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AVIATION CHANGES WARFARE ON THE EASTERN FRONT 1914

Vauban, Napoleon, Firepower and Aeroplanes

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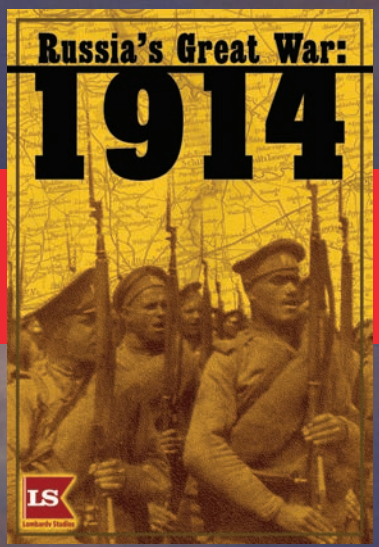
CARPATHIAN FROZEN SLAUGHTERHOUSE

Decimation of the Habsburg Army



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Aviation Changes Warfare on the Eastern Front

Great War generals carried forward the legacies of Vauban and Napoleon, adjusting for modern firepower and the long-range, rapid information provided by the new aeroplanes

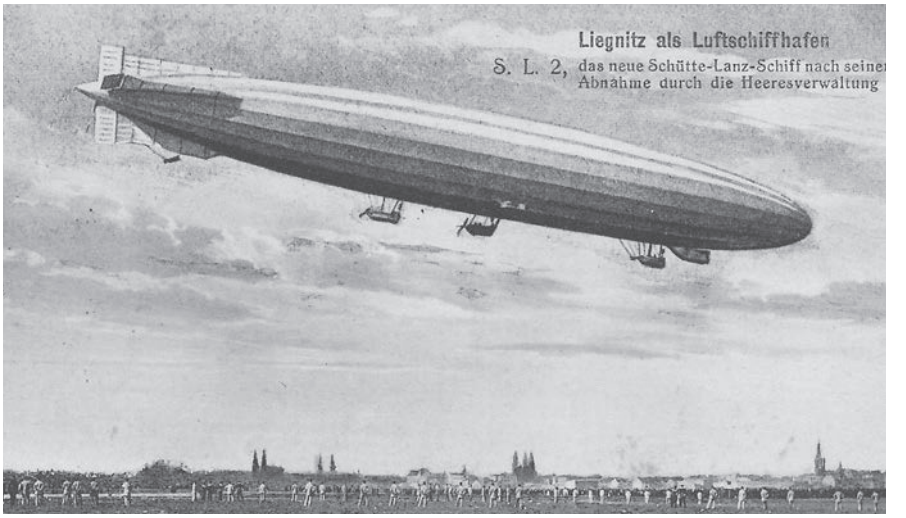
By Terrence Finnegan, Carl Bobrow, and Helmut Jäger with map by Philip Schwartzberg and historical images from the collections of Marat Khairulin and Dana Lombardy

Aviation's reconnaissance potential was immediately realized in 1914 and would be used throughout the Great War to support field commanders. Successes and failures in the opening months of the war in the East often hinged on whether aircraft could fly, where aeroplanes searched, and if their information reached the right people.

At the onset of the Great War, military doctrine in the East still included maintenance of a broad array of fortresses, a legacy from 17th Century French master fortress builder Marshal Sébastien Le Prestre de Vauban. In 1914 Russia had ten major fortresses or fortified areas in a crescent from East Prussia to Galicia, with additional fortresses further east and numerous smaller fortified areas throughout the region. In the years preceding 1914, Germany built five such fortress complexes facing the Russian Polish salient and Austria-Hungary built two in Galicia to bolster its defenses

There were few aviation visionaries before the war.

Despite vast sums spent on fortresses before the war, field commanders in both the East and West in August 1914 hoped to replicate Napoleon Bonaparte's legacy of rapid campaigns of envelopment—as the Prussians had done in their brief and victorious war over France in 1870-71. Warfare in the East in World War One would witness Napoleonic-like maneuvers whereas the Western Front and Italy would unintentionally encompass a new style of fortification—hundreds of miles of complex trenches—in the tradition of Vauban.



Schütte-Lanz-Schiff S.L. 2 was one of several German airships used for reconnaissance on the Eastern Front in 1914. This one flew from Liegnitz near Breslau. (Postcard collection of Dana Lombardy)

Three years of warfare on the Eastern Front from 1914-1917 incorporated technological advances that included the first aerial platforms. How armies operated would be radically transformed during the Great War and aviation was at the forefront of this revolution. High troop density and massive firepower led to stalemate in the West, whereas the much larger area of operations in the East allowed for maneuver. Over every front aviation would play a vital role.

