Historical Background

by Dave Parham

The heat of the late August day was still upon them as the soldiers of the Russian rocket battalion stopped work on their earthen emplacements. The battalion had just moved into positions to the west of Spartanovka, a northern suburb of Stalingrad, and while the officers were anxious to complete the defenses, no one was particularly concerned. After all, the enemy was still beyond the Don River, some 35 miles away. Many Soviet formations stood between the Don and the Volga.

Suddenly, a sentry reported to his commander that some strange tanks and scout cars were occupying a nearby hill. Since no friendly armored formations were reported in the area, the officer decided to inspect the vehicles. They were now stopped and already covered with camouflage netting which obscured their shapes. A few yards from the nearest tank the Soviet officer shouted an order for the commander to come forward. A figure wearing the helmet and coveralls of a Russian tanker stood up in the open turret hatch and replied that there was no problem. The Soviet officer puzzled over the man's poor accent, then noticed the exposed tracks of the tank. The roadwheels were unlike any Soviet armored vehicle! Stepping back to alert his soldiers, the Russian officer was cut down by automatic fire from the bogus tank commander. Within seconds a firefight erupted between the rocket troops and the now hostile armored unit.

Thus, on 23 August 1942, began a struggle which has been described as the major turning point in World War II. The battle of Stalingrad was perhaps the supreme confrontation on the Eastern Front. Both the Nazi and the Communist regimes were seeking decisive results. After a year of war in Russia, Germany had to eliminate the enemy which denied the conquests so vital to its expansionist designs. For its part the USSR was forced to maintain an effective defense of the homeland while developing the assets necessary to drive out the invaders. What began as a skirmish on an unnamed hill near the Volga soon involved millions of combatants and attracted the attention of the world. The high drama would unfold in the streets of Stalingrad.

By mid-1942, the Soviet Union had lost millions of its citizens and large chunks of its territory. Nearly 6,000,000 Russian soldiers were dead or captured. Moreover, the remaining forces seemed incapable of halting the enemy onslaught which now headed southward. The Germans appeared pointed toward the Volga River, a north-south axis of unusual importance. Enemy occupation of the waterway would jeopardize Allied aid through Iran, it would also deny the Soviet economy vital manufactured goods and raw materials. Most crucial was oil. The German intent had become clear, due to the reports of special petroleum detachments operating behind the lead columns. With fuel for his panzers, the enemy could consolidate gains made in the Caucasus Mountains and then advance around the Mediterranean shore to Suez or even drive toward India.

Case Blau

Indeed, the Wehrmacht was trying to win the southern area of the USSR. On the orders of Adolf Hitler all plans were suspended except for the continuation of Operation *Blau*. It called for Army Group South to be divided into two efforts. Army Group A was to clear the Caucasus region, while Army Group B, under Generalfeldmarschall Fedor von Bock, was to advance toward the Volga. Two German armies (the Sixth and Fourth Panzer) and two Rumanian armies (the Third and Fourth) were to secure the river line. A veteran of the campaigns in the west and Russia, the Fourth Panzer Army, led by Generaloberst Hermann Hoth, was to provide the cutting edge of the advance. it would be followed by the Sixth Army which had seen action in Poland, the Low Countries, and France. The Sixth Army was commanded by General Friedrich Paulus, its former chief of staff and an expert in logistics and training. The Rumanian armies were to provide additional covering units despite their inferior equipment and leadership.

Operation *Blau* began with some success. By July 1942, the Sixth Army had cleared the Don Bend of most resistance. However, the extended supply line had prevented the steady replenishment necessary for the German mechanized forces. Moreover, while the Russian losses were high, the Red Army had been able to withdraw many units, notably at Voronezh. Stung by this failure, the Fuehrer replaced Bock with Generalfeldmarschall Maximilian von Weichs. To encourage the southern advance, Hitler directed Army Group B to send half of its motor transport and two of its panzer divisions to Army Group A. As a form of compensation, a brigade of *nebelwerfers* (rocket launchers) was assigned to the Sixth Army. The additional firepower would help the Sixth Army in its next assignment — to secure Stalingrad.

