IMAGES OF WAR

THE EASTERN FRONT AIR WAR 1941 – 1945

RARE PHOTOGRAPHS FROM WARTIME ARCHIVES

ANTHONY TUCKER-JONES

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This Soviet wheels-up I-16 fighter, its propeller blades all bent out of shape, gets the once-over by a curious German soldier. It was possible for a pilot to survive such a heavy landing and live to fight another day.

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Anthony Tucker-Jones

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Introduction

In the summer of 1941 Stalin's forward defence strategy saw units of the Red Air Force operating from airfields in Soviet-occupied Eastern Poland as well as Western Byelorussia and Ukraine. These included about 7,300 aircraft that were guarding against the threat posed by the Wehrmacht's close proximity in neighbouring Western Poland as well as Hitler's Hungarian and Romanian allies.

Stalin chose to ignore all the warning signs and the ill-prepared Red Air Force paid the price. Air attacks on sixty-six frontier airfields on Sunday, 22 June 1941 heralded Adolf Hitler's titanic assault on Joseph Stalin' Soviet Union, with the result that the Red Air Force was swiftly and efficiently crushed largely still on the ground. The first few days of the war ensured the almost complete destruction of the Red Air Force and left the Red Army at the mercy of the Luftwaffe and Hitler's panzers.

When the time came the Luftwaffe struck – sirens screaming, guns blazing, and bombs whistling from the sky. Some 550 Luftwaffe bombers and 480 fighters were involved in the opening air strikes of Operation Barbarossa. Hitler's strike force also included an additional 300 Stuka dive-bombers from Luftflotten 1, 2 and 4. The dreaded Stuka had made its name as a terror weapon during the Polish campaign in 1939 and, while it enjoyed air superiority, was invincible.

Within the space of five months following Barbarossa the Red Air Force had lost more than 21,000 aircraft in the face of the Luftwaffe's deadly onslaught. Like the Red Army, the Air Force was sent reeling, battered and bleeding. Whilst many of its bombers escaped the opening attacks its fighter force was so severely depleted it seemed at breaking point. Luckily, as many of the fighters were destroyed on the ground, the pilots lived to fight another day. The Soviet Union's cities also felt the wrath of the Luftwaffe; thousands of buildings were shattered into rubble by a steady stream of high explosives delivered by Hitler's Heinkel and Junkers bombers.

The subsequent four-year air war over Russia, or, more precisely, the Soviet Union, is a much neglected aspect of the conflict on the Eastern Front. In particular, it is not generally appreciated that Hitler's strategic blunders in seeking to defeat Stalin were compounded by the inadequacy of his tactical bombers and the needless destruction of his transport fleet. In terms of the conflict in the air the focus of the Second World War has always been on the Battle of Britain, the strategic bomber campaign against Germany, the air campaign supporting the Normandy

invasion and the efforts to counter Hitler's V-rockets. The air war on the Eastern Front was no less intense and saw pilots and aircrews on both sides engaged in a deadly duel across vast distances stretching from Leningrad in the far north to the Crimea in the south.

A technological arms race had been taking place throughout the 1930s, which was one that the Soviet Union initially lost. The Soviet aviation design bureaus of MiG, Sukhoi and Yak sought to develop high-speed and agile fighter and interceptor aircraft on a par with those being built in Western Europe. Design flaws and teething problems greatly delayed this process and meant that the bulk of the Soviet Air Force's fighter units were equipped with the obsolete Polikarpov biplanes and monoplanes. These proved incapable of keeping the Luftwaffe at bay.

In addition, in keeping with Stalin's deep mistrust of the Soviet armed forces, he viewed the senior leadership of the air and air defence forces as a serious threat to his power. In consequence they were not spared the purges that afflicted and debilitated the Red Army on the eve of the war. The Red Air Force, in the guise of Stalin's Falcons, and the Luftwaffe, in the shape of Hitler's Condor Legion, gained invaluable combat experience during the Spanish Civil War. Whereas the Luftwaffe's Spanish veterans soon rose through the ranks, Stalin rewarded his Falcons by purging them just before Hitler's invasion. Many of the leading aviation designers and engineers suffered a similar fate. Hampered by poor aircraft, poor training and a dispirited leadership, the Red Air Force proved to be a paper tiger.

