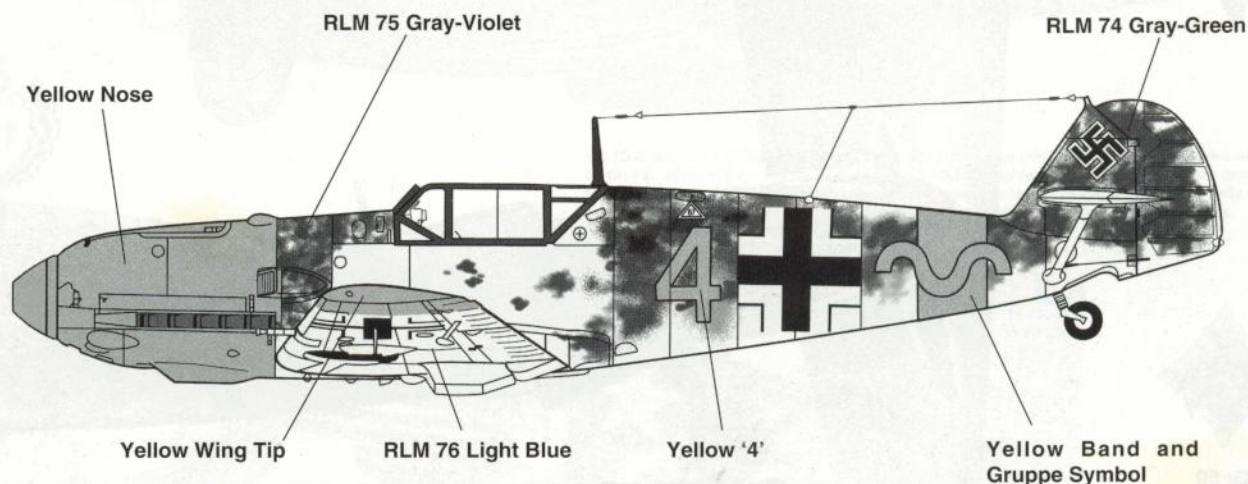


Hermann Graf began World War II as a Sergeant Pilot and ended it as an *Oberst* (Colonel) commanding JG 52. Graf shot down 212 enemy aircraft and survived the war.

Following his service in Russia, Graf's scoring slowed and he had a particularly difficult time against P-51 Mustangs.

The illustrated Bf 109G-5/R2 with the flashy red tulip design on the nose was flown by Major Hermann Graf when he was *Kommandeur* of JGr 50 (*Jagdgruppe* 50). He continued to fly this aircraft after he became *Kommandore* of JG 11 and used it to shoot down at least two American heavy bombers. He was subsequently injured and Red One destroyed after a wild mid-air collision with a P-51 Mustang. The Fw 190A-5 was flown by Graf while with *Jagderganzungsgruppe Ost*, an operational fighter training group in southern France.

Messerschmitt Bf 109E-7 Flown by Hermann Graf, Summer, 1941



Colonel Francis S. Gabreski

Francis S. 'Gabby' Gabreski achieved ace status in both World War II (28 victories) and the Korean War (6.5 victories). Not many pilots can claim this unique, two-war, ace status.

Gabreski was posted to the 45th Fighter Squadron, 15th Fighter Group at Wheeler Field, Hawaii at the time of the Japanese attack on Pearl Harbor. During the attack Gabreski was unable to engage any Japanese aircraft. He next flew Spitfire Mark V fighters while assigned to the RAF's Polish Wing in the United Kingdom. Although he participated in 20 combat missions, he did not score any kills while flying Spitfires. Gabreski was then assigned to fly P-47 Thunderbolt fighters as a Flight Leader with the 61st FS, 56th FG during February of 1943. His first victory, an Fw 190, came on 24 August 1943 and he became an ace on 26 November 1943 after shooting down two Bf 110s near Oldenburg, Germany. Gabreski scored 28 victories during a span of 11 months — a rate which was generally faster than many of the higher scoring German pilots. Gabreski destroyed a Bf 109G on 20 July 1944 which would be his final World War II victory. During the same mission he flew his Thunderbolt fighter into the ground while strafing Bassenheim Airfield. He sat out the rest of the war in *Stalag Luft 1*. Among American pilots, only Richard I. Bong (40 kills), Thomas B. McGuire (38), and David W. McCampbell (34) had higher scores than Gabreski's 28 kills and their kills were in the Pacific Theater of Operations.

The Republic P-47 Thunderbolt fighter was the largest and heaviest single-engine fighter used operationally during World War II. The P-47 had a reputation for excellent speed and diving performance as well as a near legendary ability to absorb battle damage and still bring its pilot home. At first, German pilots flying Bf 109G and FW 190A fighters were able to escape the heavy Thunderbolts by using a spiral climb. This advantage disappeared after the P-47s were fitted with paddle bladed propellers. With a top speed of 415 mph at 20,000 feet, the Thunderbolt was faster than the Bf 109G-6 (387 mph at 22,970 feet) and the FW 190A-8 (408 mph at 20,600 feet). By further comparison, German fighters were fragile — especially the Bf 109 with its liquid-cooled engine.

Gabreski had outstanding eyesight which often allowed him to spot and identify enemy aircraft far in the distance. He used the Thunderbolt's speed and diving advantages to close to point-blank range

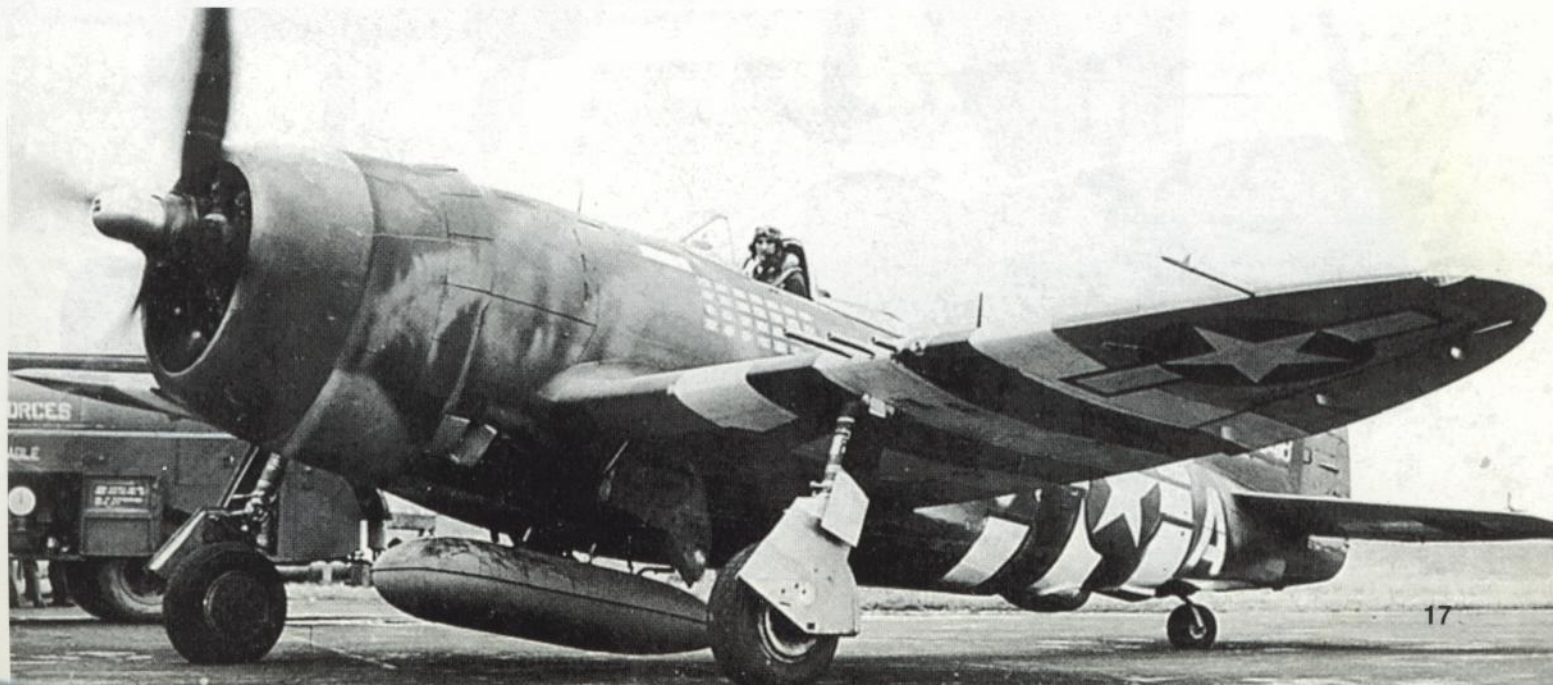
Francis Gabreski sits in the cockpit of his P-47D shortly after the D-Day invasion in June of 1944. Initially used in the long range bomber escort role, the P-47 quickly converted to the fighter-bomber role where its heavy armament of eight machine guns, bombs, and rockets were used to wreak havoc on the retreating Wehrmacht.



Colonel Francis Gabreski led a varied pilot career from Pearl Harbor, to the RAF, to the 56th Fighter Group, and finally to jets during the Korean war. He scored a total of 34.5 victories in two wars.

before firing on an enemy fighter. He then pulverized the target with the P-47's eight .50 caliber machine guns. He refused to use tracer rounds in his guns because he felt the smoke trails left by the tracers would provide advance warning to his opponents. Gabreski also flew with half-empty magazines believing that, with a full load, his Thunderbolt's wings were too heavy to allow him to turn inside a Bf 109G-6 (although wise pilots did not use the P-47 to dogfight tighter-turning German fighters). Gabreski also shot down a number of Bf 110 twin engine fighters which were hopelessly outclassed by the P-47D.

During the Korean War Gabreski flew the North American F-86E Sabre Jet and claimed 6.5 Russian-built MiG-15 jet fighters. Once again, he flew a larger, heavier, aircraft that could out dive the smaller, lighter MiG-15 (which in turn could dramatically out climb the F-86). New equipment such as lead computing gun sights actually irritated Gabreski who said that a piece of bubble gum stuck to the windshield could do just as well! The six .50 caliber machine guns, so effective in World War II, were inadequate against fast, tough jets like the MiG-15 which were armed with three heavy, although slower firing, cannon. While in Korea Colonel Gabreski was based at Suwon with the 51st Fighter Intercept Wing. He, along with aces Lt George Jones (6.5 victories) and Major William Whisner (5.5 victories) adopted a 'hot pursuit' policy called 'Maple Special' missions. They would — perhaps illegally



This P-47D Thunderbolt (226418/HV-A) was flown by Captain Francis Gabreski of the 56th FG, 61st FS, 8th Air Force at Boxted, England. Gabreski's Jug was camouflaged in a shadow-shade scheme of USAAF Medium Green 42 (FS 34097) and RAF medium sea gray (FS 35240) upper surfaces over RAF medium sea gray under surfaces. The tail was red (FS 31350).



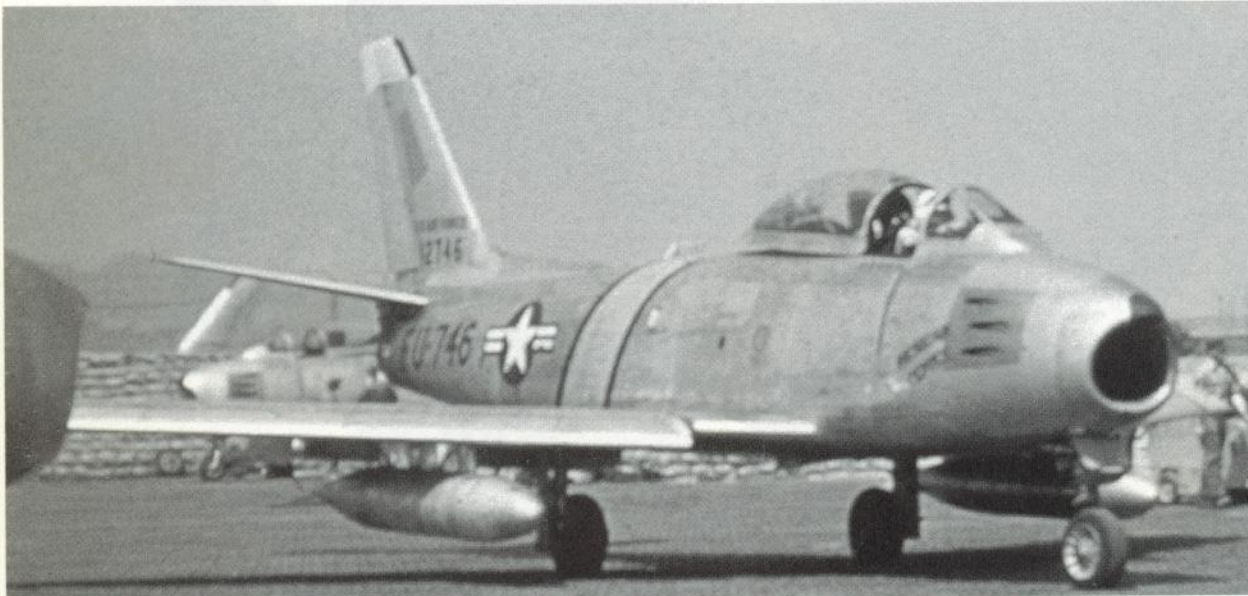
This F-86E-10-NA Sabre (51-2740) Gabby was flown by Colonel Francis S. Gabreski, Commander of the 51st Fighter Intercept Wing, Suwon, Korea. Gabreski scored a further 6.5 kills in the Korean War adding to his World War II total of 28. Gabreski's Sabre was natural metal with yellow (FS 23655) outlined in black recognition bands.



— follow the MiGs into their sanctuaries in Manchuria (across the Yalu River separating North Korea from China) to get more kills.



(Left) Col Francis Gabreski scored 28 kills while flying Republic P-47 Thunderbolts with the 56th Fighter Group. Gabreski crashed his Jug on 20 July 1944 while strafing Bassenheim airfield, Germany and spent the rest of WW II in Luftwaffe prison camps.



(Left) Col Francis Gabreski and Major Bill Wescott flew MICHIGAN CENTER, an F-86E assigned to the 51st Fighter Interceptor Wing at Airfield K-13, Korea in 1951. The name MICHIGAN CENTER was painted on the starboard side of the aircraft. The natural metal F-86 wears the black trimmed yellow ID band carried by most Sabres in Korea. (Collins via Larry Davis)



(Left) Francis Gabreski stands in front of LADY FRANCES. The name was painted on the port side of MICHIGAN CENTER. Gabreski only flew the LADY FRANCES/MICHIGAN CENTER once, but is reported to have scored at least one kill in the aircraft. The dark metal blast panel surrounding the gun muzzles has been lightly stained by weapons firing. (USAF)

Chu-i (Lt JG) Kaneyoshi Muto

Kaneyoshi Muto was tough-minded in matters of aerial combat, yet was friendly and cheerful to those around him. He had tremendous physical stamina and was able to continue to fight against overwhelming odds until the last days of World War II. Muto's personality was similar to the German ace Walter Oesau (123 victories).

Kaneyoshi Muto scored his first victory, a Chinese I-16 fighter, over the Nanking area on 4 December 1939. At the time he was an enlisted *Itto Hikohei* (Flight Seaman 1st Class) assigned to the *Omura Kokutai* (Naval Air Group). He fought in the Philippines and the Dutch East Indies Campaigns of early 1942. Later in 1942 he was transferred to the 'Genzan' Fighter Squadron of the 252nd *Kokutai* and posted to Rabaul. He fought over New Guinea and the Solomons until March of 1943 when he was promoted to *Itto Hiko Heiso* (Flight Petty Officer 1st Class) and transferred to the Yokosuka *Kokutai* in Japan as an instructor.

Muto and much of the Yokosuka *Kokutai* were transferred to Iwo Jima in June of 1944 to assist in the defense of the Marianas. Large-scale engagements between Mitsubishi Zeros and US Navy F6F-3 Hellcats took place over the island. The increasingly obsolescent Zeros and their inexperienced pilots were no match for the aggressive US pilots and both suffered heavily. Nevertheless, Muto continued to engage waves of American aircraft while flying the Model 52 Zero which had an uprated radial engine. This Zero had an improved top speed of 360 mph and better rate of roll due to the uprated engine and slightly shortened wing span, but it was still no match for the F6F-3 Hellcat with its 2000 horse power engine and 386 mph top speed at 17,300 ft. Muto, however, was so familiar with American combat tactics that he could almost fire his cannon into open air knowing that a Hellcat would soon occupy that space. He was able to bounce US fighters or close with them in a turning engagement and emerge victorious either way. In many cases he was the only pilot in his *Chutai* (8 aircraft) to survive the intense engagements and return alive to his airfield.

During the three-day air battle over Iwo Jima, 80 Japanese fighters had been reduced to just nine serviceable Zeros along with a handful of bombers. Among the survivors were Kaneyoshi Muto and Saburo Sakai (64 victories and the great ace of Rabaul). On 5 July 1944 Muto and Sakai were both ordered to attack the US fleet on a suicide mission, but after encountering bad weather and dozens of radar directed Hellcats, were forced to turn back to Iwo Jima. Both aces were flown back to mainland Japan in transports. Muto was then introduced to the new Kawanishi N1K2-J *Shiden-Kai* (Allied code name George).

In Muto's hands, the N1K2-J *Shiden Kai* (Violet Lightning) fighter was a superlative weapon. Its maneuverability and top speed of almost 400 mph at 18,000 feet was superior to the Hellcat and equal to the Corsair. Muto single-handedly attacked a flight of 12 Hellcats and shot down four while flying a new *Shiden Kai* over Atsugi in February of 1945. Following this action the Japanese press referred to him as the 'Miyamoto Musashi of the Air'. (Miyamoto Musashi was an unsur-



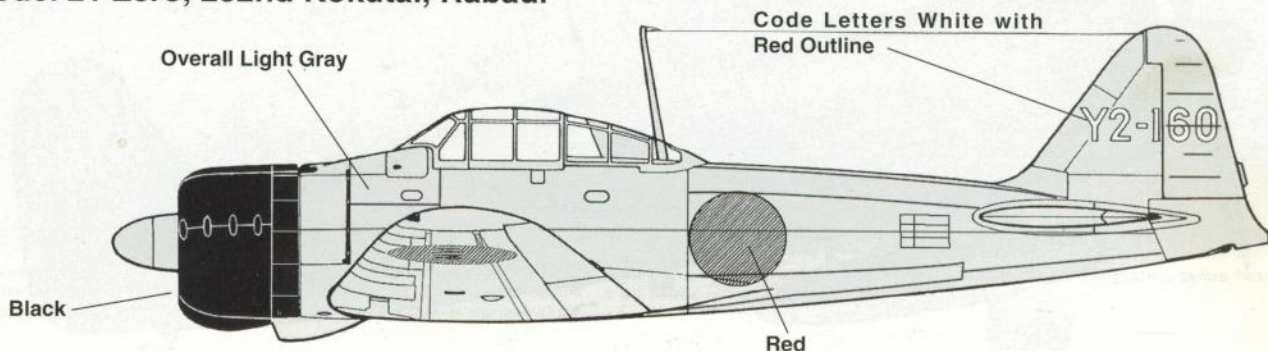
Kaneyoshi Muto was a master of the Zero and Shiden Kai fighters. Muto had shot down 28 enemy aircraft before being shot down by Lt George Applegate, USN on 24 July 1945.

passed swordsman during Japan's medieval times.) Muto was also presented a personal letter of thanks from the commander of the Yokosuka Naval Base.

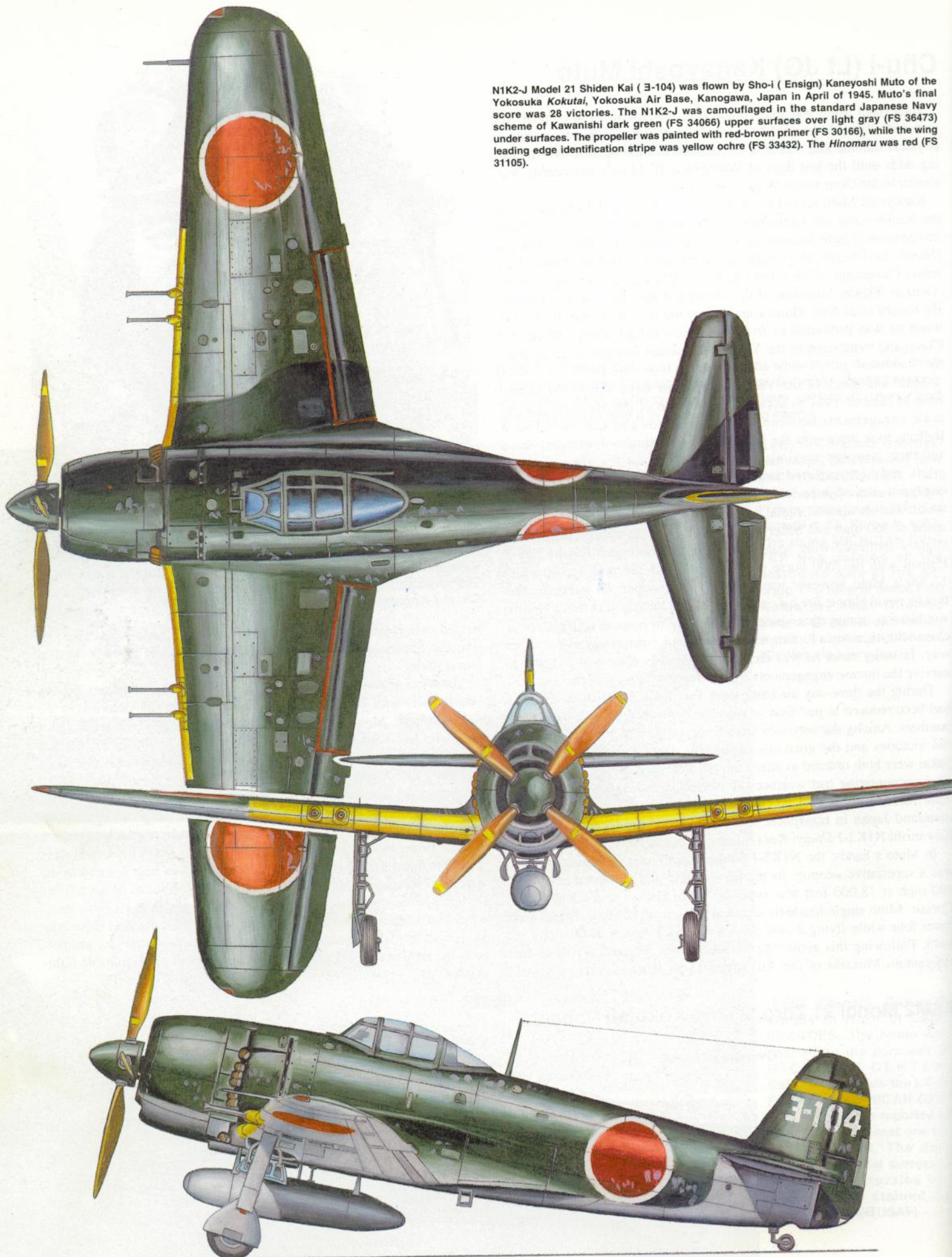
Muto was recruited during June of 1945 by *Taisa* (Captain) Minoru Genda to fly with *Tai-i* (Lieutenant) Naoshi Kanno (25 victories) of the 343rd *Kokutai*. Muto replaced *Chutai* Leader Sho-ichi Sugita (70 victories) who had been killed in action while taking off in his *Shiden Kai* from Kanoya Air Base. Muto flew escort and intercept missions while with the 343rd *Kokutai*.

Kaneyoshi Muto was listed as missing in action on 24 July 1945 after an engagement against Hellcats and Corsairs over Bungo Strait. Some speculate that Muto met his end during a head-on attack against a Corsair flown by Lt George Applegate (1 victory) of VBF-1 (who was also shot down during the fight). Lt Applegate was later rescued by an American submarine, but nothing was ever seen of Muto. At the time of his death Muto's score was 28 aircraft shot down with many more damaged. Five of these victories were scored over China. He held one of the Japanese Navy's top medals for bravery and was posthumously promoted to the rank of *Chu-i* (Lt JG). Kaneyoshi Muto was a formidable fighter pilot.

A6M2 Model 21 Zero, 252nd Kokutai, Rabaul



N1K2-J Model 21 Shiden Kai (E-104) was flown by Sho-i (Ensign) Kaneyoshi Muto of the Yokosuka Kokutai, Yokosuka Air Base, Kanogawa, Japan in April of 1945. Muto's final score was 28 victories. The N1K2-J was camouflaged in the standard Japanese Navy scheme of Kawanishi dark green (FS 34066) upper surfaces over light gray (FS 36473) under surfaces. The propeller was painted with red-brown primer (FS 30166), while the wing leading edge identification stripe was yellow ochre (FS 33432). The Hinomaru was red (FS 31105).





Lt Cdr Robert Weatherup, flying an F6F-5 Hellcat (white 2), fires a stream of fifty caliber rounds into the dark green N1K2-J *Shiden Kai* of Sho-ichi Sugita on 15 April 1945. Caught while attempting to take off, Sugita is unable to maneuver and crashes at the end of the

runway. Weatherup also claims Sugita's wingman, Toyomi Miyazawa, before returning to his carrier — the USS *Independence*.

Japan's great naval ace Sho-ichi Sugita is shot down at Kanoya Airfield

On 15 April 1945 Okinawa came under attack by the US Fleet. Extensive carrier air strikes were also flown against Japanese air bases in southern Japan. The air strikes were designed to put an end to *kamikaze* attacks on the ships off Okinawa.

Fighter sweeps were launched against Kanoya and Kashura airfields at 1315 hours. Lieutenant Commander Robert A. 'Doc' Weatherup (2 victories) led 28 Grumman F6F-5 Hellcat fighters of VF-46 and VF-12 from the carriers Independence and Randolph on a planned rocket attack on Kashura Airfield. As the strike force flew up Kagoshima Bay on its way to Kashura Airfield, Weatherup observed activity on Kanoya Airfield and led his force in to attack from 15,000 ft. Weatherup fired his rockets at parked aircraft and proceeded to strafe the airfield using his fifty caliber machine guns. At this point he spotted Japanese fighters beginning their take-off runs and turned to intercept them. Weatherup filled his sight with the lead Japanese aircraft before firing. The Japanese fighter, an N1K2-J *Shiden Kai* (Allied code name George), was hit as it reached an altitude of 200 feet and nosed over into the

ground. Weatherup then attacked the second Japanese fighter and shot down east of the airfield. Weatherup noted in his combat report that three of the Japanese fighters burned like other Japanese aircraft was struck by the fifty caliber tracer rounds.

Japanese naval pilots on the ground—including Saburo Sakai (64 victories) of the 343 *Kokutai*—watched in horror as the Hellcats swooped down on the two N1K2-J fighters as they desperately tried to take off. The two fighters were flown by Petty Officer 1st Class Sho-ichi Sugita and his wingman PO2c Toyomi Miyazawa of the 301st *Hachiku* (Squadron)—then commanded by *Tai-i* (Lieutenant) Naoshi Kanno (10 victories). Sugita and his wingman either did not hear the abort order or chose to ignore it, possibly because they were too close to lift-off. Sho-ichi Sugita died in the burning wreckage of his dark green N1K2-J *Shiden Kai* fighter.