Significance of Stalingrad

Although Hitler did not order the Sixth Army to take Stalingrad until 19 July, the decision was predetermined by the city's importance and the Nazi plan of conquest. Stalingrad was a great industrial center of the Soviet Union. Built upon an ancient town on the west side of the Volga River, the city was thirty miles long, but only five miles wide. By 1942, most of the adults in its half million population toiled in factories converted to war industry. The largest factory was the Dzerhezinsky Tractor Works, a sprawling complex designed to manufacture farm implements but now a prime source of tanks. Similarly, the Red Barricades (*Barrikady*) Factory was assembling heavy artillery pieces. Various armaments came out of the foundaries and machine shops of the Red October (*Krasny Octyabr*) Factory. Smaller plants produced goods ranging from medicines to clothing. Grain harvests were stored in a giant elevator, while canneries preserved local crops. As the greatest river in Europe, the Volga was a natural conveyor of large steamers and barges. It was complemented by roads and rail lines which made Stalingrad a major transportation center. The city was also an important military training site with specialized schools for artillery and tanks. Several Red Army divisions were activated in the area, and a large manpower pool was still available. The Communist Party staffed a major office in Stalingrad because it was an administrative headquarters for the Soviet government.

Beyond these objective considerations, Stalingrad had almost a mystical attraction to the leaders of the Third Reich. Part of the reason for the eastern invasion was to reunite the Germanic peoples of Russia with the rest of the Teutonic race. Thousands of *Volks-Deutsch* inhabited the Volga area, primarily living in agricultural settlements. The region was also closely linked with Bolshevik victories in the Revolution and Civil War. Stalin, then named Josef Djugashvili, had won his first battle around the old town of Tsaristsyn. Now a city there was called Stalingrad in his honor. To capture such a place would affirm the superiority of National Socialism. Finally, Adolf Hitler took great stock in an old proverb which predicted that whoever crossed the Volga River would conquer "Mother Russia." Clearly, Germany's destiny was to be realized at Stalingrad.

The strategic and symbolic importance of the city was not lost upon the Soviet Supreme Command (*Stavka*). As the enemy drove eastward in mid-summer, Stalin ordered the Stalingrad Front commander, Marshal S.K. Timoshenko, to activate two reserve armies. These became the 62nd (Major General V. Kolpakchi) and the 64th (Major General V.N. Gordov) armies. Their hastily trained and poorly led divisions soon proved defective. In early August, while preparing forward positions west of Kalach on the Don River, the 62nd Army (and neighboring units) lost 50,000 men and almost of all of its divisions in a German encirclement. Kolpakchi was sacked in favor of Major General A. Lopatin. The Stalingrad Front was split into two sectors. Gordov took over the old front (from the temporarily disgraced Timoshenko), and Colonel General A.I. Yeremenko arrived to command the new South-Eastern Front which included the city of Stalingrad. A special committee was assigned by Stalin to report on all actions in the critical area.

From the Don to the Volga

Now poised on the Don, the German Sixth Army prepared its next move on Stalingrad. The continuing logistical difficulties prevented a broad advance eastward so it was decided to send the XIV Panzer Corps (General Alfred von Wietersheim) to the north while the XXXXVIII Panzer Corps (General Werner Kempf) on loan from the Fourth Panzer Army moved in from the south. With the area sealed off, the LI Corps (General Walther von Seydlitz-Kurzbach) would clear the center and actually assault the city. After months of campaigning, the lead divisions of the LI Corps were weak in infantry and transport, but it was hoped that air supremacy and surprise would overcome these defects. In any case, the Soviet foe was judged to be too disorganized for an effective defense.

In the early hours of 21 August, the Sixth Army began its push to the Volga. At Kalach the 71st Infantry Division (Generalmajor Hartmann) quickly developed a bridgehead. Further north, the 76th (Generalmajor Rodenburg) and 295th (Generalmajor Korfes) Infantry Divisions crossed in boats and rafts. Soviet resistance was eliminated, and pontoon bridges enabled the 16th Panzer Division (Generalmajor Hube) of the XIV Panzer Corps to begin its sprint toward Stalingrad,

nearly thirty-five miles away. Shelling and bombing by the Russians caused some casualties at the bridgeheads, but the unmarked armored column drove boldly along a highway as Soviet traffic controllers obligingly diverted slower-moving vehicles. By the evening of 23 August, a battalion of the 2nd Panzer Regiment had staked a claim to a hill near Spartanovka. Within minutes fateful contact had been made with the Russian rocket launcher battalion. Since no friendly forces had been able to keep up with them, the tankers of the 16th Panzer Division formed a hedgehog defense to await reinforcement.