In sharp contrast, by the summer of 1941 Hitler's Luftwaffe was riding high thanks to the invaluable experience it had gained supporting the Wehrmacht's hugely successful blitzkrieg in the West. In addition, the Luftwaffe was able to draw on the experience of the German Condor Legion, which had fought for Franco's Nationalists during the Spanish Civil War. Even though the Battle of Britain in the summer of 1940 had provided a wake-up call for the Luftwaffe's deficiencies it was quick to learn from its mistakes, improving its tactics and aircraft.

Thanks to all this, the Messerschmitt Bf 109 developed into a highly proficient fighter and the equally formidable Focke-Wulf Fw 190 was waiting in the wings to join it. Similarly, although Hitler ignored any need for a strategic bomber force, his tactical bombers and dive-bombers gave him a first strike capability that overwhelmed both the Red Air Force and the Red Army in much the same way that he had crushed the French armed forces in May 1940.

In the long term, Hitler's failure to develop a strategic bomber force was to contribute to his downfall on the Eastern Front. Once the Soviets had miraculously evacuated their vital weapon factories east of the Ural Mountains, the Luftwaffe had little means of reaching them. This meant that Hitler was faced with a production war he could not ultimately win. Once the Soviet armed forces began to revitalize

and rearm themselves he was faced with a war of attrition that he did not have the resources to fight.

In the West, following Hitler's invasion of the Soviet Union the British and American bomber fleets began to pound his weapons factories with variable accuracy and poor results. Ironically, German output reached an all-time high in 1944. However, the Luftwaffe was increasingly distracted from the fighting on the Eastern Front, first by the Allies' invasion of Italy and Normandy, but mostly because its pilots were forced to fight a defensive war over Germany. The net result was that the Luftwaffe was bled dry on the Eastern Front and was unable to help more than one German Army group at any one time. This in turn impacted on the Luftwaffe's ability to protect its vulnerable air transport fleet, which was conducting ever riskier resupply and casualty evacuation over enormous distances.

Conditions for the pilots and aircrews were appalling in comparison to those in North Africa, the Mediterranean and Western Europe. Fighting on the ground was bad enough, with endless hardship caused by the unforgiving Soviet landscape and the often terrible weather. In the air the danger was greatly magnified and the harsh Russian winter made flying particularly hazardous. The cold added to the hazards endured by both the Luftwaffe and the Red Air Force. Icing caused innumerable accidents both on the ground and in the air. In particular, there was a lack of protective insulation, engines had to be serviced more regularly, hydraulic systems and tyres deteriorated quickly and there was little in the way of special lubricants. During the Battle of Moscow the Red Air Force's pilots were vastly better prepared to cope with the winter conditions than their German counterparts as they had grown up with them.

The Red Air Force was well aware of the dangers posed by the weather, especially after it lost one of its leading test pilots. Highly experienced Valery Chkalov was killed in the winter of 1938 thanks to the engine of his aircraft cutting out as he was coming in to land. Attempting a wheels-up landing, a wing tip brushed the ground and the aircraft cartwheeled. Chkalov was thrown from the cockpit, struck his head and died shortly afterwards. Before take-off he had been warned that the aircraft's engine had not been protected against the frost the previous night, but he decided to gamble with his life and paid the price.

Fortunately for Stalin, the Red Air Force, like the Red Army, not only survived its terrible mauling in 1941–42 but slowly began to recover. Relocated Soviet aviation factories started to churn out ever-growing numbers of fighters, dive-bombers and bombers, while new crews were trained and gained valuable experience.