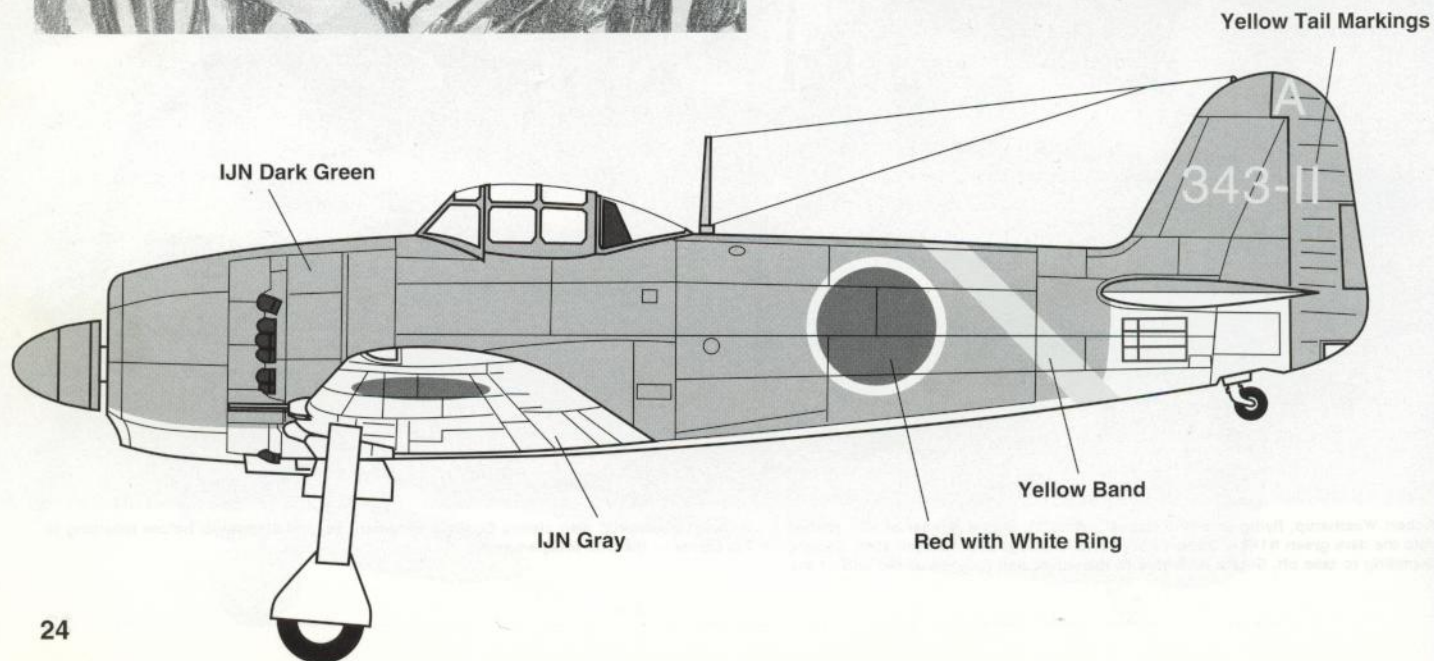
Sho-ichi Sugita was the victor of many air battles and is credited with 28 victories. He was mentioned in dispatches by the US post-war researchers with at least 70 victories—many of them he scored against US bombers. He flew one of the escorting A6M3 Zeros when Admiral Yamamoto and his staff were intercepted near Bougainville by Lockheed P-38 Lightnings from the 357th Fighter Group. Strong evidence suggests that Sugita, then with the 204th *Kokutai*, shot down a P-38 flown by Lt Raymond K. Hine—the sole US loss on the intercept mission.

Robert Weatherup scored only two kills during World War II, but his action profoundly affected the morale of the elite 343 *Kokutai* during the last days of the war by shooting down one of Japan's top naval air aces. Weatherup was also credited with shooting down Sugita's wingman, Toyomi Miyazawa. The action clearly demonstrated that a novice, given the right circumstances, can be in the right place at the right time and score critical hits against a high-scoring, more experienced enemy. Following Sugita's death in action, Naoshi Kanno recruited Kaneyoshi Muto (10 victories) to fill the gap left by the loss of Sugita.



Japan's third ranking ace, Sho-ichi Sugita, was killed late during World War II while trying to take off from Kanoya Air Base in the N1K2-J *Shiden Kai* fighter.

Kawanishi N1K2-J *Shiden Kai* Flown by Sho-ichi Sugita



Sho-i (Ensign) Susumu Ishihara

Susumu Ishihara flew his early missions with the 1st *Kokutai* (naval air group) at Hankow, China, but did not score. When World War II broke out in the Pacific, Ishihara was assigned to the Tainan *Kokutai* and was involved in aerial battles over the Philippines.

Nito Hiko Heiso (Petty Officer 2nd Class) Ishihara strafed Clark Field on 8 December 1941 and scored his first victory high over Del Carmen on 10 December. After the Philippines Campaign, he was assigned to the 204th *Kokutai* at Rabaul. On 18 October 1942 Ishihara shot down three Martin B-26 medium bombers. Ishihara seemed to specialize in attacks on bombers and scored again on 2 November. He would dive through the bomber formations in a slashing attack and then use his speed and momentum to rapidly climb back up to a higher altitude where he could position himself for another attack.

During March of 1944 Ishihara was based at Truk — a major Japanese naval and air base north of the Solomon Islands chain — and then at Yap Island with the 202nd *Kokutai*. In a dogfight over Saipan on 18 June 1944, Ishihara shot down four US aircraft. He returned to Japan during July of 1944 and flew A6M5 Model 52 Zero fighters and J2M3 Raiden (Thunderbolt) interceptors (Allied code name Jack) with the 322nd *Kokutai* near Kure and Osaba. He is known to have intercepted Boeing B-29 Superfortress heavy bombers while flying the Raiden, but is not known to have scored any victories over B-29s. Ishihara is credited with 16 victories. Following World War II Ishihara flew military aircraft for the Japanese Self-Defense Forces Air Force.

Lt Col John D. Landers

Lieutenant John D. Landers joined the 49th Fighter Group at Darwin, Australia on 3 April 1942. At the time the Japanese were pushing southward through the Pacific and Darwin had been hit a number of times by Japanese air attacks. Landers brought a new Curtiss P-40E to the Group's 9th Fighter Squadron, but had only 10 hours of flight time in the P-40 when he and his squadron mates were scrambled on 4 April 1942 to intercept an incoming Japanese air raid. Landers climbed to 20,000 feet and spotted the Japanese bombers and their Zero escort near Melville Island. He later said that he thought the right thing to do was dive on the bombers rather than dogfight the Zeros. On his way through the formation, Landers shot up a bomber which caught fire and disintegrated. Although the escorting Zeros shot his P-40 full of holes, Landers was able to dive away from them and climb back up to 20,000 feet to wait for them to return from their bombing mission. When the Japanese bombers passed beneath him on their way back to their base, Landers shot down another bomber and aided in the destruction of two more. This action was John D. Landers' most memorable fight and, since he was still a novice fighter pilot, he was fortunate to have survived.

Landers scored six kills in the wild aerial battles over Darwin before he was posted to the 9th FS to Rorona, New Guinea on 9 October 1942. Landers, however, scored no further kills before being rotated back to the US. It was during Lander's stay at Rorona that he flew the P-40E-1 'Texas Longhorn'. Landers later added another 8.5 aerial victories and 20 ground kills while flying P-51 Mustangs with the 357th and 78th Fighter Groups over Europe. He flew P-51D Big Beautiful Doll while with the 78th FG. John Landers commanded the 78th FG before returning to the United States and ended World War II with 14.5 aerial victories.

Hiko Heisocho (W/O) Yoshiro Hashiguchi

Yoshiro Hashiguchi flew with many *Kokutai* (naval air groups), but his most successful missions were flown after November of 1941 when he was assigned to the 3rd *Kokutai*. He flew combat missions over the Philippines and the Dutch East Indies during the early war years and from April through August of 1942, Hashiguchi flew escort missions during a series of attacks on Darwin, Australia. As a *Nito Hiko Heiso* (Petty Officer 2nd Class) he was stationed at Rabaul and participated in the Solomons Campaign, flying a series of air strikes on Guadalcanal during September of 1942. On 18 October 1942 Hashiguchi's *Shotai* shot down a total of seven US aircraft and damaged a number of others while on a mission to Guadalcanal.

After the Solomons campaign Hashiguchi was assigned to the aircraft carrier *Shokaku* as a senior enlisted pilot (the *Shokaku* was a veteran of the attack on Pearl Harbor). Hashiguchi flew combat missions during the 'A-go' operation in June of 1944. (The A-go operation was known as the 'Marianas Turkey Shoot' by the US.) Hashiguchi managed to survive A-go, but was later killed when his last carrier, the *Chiyoda*, was sunk during the Battle of Cape Engano on 25 July 1944. Hashiguchi had at least ten officially recognized kills at the time of his death.

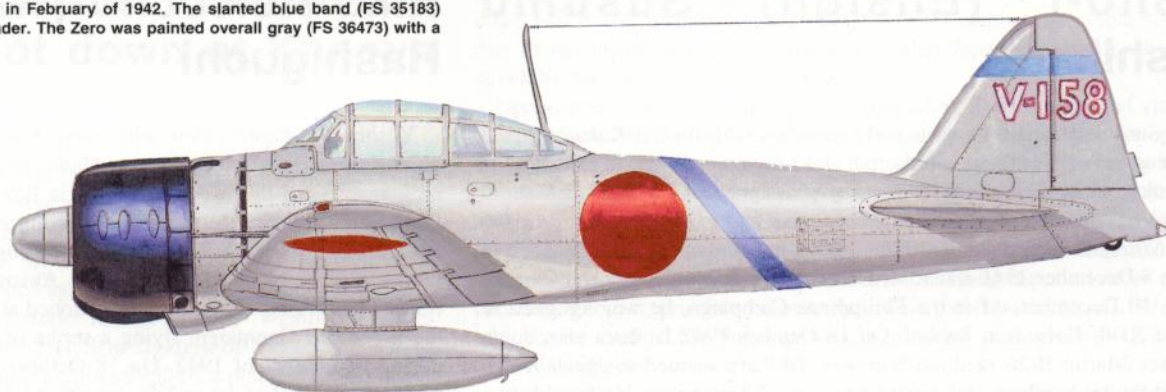
Major Charles W. King

Major Charles W. King served with the 39th Fighter Squadron, 35th Fighter Group from July of 1941 to December of 1943. He flew 25 combat missions in the Bell P-39 Airacobra, but did not score any victories in the Airacobra. King's lack of victories was not totally surprising since the P-39 was unsuitable for dogfighting the faster and more nimble Japanese Zero. The 39th FS later converted to the Lockheed P-38F Lightning and it was with this twin engine fighter that King shot down his five enemy aircraft to become an ace. King, the 39th FS commander, was rotated to the US before the 39th FS received Republic P-47D Thunderbolt fighters so he had no opportunity to score with the Jug — as the P-47 was affectionately known.

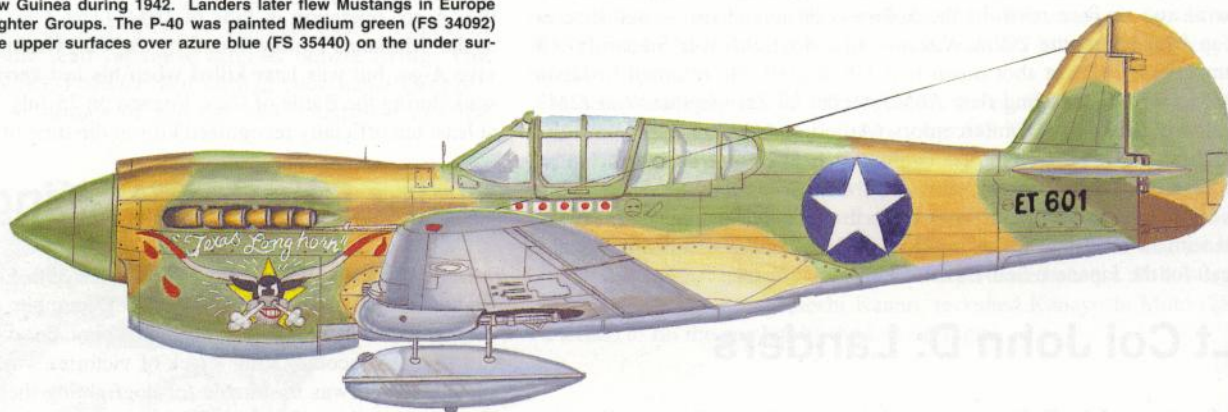
Not many pilots — outside of Russia — became an ace using the Bell P-39 Airacobra and Charles King was no exception. The P-39 performed reasonably well at low altitudes, but could not match the Zero or other Japanese fighters over 5000 feet. The British had earlier found the P-39 to be totally unsuitable for operations over England and France and had cancelled their order. The US Army Air Force (USAAF) quickly sent a number of these aircraft (known as P-400s) to New Guinea where many of them were promptly shot down by the Japanese naval aces of the Tainan *Kokutai*. These Japanese aces, such as Saburo Sakai (64 victories), Toshio Ota (36 victories) and Hiroyoshi Nishizawa (87 victories), scored a number of their kills against the P-39 and P-400.

The Russians, however, found the Bell P-39 and its successor, the P-63 Kingcobra, to be excellent aircraft for their purposes. The Russians used the 'Cobras in the close support role where its low level capabilities could be fully exploited. The fighter was especially affective at hunting down and destroying German tanks and other vehicles.

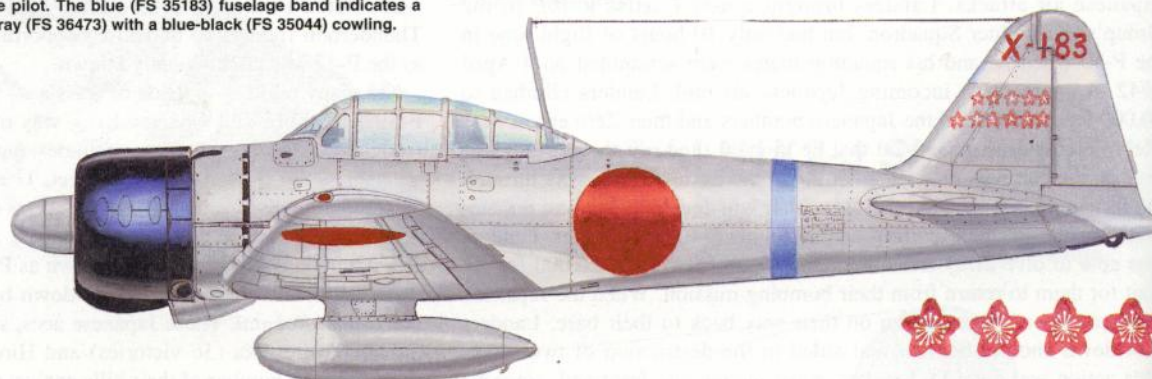
A6M2 Model 21 Zero (V-158) flown by Nito Hiko Heiso (PO2c) Susumu Ishihara, Tainan Kokutai, Surabaya Air Base, Java in February of 1942. The slanted blue band (FS 35183) indicates Ishihara was a shotai leader. The Zero was painted overall gray (FS 36473) with a blue-black (FS 35044) cowl.



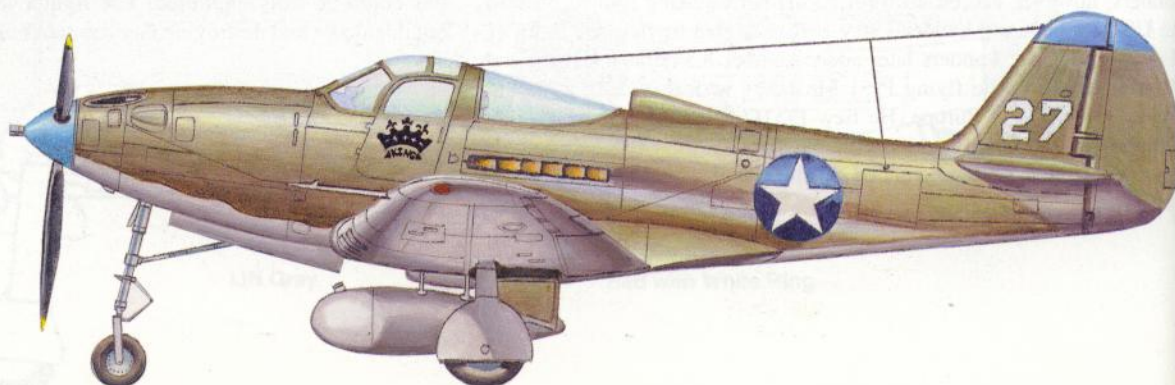
This P-40E-1 (ET 601) was named Texas Longhorn by pilot 1Lt John D. Landers of the 9th FS, 49th FG at Rorona, New Guinea during 1942. Landers later flew Mustangs in Europe with the 357th and 78th Fighter Groups. The P-40 was painted Medium green (FS 34092) and sand (FS 30480) on the upper surfaces over azure blue (FS 35440) on the under surfaces.



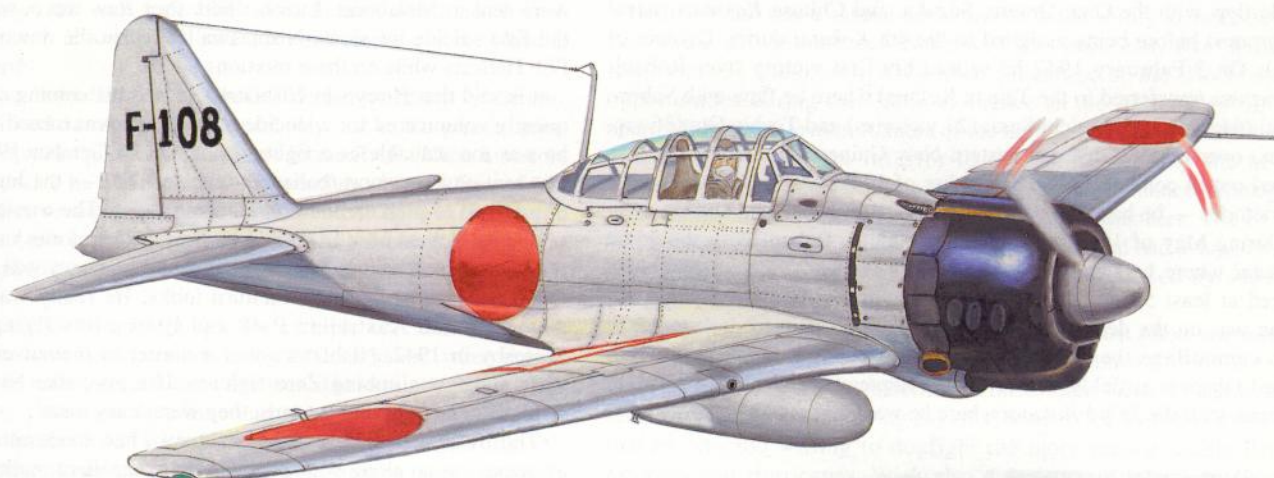
A6M2 Model 21 Zero (red X-183) was flown by Nito Hiko Heiso (PO2c) Yoshiro Hashiguchi of the 3rd Kokutai, Kendari Airbase, Celebes in February of 1942. The eleven kill marks were assigned to the aircraft, not the pilot. The blue (FS 35183) fuselage band indicates a shotai leader. The Zero was overall gray (FS 36473) with a blue-black (FS 35044) cowl.



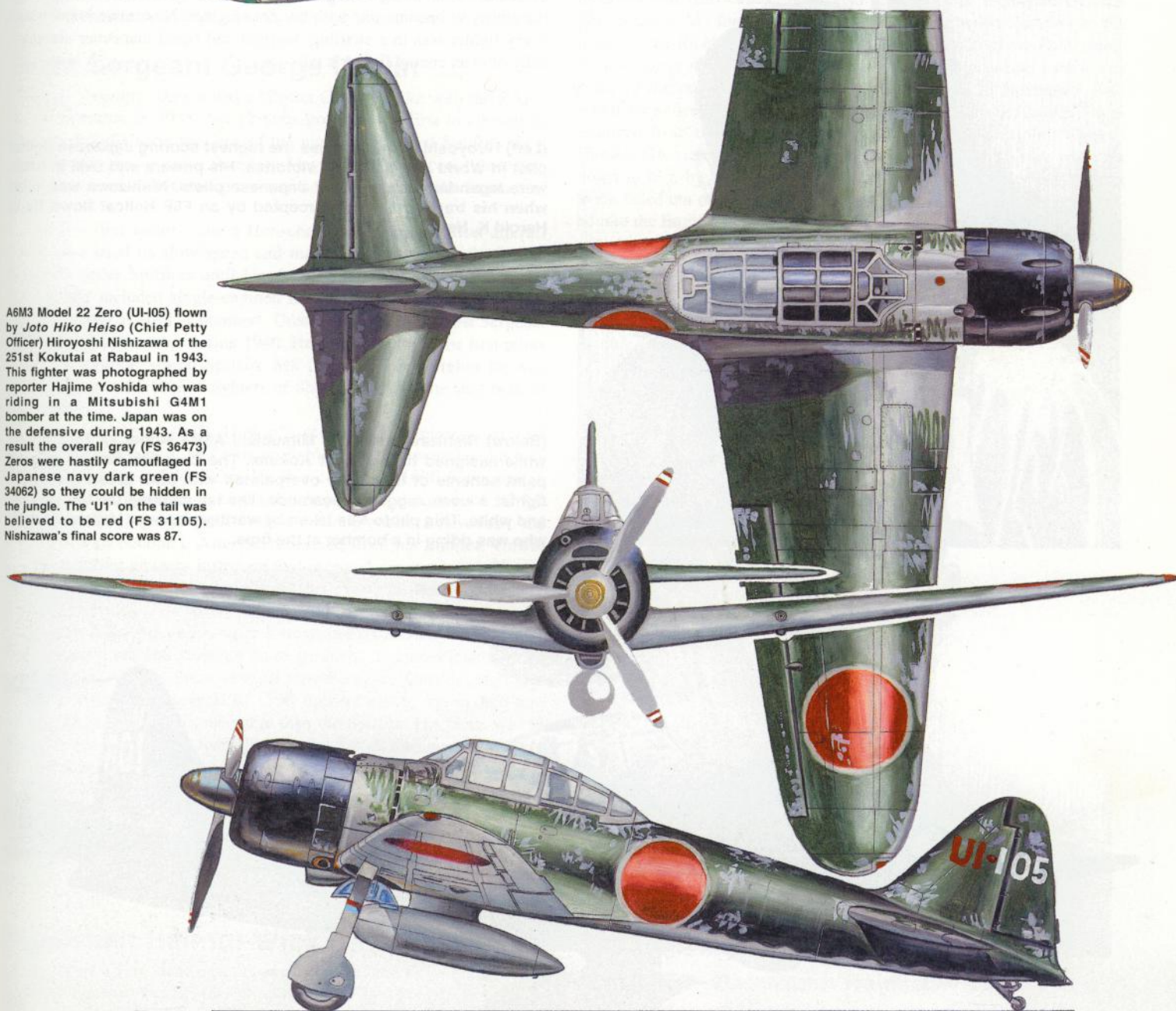
This P-39Q (White 27) was flown by Major Charles W. King of 39th FS, 35th FG in the Southwest Pacific. The P-39 was painted olive drab (FS 34098) over light gray (FS 36595). The tail flash and nose were painted blue (FS 35183). King's personal marking, a crown, was black.



A6M2 Model 21 Zero (F-108) flown by Itto Hiko Heiso (PO1c) Hiroyoshi Nishizawa while assigned to the 4th Kokutai at Rabaul in April of 1942. Nishizawa is believed to have scored his first victory in this aircraft. The Zero was painted overall light gray (FS 36473) with a blue-black (FS 35044) cowlings.



A6M3 Model 22 Zero (UI-105) flown by Joto Hiko Heiso (Chief Petty Officer) Hiroyoshi Nishizawa of the 251st Kokutai at Rabaul in 1943. This fighter was photographed by reporter Hajime Yoshida who was riding in a Mitsubishi G4M1 bomber at the time. Japan was on the defensive during 1943. As a result the overall gray (FS 36473) Zeros were hastily camouflaged in Japanese navy dark green (FS 34062) so they could be hidden in the jungle. The 'U1' on the tail was believed to be red (FS 31105). Nishizawa's final score was 87.



Chu-i (Lt. JG) Hiroyoshi Nishizawa

Hiroyoshi Nishizawa was Japan's top scoring ace during World War II and is credited with 87 victories over US flown aircraft. He ranked number 16 out of a pilot training class of 71 students.

He flew with the Oita, Omura, Suzuka, and Chitose *Kokutais* (naval air groups) before being assigned to the 4th *Kokutai* during October of 1941. On 3 February 1942 he scored his first victory over Rabaul. Nishizawa transferred to the Tainan *Kokutai* where he flew with Saburo Sakai (64 victories), Junichi Sasai (27 victories) and Toshio Ota (36 victories) over Guadalcanal and eastern New Guinea. By the time he was pulled out of combat during November of 1942, Nishizawa had scored 30 victories — he had learned much from Sakai, Sasai, and Ota.

During May of 1943 Nishizawa returned to Rabaul with the 251st *Kokutai* where he flew the newer A6M3 Model 22 Zero fighter. He scored at least 50 more victories while with the 251st. By this time Japan was on the defensive and the Zeros were painted dark green to help camouflage them while they were parked under the trees that ringed Japanese airfields. The following September, Nishizawa returned to Japan with the 253rd *Kokutai* where he was posted as an instructor.



Nishizawa's instructor duties were short-lived and he was posted to the 203rd *Kokutai* in the northern Kurile Islands during November of 1943. There was little fighting in this area and no opportunities for him to increase his score. On 24 October 1944 Nishizawa and the 203rd were sent to Malabacat, Luzon where they flew top cover for some of the first suicide missions. Nishizawa shared in the downing of several F6F Hellcats while on these missions.

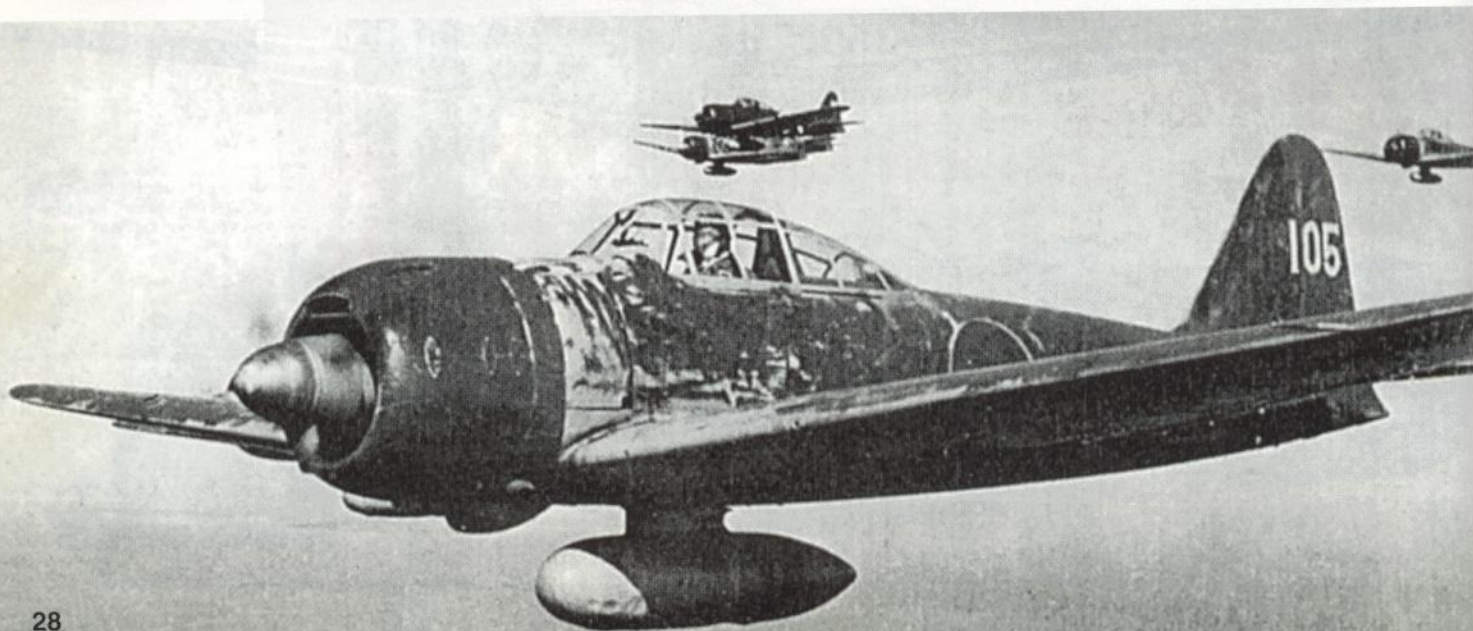
It is said that Hiroyoshi Nishizawa sensed his coming end and subsequently volunteered for a suicide mission. He was turned down because he was too valuable as a fighter pilot. On 26 October 1944 Nishizawa was sent on a transport (believed to be an L2D3 — the Japanese version of a DC-3) to pick up additional Zero fighters. The transport was intercepted by Hellcat pilot Lt Harold K. Newell (3 victories) and shot down.

Saburo Sakai said in his memoirs that Nishizawa was known as the Devil because of his pale, taciturn looks. He really was the devil to American and Australian P-40 and P-39 pilots flying out of Port Moresby in 1942. Nishizawa was a master at maneuvering the light, agile and fast climbing Zero fighters. If a pilot like Nishizawa lured P-40 pilots to fight on his terms, they were 'easy meat'.

The truth is that Hiroyoshi Nishizawa had tremendous situational awareness to go along with good eyesight, excellent marksmanship, and the ability to become one with his Zero fighter. Nishizawa knew where every fighter was in a swirling dogfight and could maneuver automatically onto an enemy fighter's tail.

(Left) Hiroyoshi Nishizawa was the highest scoring Japanese fighter pilot in World War II with 87 victories. His powers and skill in battle were legendary among other Japanese pilots. Nishizawa was killed when his transport was intercepted by an F6F Hellcat flown by Lt Harold K. Newell.

(Below) Nishizawa flew this Mitsubishi A6M3 Model 22 Zero fighter while assigned to the 251st *Kokutai*. The Zero has had its original paint scheme of light gray overpainted with dark green giving the fighter a worn, ragged appearance. The tail marking U1-105 was red and white. This photo was taken by wartime reporter Hajime Yoshida who was riding in a bomber at the time.