Soviet Preparation

The Soviet military command had expected a German attack, but they were unprepared for its speed and direction. Only remnants of a few rifle regiments stood in the way of the panzers. However, the narrow penetration allowed other Russian formations to fall back and regroup. Tank and mechanized groups recoiled from the enemy attack, but they were soon able to reoccupy most of the area, thereby cutting off the 16th Panzer Division. In Stalingrad itself the German advance had made useless the outer rings of defenses, so efforts were concentrated on the inner or "G" line. Civilians of all ages were organized in work gangs to expand anti-tank ditches and to erect street barricades. Regiments of the new 10th NKVD (Internal Security) Division (Colonel Sarayev) were filled with able-bodied men, then rushed to the lines. Factory workers found themselves in special tank-killer squads armed only with Molotov cocktails. With most of the regular military units in the area awaiting replacements, the only additional reinforcement was a group of armored trains. They were to provide mobile artillery and a boost to morale until more substantial forces were available.

While by their presence Red Army formations were at least able to slow the enemy advance on the ground, there was no protection in the air. Soviet airpower in the area was reduced to 150 obsolete aircraft of the 8th Air Army (Major General Khryukin). Although soon to gain in numbers, the anti-aircraft batteries were made up of machine-guns and light cannons. Thus, there was little resistance when the German VIII Air Corps (Generalleutnant Fiebig) began its attacks in early September. Using superb maps, the JU-88's and HE-111's carefully sought out and destroyed military targets, particularly artillery and rocket batteries. Incendiary bombs set ablaze the wooden houses of the city workers, causing a panic which jammed the streets near the river. Boats trying to evacuate the civilians or transfer military personnel were strafed by low-flying fighters. Rail tracks and rolling stock were also shot up. Factories sheltering workers and soldiers were collapsed by bombs, and nearby schools and shops were also destroyed. Perhaps 40,000 people perished in the air attacks. Only when the city was obscured by a pall of black smoke did the VIII Air Corps reassign its aircraft to other operations in the south.

With Stalingrad now under direct attack, the *Stavka* issued strict directives for its defense. Rifle divisions from nearby armies were to be sent as reinforcements. Large bridges to the east bank were destroyed to prevent a simple crossover by the enemy. Boat traffic would be subordinated to military requirements, and the only evacuees were to be the severely wounded, children, and the aged, in that order. Communist Party officials were expressly forbidden to leave the city. Since the 62nd Army was ordered to hold the city, a more vigorous commander seemed necessary. After consultations with both his special advisor, Colonel General G.K. Zhukov, and the Front commander, Yeremenko, Stalin selected Lieutenant General V.I. Chuikov to take over the 62nd Army. Chuikov, a professional soldier since 1918, had many times shown a tactical flair, most recently with the 64th Army.

The resources available to Chuikov would tax even his ingenuity. When he arrived in Stalingrad on 12 September, Chuikov found the remnants of several shattered formations. Rifle divisions, such as the 33rd Guards (Colonel Utwenko), 131st (Colonel Pesochkin), 196th (Colonel Ivanov), and 399th (Major General Glazhov) had only a few hundred infantrymen and no heavy guns. The 35th Guards (Colonel Dubiansky) and 244th (Colonel Afanasiev) Rifle Divisions were somewhat better off, though still far below their authorized strength. A steady flow of disciplinary prisoners helped maintain the 112th Rifle Division (Colonel Yermolkin). The 10th NKVD Division had nearly 10,000 men but no heavy artillery. Chuikov's only mobile troops came from the battered brigades of the II and XXIII Tank Corps and some motorized rifle units. A few independent artillery and rocket regiments were also available, along with the enthusiastic but green militia formations. The gunboats and ferries of the newly-organized Volga Flotilla (Rear Admiral D.D. Rogachev) had limited value because of their exposure to German artillery and aircraft. Altogether, Chuikov had some 60,000 soldiers, over 500 guns, and 80 tanks.

The 62nd Army was deployed along a strange front over forty miles long but only five miles deep. Between the outer defenses and the Volga, the area was checkered with deep gullies (*balkas*) and high railroad embankments. Elevations such as the Tartar Wall and Mamayev Kurgan were important vantage points. The natural vegetation was low brush, but orchards and woods offered some concealment. In the factory area, the large concrete buildings were likely fortresses. Multi-level apartment houses, department stores, and office buildings also had defensive possibilities. To ensure the survival of his army, Chuikov had to retain the river docks near the factories and the *balkas*. Since he could not greatly adjust his meager forces, Chuikov could only hope that they could hold long enough for reinforcements to arrive from across the Volga.