Whilst the Red Air Force was recovering from the devastating blow from Barbarossa, as well as defending Moscow, Leningrad and Stalingrad the Luftwaffe scored a significant pyrrhic victory at Demyansk. This proved to be the Luftwaffe's

undoing on the Eastern Front. In a quite remarkable operation lasting three months, the Luftwaffe maintained an air bridge sustaining 100,000 trapped troops until they were rescued. Convinced that such a heroic feat could be repeated on a grander scale, a year later Hitler ordered the Luftwaffe to supply 250,000 men surrounded in the Russian city of Stalingrad. It was a task too great.

Emboldened by the victory at Stalingrad and a growing confidence the Red Air Force tried to pre-empt Hitler's summer offensive at Kursk. Soviet bombers almost caught the Luftwaffe on its airfields around Kharkov; instead, the Luftwaffe's radar saved them at the eleventh hour and the attacking force, in what was one of the largest air battles of the war, was comprehensively destroyed. This defeat mattered little as the subsequent Battle of Kursk proved to be the Luftwaffe's last major operation on the Eastern Front. The final turning point in the air war over the Soviet Union came in the summer of 1944, when Stalin's massed air fleets supporting the liberation of Byelorussia swept the weakened Luftwaffe before them. From that point on, the Red Air Force harried the Luftwaffe all the way back to Berlin and final victory.

Photograph Sources

All the images in this book are courtesy of the Scott Pick WWII Russian Front Original Photo Collection. This consists of almost 2,500 black and white photographs. They provide a remarkable and often grim insight into the many aspects of the war on the Eastern Front. Notably, the quality of the photographs is consistently high throughout the archive. Most of those selected by the author to illustrate this title have never been published before. Pen & Sword and the author are indebted to Scott Pick for his generous assistance with this project.

Chapter One

Stalin's Falcons Decapitated

Ironically, in the year preceding Hitler's invasion, as the Red Air Force's numerical strength grew its effectiveness declined. This was in part due to its loss of technical parity with other European air forces, as well as the setbacks it experienced in Spain during the Spanish Civil War and in the Winter War with Finland. The Red Air Force was slow to learn from these hard-won lessons and in common with the Red Army suffered thanks to the destruction of its high command by Stalin.

The Red Air Force was not immune to Stalin's purges during the late 1930s. General Ya. I. Alksnis, Red Air Force Commander-in-Chief, and General A.I. Sedyakin, Air Defence Commander-in-Chief, were shot during the Soviet leader's paranoid bloodletting. The execution of the former Red Air Force commander, General Ya. V. Smushkevich, occurred four months after the German invasion, Smushkevich having been dismissed in 1940. His replacement, Pavel Rychagov, lost his job in the spring of 1941 to Pavel Zhigarev. According to German intelligence the actual strength of the air force prior to the invasion was about 30 per cent less than the authorized establishment. Stalin's air force, like the rest of the Soviet armed forces, was not in the best condition to fend off Hitler's blitzkrieg.

Stalin, who was almost the architect of his own destruction, did all he could to derail the modernization of the Red Air Force. Alksnis' crime was being too closely associated with the discredited modernizer Marshal Tukhachevsky. He was on his way to a diplomatic reception in Moscow when, on 23 November 1937, he was grabbed and whisked away to the Lubyanka prison: he was dead in less than year.

Alksnis was not alone; most of his comrades suffered the same fate, including Chief of the Air Staff and Head of the Special Purpose Air Arm Vasily Khripin, Head of the Air Force Political Directorate B.U. Troyanker, and Head of the Zhukovsky Air Force Academy General A.I. Todorski, along with five military district air commanders. Only a year before, these men had received decorations from Stalin himself.

Alksnis' initial replacement did not prove up to the job and was replaced by the highly experienced Smushkevich ready for the invasion of Eastern Poland in 1939. Under the nom de guerre General Douglas, Brigade Commander Yakov Vladimirovich Smushkevich commanded the Soviet Air Group in Spain known as

Stalin's Falcons. They combat tested the Soviet Union's I-15 and I-16 fighters as well as the SB-2 bomber. Smushkevich then went on to command the Red Air Force, supporting General Georgy Zhukov's brief and highly successful border war against the Japanese on the Mongolian–Manchurian border. Smushkevich was unable to repeat his Manchurian successes over Finland and the poor condition of the Red Air Force was highlighted during the Winter War, which broke out in November 1939 and was fought through three and a half months of freezing weather.