Major Wilhelm Balthasar

Wilhelm Balthasar was already a veteran of the Spanish Civil War with seven victories — four in one action — before the start of WW II. Balthasar was the *Staffelkapitän* of 4/JG 27 during the Battle of France and his best day came on 6 June 1940 when he shot down nine French aircraft during several sorties. When France fell his total score stood at 23 aerial victories.

Balthasar was *Staffelkapitän* of III/JG 3 during the Battle of Britain. His scoring slowed during the Battle, probably due to the greater numbers of higher quality pilots and machines in the RAF. When his score reached 35 victories he was wounded in a combat with Spitfires of 222 Squadron. After recovering for several months, he was appointed *Kommodore* of JG 2 which he led until 3 July 1941 when he was bounced and killed by Spitfires while flight testing a new Messerschmitt Bf 109F.

Wilhelm Balthasar had an aptitude for multiple kills. His situational awareness must have been greatest during a 'flock shoot' when enemy aircraft scattered following a bounce. He was able to hunt down the disoriented enemy pilots one at a time and shoot them down. When he came up against the RAF's better fighters and tactics, Balthasar's advantage slowly disappeared. In fact, his lone hunting tactics probably made him vulnerable in engagements with the more aware RAF pilots.

Flight Sergeant George Unwin

George 'Grumpy' Unwin was a Gloster Gauntlet pilot with the RAF's No 19 Squadron in 1935. No 19 Squadron was the first to convert to Spitfires. F/Sgt Unwin was one of the most experienced Spitfire pilots when the Germans invaded France in May of 1940. He scored three aerial victories on his first mission — providing cover over the beaches of Dunkirk.

Unwin's first victory was a Henschel Hs 126 observation aircraft whose pilot used its slow speed and maneuverability to evade several passes by faster Spitfires until Unwin was able to shoot it down. His victory tally included single-engined Bf 109Es, twin-engined Bf 110C fighters as well as He 111 bombers. Unwin was one of the first Sergeant Pilots to reach ace status during 1940. He was also one of the first pilots to fly the cannon-armed Spitfire Mk Ib. On 15 September he was engaged by two Bf 109E-4 fighters of Stab I/JG 77 and he shot both of them down.

By November of 1940, Unwin's score was 12 enemy aircraft destroyed, two shared, and two probables. On 5 November he was involved in a series of dogfights. He shot down a Bf 109E-3, but was in turn shot up by *Hauptmann* Gerhard Schöpfel (40 victories) of JG 26. Schöpfel was flying a Bf 109E-4. Unwin barely got back alive from the encounter with Schöpfel. After he recovered from his injuries, Unwin became a fighter gunnery instructor and received a commission. Unwin later commanded a de Havilland Mosquito squadron, but did not score any further victories. He became a Wing Commander in 1961.

Dogfights usually occurred when Luftwaffe Bf 109E and RAF Spitfire Mk I fighters met and Unwin's quick reactions and situational awareness allowed him to claim several single-engine German fighters. Unwin also shot down several Bf 110C fighters which, due to their size and weight, were less maneuverable than the Spitfire. His tactic was to close to point-blank range from the rear and fire all his ammunition into the German fighter. George Unwin's usual tactic against He 111 bombers was to close to 350 yards, knock out the rear gunner, and then close to 100 yards and use his remaining rifle caliber ammunition to shoot out an engine. In general, British tactics in 1940 were inferior to those employed by the Germans, but Unwin's personal skill overcame this deficiency and he survived the Battle of Britain.

Hauptman Helmut Wick

Helmut Wick's first victory came on 22 November 1939 and he scored multiple victories during the Blitzkrieg. He shot down four French Bloch 152 fighters on 5 June 1940 and claimed a further two Bloch 152s

the following day. By 27 August 1940 Wick's score had reached 20. His tally included Morane Saulnier 406 fighters, Swordfish torpedo bombers, and Hurricane and Spitfire fighters. He was appointed *Kommandeur* of II/JG 2 on 7 September.

Helmut Wick was a natural marksman with the ability to make deflection shots. His situational awareness was high and, like Wilhelm Balthasar (31 victories), Wick took advantage of the 'flock shoot' opportunities during the Battle of France as the *Armee de l'Air* fell apart. Most of the French fighters of the time — the MS 406, Bloch 152, and Hawk 75 — were inferior to the Bf 109E. Only the newer Dewoitine D 520 came close to the Bf 109 in performance, although it was hampered by inferior tactics and insufficient numbers. The Bf 109 was generally faster, could dive and climb better, and had a superior roll rate. French pilots were brave, but totally outclassed by superior German aircraft and tactics.

Wick's score continued to mount, although British pilots and aircraft were much better. He was promoted to *Kommodore* of JG 2 on 19 October 1940. On 5 November he claimed three victories and quickly scored five more the following day. If Helmut Wick had one fault it was that he was too willing to dogfight the more maneuverable British Spitfires and Hurricanes. Wick also did plenty of talking to German newspapers: "*As long as I can shoot down the enemy, adding to the honor of the Richthofen Geschwader and the success of the Fatherland, I am a happy man. I want to fight and die fighting, taking with me as many of the enemy as possible.*" He got his wish 28 November 1940 when he scored his 56th victory (a Spitfire). His Bf 109E-3 was bounced from the rear and shot down by Spitfire ace John "Cocky" Dundas (16 victories) of No 609 Squadron. Dundas' Spitfire was shot down in turn by Wick's wingman, Rudi Pflanz (52 victories). Helmut Wick baled out of his stricken Messerschmitt and successfully parachuted into the English Channel, but was never seen again.



Hauptman Helmut Wick

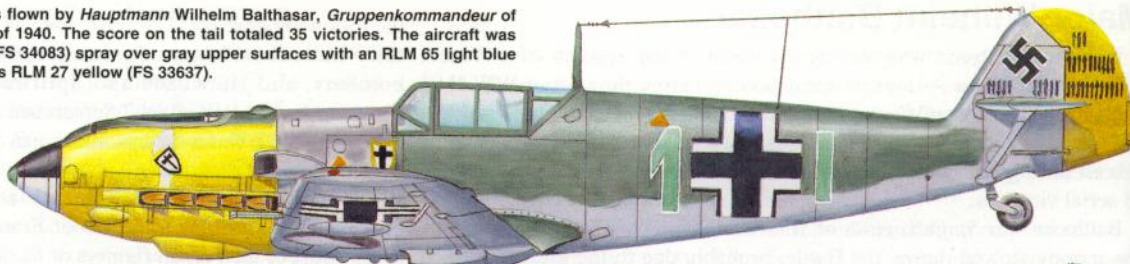
Green 1, a Bf 109E-4 (Wk Nr 1559) was flown by *Hauptmann* Wilhelm Balthasar, *Gruppenkommandeur* of III/JG 3 at Desures, France in August of 1940. The score on the tail totaled 35 victories. The aircraft was camouflaged with RLM 71 dark green (FS 34083) spray over gray upper surfaces with an RLM 65 light blue under surface (FS 36473). The nose was RLM 27 yellow (FS 33637).



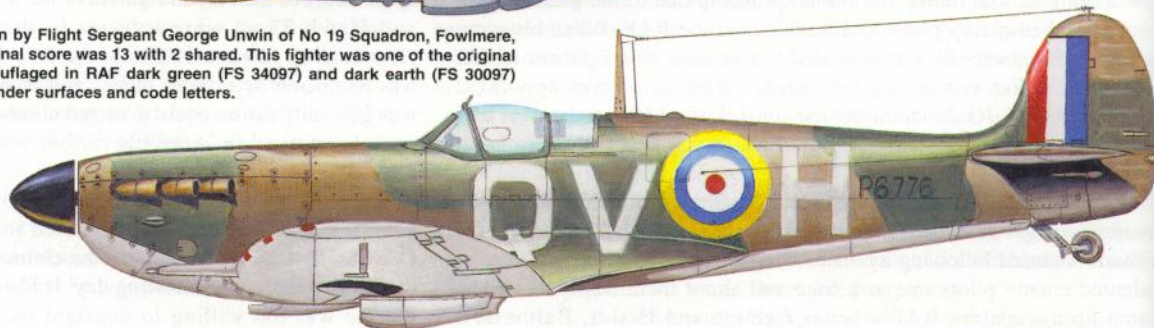
III/JG 54



III/JG 3



Spitfire Mk Ib (R6776/QV-H) was flown by Flight Sergeant George Unwin of No 19 Squadron, Fowlmere, England in August of 1940. Unwin's final score was 13 with 2 shared. This fighter was one of the original cannon-armed Spitfires and is camouflaged in RAF dark green (FS 34097) and dark earth (FS 30097) upper surfaces with sky (FS 25526) under surfaces and code letters.



Bf 109E-3 (yellow 2) was flown by *Leutnant* Helmut Wick in early 1940. The camouflage scheme consists of what are believed to be the same as the Bf 109E-4 (yellow 2) below.



JG 2 'Richthofen'



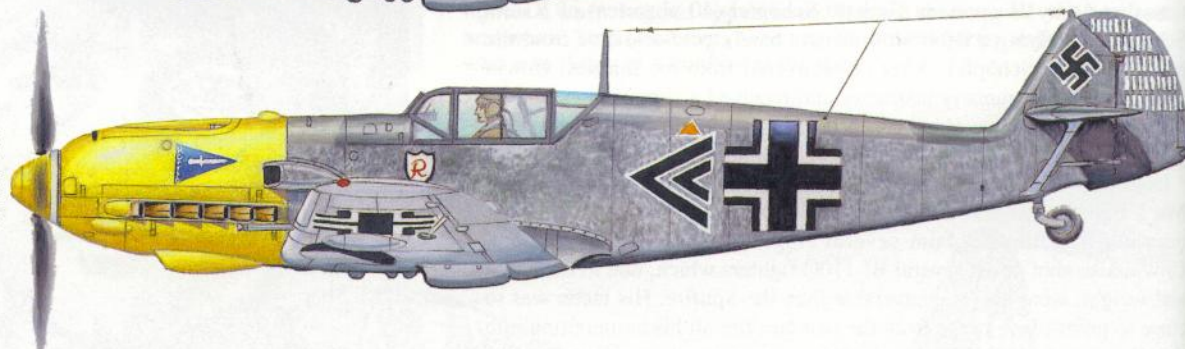
Hauptman Helmut Wick flew Bf 109 E-4 (yellow 2/wk nr 5344) in August of 1940. The colors and patterns are similar to 'Black Double Chevron' below. The Bf-109E-4 is camouflaged in a RLM 71 dark green (FS 34083) and RLM 02 gray (FS 36165) splinter pattern on the upper fuselage and wing surfaces with RLM 65 light-blue (FS 36473) on the under surfaces and fuselage sides. The fuselage sides were heavily mottled with dark green and gray green (FS 36081) applied with a sponge. The cowl sections were painted RLM 27 yellow (FS 23538), while the pennant was blue (FS 25053).



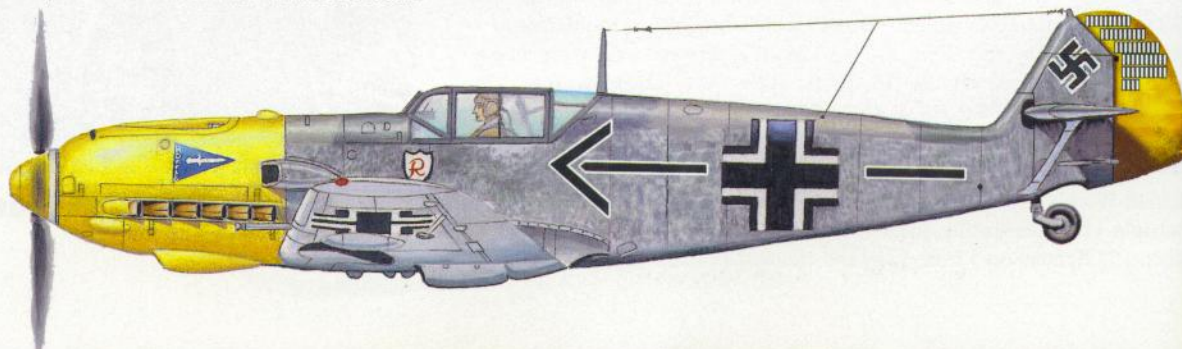
III/JG 2



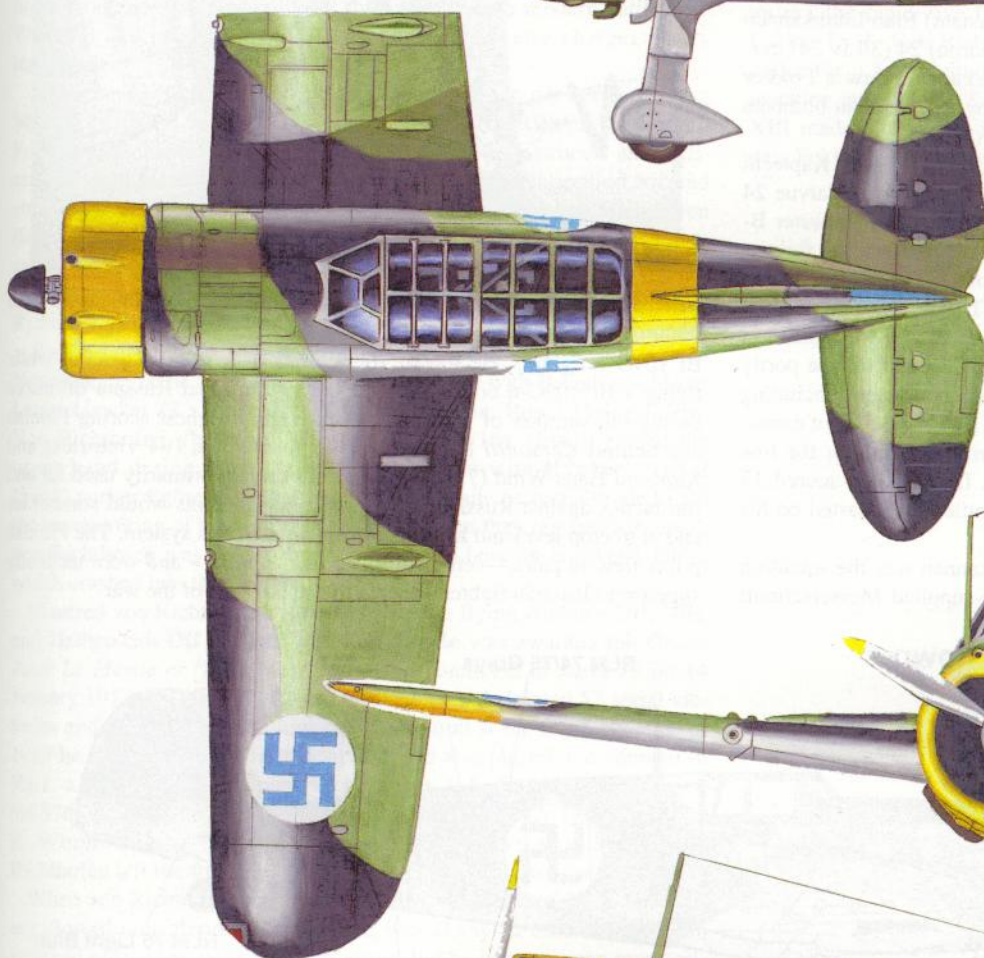
Bf 109E-4 (Wk Nr 5344/black double chevron) was flown by *Hauptmann* Helmut Wick, *Gruppenkommandeur* of I/JG 2 'Richthofen' at Beaumont-le-Roger, France in October of 1940.



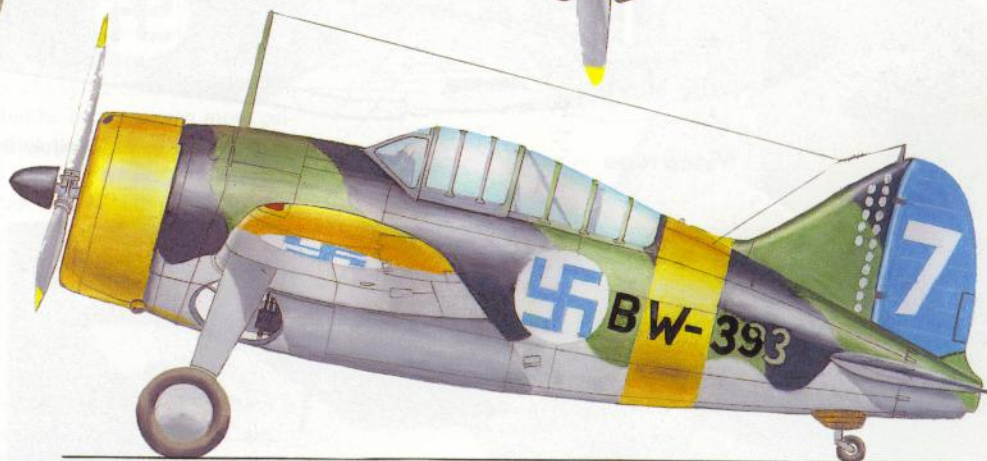
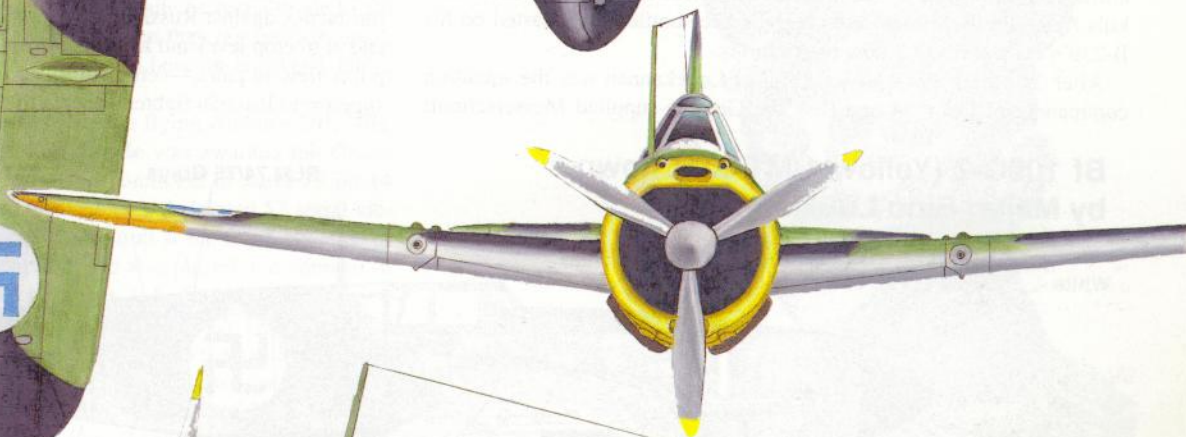
Major Wick continued to fly the Bf 109E-4 (5344) well into the fall of 1940. The colors and pattern are similar to the two aircraft above, have been brightened with a yellow nose and rudder. The chevron and bar denote the *Geschwader* operations officer although at this time, Wick was the *Geschwader Kommodore* of JG.2.



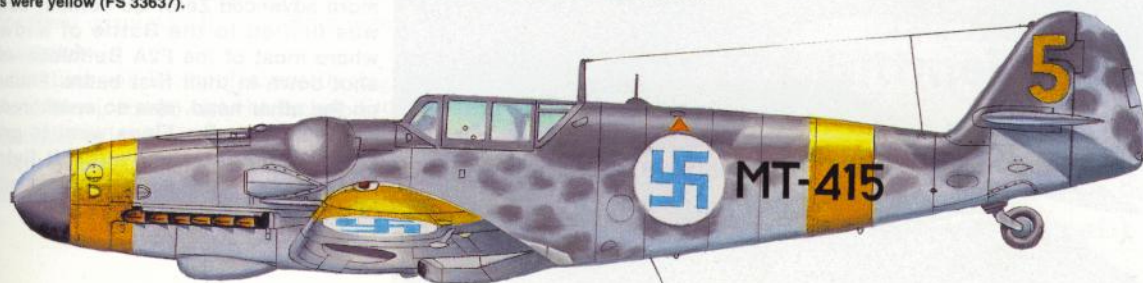
Lutnantti (Lieutenant) Eino Luukkainen of 3/LLv 24 flew Fokker D.XXI (FR-108) during the Winter War of 1939-1940. Luukkainen shot down two Russian bombers and one R-5 observation aircraft with this fighter. His Fokker was camouflaged with olive green (FS 34096) upper surfaces and light blue (FS 35414) under surfaces.



Brewster B-239 (BW-393) was flown by *Majuri* (Major) Eino Luukkainen of 1/LeLv 24, Rompotti Airfield, Finland during the Continuation War in 1942. The 17 victory markings on the tail were Karelia beer-bottle labels. The B-239 was camouflaged olive green (FS 34096) and black (FS 37038) on the upper surfaces and light blue (FS 35414) on the under surfaces. The eastern front identification markings were yellow (FS 33655).



Bf 109G-6 (MT-415) was flown by *Majuri* (Major) Eino Luukkainen of 3/LeLv 34 at Immola Airfield, Finland during the Continuation War in 1944. The aircraft retained its German camouflage of RLM 74 gray-green (FS 36081) and RLM 75 gray-violet (FS 36132) on the upper surfaces with RLM 76 light blue (FS 36473) on the under surfaces. The eastern front identification markings were yellow (FS 33637).



Majuri (major) Eino Luukkannen

The fighter pilots of the Finnish Air Force shot down Russian aircraft by the thousand despite flying an often rag-tag assortment of obsolescent fighters that no one else wanted. The Finnish pilots made up for their technical shortcomings with training, tactics, and courage.

Eino Luukkannen flew the Dutch-built Fokker D.XXI, the US produced Brewster B-239, and finally the German designed Messerschmitt Bf 109G to score his 56 kills. *Lutnantti* (Lieutenant) Eino Luukkannen commanded the 3rd Flight of Lentolaivue (squadron) 24 (3/Lv 24) during the Winter War of 1939 and 1940. Luukkannen flew a Fokker D.XXI (FR-108) and used this fighter to destroy two Russian bombers (a DB-3 and SB-2) and one observation aircraft (an R-5).

During the Continuation War (which began in June of 1941), Kapteeni (Captain) Luukkannen was leader of the First Flight of Lentolaivue 24 (1/LeLv 24) and flew the lightened Brewster B-239. The Brewster B-239 was an export version of the US Navy's F2A Buffalo carrier fighter. The Buffalo had not fared well in the hands of US, British, or Dutch pilots during the early years of World War II. The Buffalos were often annihilated by the Japanese Mitsubishi A6M2 Model 21 Zero fighters in the Southwest Pacific. The Finns, trying to shave weight off the portly fighter, removed every bit of excess material and equipment, including two of its machine guns. After removing nearly a 1000 pounds of excess weight, the rotund fighter's performance improved greatly at the low altitudes where most Soviet aircraft operated. Luukkannen scored 17 kills flying the B-239 and used Karelia beer bottle labels pasted on his B-239's vertical fin to denote his victories.

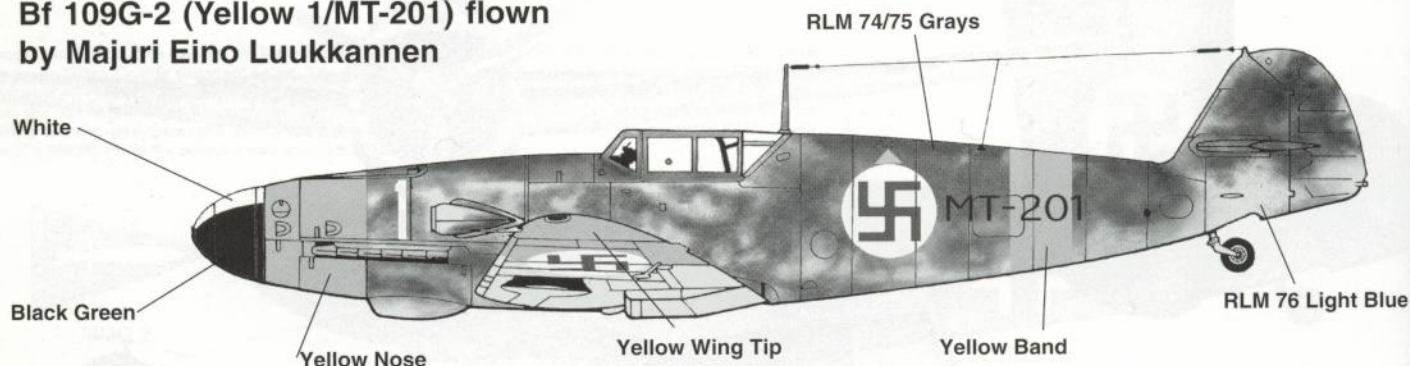
After 29 March 1943 *Majuri* (Major) Luukkannen was the squadron commander of LeLv 34 and flew the German-supplied Messerschmitt



(Left) *Majuri* Eino Luukkannen scored 56 kills from 1939 to 1944 to become Finland's third ranking ace.

Bf 109G-6 fighter. He scored 16 victories over Russian aircraft while flying a Bf 109G-6 coded MT-415 during the great Russian offensive during the summer of 1944. He was the third highest scoring Finnish ace behind *Kersantti* (sergeant) Eino Juutilainen (94 victories) and *Kapteeni* Hans Wind (75 victories). Luukkannen primarily used hit and run tactics against Russian aircraft. His engagements would sometimes end at treetop level and he scored heavily using this system. The Finnish pilots flew in pairs — emulating German tactics — and were tactically superior to Russian fighter pilots until the last year of the war.

Bf 109G-2 (Yellow 1/MT-201) flown by Majuri Eino Luukkannen



Brewster's portly F2A Buffalo and its export variant — the B-239 and 339 — fared poorly in the hands of US, British, and Dutch pilots during the early days of the Pacific war. The British purchased approximately 170 Buffalo Mk Is for use in the far East. Although successful against Japanese bombers and older fighters, the Buffaloes were no match for Mitsubishi A6M Zeros. Dutch pilots in the Netherlands East Indies also enjoyed some success against certain Japanese aircraft, but were later overwhelmed by greater numbers of the more advanced Zero. US combat usage was limited to the Battle of Midway where most of the F2A Buffaloes were shot down in their first battle. Finland, on the other hand, was so enamored of the B-239 that the Finns went to great lengths to keep their aircraft flying. Finland even went so far as to attempt to build their own B-239 fighters.

Rittmeister Manfred, Freiherr von Richthofen

Manfred von Richthofen, the celebrated 'Red Baron', began World War I as an *Uhlán* cavalry trooper. He received the Iron Cross Second Class for his actions in France during the first year of World War I. It became painfully clear to Richthofen, however, that the traditional horse-mounted cavalry would not survive long on a modern battlefield. Trenches and machine guns made traditional cavalry charges nearly impossible.

Manfred von Richthofen transferred to the German Air Service during May of 1915 and became an observer in Albatros BII and CI aircraft. Following a chance meeting with the great fighter instructor and tactician Oswald Boelcke (40 victories), von Richthofen applied for and entered pilot training. After graduating pilot training, von Richthofen flew two-seat Albatros CIII observation aircraft with *Jasta 8* on the eastern front. Boelcke was then recalled to the western front where he formed *Jasta 2*. Boelcke's influence later allowed him to have von Richthofen transferred with him to *Jasta 2*.

By the fall of 1916, von Richthofen was an ace with 10 kills. On 23 November 1916 he fought a long and hard battle with British ace Major Lanoe Hawker (9 victories) of No. 24 Squadron, Royal Flying Corps. Von Richthofen, flying an Albatros DII (491/16), slowly gained the upper hand during a rare turning engagement with Hawker's DH 2 (5964) pusher fighter. Hawker held his own while he had altitude to aid the maneuvering of his slower aircraft, but when they reached low level, von Richthofen was able to bring his guns to bear on Hawker's DH 2 which crashed into the treetops.

Manfred von Richthofen scored 16 victories flying Albatros DII, DIII, and Halberstadt DII fighters with *Jasta 2*. He was awarded the *Ordan Pour Le Merite* or 'Blue Max' and given command of *Jasta 11* on 14 January 1917. By the end of April of 1917 he had claimed 52 aerial victories and *Jasta 11* was the highest scoring unit at the front. By June of 1917 he had scored four additional kills and was placed in command of JG 1, a wing which was made up of *Jastas 4, 6, 10* and *11*. Following his 57th victory, von Richthofen was wounded on 6 July 1917 by 2Lt A. E. Woodbridge — an observer/gunner in a two-seat FE 2. Von Richthofen left the front to recuperate from a severe concussion.