There were few aviation visionaries before the war. British advocacy was led by Brigadier-General Sir David Henderson, the first commander of the Royal Flying Corps. Henderson imagined how aerial reconnaissance could aid military field commanders in both his book *The Art of Reconnaissance* (1911) and various pre-war articles in leading aviation journals such as *Flight*. A few leading aviation advocates such as Hauptmann Hermann von der Lieth-Thomsen, a junior General Staff officer working for Ober-

stleutnant Erich Ludendorff, and Captain Petr Nikolaevich Neterov in Russia, later became influential. Thomsen turned into the driving force of the revamped German Military Air Service and his role in its later accomplishments cannot be overemphasized.

Most French and German aeroplanes (as they were initially called) were organized into small units of six flying craft each and assigned to commanders of armies, German active corps, and fortresses. Britain organized larger squadrons of 15 or more planes but had only four such squadrons in France in 1914.

At the start of the war, the Austro-Hungarian (Imperial) high command controlled fifteen companies of air units, and many of these were assigned to individual field armies. However, Imperial air operations proved to be less effective compared to their German ally's. In the Balkans the forested terrain often hid Serbian troops and intentions, while in Galicia on 11 August not many of the 42 aeroplanes in the Imperial order of battle were able to fly—and the official Austro-Hungarian history noted very few significant achievements by air reconnaissance over Russian forces despite the open nature of the terrain.

Germany's lone 8th Army in East Prussia included more than 20 aeroplanes, and operations prior to the war enabled German aviators to study the vast area of future operations and practice coordination with ground forces. In the West in August of 1914, the seven German armies had nearly 200 aircraft to scrutinize a 300-mile long front to a depth of 100 to 200 miles. By comparison, the four Austro-Hungarian armies in Galicia had fewer than 30 functioning aircraft to cover an equivalent area.

In August 1914, German aeroplanes and airships achieved notoriety for flying over enemy territory, conducting aerial reconnaissance, propaganda missions, and the first aerial bombardments of the war. On 2 August, three planes from Feld Flieger Abteilung (FFA) No. 2 flew from East Prussia to Warsaw and dropped propaganda leaflets. Two airships, Z.IV and Z.V, commenced operations from Posen and Königsberg searching for Russian troops near the East Prussian border. At that early stage none were detected.

On 9 August airship Z.V flew over Lodz and reported on Russian positions. On 10 August, airship Z.IV bombed Mlava, with airship Z.V striking Lodz the following day. German aeroplanes and airships flew as far east as the Russian fortress at Kovno (Kaunas). In the critical weeks to come, airship Z.V discovered Russian concentrations near the German XX Corps at Modlin.

Losses occurred. Airship Z.V was shot down by Russian artillery at the end of August with the airship commander killed and the remaining crew captured. However, the precedent was set in the first month of war. If employed and coordinated properly, aerial reconnaissance could greatly benefit the maneuvering armies. In the military parlance of today, despite its limited numbers, aviation rapidly became a serious "force multiplier" for ground operations.

In 1914, friendly fire proved to be one of the greatest dangers to aviators. Leutnant Mahnke remembered German soldiers shooting at their own aeroplanes, despite the clearly marked iron cross emblems on the wings. Austro-Hungary's 4th Army suffered the loss of three of its own aircraft from friendly infantry fire, prompting the 4th Army command staff to issue a directive that no aeroplane was to be fired upon.

The Russian pilot Georgii Leonidovich Sheremetevsky recalled returning from one aerial reconnaissance sortie where, "we would be fired on by 'all God-fearing folk.'" One Russian general, Vasilii Gourkoe, surmised that Russian soldiers were shooting down Russian aeroplanes over their own landing ground because his soldiers, "seriously thought that such a cunning idea as an aeroplane could only emanate from, and be used by, a German."

Even the most exceptional aeroplane in the East at this time, the Sikorsky designed four-engine Il'ya Muromets, had to be wary of friendly fire. The Russian Ninth Army commander warned his troops fighting in Galicia that an Il'ya Muromets was to fly to the southwest to support the front. In doing so, troops were to avoid shooting at "big size, four engines, a platform in front with gun installation, long tail with three rudders in front… aeroplane sparkles in the sun…"

Aerial reconnaissance over the extensive eastern territories became the standard method for discovering enemy troop locations and determining vulnerable open flanks.