State of the Sixth Army

As Chuikov took charge in Stalingrad, his opponent was also evaluating his assets. Paulus was an able officer but always before his command had operated in cooperation with other armies. This time the Sixth Army was to fight on its own in the deepest penetration of the Soviet Union. Fortunately, the northern flank had been secured as the 16th Panzer Division was joined by the rest of the XIV Panzer Corps. Russian probes did not yet appear to be too dangerous. To the south, the XXXXVIII Panzer Corps had driven through to Yelshanka by 8 September, but surprising resistance had developed near the Volga. A sizable concentration of Soviet units at Beketovka had yet to be eliminated. In the middle, the LI Corps had finally marched up, delayed not so much by the enemy as by the lack of supplies and transport. Indeed, logistics appeared as the critical factor since the Sixth Army had to provision nearly a quarter of a million men from the Volga back beyond the Don. Only a single railroad and a few roads stretched that distance, while bridges needed to be rebuilt over many of the smaller rivers.

Even if supplies were available, Paulus wondered if his combat units were up to assaulting the city. Airpower was present though often diverted to other missions. Several army artillery battalions were on hand, but heavy caliber ammunition was already being rationed. Assault guns and rocket launchers promised close support if they could be replenished. However, the key element in city fighting, the infantry, was inferior in strength. The battalions of the 71st and 295th Infantry Divisions which were to lead the attack were already below offensive standards. The 389th Infantry Division (Generalleutnant Jaenecke) was also on line but so weak that it was used along with the automatic weapons of Luftwaffe Kampfgruppe Stahel to screen operations near Orlovka. Paulus presented his conclusions and misgivings to Hitler in a special meeting at Vinnitsa on 12 September. The Fuehrer, however, insisted that the Soviets were nearly ready to abandon Stalingrad. He ordered the assault to begin at once. The Sixth Army had already drawn up a plan of attack for Stalingrad. The enemy was known to be weak but so dispersed in the city that a single blow could not be decisive. Also, the German units were too few to assault the entire area. The only possible scheme was to execute a series of small operations, aimed first at the central city, then the river docks, and finally, the factories. By keeping up the pressure, the Sixth Army would chop up the Russian defense one sector at a time. If reinforcements could be blocked, the Soviet would have to surrender or face annihilation. Despite the hardships that the combat meant for the German troops, their commanders knew that any delays would be fatal.

The Initial Assault

At 0445 hours on 13 September, the LI Corps began its attack into the central city. Heavy artillery pounded suspected enemy emplacements, while dive-bombers hunted for relief columns. As the infantry closed with the Soviet defenders, the guns and aircraft had to lift their support to avoid hitting friendly troops. The 71st Infantry Division made good progress through several housing groups before stopping just west of the downtown district. The 517th and 518th Infantry Regiments won the airfield nearby but had to clear pillboxes dug into the sides of adjacent ***balkas.*** Between them, the 295th and 389th Infantry Divisions destroyed two dozen T-34 tanks, many of which were used as stationary field pieces. As night fell, the Germans found themselves under artillery fire ranging in from the east bank.

To the south armored groups from the 24th Panzer Division (Generalmajor Hauenschildt), formerly 1st Cavalry Division, combined with the 94th Infantry Division (Generalleutnant Pfeiffer) to advance along streets blocked by dug-in tanks and barricades. Bitter fighting cleared houses held by small groups of Soviet riflemen and anti-tank teams. The 29th Motorized Rifle Division (Generalleutnant Leyser) tried to move along the river bank but came under increasing fire from the far shore. Gradually, the panzergrenadiers were able to drive nearly 500 enemy soldiers into the giant grain silo near a boat dock. The concrete tower and its outbuildings were a natural fortress. Fanatical commissars bricked shut the exits and exhorted the Soviet soldiers to fight to the end. When artillery and tank guns failed to reduce the position, the Germans wheeled up heavy howitzers to blast open entrances into the massive structure. After an hour of sustained firing, only 140 survivors were left to surrender.

Sacrifices such as these enabled Chuikov to develop his inner defenses and to deploy his few reserves. As the enemy pushed toward the central city, they found their way blocked by mines and field artillery firing with open sights. German tanks and assault guns could not maneuver in the clogged streets, so it was up to the infantry to go forward alone to clear a passage. By dusk of 14 September, the 71st Infantry Division held nearly a mile of the river bank. However, darkness allowed battalions of the 13th Guards Rifle Division (Major General Rodimtsev) to cross the Volga. The ex-paratroopers quickly infiltrated German lines through unguarded alleys and *balkas*. By dawn they reoccupied Rail Station No. 1. German soldiers had to now defend their lines of com-

munications, thereby diverting units needed to expand the river corridor. Armored groups from the 24th Panzer Division gave welcome support, but it took over a week for the Germans to clear the southern city completely. Finally, on 25 September, Paulus could report that the Reich's battle standard flew over the Communist Party headquarters in Red Square.