When von Richthofen returned to combat in August of 1917, his scoring slowed considerably. Richthofen was always a careful pilot who attacked only when odds were favorable, but he became even more calculating. In some respects he was the prototype of Erich Hartmann's (352 in WW II) 'head flyer' who used his mind rather than his muscles to gain aerial victories. Von Richthofen scored 17 kills over the Somme during one month by carefully stalking his victims and surprising them from out of the sun. By March of 1918 he had scored 70 kills. On 20 April 1918, while flying a Fokker Triplane (477/17), von Richthofen shot down two Sopwith Camels of No. 3 Squadron, RFC to bring his score to 80 confirmed kills.

Manfred von Richthofen's career ended the next day on 21 April 1918 when he engaged several British Sopwith Camels. He was pursuing a Camel at low level when he was hit by fire from the Camel of Captain Roy Brown (13 victories) or ground fire from Australian machine gunners of the 53rd Battalion in the trenches below. Von Richthofen's blood red Fokker Dr1 triplane hit the ground at a relatively flat angle and was remarkably intact when it was reached by Allied troops. Although Brown was given credit for the kill at the time, later — and sometimes controversial — evidence indicates the fatal shot came from the ground.

Manfred von Richthofen was the highest scoring fighter pilot of World War I. His 80 victories included 40 fighters of all types with the remainder being two-seat observation aircraft. He was a good pilot, a superb marksman, and an even better leader. His idea of painting his *Jasta 11* aircraft in bright, gaudy colors was an excellent way to boost

morale both for the troops on the ground and the public at home. His *Jasta* became known in Germany as the 'Flying Circus' with Rittmeister von Richthofen as the 'Ring Master'. The British and French knew him as the '*Petit Rouge*' or Little Red. His loss was a severe blow to the German war effort and his place was never fully taken by those who followed as commanders of JG 1 — Willi Reinhardt (20 victories) and Hermann Göring (22 victories) of later Luftwaffe fame.

Manfred von Richthofen pioneered, along with Werner Voss (48 victories), the rapid dive from behind followed by a vertical climb in his Fokker Dr 1. Von Richthofen would then hang the Fokker on its propeller for a few seconds which allowed him to stitch his victim with machine gun bullets. Faster enemy fighters such as the French SPAD XIII made the Fokker Dr1 obsolete and JG 1 was working up on the new Fokker D VII biplane fighters when von Richthofen was killed.



**Rittmeister Manfred,
Freiherr von Richthofen**

(With the Pour le Merite or 'Blue Max' at his throat.)



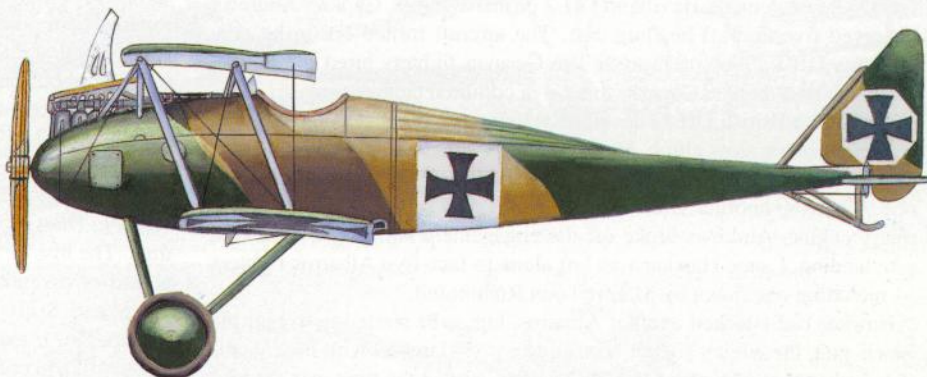
On 23 November 1916 Manfred von Richthofen, with 10 victories to his credit, met Major Lanoe Hawker, a British ace with 9 victories, in a thirty minute turning battle that ended just above the treetops. Seconds later von Richthofen fired his last burst and hit Hawker in the

head. The British pilot's DH2 pusher fighter (5964) crashed into the trees. Major Lanoe Hawker, the first British ace, was von Richthofen's 11th victory. Hawker was buried at the crash site, a few dozen yards from the British lines.

Fokker E.III flown by Leutnant Manfred von Richthofen at Mont-Murville, France, during the late spring of 1916. Due to an engine failure, von Richthofen crashed and totally destroyed his first E.III. The E.III had natural doped fabric (FS 33717) with a 'swirled' aluminum cowl. The national markings were black (FS 35042) on a white field.



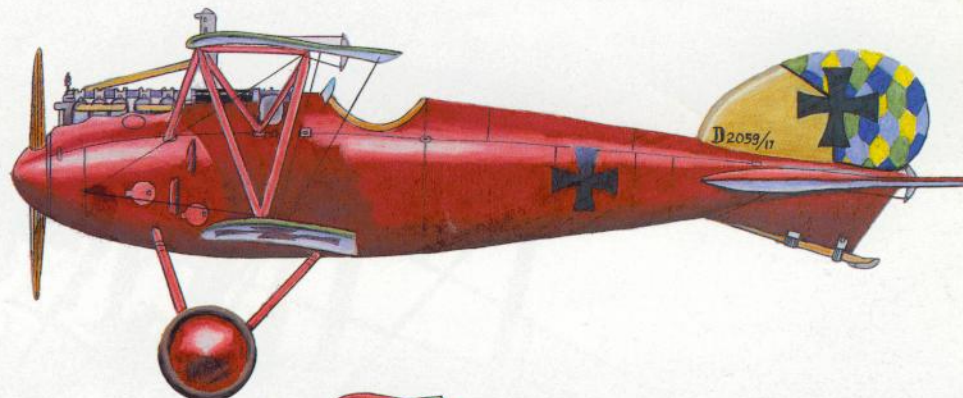
Halberstadt D.II flown by Oberleutnant Manfred von Richthofen, Jasta Führer of Jasta 11, Douai, France on 14 February 1917. When the lower wingspar cracked on his first Albatros D.III 789/17, von Richthofen switched over to the Halberstadt D.II which was about the only viable alternative at the time. The Halberstadt was doped green (FS 34258) and brown (FS 30219) on the upper wing, fuselage, and tail surfaces with light blue (FS 35440) dope on the under surfaces and wing struts.



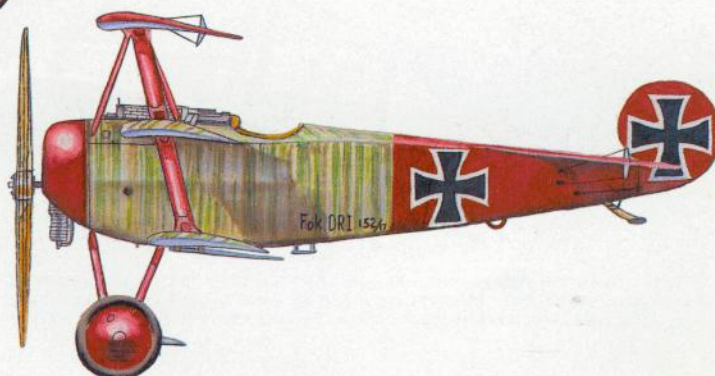
Albatros DV (1177/17) of Rittmeister Manfred von Richthofen, JG 1, Marcke Airfield, France on 25 June 1917. Von Richthofen claimed at least four victories while flying this Albatros. This Albatros had a red fuselage, but the upper wing surfaces were doped in the standard camouflage of mauve (FS 37160) and green (FS 34258). The under surfaces were doped light blue (FS 35440).



Albatros DV (2059/17) flown by Rittmeister Manfred von Richthofen of JG 1 at Marcke Airfield, France on 20 August 1917. Von Richthofen scored two victories in this aircraft. The colors were similar to DV 1177/17, however the tail was left in the natural doped finish while the rudder had the early lozenge camouflage.



Fokker Dr.I (152/17) flown by Rittmeister Manfred von Richthofen, JG 1, Marcke Airfield, France on 12 March 1918. Von Richthofen scored at least three victories while flying this Dr.I. The triplane had red (FS 31105) dope on the cowl, upper wing and tail surfaces, wheel covers, and struts. The fuselage was doped with olive green (FS 34258) streaked over natural fabric (FS 33717). The under surfaces were light blue (FS 35440). This fighter was later doped overall red, but von Richthofen did not claim any victories with the aircraft in that state. This Dr.I was placed on display in the Zeughaus weapons museum in Berlin, but was destroyed during an Allied bombing raid during World War II.



Engagement between Leutnant Manfred von Richthofen and Major Lanoe Hawker

On 23 November 1916 A Flight of No. 24 Squadron RFC patrolled the skies over the Somme Battlefield looking for German aircraft. Both the Flight Commander, Captain J. O. Andrews and the Squadron Leader, Major Lanoe Hawker, and the other two pilots in the flight were flying obsolescent De Havilland DH 2 pusher fighters. Captain Andrews observed five aircraft heading east. The aircraft turned out to be new Albatros DII fighters of Jasta 2. The German fighters lured the British aircraft further behind German lines — a common tactic.

Two of the British DH 2s developed engine trouble just as the German fighters began a slow climb. Hawker and Andrews in the two remaining DH 2s continued their pursuit, but when Andrews got onto the tail of one Albatros, another fired at his aircraft and severely damaged the rotary engine. Andrews broke off the engagement and glided back to a safe landing. Lanoe Hawker was left alone to face five Albatros fighters — including one flown by Manfred von Richthofen.

Hawker had attacked another Albatros, but as he started to trigger his Lewis gun, the enemy fighter banked sharply. Hawker, with nine victories, had engaged Manfred von Richthofen, who at the time was the victor of ten aerial combats. Von Richthofen's Albatros DII was the superior aircraft with a higher top speed (105 mph) and better climbing ability

The British DH.2 pusher fighter was a response to the introduction of the German Fokker Eindekker monoplane fighter during the early summer of 1915. Since Allied development of an interrupter gear was lagging, De Havilland developed the single seat DH.2 with its engine at the rear of the fuselage pod. The fuselage pod held the pilot, guns, ammunition, fuel, and the engine. Additionally, the DH.2 offered improved performance over other Allied fighters and its

against the older DH 2's slower speed (93 mph) and tighter turning circle. Hawker circled to the left and right and sideslipped at maximum bank to throw off von Richthofen's aim. These tactics were successful at first, but the combatants had lost altitude and were down to 3000 feet. This spelled the beginning of the end since Hawker needed short dives from higher altitudes to keep his speed up against the faster Albatros. This meant that there was less altitude for Hawker to gain speed with his inferior aircraft. Hawker was fast running out of both.

With his fuel and altitude decreasing, Hawker desperately tried a series of vertical loops which briefly brought von Richthofen into his sights. Hawker still could not score any fatal hits and broke out of the running battle just over the tree tops. He tried to regain the British lines by weaving and flying in and out of the trees, but von Richthofen, himself just about out of ammunition, fired a last burst from 60 yards out just as Hawker started another turn. Hawker was hit once in the head and his DH 2 (5964) plunged into the ground approximately 50 yards from the British lines.

Major Lanoe Hawker was *Leutnant* Manfred von Richthofen's 11th victory. The future 'Red Baron' was flying Albatros DII 491/16 at the time. The loss of Hawker, an outstanding leader and tactician, initiated a period of ascendancy for the Germans until the British introduced the SE 5 and Sopwith Camel fighters almost a year later. For von Richthofen, it meant a command of his own (*Jasta 11*), more victories (80 total), and continuing fame.

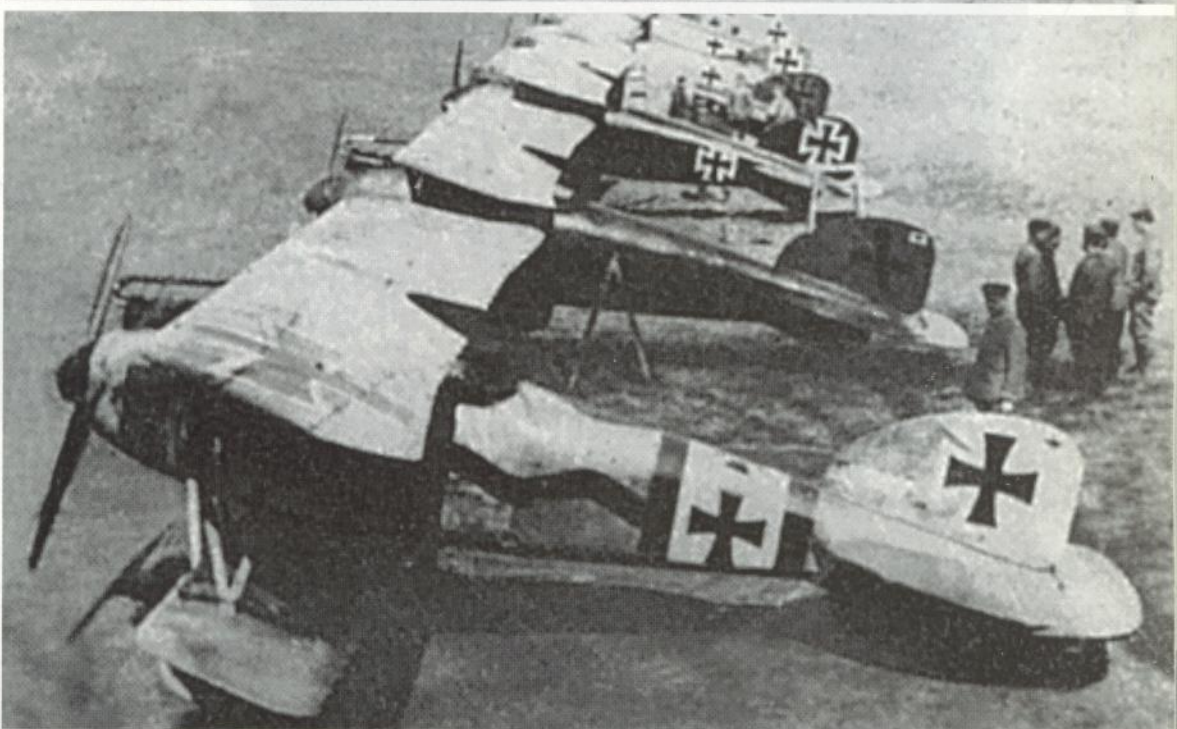
introduction in February of 1916 effectively ended the 'Fokker Scourge'. The DH 2's reign was shortlived, however, since both sides were rapidly new fighters with more power and better maneuverability. When Major Lanoe Hawker fought his last battle against the Red Baron on 23 November 1916, the DH 2 was already approaching obsolescence.



The introduction of the Fokker E.I Eindekker during the summer of 1915 began a period known as the 'Fokker Scourge'. The Fokker EI, EII, and EIII were the first true German fighters in that they were a single seat, machine gun equipped aircraft whose sole purpose was to shoot down other aircraft. An interrupter gear allowed the machine gun to fire through the propeller disk without the risk of bullets damaging the propeller. The concept allowed the pilot to aim the entire aircraft at a target and achieve a greater number of hits. The Fokker EIII was the last fighter variant to see substantial service.

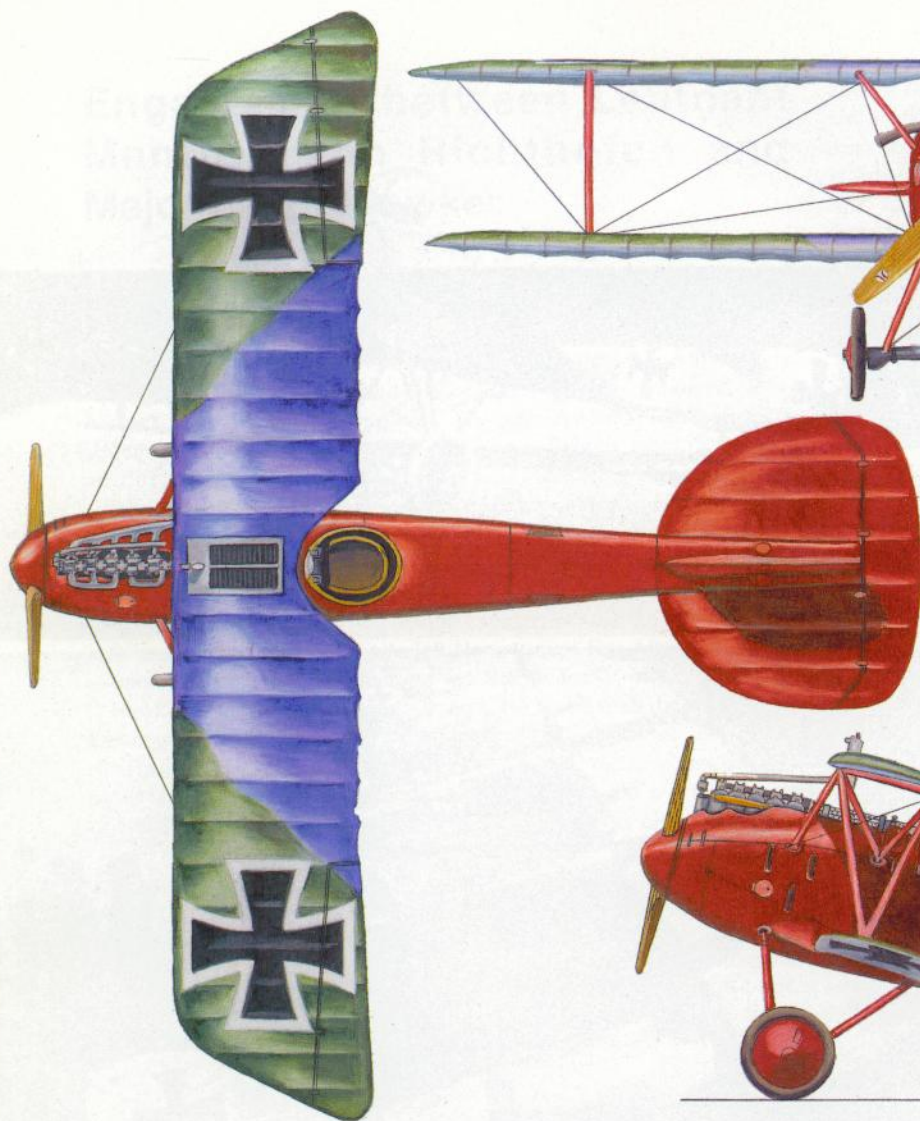


Albatros DIII fighters of *Jasta 11* line up on field in Flanders, France in 1917. Richthofen's all red DIII is the second machine. The introduction of the Albatros series fighters rendered all other Allied fighters obsolete. The Albatros was faster, stronger, and had twice the firepower of the French Nieuport 11 and British DH 2. The Albatros DI fighters were introduced in September of 1916 and claimed five British F.E.2b pusher fighters on their first patrol. The DI was followed by successive variants of the fighter designated DII through DV — each more deadly than the last. Richthofen gave up his Albatros for the new Fokker Dr1 triplane.

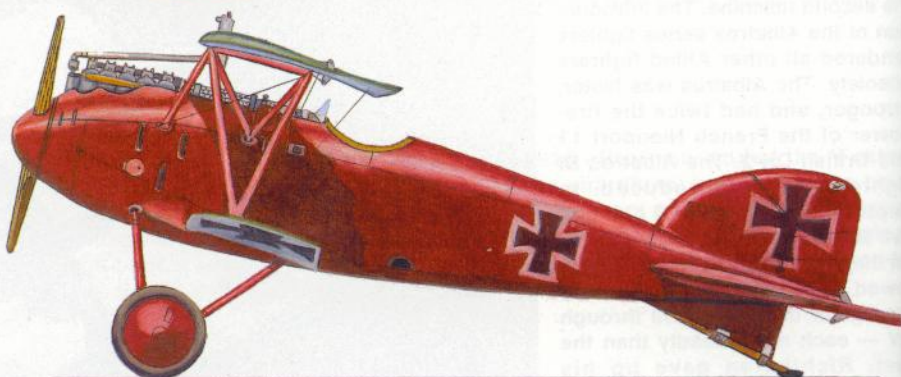


Manfred von Richthofen was introduced to the Fokker Dr1 triplane during the late summer of 1917. Richthofen liked the Fokker Dr1 despite a series of upper wing failures which resulted in several fatal crashes involving other pilots. The Dr1 had excellent maneuverability, but was underpowered. Richthofen scored his first victory flying a Fokker FI — as the prototype triplane was then known — on 7 September 1917. His last victories came on 20 April 1918 when he claimed a pair of British Sopwith Camels. Richthofen was killed the next day in a low level engagement with more Sopwith Camels. By then, however, the Fokker DVII was already entering service. Fokker Dr1s were eventually used as trainers for the Fokker DVIII.

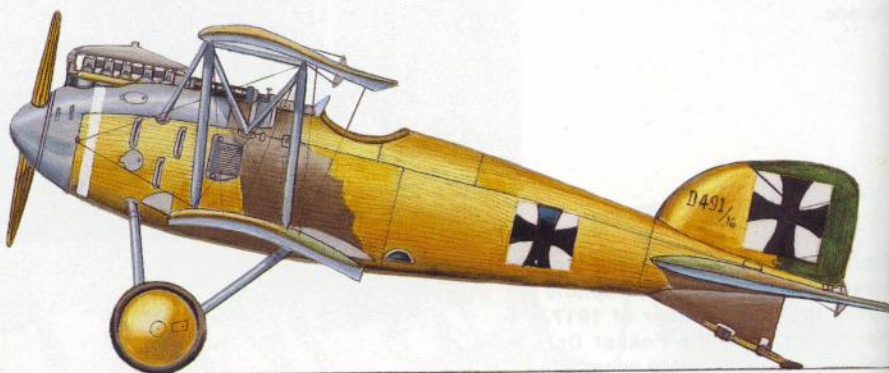




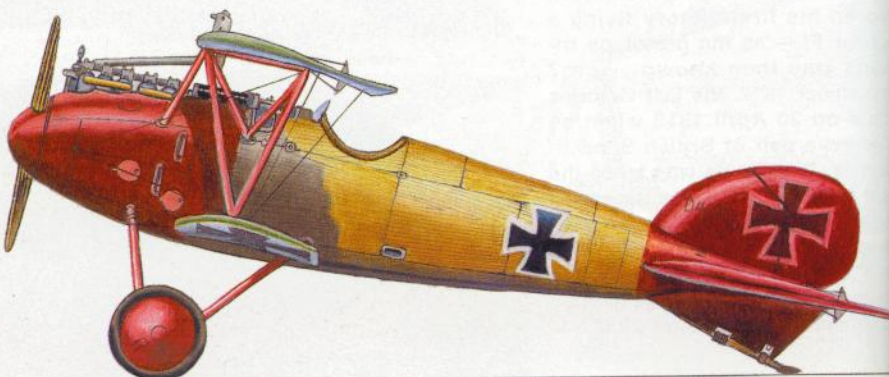
Albatros DIII (2253/17) flown by *Oberleutnant* Manfred von Richthofen, *Jasta Führer* of *Jasta 11*, Douai, France, on the Arras front during April of 1917. Von Richthofen used this DIII to gain thirty victories. The Albatros had a red fuselage with the upper wing surfaces being painted in the standard camouflage of mauve (FS 37160) and green (FS 34258).

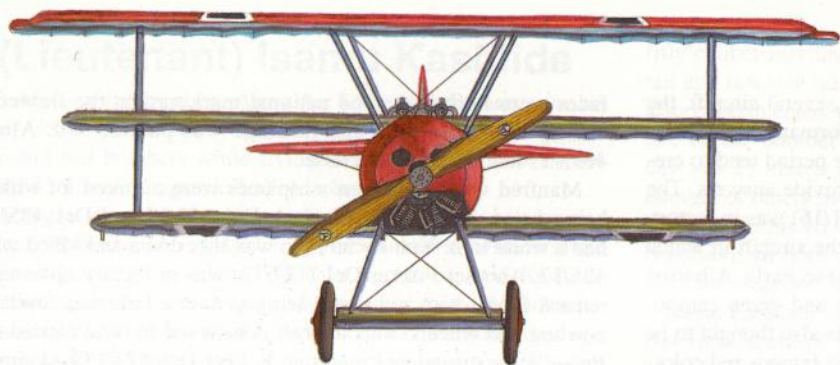


Albatros DII (491/16) flown by *Leutnant* Manfred von Richthofen, *Jasta 2*, Lagnicourt, France on the Somme Front in November of 1916. Richthofen scored at least 16 victories while flying 491/16 including his 11th victory over Major Lanoe Hawker on 23 November 1916. This Albatros had a natural plywood fuselage with green (FS 34258) and brown (FS 30219) camouflage on the upper wing and tail surfaces. The lower surfaces were natural fabric (FS 33727). This fighter also had a white band around the nose and a green rudder.

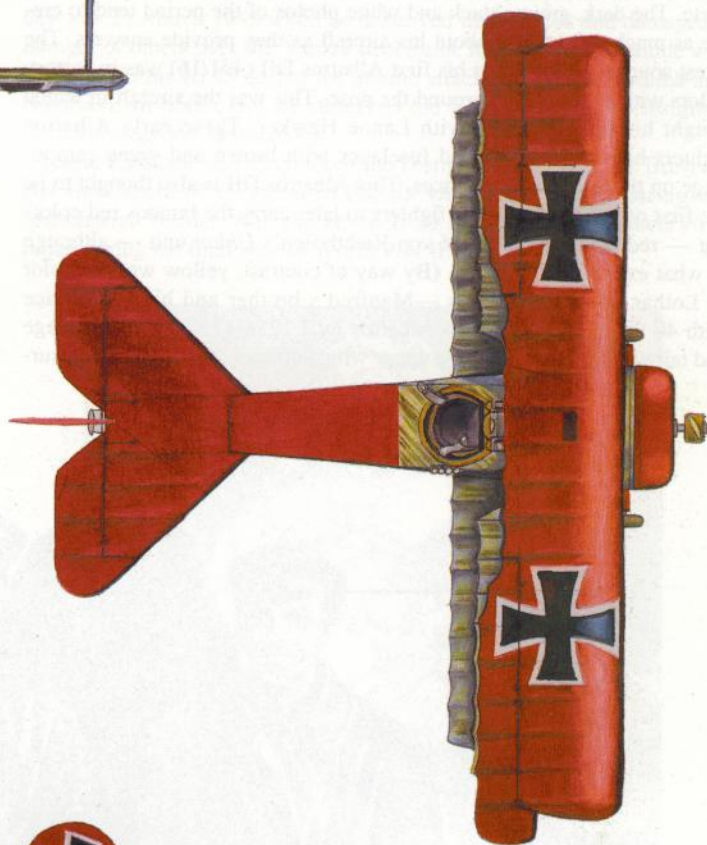


Albatros DV (4693/17) of *Rittmeister* Manfred von Richthofen, Jagdgeschwader 1, Marcke Airfield, France on 23 November 1917. Von Richthofen scored two victories while flying this fighter. The colors were similar to those on Albatros DIII 2253/17.

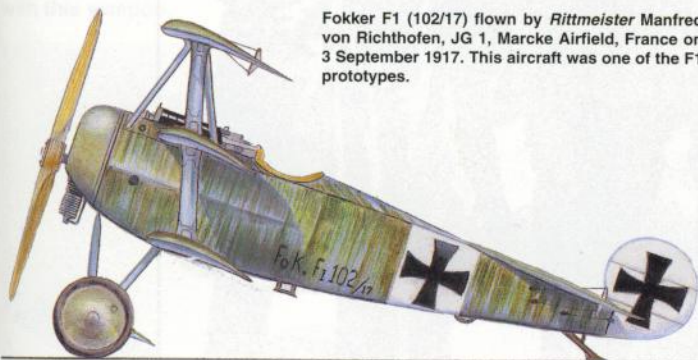




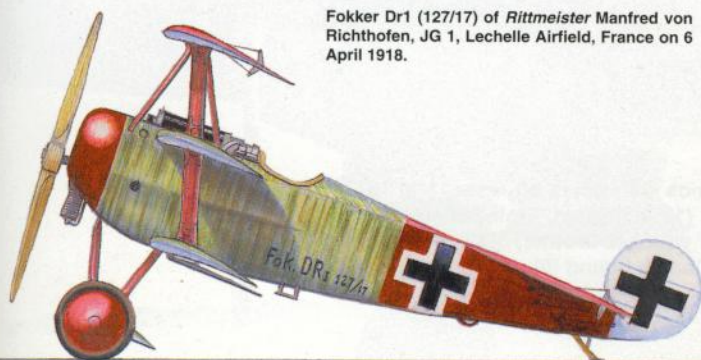
Fokker Dr1 (477/17) flown by *Rittmeister* Manfred von Richthofen, JG 1, Lechelle Airfield, France on 27 March 1918. Von Richthofen scored nine victories while flying 477/17. The aircraft was thought to have the early style 'Cross Patee' national marking. The colors of this aircraft and Dr1 127/17 were similar — red cowlings, upper wing and tail surfaces, wheel covers, and struts. The fuselage colors were olive green (FS 34258) streaked over natural fabric (FS 33717).



Fokker F1 (102/17) flown by *Rittmeister* Manfred von Richthofen, JG 1, Marcke Airfield, France on 3 September 1917. This aircraft was one of the F1 prototypes.