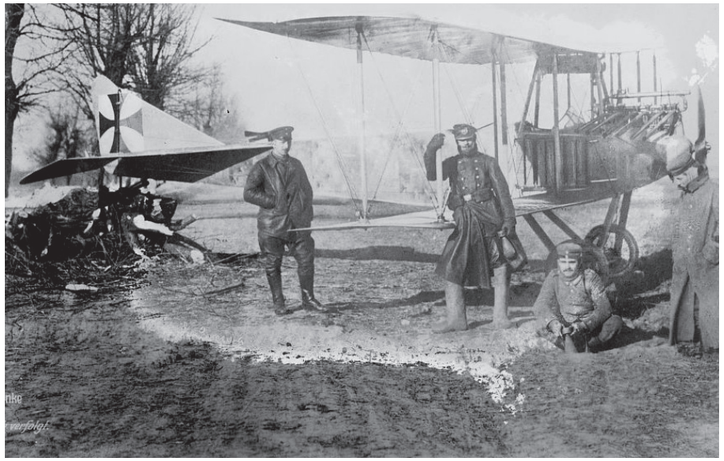
Perhaps one of the most recognizable aircraft to appear early in the war, the Austro-Hungarian designed Taube was built by at least 14 companies with a great many variations on the initial design. It proved to be unsuitable for front-line service and was relegated to use in training of new pilots.

This was clearly the case with German forces in the first weeks of the war. I Corps's FFA 14 reported brigade-strength columns, massive troop movements and long logistic columns moving between Suwalki and the East Prussian frontier.

Lack of vital intelligence from aviation led to operational and strategic mistakes, such as the engagement at Gumbinnen. With insufficient information on Russian forces, the German I and XVII Corps attacked but were routed. This setback so unsettled 8th Army commander Generaloberst Max von Prittwitz that he considered retreating from East Prussia and defending from behind the Vistula River. As a result, several German corps committed in Belgium were pulled out and sent east, but arrived too late to support the counterattack and victory at Tannenberg. Better coordinated aviation resources, or a better system for obtaining and distributing aviation reconnaissance information, might have prevented these German blunders. In 1914, everyone was learning through trial and error.

The greatest German aerial recon-

The Nieuport IV two-seater reconnaissance aircraft was one of the principal machines used by the Imperial Russian Air Service. Nearly 300 were produced under license in Russia by the Russo-Baltic Wagon Works in St. Petersburg and the Dux Factory in Moscow.



The Albatros B.II was one of the primary German two-seater reconnaissance aircraft. It would eventually be replaced with the updated and armed C.1 version.

naissance success in the East in 1914 was in helping to exploit the gap between General Pavel Rennenkampf's Russian First Army and the Russian Second Army under General A. V. Samsonov, leading to the destruction of the Second Army at Tannenberg.

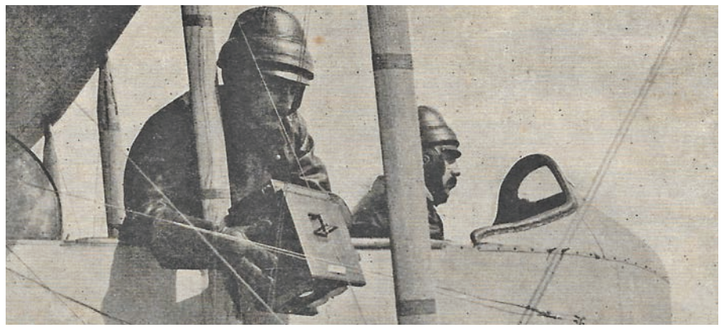
This celebrated victory of the Central Powers was offset by the equally futile and bloody offensive operations attempted by Franz Conrad von Hötzendorf, Austro-Hungarian Chief of Staff, to relieve the Russian siege against the fortress complex at Przemsyl. Relatively few aeroplanes were available to Russian and Imperial planners, but Russian aviators apparently accomplished more for their ground forces. (In fairness to all of the pilots in the East in 1914, unfavorable weather conditions hampered aerial operations much more than in the West.)

Arguably the best Russian general of the Great War and commander of the Russian Eighth Army in 1914, Alexei Brusilov, recognized aviation's limitations and its potential in 1914. Brusilov explained in his postwar account. "Because of short supply and poor quality of aeroplanes, aerial reconnaissance was quite weak, nevertheless our information was mainly through this channel."