Smushkevich had 900 aircraft available for operations against less than 100 Finnish planes. Nonetheless, they suffered heavy losses, especially the obsolescent SB, DB-3 and TB-3 bombers. Large-scale Soviet bombing raids failed to achieve much and ground support was poorly coordinated. By the time the war with the Finns came to an end the Red Air Force had massed 2,000 aircraft against Finland. Despite much backslapping the Soviets lost up to 950 aircraft whilst the Finns lost just seventy. It was a hard-won victory that showed the Red Air Force to be a largely flawed instrument.

In April 1940 Smushkevich was sacked and replaced by his former brother-in-arms Pavel Rychagov. He was another of Stalin's Falcons, credited with fifteen victories in Spain and named as a Hero of the Soviet Union. Rychagov also saw action against the Japanese in Manchuria. Commissioned as a fighter pilot in Ukraine, he rose in four short years from squadron leader to head of the Red Air Force, only to be swept away in Stalin's purges barely two months before Hitler's invasion. He lasted until the spring of 1941, to be replaced by Pavel Zhigarev (another commander from the Soviet Far East) in what must have felt like an unending game of deadly musical chairs. Smushkevich was shot on 28 October 1941, depriving the Red Air Force of his valuable expertise.

The Soviet aircraft industry suffered as well; A.N. Tupolev, head of the Experimental Aircraft Design Section, was arrested on the ludicrous charge of having sold the plans for the Bf 109 and Bf 110 fighters to Germany! His senior design team, including Vladimir Petlyakov and Vladimir Myasishchev, soon joined him. An estimated 450 designers and engineers were interned from 1934 to 1941. Of these, fifty were executed and 100 died in the Gulag.

At the same time, many of the aircraft factories lost key personnel, including directors, chief engineers and designers. The failures of prototypes to meet performance criteria and accidents during test flights were considered deliberate sabotage. When Valery Chkalov was killed in the prototype I-180 fighter on 15 December 1938, the death of this national hero led to a wave of arrests despite the accident being down to pilot error. This fighter was abandoned shortly afterwards, depriving the Red Air Force of 3,000 I-180s that would have been in service by June 1941.

The Soviet armed forces were divided into five elements prior to the Second World War: the ground forces, navy, air force, national air defence and armed forces support. The ground forces accounted for the largest proportion of personnel, with just over 79 per cent. The Red Air Force had just over 11 per cent and the navy had just under 6 per cent. The Red Air Force consisted of four key elements: the Voenno-Vozdushnye Sily (VVS – Air Force), Protivovozdushnaya Oborona (PVO – Air Defence), the Fleet Air Force and Gosudarstvenny Komitet Oborony (GKO – State Committee for Defence) Air Reserve.

The Soviet Union claimed to have the world's largest air force in 1940, but in reality 75 per cent of them were obsolete I-15, I-152 and I-153 biplanes and I-16 monoplanes. Whilst the I-16 was the best, it was significantly inferior to the German Bf 109E. Their new LaGG-3, MiG-3 and Yak-1 had yet to be issued in any number although by 22 June 1941, about 2,030 of these aircraft had been produced.

Initially, a Soviet fighter regiment consisted of three squadrons with an established strength of forty aircraft. These squadrons flew tight defensive formations with three or four aircraft known as Zveno. A fighter aviation division was made up of three regiments, with a nominal strength of 120 aircraft. These divisions were grouped in two or threes to create aviation army corps with strength of up to 375 fighters.