Fokker Dr1 (425/17) flown by *Rittmeister* Manfred von Richthofen of JG 1 at Cappy Airfield, France in April of 1918.



Fokker Dr1 (127/17) of *Rittmeister* Manfred von Richthofen, JG 1, Lechelle Airfield, France on 6 April 1918.



Fokker Dr1 (425/17) flown by *Rittmeister* Manfred von Richthofen when he was killed in action on 21 April 1918.

The Baron's Colors

Although much is known about von Richthofen's several aircraft, the information is tantalizing because much of the information is incomplete. The dark, grainy black and white photos of the period tend to create as much speculation about his aircraft as they provide answers. The latest sources indicate that his first Albatros DII (491/16) was in factory colors with a white band around the nose. This was the aircraft in which fought his famous battle with Lanoe Hawker. These early Albatros fighters had natural plywood fuselages with brown and green camouflage on the upper wing surfaces. This Albatros DII is also thought to be the first of von Richthofen's fighters to later carry the famous red coloring — red being the color of von Richthofen's *Uhlan* unit — although to what extent is not known. (By way of contrast, yellow was the color of Lothar von Richthofen's — Manfred's brother and himself an ace with 40 kills — *Uhlan* unit.) Albatros DIII 2253/17 had a red fuselage and tail with green and mauve upper wing surfaces. The lower wing sur-

faces were light blue. The national markings on the fighter were not clearly repainted after the fuselage was painted red. Albatros DV 4693/17 had a red tail and nose.

Manfred von Richthofen's triplanes were a mixed lot with only two being painted all red. These were Dr1 152/17 and Dr1 425/17 (which had a white tail). Von Richthofen was shot down and killed while flying 425/17. Another Fokker Dr1 (127/17) was in factory olive streaks over natural fabric with red upper wing surfaces, tail, rear fuselage, struts, cowlings and wheels. This aircraft is believed to have carried the 'Cross Patee' style of national marking. Fokker Dr1 477/17 had similar markings to Dr1 127/17, but the national markings were applied in the straight *Balkenkreuze* style rather than the earlier curved *Cross Patee*. It is known that the *Cross Patee* on Dr1 425/17 had been hastily painted over into the *Balkenkreuze* before the Red Baron's last flight.



Manfred von Richthofen (center) stands with pilots of Jasta 11 in 1917. Left to right are; Sebastian Festner (12 victories), Emil Schaefer (30), Lothar von Richthofen (The Baron's younger brother) (40), Kurt Wolff (33) and (left foreground) Moritz the Danish hound (0).

Tai-i (Lieutenant) Isamu Kashiide

Isamu Kashiide of the Japanese Army Air Force is well known for his skill against USAAF B-29 heavy bombers. He shot down a number of these large and fast bombers while flying the increasingly obsolescent Kawasaki Ki.45 *Toryu* (dragon killer) twin-engine fighter.

Kashiide began his combat career during July of 1938 when he was posted to the 59th *Sentai* (Army Air Group) in Manchuria where he flew Ki.10 biplane fighters as an enlisted pilot. In August of 1938 Kashiide was transferred to central China and did not return to the Manchurian fighting until 1939. After his return to Manchuria, Kashiide flew the newer Nakajima Ki.27 fighters and scored six victories against Russian flown Polikarpov I-15 and I-16 fighters.

Kashiide was posted back to Japan as a flight instructor during 1940 and then went on to officer's training. He was with the 4th *Sentai* during the attacks on American bases in the Philippines, but he did not claim any victories. He was then assigned to bomber defense duties in Japan — still flying the now-obsolete Ki.27. By 1943 the 4th *Sentai* was finally equipped with the new Kawasaki Ki.45 *Toryu* twin engine heavy fighters. Like the German Messerschmitt Bf 110, the Ki.45 was large, heavy, and slow to roll. Against single engine fighters the Ki.45 was helpless, however, it was used to intercept slower and less maneuverable heavy bombers by day and night. The Ki.45 mounted a slow-firing 37mm semi-automatic cannon. Although some Ki.45s used upward firing 20mm cannon, Kashiide preferred the heavier nose mounted 37mm weapon for intercepting bombers.

On 17 June 1944 Kashiide, now the commander of the 3rd *Chutai*, 4th *Sentai*, encountered B-29 Superfortress bombers for the first time over Wakamatsu. He scored one kill using the 37mm cannon. Kashiide concentrated on night attacks and his initial strategy was to attack the heavily armed B-29s from behind and slightly below where they appeared to be weakest. The high speed of the bomber allowed only slow and dangerous approaches from the rear. The only real advantage Kashiide had in this kind of attack was the greater range of the 37mm cannon over the effective range of the bomber's defensive weapons — a combination of

fifty caliber machine guns and a 20mm cannon (when fitted) in various tail and fuselage turrets. Since rear attacks were so dangerous, Kashiide also experimented with frontal attacks where he could concentrate his fire on the bomber's vulnerable forward crew compartment. His best day was 27 March 1945 when he destroyed three B-29s and damaged a number of others over the Yanata steel mills. Remarkably, Kashiide was in the air in his Ki.45 during the atomic attacks on both Hiroshima and Nagasaki. In both cases he observed the mushroom clouds resulting from the weapons' detonations.

Isamu Kashiide was recipient of the Distinguished Medal for Bravery. His final score of 13 included the six victories achieved during the Manchurian Border War and seven B-29 Superfortress bombers over Japan during the final year of World War II.

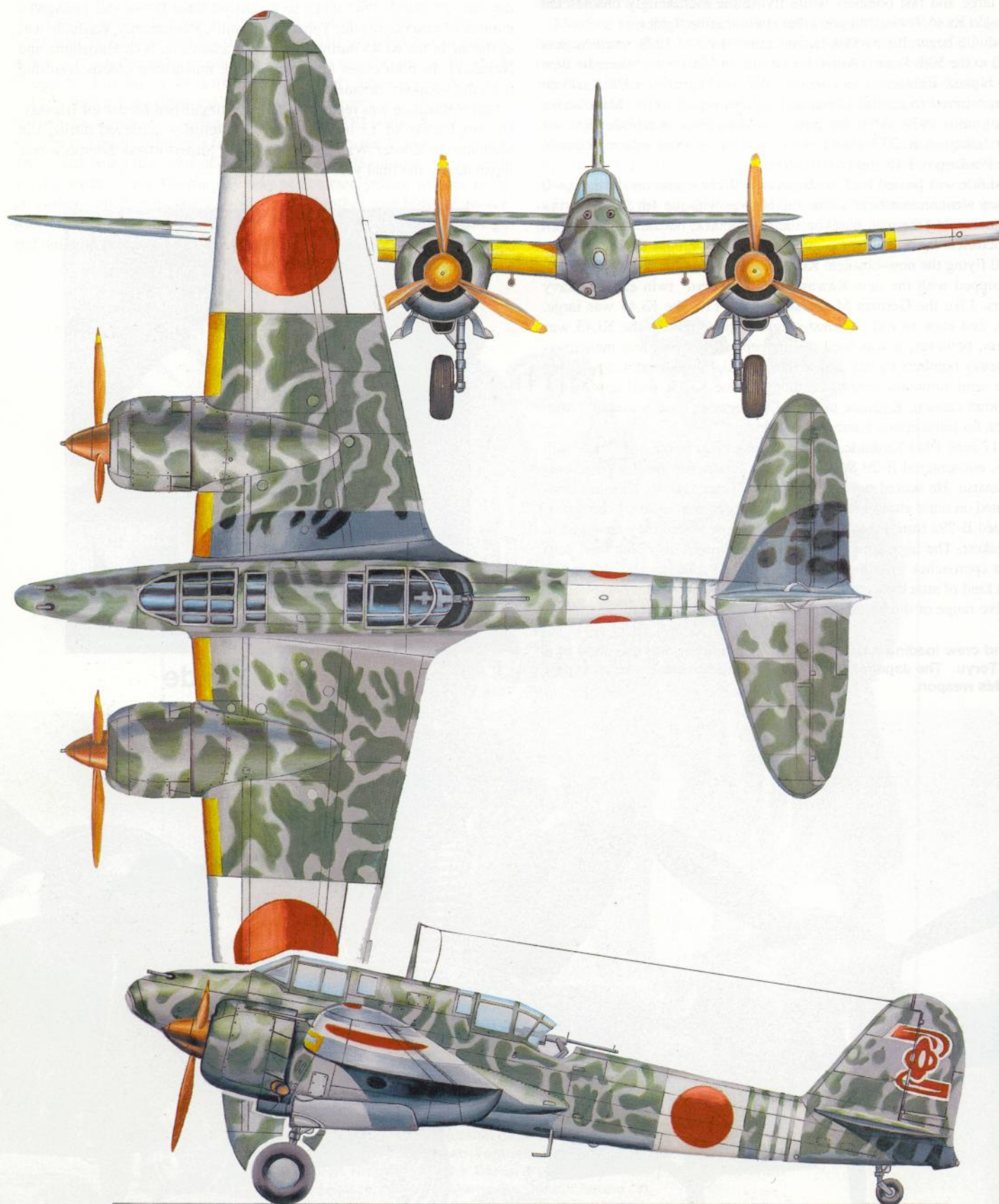


Isamu Kashiide

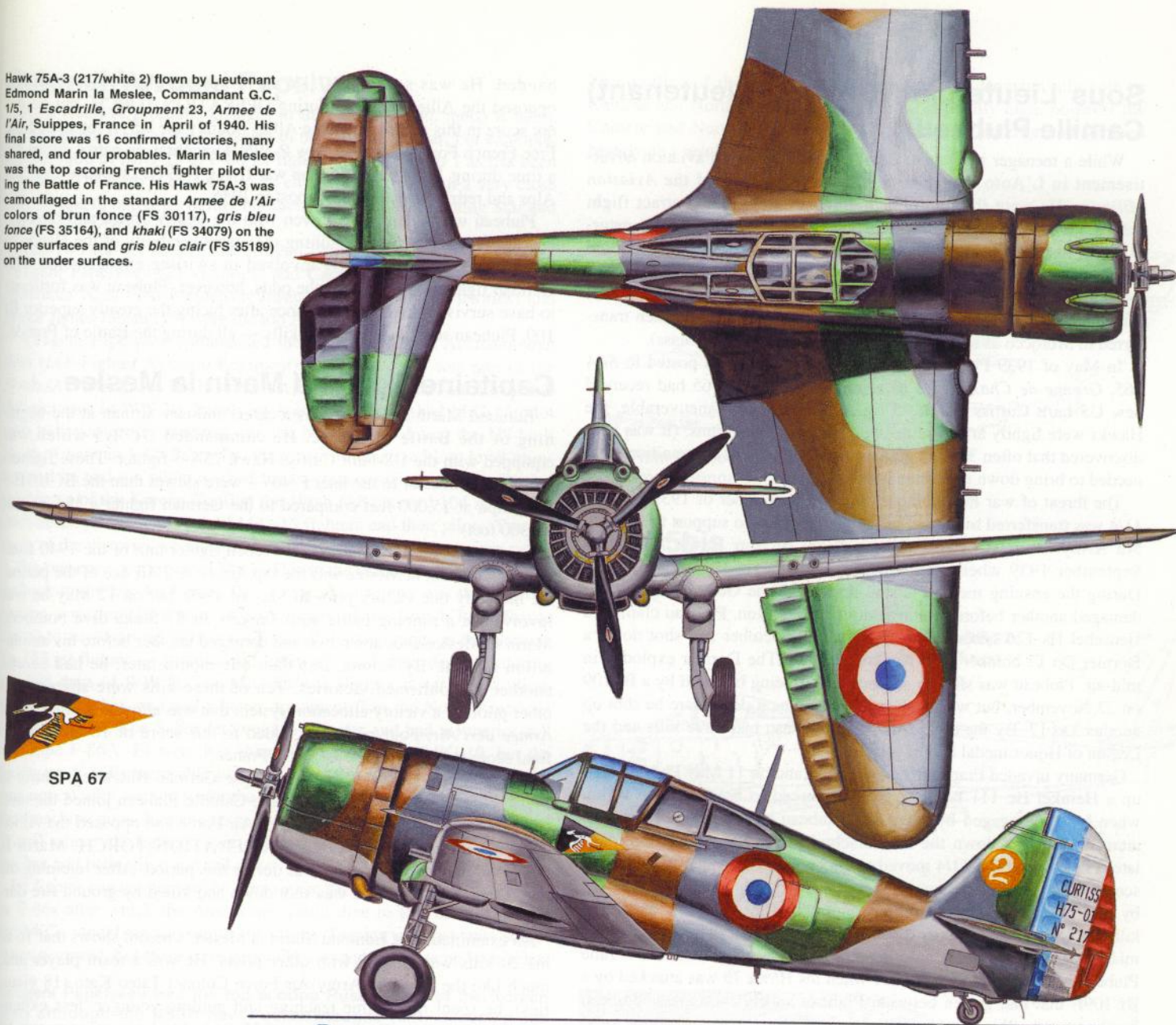
Ground crew loading a belt of 37mm ammunition into the nose of a Ki.45 *Toryu*. The Japanese army ace, Isamu Kashiide was an expert with this weapon.



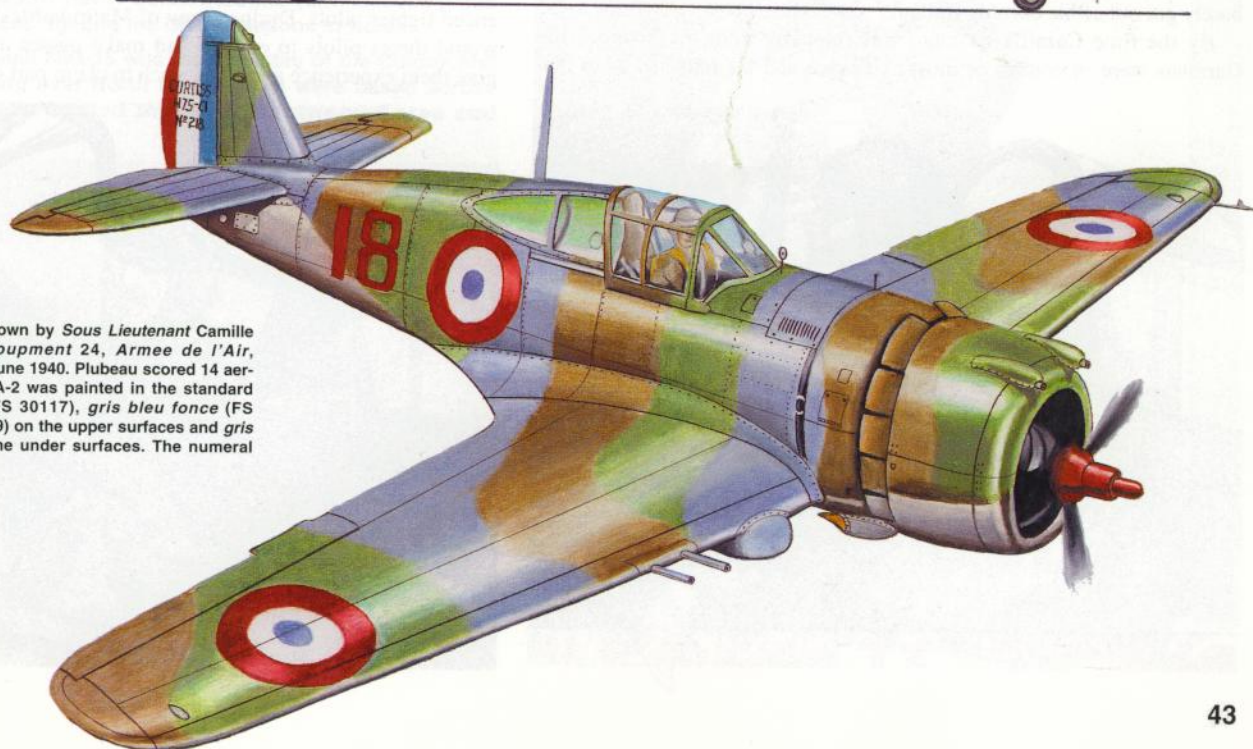
Ki.45 Kai Ko *Toryu* was flown by Chu-i (Lt JG) Isamu Kashiide, 2nd *Chutai*/4th *Sentai* at Kozuki Airfield, Japan during 1944-45. Kashiide's final score was 13 aerial victories. The heavy twin engine fighter was camouflaged in one of the many patterns used by the Imperial Japanese Army Air Force — overall light gray (FS 36492) with a dense pattern of dark green (FS 34082) spots. The markings were medium red (FS 31105) and white. The tail marking is a stylized '2' signifying the 2nd *Chutai*.



Hawk 75A-3 (217/white 2) flown by Lieutenant Edmond Marin la Meslée, Commandant G.C. 1/5, 1 Escadrille, Groupement 23, Armée de l'Air, Suippes, France in April of 1940. His final score was 16 confirmed victories, many shared, and four probables. Marin la Meslée was the top scoring French fighter pilot during the Battle of France. His Hawk 75A-3 was camouflaged in the standard Armée de l'Air colors of brun fonce (FS 30117), gris bleu fonce (FS 35164), and khaki (FS 34079) on the upper surfaces and gris bleu clair (FS 35189) on the under surfaces.



SPA 67



Hawk 75A-2 (218/red 18) flown by Sous Lieutenant Camille Plubeau, G.C. 11/4, Groupement 24, Armée de l'Air, Xaffrevillers, France on 9 June 1940. Plubeau scored 14 aerial victories. His Hawk 75A-2 was painted in the standard scheme of brun fonce (FS 30117), gris bleu fonce (FS 35164), and khaki (FS 34079) on the upper surfaces and gris bleu clair (FS 35189) on the under surfaces. The numeral was rouge (FS 31105).

Sous Lieutenant (Second Lieutenant) Camille Plubeau

While a teenager in France, Camille Plubeau saw an aviation advertisement in *L'Auto* magazine and, as a result, joined the *Aviation Militaire*. He went through pilot training in a civilian contract flight school. Plubeau wanted to be an observation aircraft pilot, but his natural talent resulted in his being sent to the 6 *Escadrille*, 34th *Aviation Regiment* as a fighter pilot. At the time this *Regiment* was commanded by Colonel Armand Pinsard (27 victories) the great World War I ace. Plubeau flew with the 6 *Escadrille* for a period of time, and then transferred to Morocco as a new *Caporal-Chef* (Corporal First Class).

In May of 1939 Plubeau returned to France and was posted to SPA 165, *Groupe de Chasse* 11/4 as a senior NCO. SPA 165 had received new US-built Curtiss Hawk 75 fighters. Although maneuverable, the Hawks were lightly armed with six 7.5 mm machine guns. (It was later discovered that often 3000 to 5000 rounds of this light ammunition were needed to bring down a German bomber.)

The threat of war moved closer during the summer of 1939 and GC 11/4 was transferred to the airfield at Xaffervillers to support the French 5th Army. Plubeau was leading a flight of four Hawk 75s on 24 September 1939 when they were engaged by six Bf 109E fighters. During the ensuing melee Plubeau destroyed one German fighter and damaged another before running out of ammunition. Plubeau claimed a Henschel Hs 126 observation aircraft on 30 October and shot down a Dornier Do 17 bomber on 8 November 1939. The Dornier exploded in mid-air. Plubeau was slightly wounded after being bounced by a Bf 109 on 22 November, but was back in action the next day where he shot up another Do 17. By the end of the year, Plubeau had three kills and the Legion of Honor medal for bravery.

Germany invaded France in May of 1940 and on 11 May Plubeau shot up a Heinkel He 111 bomber. He was forced to break off the action when he was engaged by a Bf 109. Plubeau turned the tables on his attacker and shot down the Messerschmitt near Blamont. Three days later Plubeau and GC 11/4 moved to Orconte. On 18 May 1940 Plubeau scored four victories during one mission. Plubeau's flight was attacked by Bf 109 fighters and he promptly shot one of them down. The fighter kill was quickly followed by a pair of He 111s. Plubeau's last kill of the mission was a Bf 109 attempting to protect the bombers. On 9 June Plubeau was shooting up a He 111 when his Hawk 75 was attacked by a Bf 109E that had gotten between Plubeau and his wingman. Plubeau barely got out of his burning fighter.

By the time Camille Plubeau was released from the hospital the Germans were in control of most of France and his unit had been dis-

banded. He was sent to GC 1/5 in Morocco. Plubeau's squadron opposed the Allied landings during OPERATION TORCH, but he did not score in this action. After the Allies (mainly the US) re-equipped the Free French Forces, Plubeau flew P-39N Airacobras on patrol duties for a time during 1943. He ended the war flying P-39Qs on patrol over the Alps and retired from a training post in 1946.

Plubeau was a deadly shot even with the lightly armed and obsolescent Hawk 75. Plubeau, exploiting the maneuverability of the Hawk 75 to its fullest, was constantly involved in swirling engagements with German fighters. Considering the odds, however, Plubeau was fortunate to have survived the Battle of France after facing the greatly superior Bf 109. Plubeau scored a total of 14 kills — all during the Battle of France.

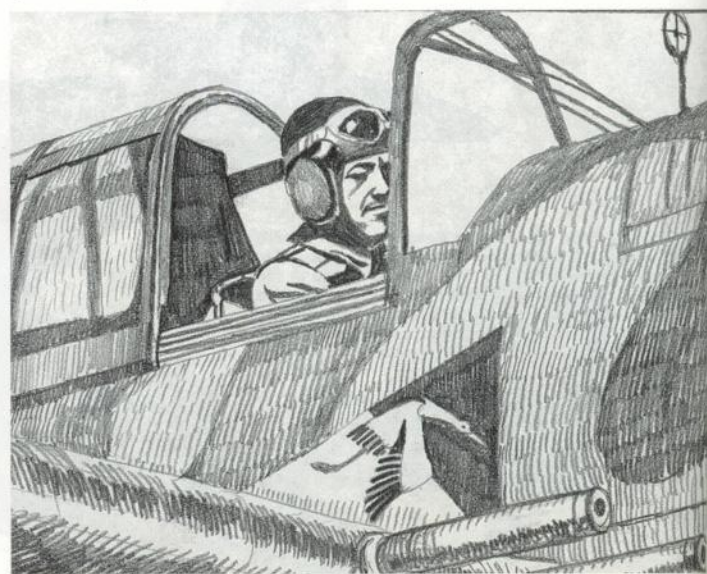
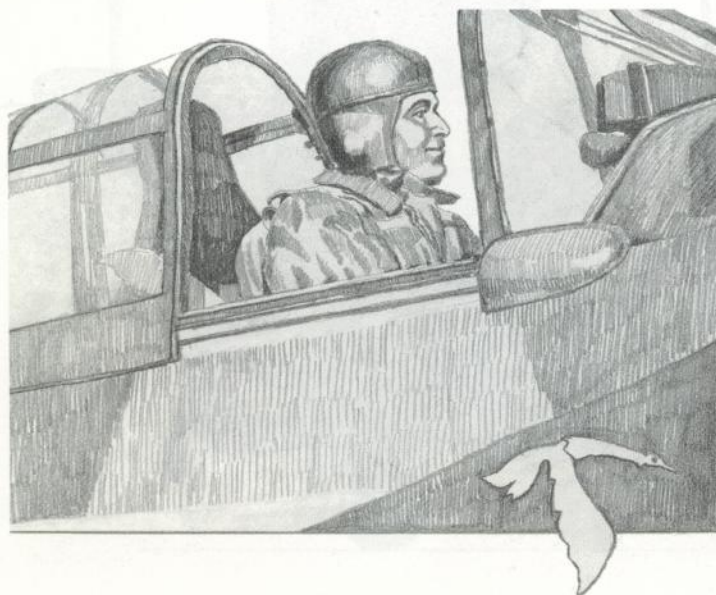
Capitaine Edmond Marin la Meslee

Edmond Marin la Meslee was a career military airman at the beginning of the Battle of France. He commanded GC 1/5 which was equipped with the US-built Curtiss Hawk 75A-3 fighter. These fighters — a direct ancestor to the later P-40 — were slower than the Bf 109E-3 (323 mph at 15,000 feet compared to the German fighter's 354 mph at 12,300 feet).

GC 1/5 was the most successful French fighter unit of the 1940 campaign and Marin la Meslee was the top *Armee de l'Air* ace of the period. He had only one victory prior to May of 1940, but on 12 May he was involved in a running battle with Junkers Ju 87 Stuka dive bombers. Marin la Meslee shot down two and damaged another before his ammunition ran out. By 7 June, less than one month later, he had scored another 12 confirmed victories. Ten of these kills were shared with other pilots — a victory allocation system that was allowed in the French *Armee de l'Air*. Four probables added to this score of 16 brought his final score to 20 during the Battle of France.

When France finally succumbed to the German Blitzkrieg, Marin la Meslee led GC 1/5 to Morocco where Camille Plubeau joined the unit. GC 1/5 was part of the Vichy French Air Force and opposed the Allied landings in North Africa during OPERATION TORCH. Marin la Meslee did not score any victories during this period. After rejoining the Free French Air Force he was shot down and killed by ground fire during 1944.

An examination of Edmond Marin la Meslee's record shows that 16 of his 20 kills were shared with other pilots. He was a team player and, much like the Japanese Army Air Force Colonel Tateo Kato (18 victories), he spent much time teaching and guiding younger, less experienced fighter pilots. During many of Marin la Meslee's engagements he would direct pilots to engage and make passes at a single bomber to give them experience and allow each to claim part of the score.



Colonel Yevgeni Pepelyaev

As a result of profound changes in the Soviet Union, much is being learned about what really happened in the Korean air war. For example, the kill ratio of MiG-15 to F-86 jet fighters was not 15 to 1 as has been reported. The truth is believed to be closer to 3.5 to 1 with a very close ratio of one to one if jet fighter bombers like the F-80 Shooting Star and F-84 Thunderjet are included.

The two top jet aces of the Korean war were Russians — Colonel Yevgeni Pepelyaev (23 victories) and Captain Nikolai Sutyagin (21). American Aces First Lieutenant Joseph McConnell (16 victories) and Major James Jabara (15) were the top Allied aces.

Yevgeni Pepelyaev commanded the 196th *Istrebitel Aviasionnaya Polk* (IAP-Fighter Aviation Regiment). The 196th IAP was part of the 324th IAD which was led by the great World War II ace Ivan Kozhedub (62 victories in WW II). Pepelyaev was an accomplished MiG-15 pilot who believed proper training was the best way to defeat the US-built North American F-86 Sabre Jet. Pepelyaev emphasized low level training and he and his pilots worked hard at maneuvering in pairs. During the course of the Korean Conflict the 196th IAP claimed 104 Allied aircraft destroyed for a loss of 10 MiG-15 fighters and their pilots. Twenty three of the victories were claimed by Yevgeni Pepelyaev.

The presence of the Soviet MiG-15bis in the skies over Korea came as a shock to the US Air Force. The advanced jet fighter was the result of mating a modern jet engine (a Soviet copy of the British Rolls-Royce Nene) to an advanced airframe which had its beginnings in the German Ta 153 jet fighter — an advanced Luftwaffe jet fighter designed during the last days of WW II. The MiG-15 was slightly faster, could climb faster and higher, and had a better armament than the North American F-86 Sabre Jet. The Sabre Jet could dive faster and had a superior roll rate. The F-86A -Es were less maneuverable than the MiG-15, but the hardwing F-86Fs were able to match the MiG turn for turn. The MiG was armed with cannon while the F-86 was equipped with six fifty caliber machine guns. In many respects, the match up was similar to World War II where US fighters were almost always heavier than Axis fighters, but had better dive and roll rates.

Jet fighter engagements over Korea were generally 'bounces' by MiGs or F-86s after which the Americans would dive to low altitudes while the MiGs would tend to climb for safety. Turning engagements sometimes occurred, but these were generally avoided by pilots on both sides.

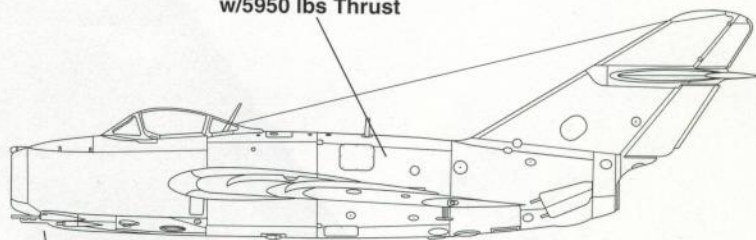
Yevgeni Pepelyaev was the top scoring Russian ace of the Korean War, although the USSR never acknowledged (until recently) the presence of their forces fighting the United Nations in Korea.

(Below) The Soviet-built MiG-15 was the mainstay of the Communist fighter units operating over North Korea. Most were based across the Yalu River which formed the border between Korea and Manchuria



The quality of the Russian fighter pilots and Russian advisors to Chinese and North Korean squadrons was generally high, however the Chinese and North Korean pilots were decidedly inferior and suffered heavily as a result.