During the initial clashes, the Soviets had continued to hold several landing sites. These enabled troops trapped along the river to be evacuated to other sectors. Reinforcements also needed the landing sites to join the 62nd Army. Only formed a few weeks before, the 95th Rifle Division (Colonel Gorishny) started sending across regiments by 19 September. They took up positions near Mamayev Kurgan and were soon joined by Siberian snipers of the 284th Rifle Division (Lieutenant Colonel Batyuk). A few days later, the half-strength 193rd Rifle Division (Colonel Smekhotvorov) also came on line. An armored brigade was also expected, but the barges could only carry its light tanks across the river. Substantial artillery support was developing on the east bank and river islands. Special targets were enemy troop concentrations and supply dumps.

The Sixth Army, however, received no such aid. Aside from convalescents returning to their units, there were no replacements for the combat formations. Many infantry companies had only fifty men and one or two officers. The 24th Panzer Division which had entered the battle at reduced strength could field but thirty tanks. The assault gun battalions were no better off. While most of the artillery was still present, the howitzers and heavy rocket launchers needed ammunition. The 100th Jaeger Division (Generalleutnant Sanne) was assigned to augment the attack, despite its mountain battalions lacking the heavy weapons and training for street fighting. As Russian probes continued on the flanks outside of the city, Rumanian divisions were ordered into the line although German units still had to reinforce their sectors.

The Leaves Fall...But Not Stalingrad

Since he lacked the power to attack the city all at once, Paulus was forced to continue his piecemeal advance. Mamayev Kurgan was still partly held by the Soviets. Between the hill and the river, enemy artillery covered pillboxes built into the railway loop known to the Germans as the "Tennis Racquet." Accordingly, Paulus decided to hold the southern line and swing his attack in from the west. The 100th Jaeger Division held the right flank, while the 94th Infantry Division moved on the north. In between, the 389th Infantry Division and 24th Panzer Division, reinforced by the 276th Infantry Regiment and assault guns, led the offensive on 27 September. Following an artillery barrage and dive-bombing runs, the panzergrenadiers and tanks plunged into the Owrashnaya Woods. They came under immediate fire from heavy machineguns and dug-in tanks apparently unfazed by the previous shelling. Pioneers tried to clear extensive minefields, but snipers kept them under cover.

The divisions continued their assault. Both the 24th Panzer and 389th Divisions suffered high casualties, but within 24 hours they could claim 900 prisoners, over 100 machineguns, and the destruction of 30 tanks. The advance through the workers' settlements was brought to the edge of the factories. Further progress was hampered, however, by the poor performance of the 100th Jaeger Division. The mountain troops could not clear and hold the buildings around them. One housing group adjacent to a meat packing plant was particularly difficult. Over 600 men were lost in four days of combat, and the Soviets still occupied some of the structures.

To reduce a dangerous salient to the immediate north, elements of the XIV Panzer Corps and LI Corps moved to cut off enemy rifle brigades around the town of Orlovka on 29 September. The Soviet command had left these static formations to threaten the German lines. They could offer little opposition to the rockets and aerial bombs which showered their trenches. Panzergrenadiers of the 16th Panzer Division moved in from the north, while elements of the 94th and 389th Infantry Divisions advanced from the west and south. Soon the two assault groups linked up near Height 97.7. Artillery and flak guns were turned on the pocket, while hasty defenses prevented relief from Soviet forces in the city. By 8 October, the Orlovka pocket was eliminated with the capture of over 600 prisoners and many heavy machineguns and mortars.

To replenish his army Chuikov depended entirely on allotments from the Front command which was trying to reinforce the entire Volga line. When in late September the 39th Guards Rifle Division (Major General Guriev) was marched in from the east, its troops were bivouacked in well camouflaged camps where daytime movement was forbidden. The men received instruction in street fighting, while their officers were briefed on conditions in the city. Only mortars and antitank guns were taken across the river since Chuikov insisted that heavy artillery be left behind to reduce the logistical strain on the west side. The camps were soon filled by the 37th Guards Rifle Division (Major General Zholudov), then the 308th Rifle Division (Colonel Gurtiev). Rapid transfer was required both because of the pace of the combat and the danger of cholera and other diseases which periodically flared up along the swampy east bank.