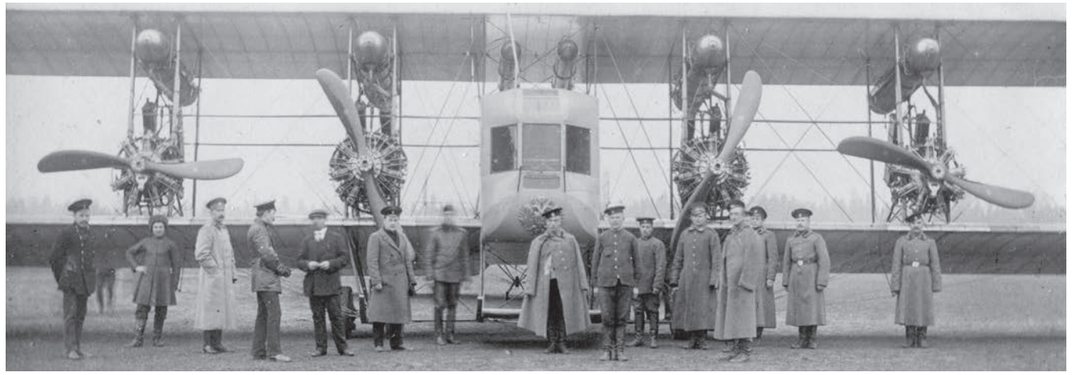
A tribute to early Russian aviation capability came from a postwar memoir by the Austrian Leutnant Fritz Kreisler. As his platoon marched south of Lemberg (Lvov) a "whizzing of a motor above our heads could be heard and we knew why the enemy's shrapnel had so suddenly found us. It was a Russian aeroplane, which presumably had signaled our approach, together with the range, to the Russian gunners…." Kreisler's is one of the first accounts of aviation in direct support of artillery.

Likewise in Galicia in 1914, General Brusilov recalled a similar experience near Grodsk when aerial reconnaissance alerted his Eighth Army about several large Austro-Hungarian columns attempting to breach his army's center and drive to Lemberg (Lvov). As Brusilov recounted, "This exceptionally important and timely report, which could be ascertained only by aerial reconnaissance, provided me with the opportunity of pulling up all my reserves to the VII and VIII Corps."

Starting in November 1914, aerial cameras became employed, initially utilizing pre-war cameras in armies' inventories. The German 25 cm Handkammer was a sleek design with easy-to-handle pistol grip producing 9 x 12 cm images (also used by the Austro-Hungarian air service). The Russians had two primary aerial cameras throughout the war. The Ulyanin 25cm employed photographic plates best suited for high-resolution photographs of a specific target location. The Potte film camera took 50 exposures of a standard 50-meter film roll—ideal for surveillance of an extensive line of trenches or lengthy deployments. Along with this technology a more advanced approach to aerial reconnaissance grew, including standardized reporting procedures, print development, and distribution. This more sophisticated use of aerial reconnaissance started to make its impact in early 1915.



Built under license, the French Farman two-seat pusher was one of the mainstays of the Imperial Russian Air Service in 1914. The observer is holding an Ul'yanin camera.



Il'ya Muromets factory number 137, one of a group initially sent to the front in 1914 prior to the establishment of the EVK—Eskadra vozdushnykh korablei ("Squadron of Flying Ships"). It is a type Beh, adapted to military use, powered by French-built Salmson 200 hp and 130 hp radial engines. These proved less efficient than the later inline engines due in large part to the frontal drag they produced, and the planes were soon replaced with type Veh's.

German intercepts of Russian radio communications are often cited as essential to the German high command's ability to achieve a great victory at Tannenberg. While these intercepts (in plain language and not coded) were significant, German aviators provided the tactical information on Russian troop positions and movements that enabled the German 8th Army to exploit the gaps and vulnerable flanks between widely separated Russian units. Generaloberst Paul von Hindenburg, the new commander of the 8th Army, was said to have declared: "Ohne Flieger kein Tannenberg!" ("Without flyers, no Tannenberg!").

The first major air war in history was fought in the Great War, and some of the earliest successes of aerial reconnaissance were in the East—exemplary accomplishments for aviation professionals with few resources at their disposal. The legacies of Vauban and Napoleon would be replaced by the new military paradigm of firepower and aviation.

For further reading the authors recommend:

Walter Raleigh, ***The War in the Air, vol. I*** *(Oxford, 1922).*

Sebastian Rosenboom, ***Im Einsatz über der „vergessenen Front" – Der Luftkrieg an der Ostfront im Ersten Weltkrieg*** *(Potsdam, 2013).* ***[Employment Over The "Forgotten Front" – Air War on the Eastern Front During the First World War.]***

Österreich-Ungarns letzter Krieg 1914–1918, vol. I *(Vienna, 1930).* ***[Austria-Hungary's Last War 1914-1918.]***

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Carl J. Bobrow *is a former Verville Fellow at the National Air and Space Museum. He is currently on staff at NASM as a member of the Collections Department. He holds an interdisplenary degree from the State University of New York in the History and Philosophy of Science and Technology. His long-term area of research expertise is in technological innovations and early flight history, specifically the advent and development of Russian Aviation.*

Helmut Jäger *served 20 years in staff positions and as a pilot in the German Air Force. He then studied history at the University of Hamburg and his research resulted in two published studies on the development of military photography and the legacy of German aerial pictures from the Western Front in World War One.*