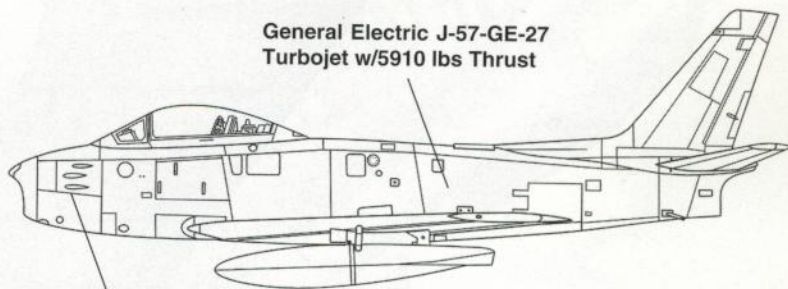
Klimov VK-1A Turbojet
w/5950 lbs Thrust



1x37mm Cannon
2x23mm Cannon

MiG 15bis

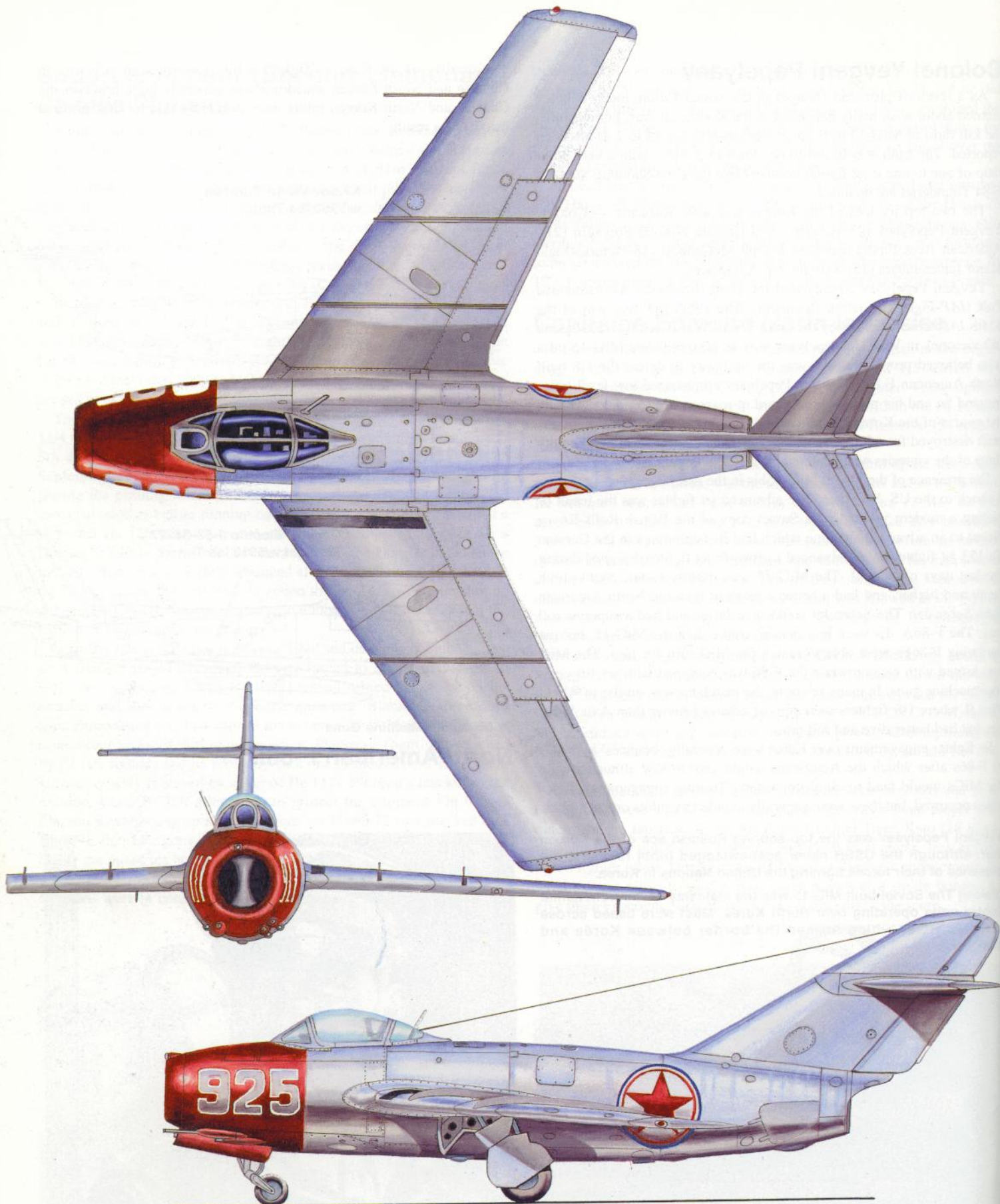
General Electric J-57-GE-27
Turbojet w/5910 lbs Thrust



6x.50 caliber Machine Guns

North American F-86F





Colonel Yevgeni Pepelyaev, the commander of the 196th IAP during late 1951, flew this MiG-15bis (925) during the Korean War. Pepelyaev's final score was 23 victories. The MiG-15bis was left in its natural metal state while the markings were red (FS 21310). All of the MiGs wore the North Korean Air Force insignia consisting of a red star encircled by red and blue rings.



High above the English Channel on 5 November 1940, Gerhard Schöpfel (20 victories), Staffelführer of 9/JG 26 has just shot up the Spitfire Mk II of George "Grumpy" Unwin (13 victories) of the Duxford Wing. Unwin dived away toward the English Channel where he

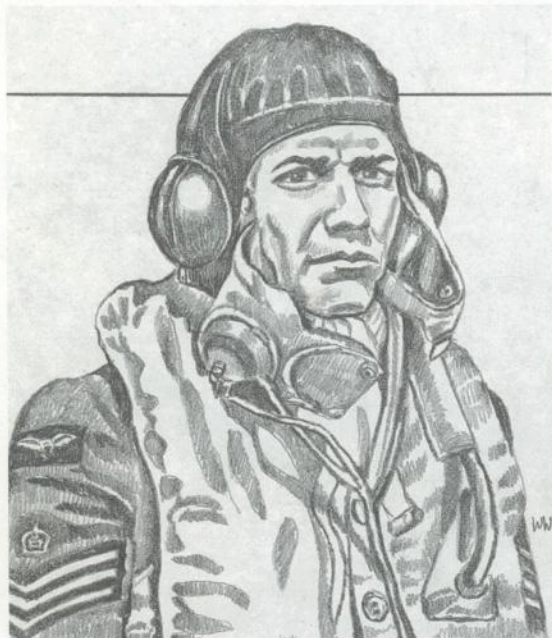
skimmed along the surface and crash-landed on the beach, unharmed. Schöpfel returned to his base in France in his Bf 109E-4 (Yellow 1).

British ace Flight Sergeant George Unwin is bounced over the English Channel by Oberleutnant Gerhard Schöpfel

On 5 November 1940 Flight Sergeant George 'Grumpy' Unwin and the Duxford Wing had just completed an engagement over the English Channel with the Bf 109s of the *Luftwaffe's* JG 51 and JG 26 when Unwin's lone Supermarine Spitfire II (P7427) was suddenly attacked by more Bf 109s from 9/JG 26 based at Caffiers, France. Unwin, who had already claimed a 'Heinkel He 113' fighter (actually a Bf 109E-3 of

5/JG 51), received a number of cannon hits from the Bf 109 flown by Gerhard Schöpfel, the *Staffelkapitän* of 9/JG 26. Unwin dived his heavily damaged Spitfire down through the clouds, skimmed low over the water, and finally crash-landed the stricken fighter on the beach just as the engine seized. George Unwin, an ace with 13 victories at the time, survived the battle. Unwin later became a fighter gunnery instructor, commanded a Mosquito squadron, and retired from the RAF as an Air Vice Marshall during the late 1950s.

Gerhard Schöpfel was an ace with 20 victories when he fatally damaged George Unwin's Spitfire. He ended the war as Kommodore of JG 6 with 40 victories. His Bf 109E-4 (yellow 1) carried the JG 26 Schlageter (Bruiser) Badge and the red Hollenhund (Hellhound) insignia.

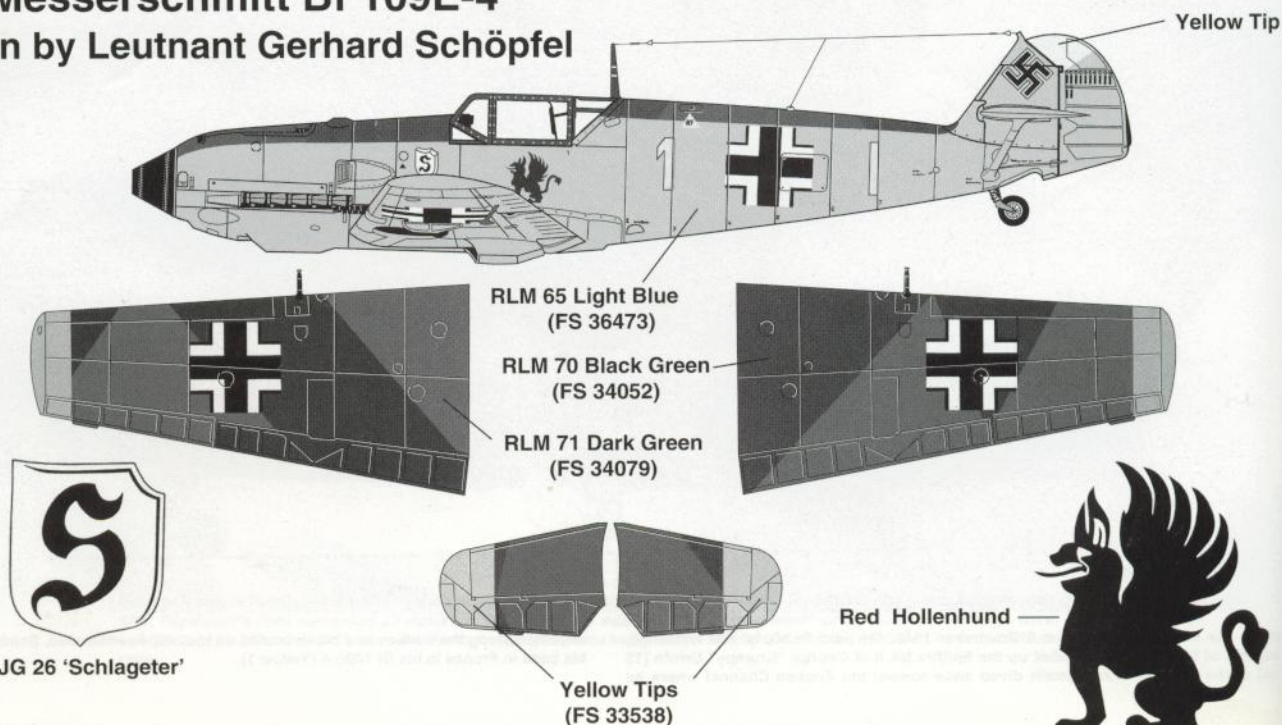


F/Sgt George Unwin



Gerhard Schöpfel, Adolph Galland, Joachim Müncheberg

Messerschmitt Bf 109E-4 Flown by Leutnant Gerhard Schöpfel



Colonel Gregory Boyington

Gregory Boyington left the Marine Corps to join the American Volunteer Group (Flying Tigers) in southern China. Boyington flew Curtiss P-40C fighters against the Ki.27 and Ki.43 *Hayabusa* fighters of the Japanese Army Air Forces over Burma and China. During his stay with the Flying Tigers, Boyington was unofficially credited with 6 aerial victories.

Following his tour with the American Volunteer Group, Boyington went back to the US Marine Corps and flew one tour on Grumman F4F Wildcat fighters with VMF (Marine Fighter Squadron) -211 on Guadalcanal. Boyington claimed no victories while serving with VMF-211.

Boyington was promoted to command VMF-214 and, at age 31, was considered old for a fighter pilot by his younger charges. The younger pilots called him 'Pappy'. He seemed to draw misfits from all over the Marine Corps and VMF-214 became known as the 'Black Sheep Squadron' of Vella Lavella Island. Even the squadron's fighters, the huge Vought F4U-1A Corsairs, were looked on as misfits due to their carrier qualification problems.



Despite the group's reputation, VMF-214 produced nine aces and cut a wide swath through the Japanese Army and Naval Air Forces around Rabaul. Boyington himself claimed five A6M Zeros on his first combat mission in the Corsair on 16 September 1943. Twelve Corsairs ended up in the middle of "about 40 Zeros" and Boyington exploded or flamed one after another until he was at sea level chasing one final target.

After this first melee, Boyington claimed three Zeros in one day on two other occasions. On 23 December 1943 he shot down another four Zeros. By 27 December 1943 Boyington brought his score to 25, just one short of Eddie Rickenbacker's World War I score of 26. On 3 January 1944 Boyington was missing in action and both he and his wingman were believed to have been shot down and killed. For what was believed to be his final battle, Boyington received a posthumous Medal of Honor. In reality Boyington had been found by the Japanese and spent the remainder of the war in prison camps in Japan. After the war, Boyington claimed another three Zeros shot down during his last battle for a total of 28 kills with the AVG and Marine Corps.

It seems that some aces have a wild streak. Gregory Boyington was known as a hell raiser with a drinking problem — similar to the Japanese ace Sada-aki Akamatsu (27+ victories), although he found his niche in cast-off units like the AVG and VMF-214. Boyington was a master of the fast (425 mph at 20,000 feet) F4U-1 Corsair which had the ability to allow pilots to enter or break off combat at will. The speed margin between the Corsair and the Zero was large, but pilots like Boyington could still not conduct turning engagements at low altitudes with the Zero. This could have been Boyington's undoing during his last battle.

Hiko Heisocho (W/O) Takeo Tanimizu

Takeo Tanimizu completed his pilot training in March of 1942 and was posted to the 6th *Kokutai* (Naval Air Group). Tanimizu served aboard the carriers *Kasuga Maru* and *Shokaku*. By November of 1943,

Tanimizu was in Rabaul — the fighter pilot's paradise.

Tanimizu intercepted and shot down two Lockheed P-38 Lightnings during his first combat — perhaps an indication of his future as a fighter pilot. He was then assigned to the Tainan *Kokutai* and was involved in constant air battles over Taiwan during a four month period. In November of 1943 a USAAF P-51 Mustang flamed his Zero off Amoy and the injured Tanimizu parachuted into the ocean. He was rescued, but spent considerable time in the hospital recovering from burns.

By the end of 1944 Tanimizu was back in Japan flying the Mitsubishi A6M5 Model 52 Zeros with the 203rd *Kokutai*. In 1945 Tanimizu participated in the fighting over Okinawa and Kyushu, the southernmost of the Japanese home islands, and finally ended the war at Usa Air Base with 18 kills.

Like most fighter pilots Tanimizu used the standard tactic of bouncing his targets from above, but also used the Zero's superior maneuverability to outmaneuver his opponents. Unlike many Japanese pilots, Tanimizu was a gifted pilot just to have survived the violent aerial action in a Zero fighter at the end of World War II.



Lt. Commander Hamilton McWhorter

Hamilton McWhorter attended the University of Georgia and joined the US Navy on 19 June 1941. After his flight training McWhorter was assigned to VF-9 at Naval Air Station Norfolk in February of 1942. He was later assigned to the carrier *Ranger* flying Grumman F4F Wildcat fighters during OPERATION TORCH — the invasion of northwest Africa in November of 1942. McWhorter took part in strafing operations against Vichy French destroyers at Casablanca, but claimed no aerial kills during the campaign. Following OPERATION TORCH, McWhorter and VF-9 were transferred to the new fleet carrier USS *Essex* for duty in the Pacific.

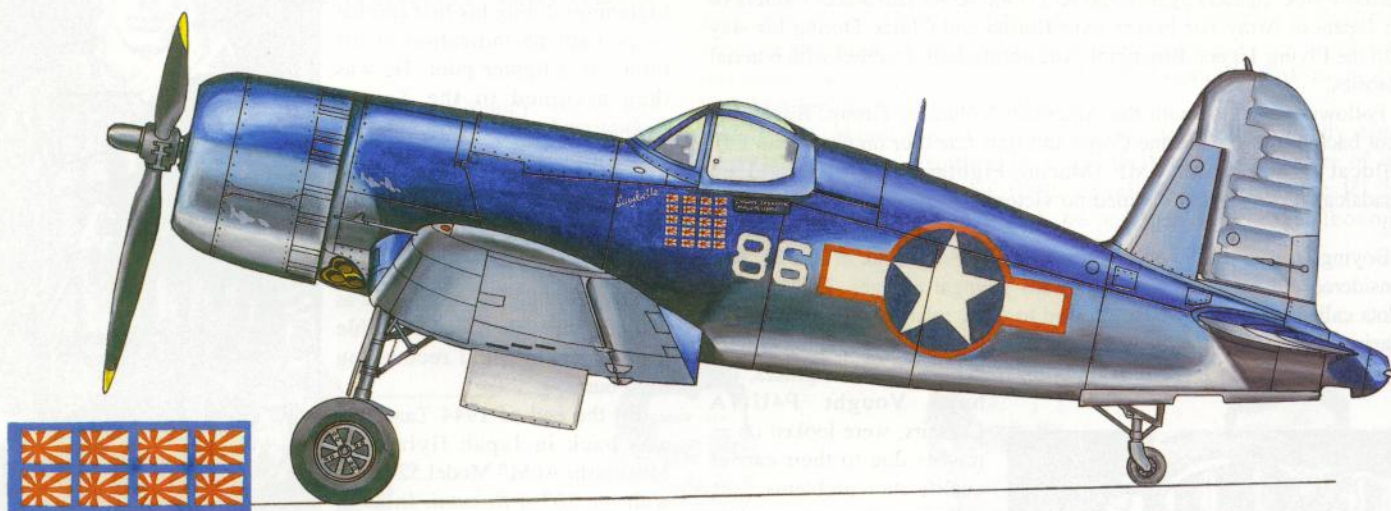
McWhorter, now flying the new Grumman F6F Hellcat, scored his first victory over a Zero on 5 October 1943 during a series of strikes on Wake Island. He was in action at Rabaul on 11 November when he escorted an anti-shipping strike to Simpson Harbor. On the return flight, McWhorter spotted an engagement between a large number of Japanese Zeros and some 12 F6F Hellcats. McWhorter immediately engaged and destroyed two Zeros before his own Hellcat was damaged, forcing his return to the *Essex*. McWhorter's tenth victory was scored over Truk Atoll on 17 February 1944.

In May of 1944 McWhorter was transferred to VF-12 aboard the carrier USS *Randolph*. McWhorter claimed his eleventh victory — a Zero — over Tokyo on 16 February 1945. His last kill, a Nakajima C6N *Myrt*, fell on 13 May 1945.

Hamilton McWhorter was the first Hellcat ace and the first double Hellcat ace. The F6F Hellcat was twice as heavy and over two times as powerful as the Zero. McWhorter used the tremendous diving ability of the heavy and powerful Hellcat to fly through Japanese formations, select and destroy a target, and then keep going. McWhorter ended the war with 12 victories.

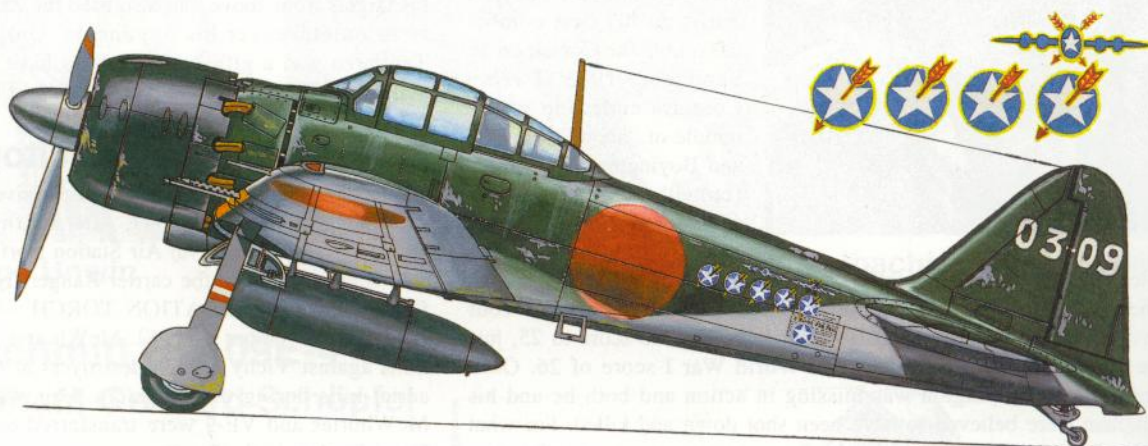
Major Gregory Boyington, the CO of VMF-214, flew an F4U-1A Corsair named *Lucybell* while based at Vella Lavella in December of 1943. Boyington had 20 kill markings painted on the fuselage at this time. His final score was six victories with the Flying Tigers in China

and 22 with the USMC. The Corsair was camouflaged in the standard mid-war US Navy scheme of non-specular sea blue (FS 35042) on the upper surfaces, intermediate blue (FS 35189) on the fuselage sides, and insignia white (FS 37875) on the under surfaces



Mitsubishi A6M5 Model 52 Zero (03-09) was flown by *Hiko Heisocho* (W/O) Takeo Tanimizu of the 203 *Kokutai*, Usa Base, Japan during 1945. The kill markings were assigned to the aircraft, not the pilot, and represent both fighter and four-engine bomber kills. At this time

Tanimizu had approximately 15 aerial victories. His final score was 18. The Zero is camouflaged in Mitsubishi dark green (FS 34062) on the upper surfaces with light gray (FS 36473) on the under surfaces. The cowling was blue-black (FS 35044).



F6F-5 (white 9) was flown by Lt Cdr Hamilton McWhorter of VF-12, USS *Randolph* in January of 1945. McWhorter's final score was twelve victories. The Hellcat is painted in the standard late-war US Navy camouflage of overall glossy sea blue (FS 35042) with insignia-white (FS 37875) markings.



Ki.84 Ko Hayate was flown by *Jun-i* (army warrant officer) Yojiro Obusa of the 50th *Hiko-sentai*, 1st *Chutai* at, at Phnom Penh Airfield, Cambodia in April 1945. The Hayate was camouflaged in one of the standard Japanese Army schemes of dark green (FS 34082) over light gray (FS 36492). The markings and insignia were medium red (FS 31105).



Jun-i (Army warrant officer) Yojiro Obusa

Yojiro Obusa began his military career as an infantry gunner during the Nomanhan Incident — the clash between Soviet and Japanese troops on the Manchurian border in 1938. Obusa entered pilot training in 1942 and was posted to the 50th *Sentai* (Army Air Group) in Burma in January of 1943. Obusa shot down a B-24 Liberator bomber on 24 November 1943, but his Ki.43 Kai *Hayabusa* (Peregrine Falcon) fighter was hit by return fire. The wounded Obusa bailed out of his burning Ki.43 and spent two months in the hospital before returning to combat. Obusa eventually became the top scoring pilot in the 50th *Sentai*, but was forced down at least four times by Allied fighters.

Yojiro Obusa consistently demonstrated that a lightly armed Nakajima Ki.43 *Hayabusa* fighter flown by a skilled and brave pilot could shoot down technically superior Mustangs, Thunderbolts and Spitfires. The Ki.43 *Hayabusa* was a light weight Japanese Army fighter equipped with a pair of nose mounted 12.7mm machine guns. The Ki.43 had a light wing loading which gave it exceptional maneuverability. Both the Ki.43 and the A6M2 Model 21 Zero used similar engines, but the Zero was almost 35 mph faster — mainly due to superior aerodynamics. The Ki.43 was maneuverable, but had a slow climb and roll rate. The *Hayabusa*'s light weight also meant that it could not match the diving speeds of contemporary Allied fighters. Obusa and his *Sentai* used tactics and terrain to lure Allied fighter pilots into slow, turning battles at low altitudes which negated the speed and diving advantages held by US and British fighters.

During late 1944 the 50th *Sentai* converted from the obsolete Ki.43 *Hayabusa* to the newer, more powerful Nakajima Ki.84 *Hayate* fighter. The late-war Nakajima design was a technically advanced fighter with a top speed of well over 400 mph (depending on fuel quality) and was armed with two to four 20mm cannon and two 12.7mm machine guns. The Ki.84 was a well-balanced design and had excellent dive, climb, and roll rates. In terms of performance, the *Hayate* was superior to the Hellcat, Corsair, and Thunderbolt; and was equal to the Mustang. Unfortunately, the design suffered from several manufacturing deficiencies which resulted in continual breakdowns and a low sortie rate com-

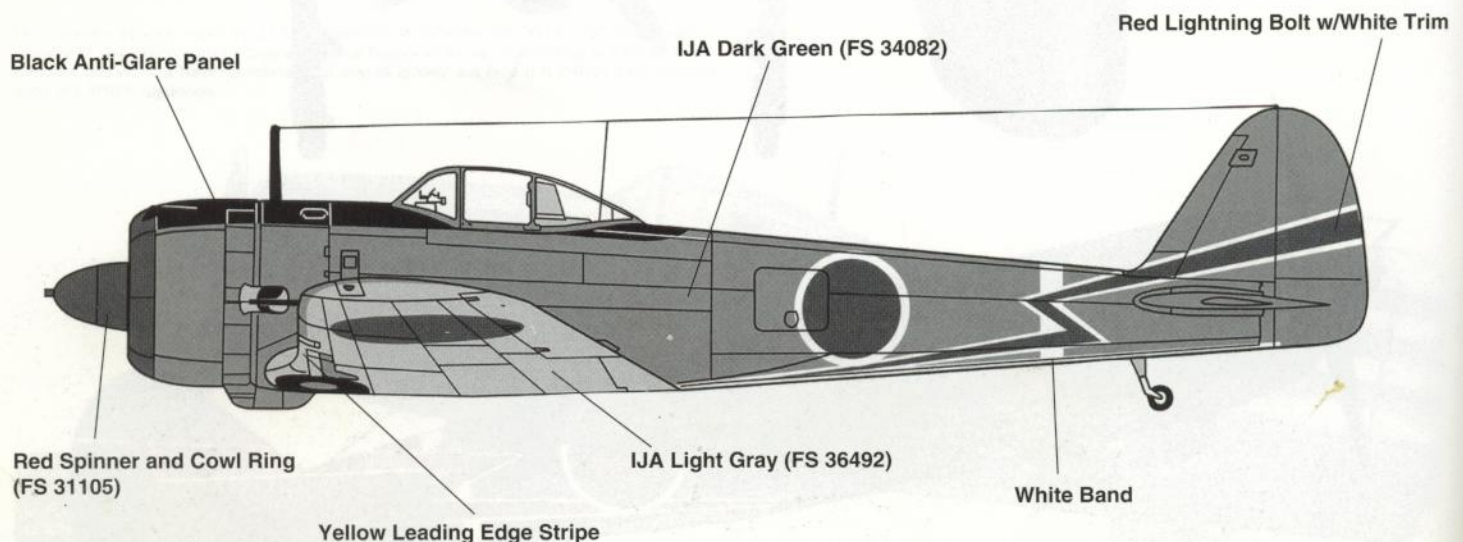
pared to other Japanese fighters. Nevertheless, high caliber Japanese fighter pilots such as Yojiro Obusa learned to use the *Hayate*'s superior performance to enter or break off combat at will — giving them a tactical advantage they had not enjoyed for almost two years.

Obusa was awarded the *Bukosho* medal (equivalent to the US Medal of Honor) on 10 June 1945 for attacking B-29 bombers — shooting one down and forcing the others to turn back short of their target. His score of 19 victories at the time of his award included five P-51 Mustangs, two P-47 Thunderbolts, four Hurricanes, one Spitfire, one B-24, and one B-29 heavy bomber. Obusa claimed a further 21 enemy aircraft damaged. He ended World War II flying the Ki.84 *Hayate* (Gale) with the 50th *Sentai* on Formosa.

Yojiro Obusa started his military career as an infantry machine gunner in 1938 and ended it flying the Imperial Japanese Army's best fighter — the Nakajima Ki.84 *Hayate* which the Allies designated *Frank*.



Nakajima Ki-43-II Hayabusa 50th Sentai, Burma, 1943



Sous Lieutenant Roger Sauvage

Few fighter pilots had an adventure like Roger Sauvage and other aces of the French Normandie-Nieman Regiment (named after sister cities in France and the USSR respectively). Sauvage began World War II flying heavy, twin engine fighters for the *Armée de l'Air* and ended it flying light single engine Yak-3 fighters on the Russian front. At the end of the war he was entertained by a grateful Joseph Stalin and sent home to France with his own fighter. *Sous Lieutenant* Roger Sauvage scored 16 victories during World War II.

Roger Sauvage was an air-minded young student who attended the Lycee Voltaire where he was a member of the *Group Aeronautique Universitaire*. He joined the *Armée de l'Air* in 1937 and flew twin-engine Potez 631 heavy fighters during 1939 and 1940. These fighters were much like the German Messerschmitt Bf 110 *Zerstörers* of the

Normandie-Nieman ace, Roger Sauvage sits in the cockpit of his Yak-3 fighter in Russia during the late spring of 1945.