At the outbreak of the war the mainstay of the Red Air Force's fighter squadrons were aircraft designed by Nikolai N. Polikarpov. The Polikarpov I-16 was first flown in late December 1933 and was the first production monoplane in the world to feature a retractable undercarriage. It was also the first Soviet fighter to incorporate armour plating around the cockpit. Introduced into service in 1934, this aircraft had a number of major design faults; most notably, the engine was too close to the centre of gravity and the cockpit was too far back. This gave the airframe insufficient longitudinal stability, making it impossible to fly 'hands off'.

Taking off and landing was not pilot friendly, either. The pilot had to hand crank the undercarriage forty-four times before retraction was complete. When deployed the undercarriage suspension was hard, which meant the aircraft had a habit of bouncing violently when it ran over uneven ground. This gained it the nickname *Ishak* (donkey). Nonetheless, in the hands of an experienced pilot the I-16 proved to be highly manoeuvrable. The I-16 saw combat in Spain with Stalin's Falcons against the Spanish Republicans and against the Japanese in the Far East. The Spanish Nationalist Air Force christened it the *Rata* (rat). This nickname stuck and was used by the Luftwaffe.

Despite its shortcomings, by the time production ceased in 1940 some 6,555 I-16s had been built. Variants included the TsKB-18 assault aircraft armed with four PV-1 synchronized machine guns, two wing-mounted machine guns and 100kg of

bombs. The Type 17 featured two wing-mounted cannon and this variant was built in large numbers. The TskB-12P was the first aircraft in the world to be armed with two synchronized cannon firing through the propeller arc. The last fighter version the Type 24 was capable of a top speed of 523km/h (325mph).

The Polikarpov I-153 was first flown in 1938 and was derived from the I-15 biplane fighter. The latter had featured a gull-type upper wing, while the following variant, the I-15bis (or I-152) was fitted with a straight wing. The I-153 reverted to the gull wing arrangement, resulting in it being dubbed the *Chaika* (seagull). Unlike its predecessor it featured a retractable undercarriage. A series of engine upgrades eventually gave the *Chaika* a top speed of 426km/h (265mp).

The pilot sat in an open cockpit with only a small windscreen for protection. The aircraft was armed with four synchronized machine guns firing along canals between the engine cylinders. A few were also fitted with two 20mm cannon. The *Chaika* first saw action in 1939 against the Japanese. It was also heavily involved in the Winter War of 1939–40, when the Soviet Union clashed with Finland. The I-153 was simply too slow against the Luftwaffe and was the last single-seat fighter biplane built in the Soviet Union.

The Soviets were late in developing an effective monoplane in the same class as the British Hurricane and Spitfire and the German Bf 109. The Yak fighter sought to address this shortcoming. The Yak-1 *Krasavyets* (beauty) first appeared publicly on 7 November 1940. This was Aleksandr S. Yakovlev's very first fighter design, powered by a 746kW (1,000hp) M-105PA engine armed with a nose-mounted 20mm cannon and two machine guns. This was a crude aircraft; there were no flying blind instruments and no fuel gauges! The gunsight was rudimentary, as was the cockpit equipment. Visibility was poor thanks to the four-piece cockpit canopy. Capable of 600km/h (373mph), it was reportedly a pleasure to fly and easy to maintain. Unfortunately, the German invasion disrupted production while the aviation factories were evacuated.

As a wartime expedient it was decided to convert the two-seat trainer variant, the Yak-7V, into a single-seat fighter by covering the second cockpit. This aircraft was redesignated the Yak-7A, but during 1942 the basic Yak-1 evolved into the slightly improved Yak-1M with a three-piece sliding hood, revised rear fuselage and smaller wing area. Likewise, the Yak-7A was upgraded to the Yak-7B, of which 6,399 were produced. Refinements to the Yak-1M before the aircraft entered quantity production in early 1943 led to the Yak-3. Some of these were heavily armed; for example, the Yak-3K was equipped with a 45mm cannon and the Yak-3T with a 37mm cannon. Another variant, the Yak-9, which was a further development of the Yak-7, entered service in 1942 and became the most mass-produced Soviet fighter.

In late 1939, the design bureau of Artem I. Mikoyan and Mikhail I. Guryevich was