Roger Sauvage flew Yak-3 (White 5) while assigned to the Normandie-Nieman Regiment on the eastern front. The aircraft was an improved version of the earlier Yak-1 which had been shot down

period. Sauvage managed to score two victories while flying the Potez 631 with *GC 1/5 Escadrille* during the Battle of France. He scored no further victories before France fell to the German Blitzkrieg in June of 1940. Sauvage languished in relative obscurity until late 1944 when he made his way to Moscow, Russia — answering General Charles DeGaul's call for Free French pilots to form a fighter regiment using Russian aircraft and equipment.

The French Normandie-Nieman Regiment had entered combat on the eastern front during March of 1943 using Russian supplied Yakovlev Yak-1 fighters. The Yak-1s were slower and cruder than the German Bf 109 and Fw 190 and almost 85 percent of the French pilots were killed in the fighting around Smolensk. The obsolete Yak-1s were replaced with new Yak-9s on 1 September 1943 and the French pilots — taking an instant liking to their new mounts — started to score victories. When Roger Sauvage arrived during October of 1944, the Normandie-Nieman Regiment was receiving Yak-3s, a fighter that was marginally better than Luftwaffe aircraft at the lower altitudes where most of the eastern front fighting took place. Sauvage was assigned to the regiment's *Rouen Escadrille* and claimed his first kill — a Focke Wulf Fw 190 — on 14 October 1944. Sauvage then shot down two Ju 87 Stuka dive bombers on 16 October 1944. He was promoted to *Sous Lieutenant* on 15 January 1945 and, perhaps to celebrate, claimed three Fw 190s on 17 January 1945 — his best day.

Sauvage was able to use his light and fast Yak-3 at low level to close on several Ju 87 Stuka dive bombers and Fw 190G-8 fighter-bombers that were trying to slow the Russian armored attacks on the Courland Pocket in East Prussia. These aircraft were flown by bomber pilots who offered little challenge to experienced fighter pilots. Sauvage is further believed to have shot down the German ace *Leutnant* Hans Beerenbrock (117 victories) in a swirling, low-level dogfight where the Sauvage's Yak-3 outperformed the German pilot's Bf 109G. Sauvage liked to turn with his opponents rather than engage them from a higher altitude — perhaps an example of using his fighter's strengths against his adversaries' weaknesses.

When the war ended the Normandie-Nieman Regiment was ordered to Moscow where it was treated to huge parties. A grateful Joseph Stalin sent them back to France with their Yak-3 fighters. On 19 June 1945 they arrive at Le Bourget Airfield outside Paris. Roger Sauvage remained in the *Armée de l'Air* and retired a *Capitaine*.

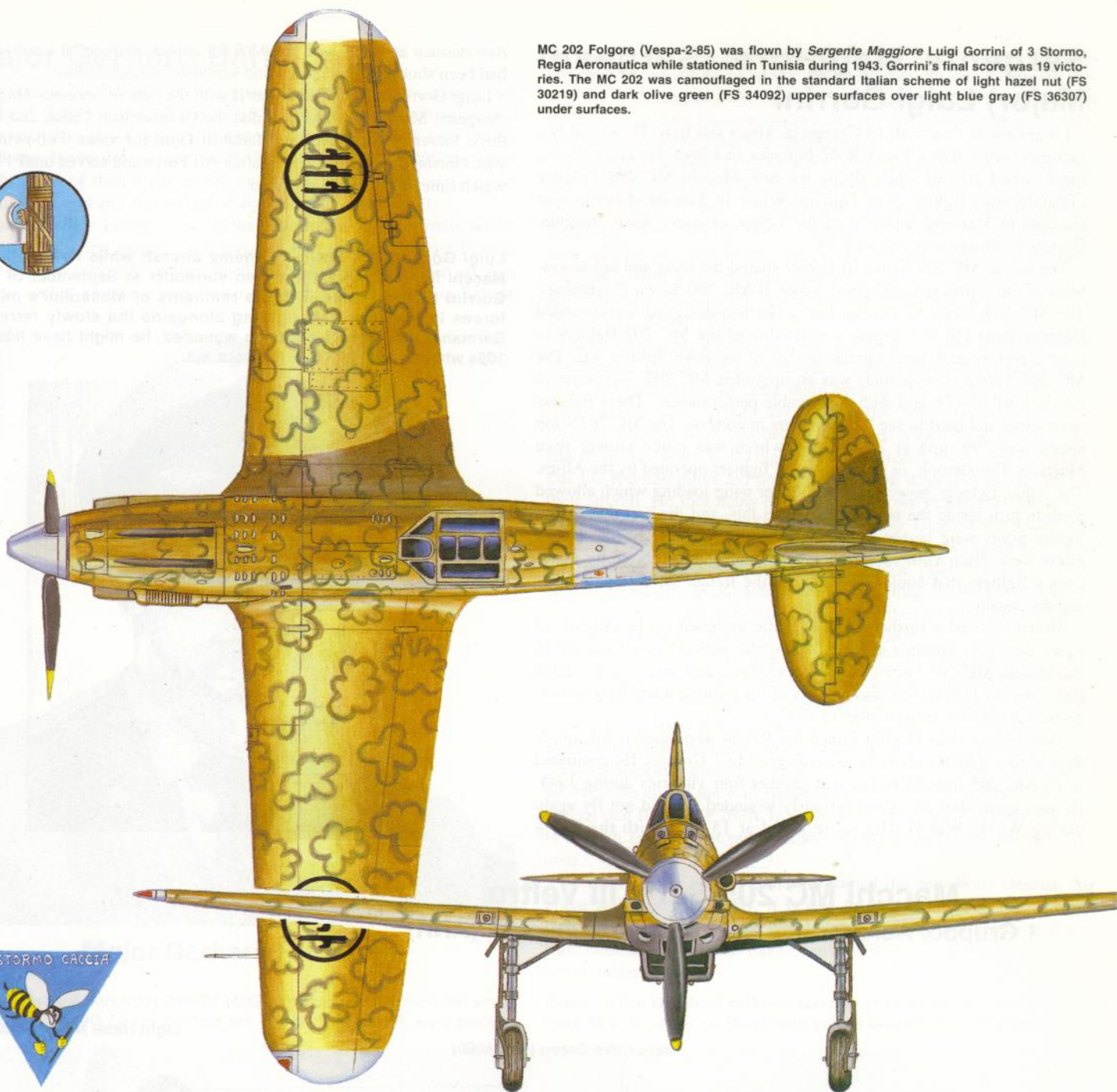
in droves by the Luftwaffe. The Yak-3, combined with more experienced pilots, served to even the odds of survival for both French and Russian fighter pilots.



Yak-3 (white 5) was flown by *Sous Lieutenant* Roger Sauvage of the Normandie-Nieman Groupe, 303 IAD, 1 VA on the German Baltic Coast in March of 1945. Sauvage's then current score of 14 (of a final 16) was painted on the upper fuselage behind the cockpit. The Yak-3 was camouflaged with medium gray (FS 36307) and gray (FS 36357) on the upper surfaces and light gray (FS 36622) on the under surfaces (Other sources state Sauvage's Yak-3 was camouflaged in a two-tone brown, however, black and white photos of the period show the fighter to be similar to that of Russian Major-General G. Zakharov which is known to have a two-tone gray scheme on the upper surfaces.)



MC 202 Folgore (Vespa-2-85) was flown by *Sergente Maggiore* Luigi Gorrini of 3 Stormo, Regia Aeronautica while stationed in Tunisia during 1943. Gorrini's final score was 19 victories. The MC 202 was camouflaged in the standard Italian scheme of light hazel nut (FS 30219) and dark olive green (FS 34092) upper surfaces over light blue gray (FS 36307) under surfaces.



3° Stormo



Crest of the House of Savoy

Sergente Maggiore (Sergeant Major) Luigi Gorrini

Luigi Gorrini flew with 18 Gruppo in Africa and Italy. He scored two victories while flying Fiat CR 42 biplanes in Libya. He claimed two more Allied aircraft while flying the new Macchi MC 202 *Folgore* (Thunderbolt) fighter over Tunisia. While in Tunisia, Gorrini was attached to 3 *Stormo* which used the *Vespa*, or angry wasp, insignia. Gorrini's call sign was 'Vespa 2-85'

The Italian MC 202 Serie III fighter shared the wing and tail assemblies of the earlier radial-engined Series II MC 200 *Saetta* (Lightning). The MC 202 flown by Gorrini had a German-designed liquid-cooled Daimler-Benz DB 601 engine which allowed the MC 202 fighters to have a performance level similar to that of the RAF Spitfire VB. The MC 205 *Veltro* (Greyhound) was an upgraded MC 202 — similar in size to a Bf 109G-6 and with comparable performance. These fighters were small and hard to see by opponents in combat. The MC 202's top speed was 399 mph at 23,000 feet which was much slower than Mustang, Thunderbolt, or Spitfire Mk IX fighters operated by the Allies. The Italian fighters, however, had a lighter wing loading which allowed them to turn inside the opposition. Given this, and the fact that Italian fighter pilots were taught to engage in a turning dogfight, the Italian pilots were often vulnerable to being bounced from above by faster enemy fighters that could dive through the Italian formations, climb, and dive again.

Gorrini scored a further 11 kills while assigned to the defense of Rome during the summer of 1943. During this period Gorrini was flying the Macchi MC 205 *Veltro*. He was shot down and seriously wounded following his 15th victory and was out of the fighting when Italy surrendered to the Allies in September of 1943.

During late 1943 Gorrini joined the Italian *Aeronautica Nazionale Repubblicana* (ANR) where he was assigned to 1 *Gruppo*. He continued to fly MC 205 fighters and scored another four victories during 1944. He was again shot down and seriously wounded and did not fly again during World War II. His score stood at 15 kills with the *Regia*

Aeronautica and four with the ANR for a total of 19 aerial victories. He had been shot down five times and seriously wounded twice.

Luigi Gorrini ended World War II with the rank of *Sergente Maggiore* (Sergeant Major) and was awarded the German Iron Cross, 2nd Class, three Silver Medals, and the Medal of Gold for valor. Following the war, Gorrini joined the rebuilt Italian Air Force and served until 1979 at which time he retired as an officer.

Luigi Gorrini shot down 19 enemy aircraft while flying Fiat and Macchi fighters. After the Italian surrender in September of 1943, Gorrini took up arms with the remnants of Mussolini's military forces in northern Italy fighting alongside the slowly retreating Germans. Had Gorrini not been wounded, he might have flown Bf 109s when the MC 205 fighters wore out.



Macchi MC 205 Serie III Veltro 1 Gruppo, Aeronautica Nazionale Repubblicana (ANR)



Major Gerhard Barkhorn

Major Gerhard Barkhorn began his fighter pilot career during the Battle of Britain in the summer of 1940. He had a less than successful introduction to aerial warfare. Barkhorn did not score any kills during the Battle, but he did provide two RAF Spitfire pilots with kill markings on the sides of their fighters. On one occasion he baled out over the English Channel and was picked up by a German rescue craft.

Barkhorn flew 120 missions on the western and eastern fronts before he scored his first victory — a Russian aircraft. (By contrast Francis Gabreski (28 victories) of the famed USAAF 56th Fighter Group flew fewer combat missions over the course of his entire career in Europe

during WW II.) Once Barkhorn gained a feel for flying and shooting, however, his scoring was steady and he reached his one hundredth victory on 19 December 1941. His best sortie came on 20 July 1942 when he shot down four Russian aircraft. By the end of November of 1943, Barkhorn's score had reached 200 victories.

Barkhorn flew with JG 52 for most of the war and, like Hermann Graf (212 victories), favored the Messerschmitt Bf 109F-4 with its engine-mounted MG 151 20mm cannon and its well-balanced maneuverability. Barkhorn often used the surprise bounce to his benefit in the Russian skies and he was able to be both aggressive and cautious — the latter attribute gained while fighting Spitfires over the English Channel. He did, however, occasionally enter turning fights with Russian fighters while flying the Bf 109F.

Barkhorn described aerial combat over the Russian Front as taking off and fighting enemy aircraft until out of gas or ammunition, returning to base, and then doing the same thing over again — perhaps as many as six or seven times in one day for months. Since both German and Russian airfields were just behind the lines, transit time was minimal and there was never a shortage of enemy aircraft. Barkhorn also stated that the Russian pilots did not appear to look behind or to the sides of their aircraft. He shot many of these pilots down before they knew they were under attack. A few Russian pilots, like Grigori Rechkalov (61 victories), were superb fighter pilots and Barkhorn once spent forty minutes in a long battle with an unknown Russian pilot flying a LaGG-3. Neither could gain an advantage against the other. By the LaGG's markings, Barkhorn felt the pilot was a member of a Guards Fighter Regiment where the Soviets put their best pilots.

Barkhorn's scoring rate was lower than that of some other *Jagdwaaffe* pilots. Following his 301st victory he was transferred to command JG 6, but scored no further victories. Barkhorn's score of 301 kills placed him behind Erich Hartmann (352 kills) as the number two ace of all time. Barkhorn was downed nine times in 1104 sorties. His fighters carried no personal markings except for his wife's name, Christl, beneath the cockpit. Near the end of the war, Barkhorn joined Adolph Galland's JV 44, a special unit flying Me 262A-1a jet fighters. A jet engine failure resulted in a crash landing that put Barkhorn in the hospital until the war was over.

After the war Gerhard Barkhorn joined the new West German Air Force and continued to fly. It is said that he once 'bent' a Kestrel jet fighter (a precursor to the Hawker/BAE Harrier) and muttered that it was 'number 302'. He did have a sense of humor after five long years of aerial warfare.

flaged in the standard mid-war scheme of RLM 74/75 upper surfaces over RLM 76 under surfaces with yellow eastern front ID markings.



Major Gerhard Barkhorn

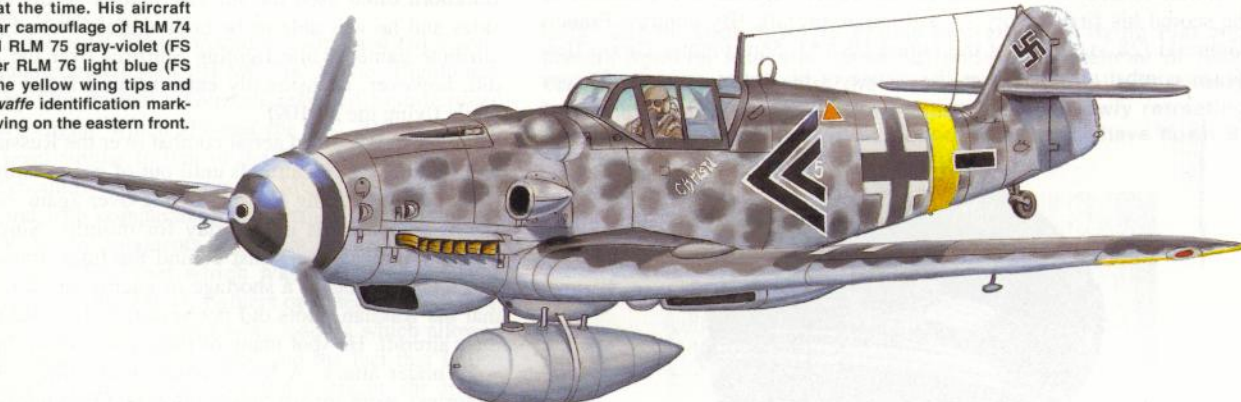
Major Gerhard Barkhorn flew Bf 109G-5 (black double chevron) while assigned to II/JG 52 on the Eastern Front. The aircraft was camou-





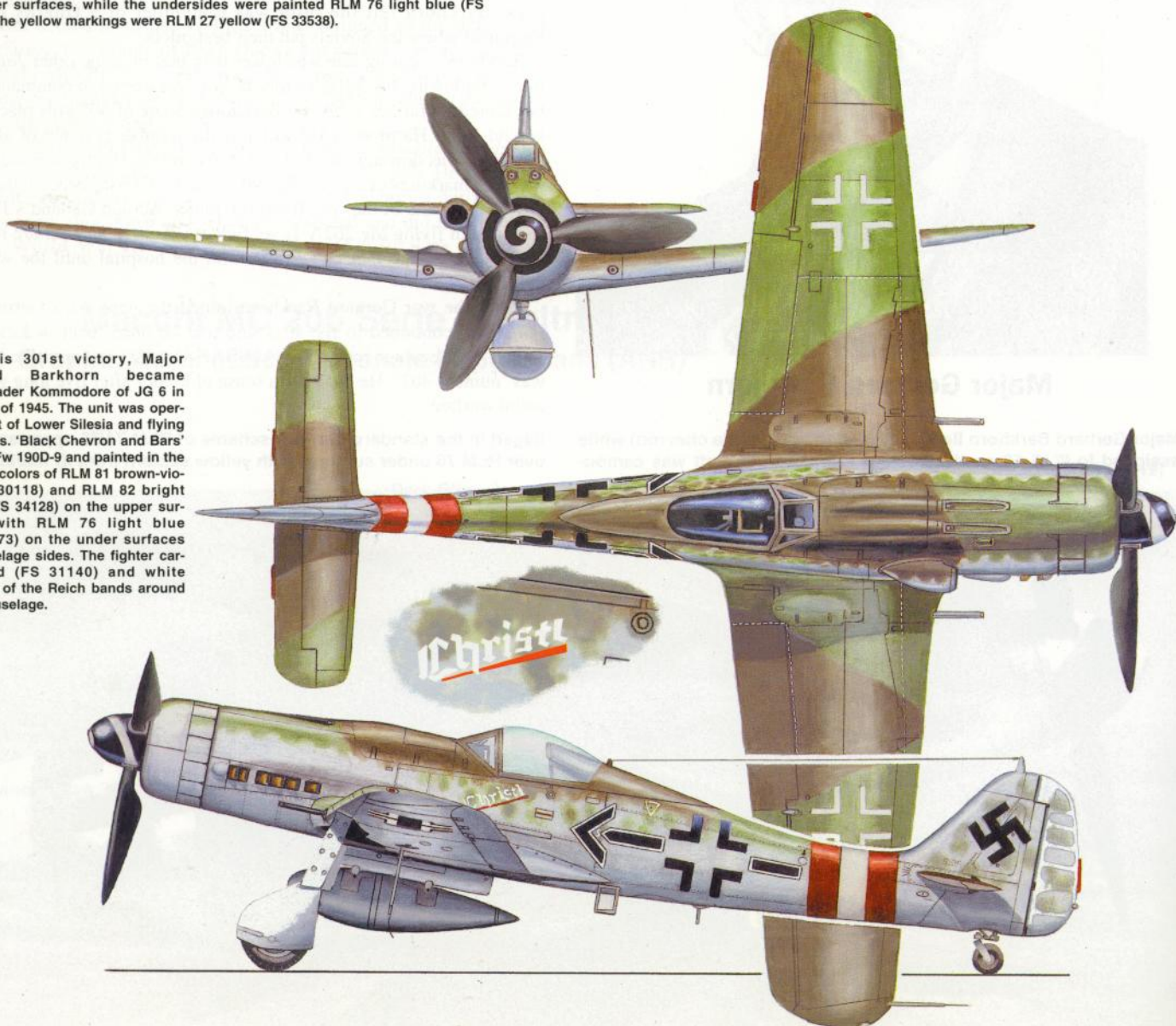
We congratulate (your) 250th Air Victory

Major Gerhard Barkhorn scored his 250th kill on 13 February 1944 while flying Bf 109G-5 (black chevron/triangle). Barkhorn was the *Gruppen Kommandeur* of II/JG52 at the time. His aircraft wears the standard mid-war camouflage of RLM 74 gray-green (FS 36081) and RLM 75 gray-violet (FS 36132) upper surfaces over RLM 76 light blue (FS 33437) under surfaces. The yellow wing tips and fuselage bands were *Luftwaffe* identification markings applied to aircraft serving on the eastern front.

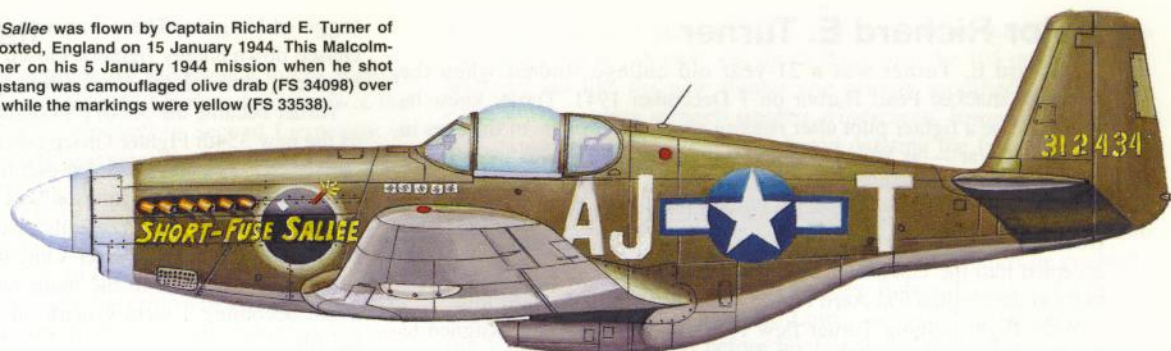


(Above) Bf 109G-5 (black Double Chevron) was flown by *Hauptman* (Captain) Gerhard Barkhorn, the *Kommandeur* of II/JG 52 in Russia during 1944. The Bf-109 was painted RLM 74 gray-green (FS 36081) and RLM 75 gray-violet (FS 36132) on the upper surfaces, while the undersides were painted RLM 76 light blue (FS 33437). The yellow markings were RLM 27 yellow (FS 33538).

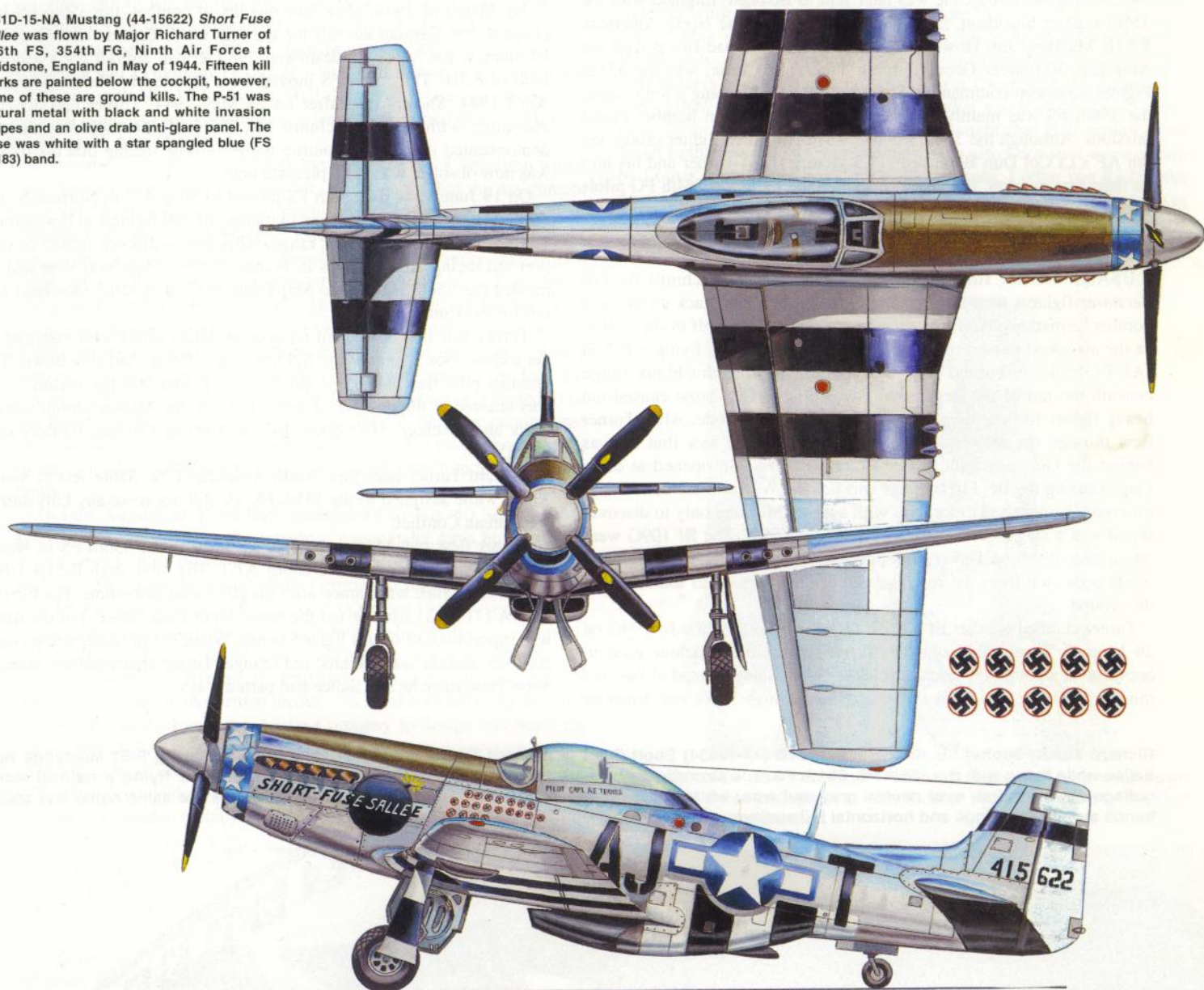
After his 301st victory, Major Gerhard Barkhorn became *Geschwader Kommodore* of JG 6 in January of 1945. The unit was operating out of Lower Silesia and flying Fw 190Ds. 'Black Chevron and Bars' was an Fw 190D-9 and painted in the late war colors of RLM 81 brown-violet (FS 30118) and RLM 82 bright green (FS 34128) on the upper surfaces with RLM 76 light blue (FS 36473) on the under surfaces and fuselage sides. The fighter carries red (FS 31140) and white Defense of the Reich bands around the aft fuselage.



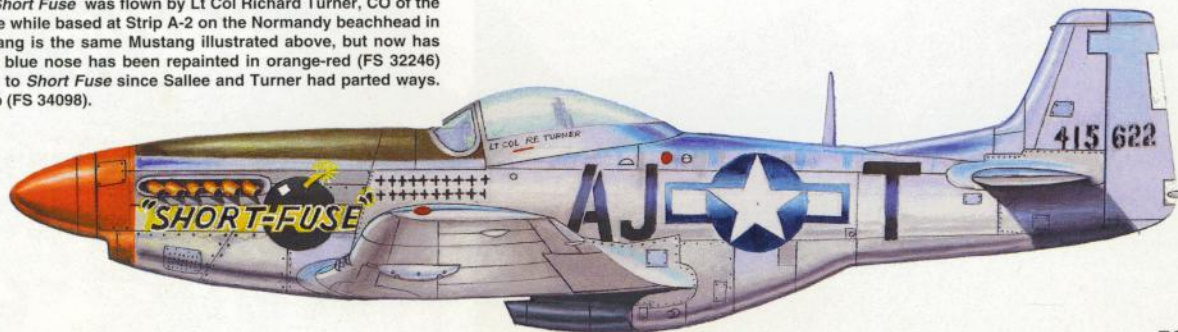
P-51B-1-NA Mustang (43-12434) *Short Fuse Sallee* was flown by Captain Richard E. Turner of the 356th FS, 354th FG, Ninth Air Force at Boxted, England on 15 January 1944. This Malcolm-hood equipped Mustang was flown by Turner on his 5 January 1944 mission when he shot down two Bf 110s and a stray Bf 109. The Mustang was camouflaged olive drab (FS 34098) over neutral gray (FS 36595). The nose was white, while the markings were yellow (FS 33538).



P-51D-15-NA Mustang (44-15622) *Short Fuse Sallee* was flown by Major Richard Turner of 356th FS, 354th FG, Ninth Air Force at Maidstone, England in May of 1944. Fifteen kill marks are painted below the cockpit, however, some of these are ground kills. The P-51 was natural metal with black and white invasion stripes and an olive drab anti-glare panel. The nose was white with a star spangled blue (FS 35183) band.



P-51D-15-NA Mustang (44-15622) *Short Fuse* was flown by Lt Col Richard Turner, CO of the 356th FS, 354th FG, Ninth Air Force while based at Strip A-2 on the Normandy beachhead in France on 5 July 1944. This Mustang is the same Mustang illustrated above, but now has different markings. The white and blue nose has been repainted in orange-red (FS 32246) and the name has been shortened to *Short Fuse* since Sallee and Turner had parted ways. The anti-glare panel was olive drab (FS 34098).



Major Richard E. Turner

Richard E. Turner was a 21-year old college student when the Japanese attacked Pearl Harbor on 7 December 1941. Turner knew he wanted to be a fighter pilot after reading about the exploits of the aces in The Great War — as WW I was known. Turner, along with some members of his college football team, tried to enlist in the British Royal Air Force (RAF), but ran into paperwork problems. He then tried to join the US Marine Corps, but the waiting lists were full. Turner was eventually accepted into the USAAF cadet pilot training program and was trained to fly at the civilian Cal-Aero Flying Academy in Chino, California.

After flight training Turner flew P-39s in Nevada while assigned to the 20th Fighter Group. He was later sent to Boxsted, England with the 356th Fighter Squadron, 354th FG where he flew the North American P-51B Mustang. Jim Howard (13.3 victories), who had flown with the American Volunteer Group (Flying Tigers) in China, was the 356th Fighter Squadron commander. Due to the P-51B Mustang's long range, the 356th FS was mainly assigned to deep penetration bomber escort missions. Although the 354th FG was a 9th Air Force fighter group, the 8th AF's Lt Col Don Blakeslee (11.5 victories) led Turner and his unit on their first mission. Blakeslee counseled the fledgling 354th FG pilots to always turn into an attack rather than away from it and Turner had ample opportunity to do just that.

On 5 January 1944, the 356th FS was positioned two miles in front of a USAAF bomber stream when twin engine Messerschmitt Bf 110 *Zerstörer* fighters were spotted lining up for a frontal attack on the lead bomber formations. Howard ordered each flight to peel off in succession as the squadron passed the oncoming Bf 110s. Turner, flying a P-51B (AJ-T), broke in behind a Bf 110 and closed to point-blank range beneath the tail of the large enemy fighter. His first burst caused the heavy fighter to light up along the fuselage and explode. After Turner flew through the Messerschmitt's ball of smoke he saw that he was behind the German flight leader's aircraft and again opened at close range causing the Bf 110 to erupt into flames. With two sudden kills to his credit Turner tried to form up with another Mustang only to discover that it was a single-engine Messerschmitt Bf 109G. The Bf 109G went into a steep dive and Turner promptly gave chase. The German fighter's wings separated from the fuselage and the Messerschmitt tumbled into the ground.

Turner claimed another Bf 110 on 11 January 1944 and a Bf 109G on 29 January. Turner had adjusted his six fifty caliber machine guns to converge at a point 100 yards in front of his Mustang instead of the customary 1500 feet. This was the reason for the high strike rate when he

triggered his guns. There was nothing subtle about Turner's tactics. He chased down enemy fighters, closed to point blank range, and shot them to pieces, although this was easier said than done.

Turner became the 356th FS commander when Jim Howard moved up as the new 354th Fighter Group commander. Turner was in the air again on 6 March 1944 on a bomber escort mission — known as a Ramrod — to Berlin. The bomber mission was aborted at the last minute, but the 356th FS pilots spotted contrails made by Bf 109 fighters. At the instant the Germans attacked Turner's engine quit because he had not switched from the drop tanks to his main fuel tanks. He had to slow down to avoid becoming a victory mark on a persistent German fighter pilot's tail fin.

By March of 1944, after four months of combat, the 356th FS had claimed 159 German aircraft for the loss of 47 fighters and 45 pilots. Ultimately, the 356th FS destroyed 298 German aircraft for a kill/loss ratio of 6.3/1. The 356th FS moved from Boxsted to Maidstone on 17 April 1944. Shortly thereafter on 28 May 1944, Turner had his first encounter with a Messerschmitt Me 262 jet fighter which promptly demonstrated its ability to outrun the P-51. The feeling that his fighter was now obsolete was not a pleasant one.

On 19 June 1944 the 356th FS moved to Strip A-2 in Normandy. On 30 June 1944 Turner shot down two more Bf 109 fighters at low altitude — once again at point blank range. After two additional moves to support advancing Allied troops in France, Turner's tour was over and he handed the 356th FS over to Maj Frank O'Connor (10.5 victories) and left for the United States.

Turner was one of a small number of Allied pilots who managed to get a close look at one of the fighters (a Bf 109) he had shot down. The German pilot had bailed out quickly and Turner saw the reason — he was amazed at the number of bullet holes in the Messerschmitt's wing roots and fuselage. His tactics had paid off in German fighters shot down.

Richard Turner later flew North American F-86 Sabre Jets at Seoul, Korea while assigned to the 335th FS. He did not score any kills during the Korean Conflict.

Turner flew two Mustangs while assigned to the 356th FS in World War II. Both were given the codes AJ-T. His olive drab P-51B-1-NA Short Fuse Sallee was named after his girl friend at the time. His P-51D-15-NA (414622) also carried the name Short Fuse Sallee, but the name was superimposed over a lighted bomb. When the invasion stripes were removed and the nose painted red-orange, Turner shortened the name to Short Fuse since he and Sallee had parted ways.

Richard Turner scored his first kills in P-51B (43-12434) Short Fuse Sallee while flying with the 356th FS, 354th FG. The aircraft was camouflaged in olive drab over neutral gray and wore white recognition bands around the wings and horizontal tail surfaces.

Richard Turner scored 11 victories while flying P-51 Mustangs with the 356th FS, 354th FG. He ended the war flying a natural metal P-51D (44-15622). All of his aircraft wore the same name and codes (AJ*T).



Captain Albert Ball

Albert Ball showed an early aptitude for mechanical things such as engines and electrical circuits. He joined the Sherwood Foresters at the outbreak of World War I and was promoted to Second Lieutenant in October of 1914. During the early summer of 1915 Ball took flying lessons at his own expense and, by February of 1915, was in France with No. 13 Squadron flying B.E.2c observation aircraft from Savy Airfield. During March and April of 1916, he was in constant action and often flew the squadron's Bristol Scout C single-seat fighters. This was the first British scout — as their early fighters were known — to have synchronization gear which allowed the fuselage-mounted Vickers machine gun to fire through the propeller arc. Ball claimed a German Albatros C type during May of 1916 while flying a Bristol Scout.

Ball was transferred to No. 11 Squadron in late May of 1916. No. 11 Squadron had a Nieuport 11 fighter which Ball flew at every opportunity. While with No. 11 Squadron, Ball destroyed a German observation balloon using incendiary bombs — a feat which earned him the Military Cross on 27 June 1916.

Following a period of leave, Ball was posted to No. 8 Squadron which also flew the two-seat B.E.2c aircraft. It is thought that the assignment may have been a form of punishment on the part of a British officer because Ball was "swell headed". Once Ball was reassigned to No. 11 Squadron, he soon established himself as the most successful British scout pilot at the time. He developed 'flock shoot' tactics similar to those later used by Helmut Wick (56 victories) during the Battle of France in World War II. Ball would dive his Nieuport scout into an enemy formation, scatter it and then fasten himself under the tail of a chosen enemy machine. He would then rake it with upward fire from his top wing-mounted Lewis machine gun. Ball's Nieuport was rigged to be tail-heavy which allowed some additional stability while he manipulated the machine gun. Ball attacked and escaped quickly using shock tactics to engage large formations — a tactic which allowed him to win consistently.

In late August of 1916 Ball transferred to No. 60 Squadron at Fiescamp, France, where the squadron commander gave him a roving commission to hunt down and destroy German aircraft. During his stay with this Squadron, he added more victories to his final score. By the time he was rotated back to England on 4 October 1916, Albert Ball had 31 German aircraft destroyed or forced down to his credit.

For a frustrating period of time, Ball was an instructor with No. 34 Squadron based at Orfordness, England. During this period, he was paraded as a hero by the British media — a label which the shy Ball did not like. He worked with the Austin Company to design and build the Austin/Ball A.F.B.1 Scout which, had it gone into production, might have been a more deadly and superior fighter than the S.E.5.

Ball's instructor days ended when he was posted to the new No. 56 Squadron at London Colney as the 'A' Flight commander. 56 Squadron was selected to receive the new S.E.5 fighter which was everything Ball's Nieuport 17 and 23 fighters were not. The S.E.5 was powered by a 150 hp Hispano V8 engine, whereas the Nieuport was powered by a 102 hp Le

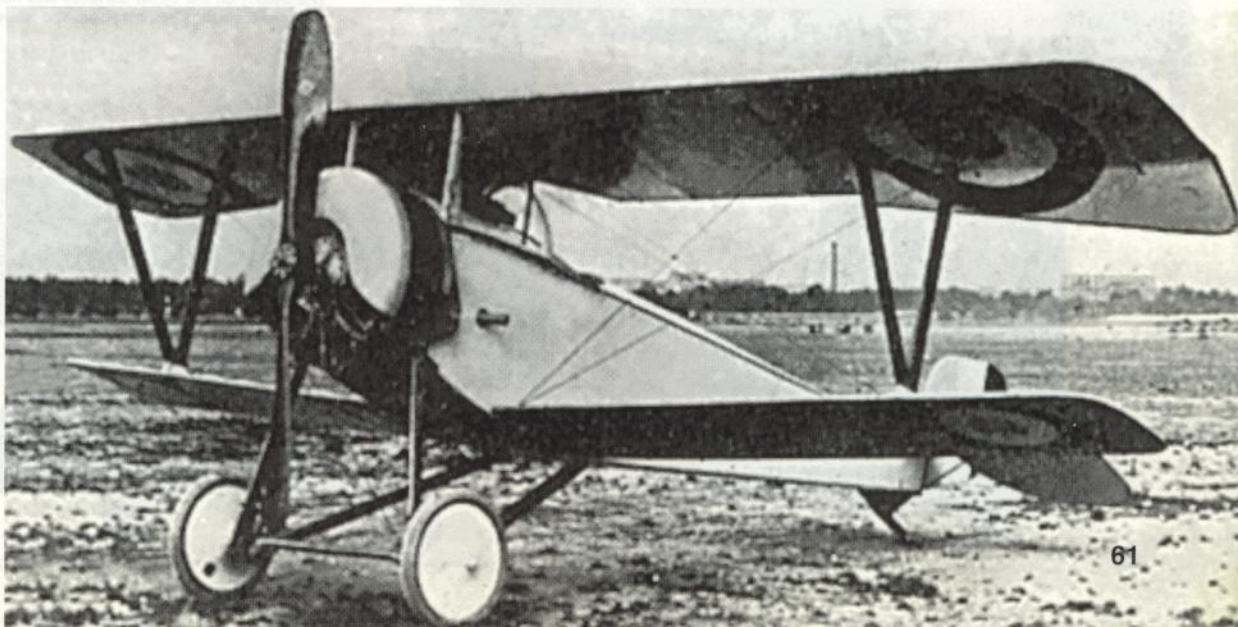
Rhone radial. The heavier S.E.5 was less maneuverable than the Nieuports, but at 138 mph was much faster than the 105 mph Nieuport. Ball did not like the new fighter and heavily modified his machine (A4850) by adding a much smaller windscreen, lowering the pilot's seat, removing the upper fuel tank and deleting the fuselage-mounted Vickers machine gun in an effort to reduce weight and improve maneuverability and top speed. When 56 Squadron arrived at Vert Galand, France, Ball had retained Nieuport 23 (B1522) which he flew on solo missions. It is said that Ball warmed up to the S.E.5 when he gradually developed better tactics to use with the new fighter. It is also said that he removed the upper wing-mounted Lewis gun and had the forward-firing Vickers gun re-fitted before his last flight. Ball scored at least 13 victories while flying with No. 56 Squadron.

On 7 May 1917, Ball led a patrol in his S.E.5 (A4850) over Cambrai-Douai, east of Lens, France. During a confusing battle with Albatros DIII fighters of JG 1 in cumulus clouds near Cambrai, Ball was mysteriously killed following a dogfight with Lothar von Richthofen (40 victories) — the Red Baron's brother. It is thought that Ball actually shot down Lothar von Richthofen and may have also been shot down in turn by Lothar or spun into ground for other reasons. Lothar von Richthofen was given credit for the kill by the German Air Service. At the time of his death, Albert Ball had 44 victories and Lothar von Richthofen could well have been number 45.



(Above) Albert Ball claimed 44 victories before he was shot down and killed in an engagement with Lothar von Richthofen — the Red Baron's younger brother.

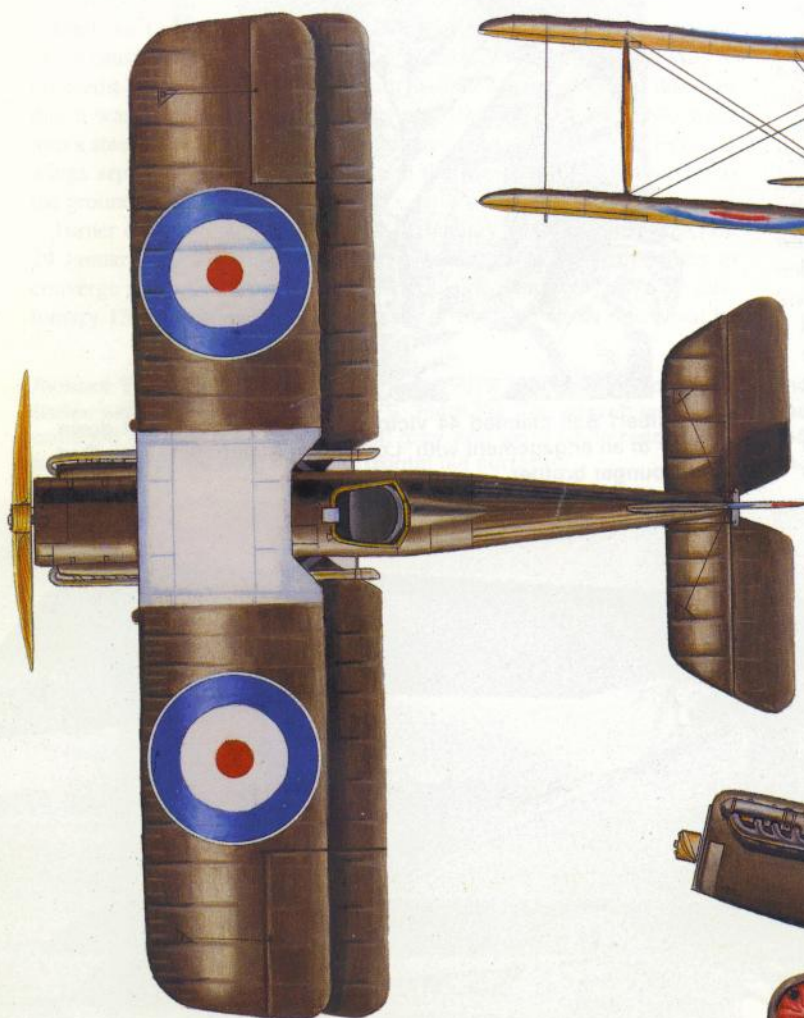
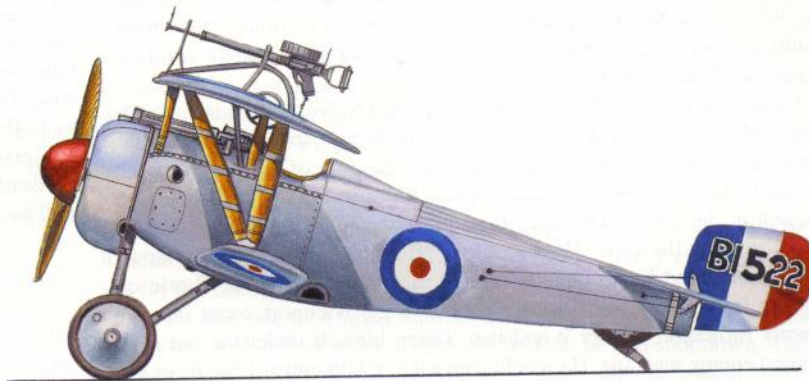
(Right) The French-built Nieuport 11, along with the British DH 2 pusher fighter, ended the Fokker Eindekker's reign as the premier fighter in the skies of WW I. The light and nimble Nieuport was equipped with a rotary engine and mounted a single machine gun on the upper wing.



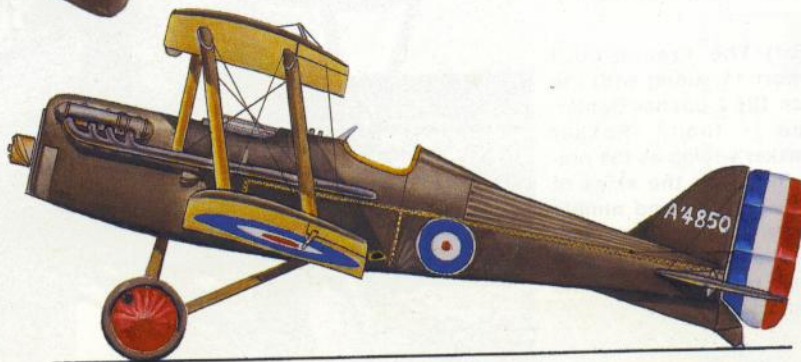
This Bristol Scout D (5313) was flown by Second Lieutenant Albert Ball of No. 13 Squadron RFC, Savy Airfield, France on 5 May 1916. Ball nearly shot the propeller off this aircraft while on lone patrol over the German lines. The Scout had a paint scheme consisting of clear doped natural fabric (FS 33717) and a natural metal cowl.



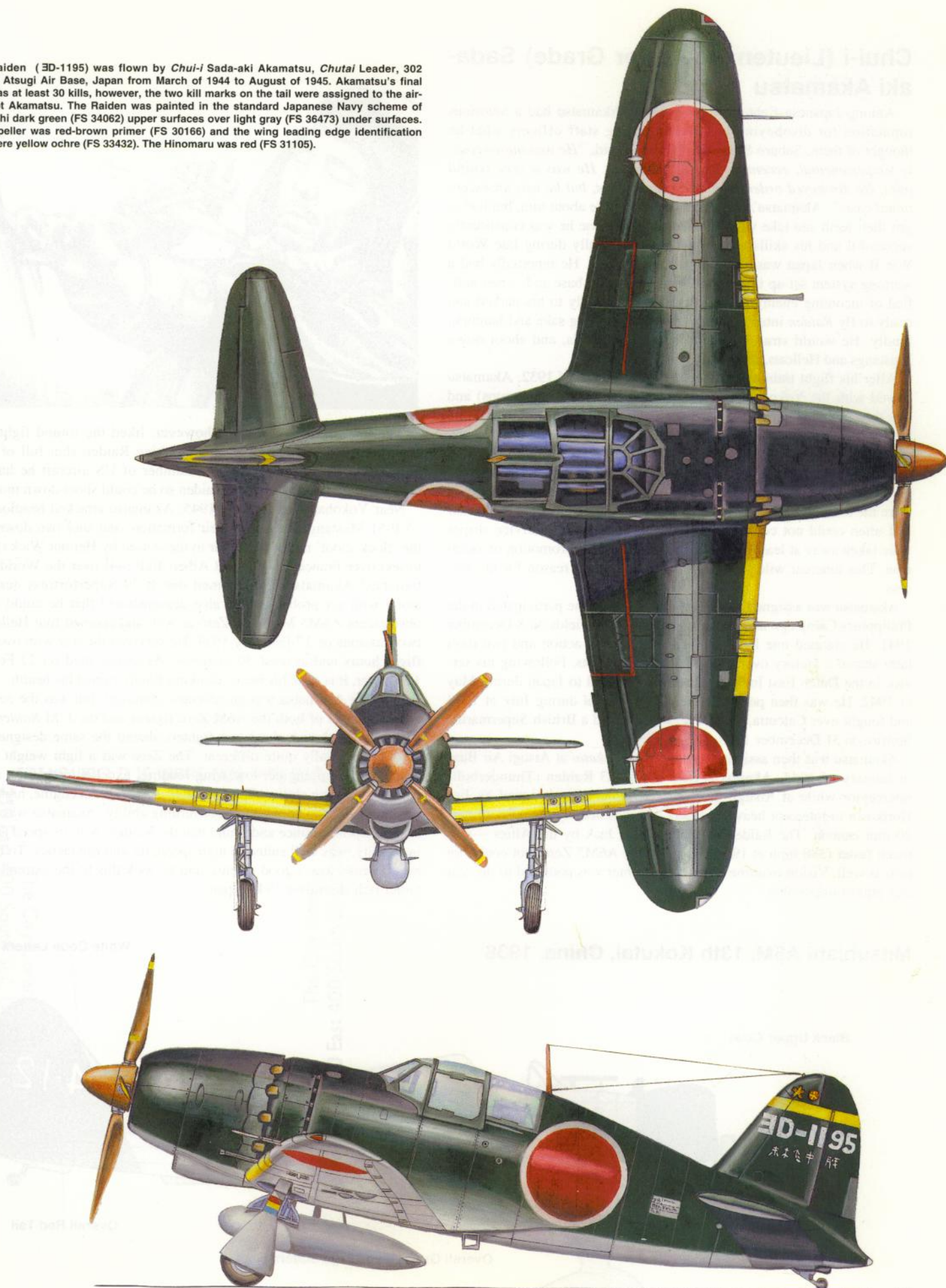
Capt Albert Ball flew this Nieuport 23 (B1522) while assigned to No. 56 Squadron RFC, Vert Galand France on 6 May 1917. He flew this Nieuport scout even while commanding 'A' Flight of the S.E.5 equipped squadron. Ball scored his last victory, an Albatros DIII, while flying this aircraft. The next day he was killed in action. The Nieuport was doped overall blue gray (FS 35526), while the cowling was left natural metal.



This S.E.5 (A4850) was flown by Captain Albert Ball of No. 56 Squadron RFC, Vert Galand, France on 7 May 1917. Captain Ball had the Lewis gun removed from the top wing shortly before his last flight, but retained the fuselage mounted Vickers gun. Ball's final score was 44 victories. The S.E.5 wore a scheme of British Khaki (FS 34031) on the upper surfaces and natural fabric (FS 33717) on the lower surfaces of the wings and fuselage. The wheel covers were red (FS 31136).



J2M3 Raiden (3D-1195) was flown by *Chui-i Sada-aki Akamatsu*, *Chutai Leader*, 302 *Kokutai*, Atsugi Air Base, Japan from March of 1944 to August of 1945. Akamatsu's final score was at least 30 kills, however, the two kill marks on the tail were assigned to the aircraft, not Akamatsu. The Raiden was painted in the standard Japanese Navy scheme of Mitsubishi dark green (FS 34062) upper surfaces over light gray (FS 36473) under surfaces. The propeller was red-brown primer (FS 30166) and the wing leading edge identification strips were yellow ochre (FS 33432). The Hinomaru was red (FS 31105).



Chui-i (Lieutenant Junior Grade) Sada-aki Akamatsu

Among Japanese fighter pilots, Sada-aki Akamatsu had a notorious reputation for disobeying orders and telling staff officers what he thought of them. Saburo Sakai (64 victories) said, "*He was outrageously temperamental, eccentric, and quite violent. He was a very skillful pilot. He disobeyed orders and misbehaved a lot, but he was an exceptional case.*" Akamatsu's superiors could do little about him, but had to grit their teeth and take what he dished out because he was consistently successful and his skills were needed — especially during late World War II when Japan was under constant air attack. He reportedly had a warning system set up in a brothel near Atsugi air base and, when notified of incoming enemy aircraft, would drive wildly to his parked and ready to fly *Raiden* interceptor all the while drinking sake and laughing loudly. He would strap in, roar off into the clouds, and shoot down Mustangs and Hellcats, seemingly with ease.

After his flight training was completed in March of 1932, Akamatsu served with the Yokosuka and Omura *Kokutai* (naval air groups) and was then assigned to the aircraft carriers *Akagi*, *Ryujo*, and *Kaga*. While with the 13th *Kokutai* in China, Akamatsu shot down four Chinese aircraft over Nanking on 25 February 1938. He is credited with shooting down 11 aircraft during the fighting in China and became a war hero for his deeds. He said that his self confidence and severe flight training were the reasons for his success. However, he was also a heavy drinker and often could not control his temper or his fists. His service stripes were taken away at least once and he failed to make promotion on occasion. This inherent wild streak was perhaps another reason for his success.

Akamatsu was assigned to the 3rd *Kokutai* when he participated in the Philippines Campaign and attacked Iba and Clark Fields on 8 December 1941. He claimed one P-40 damaged during this action and two days later shared a victory over Manila with other pilots. Following his service in the Dutch East Indies, Akamatsu returned to Japan during May of 1942. He was then posted to the 331st *Kokutai* during July of 1943 and fought over Calcutta, India where he claimed a British Supermarine Spitfire on 31 December 1943.

Akamatsu was then assigned to the 302nd *Kokutai* at Atsugi Air Base in January of 1944. Akamatsu flew the J2M3 *Raiden* (Thunderbolt) interceptor while at Atsugi. This stubby fighter was designed by Jiro Horikoshi to intercept heavy bombers and was heavily armed with four 20 mm cannon. The *Raiden* — code named Jack by the Allies — was much faster (380 mph at 19,360 ft.) than the A6M5 Zero, but could not turn as well. Vision over the nose of the fighter was poor and to the rear was almost impossible.

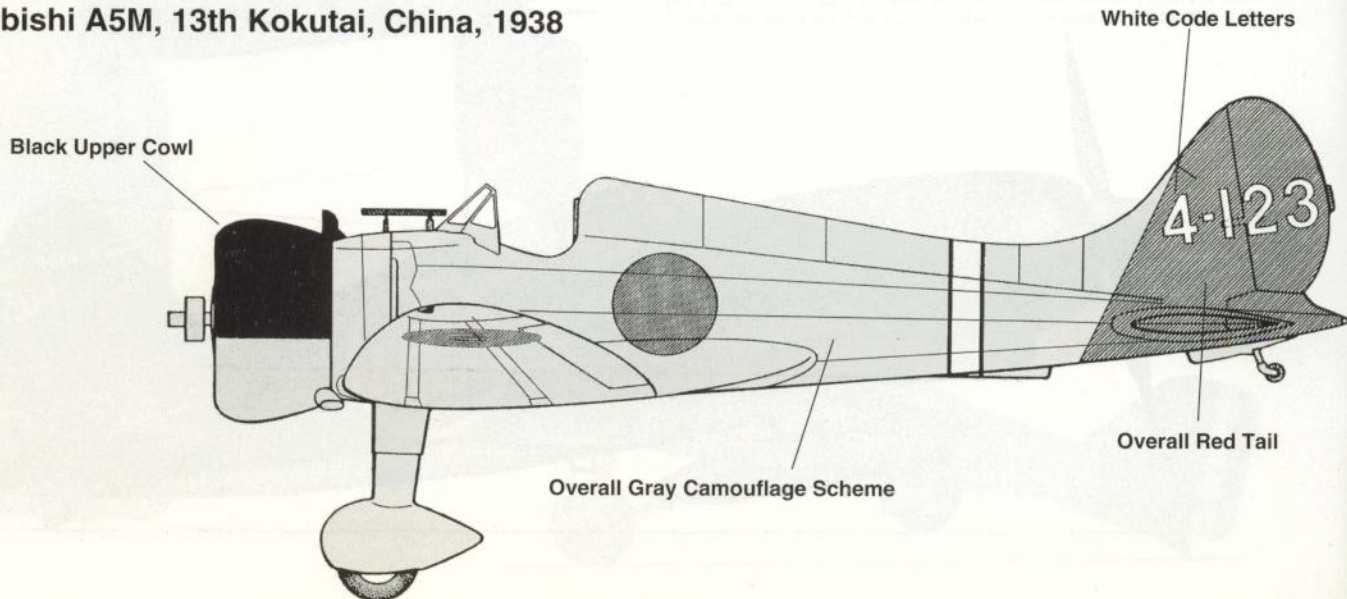


The incorrigible Akamatsu, however, liked the rotund fighter and often returned to Atsugi with his smoking *Raiden* shot full of holes holding up fingers to signify the number of US aircraft he had shot down, and demanding another *Raiden* so he could shoot down more.

Near Yokohama on 29 May 1945, Akamatsu attacked headlong into 75 P-51 Mustangs, broke up their formation, and shot two down using the 'flock shoot' methods similar to those used by Helmut Wick (56 victories) over France in 1940 and Albert Ball (44) over the World War I trenches! Akamatsu also claimed one B-29 Superfortress destroyed along with six probables. He also demonstrated that he could fly the obsolescent A6M5 Model 52 Zero as well and claimed four Hellcats on two missions on 17 February 1945. He survived the war with over 800 flight hours and at least 30 victories. Akamatsu died on 22 February 1980 after, it is said, his heavy drinking finally ruined his health.

Sada-aki Akamatsu was an eccentric character, but was the complete tactical master of both the A6M Zero fighter and the J2M *Raiden* interceptor. Even though these two fighters shared the same designer, they were conceptually quite different. The Zero was a light weight fighter with a 1130 hp engine, low wing-loading, excellent climbing ability and good turning ability. The *Raiden* had an 1820 hp engine, high wing-loading, good top speed, but poor turning ability. Akamatsu was master of the surprise bounce and found that the *Raiden*, with its speed and diving ability, was well suited to high speed, hit and run tactics. To him the best defense was a good offense and he took this to the extreme in the target-rich skies over 1945 Japan.

Mitsubishi A5M, 13th Kokutai, China, 1938





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