To bolster the Stalingrad position the *Stavka* in early October ordered a Special Defense Command be set up opposite the city. Twelve light anti-aircraft artillery regiments and one medium anti-aircraft artillery regiment came under the direction of the staff of the former II Tank Corps. Rifle and cavalry divisions took up positions while a rifle corps was kept in reserve. Two rifle divisions — the 169th and 300th — actually sent replacements to the west side. Perhaps even more important for the 62nd Army, an independent heavy artillery division was created on the east bank. It controlled ten artillery regiments, a half dozen rocket regiments, plus several heavy mortar and machinegun battalions. The Trans-Volga Artillery Group contributed 203mm guns. The batteries were dug into camouflaged emplacements linked with concrete; alternative and dummy positions were also prepared. A central command post directed by General N.N. Voronov (the top artilleryman in the Red Army) coordinated shelling after communicating directly with Chuikov's headquarters. By firing for only a few minutes, the guns usually avoided detection. Several batteries were finally located and destroyed, but the real restriction on the artillery was the availability of ammunition which was managed by the Front command.

Attack on the Tractor Works

The early days of October saw both sides trying to probe for a weak spot in the opponent's defenses. To the north of the city, Russian troops made numerous forays against prepared positions of the Sixth Army. Lend-lease tanks were used to test German artillery. In one day the 3rd Motorized Infantry Division knocked out 29 Churchill and M-3 tanks. Often Soviet guns would shell German trenches at night. South of Stalingrad the Fourth Panzer Army had to patrol a front hundreds of miles long. The continuing enemy concentration at Beketovka required a constant watch. Such conditions prevented Army Group B from increasing its forces at Stalingrad. Indeed, when Paulus requested that the replenished 14th Panzer Division and 29th Motorized Infantry Division be sent to him, he was told that they were the only reserve available on the southern front. Paulus renewed his appeals, warning that further attacks could not be performed without fresh manpower. Finally, the 305th Infantry Division (Generalmajor Steinmetz) and a major portion of the 14th Panzer Division (Generalmajor Heim) were ordered to the Sixth Army. The 29th Motorized Division, which had been pulled out of the city at the end of September, was not returned to Sixth Army.

Paulus now readied a new offensive aimed directly at the factory area. It would be directed by Generalleutnant Jaenecke, an old friend of Paulus. Leading the attack into the Tractor Works would be the 305th Infantry Division, supported by armored elements of the 24th and 14th Panzer Divisions. On the right flank parts of the 24th Panzer Division would maintain contact, while on the left side the 94th and 389th Infantry Divisions would clear the *balkas*. Pioneers and assault guns would be on hand. All artillery battalions of the LI Corps would be in support although ammunition was limited. Hopefully, a separate operation would wipe out resistance around Spartanovka and Rynok.

The assault was planned for 14 October. A moderate rain the night before did not disrupt the timetable, but a Soviet spoiling raid with tanks did catch some battalions moving forward just after midnight. At dawn the artillery began to shell the Tractor Works and river landings. As light increased, dive-bombers from the VIII Air Corps ranged over preselected targets. The panzers and infantry crossed the rail line embankment and came under immediate fire from machineguns and mortars. So close to the enemy that friendly artillery and bombs were a danger, the tanks and riflemen had to fight forward in small teams, clearing one position before engaging another. Although the Soviet artillery was silent, losses were high. In the first eight hours, the 305th Infantry Division had 53 men killed and over 100 wounded; dozens were missing. By dusk the Tractor Works was surrounded on three sides.

As the combat settled into its usual evening lull, German scouts checked out the Soviet lines. By midnight troopers of the II Battalion, 103rd Panzergrenadier Regiment, reported that a street to the river was apparently open and undefended. The battalion commander, Hauptmann Domaschk, quickly shifted his unit, followed by tanks of the 36th Panzer Regiment. By dawn of 15 October, a narrow corridor was secure to the Volga. German infantry fanned out along the river bank and attacked Soviet positions from the rear. The 94th and 389th Infantry Divisions stormed through nearby housing quarters to join up with the main attack. In its daily report the victorious LI Corps could list the destruction of twenty enemy tanks and the capture of 1,028 prisoners, four locomotives, sixty freight cars, three disabled railway guns (the last of the ill-fated armored trains), plus scores of machineguns, mortars, and light artillery pieces. For their boldness both Hauptmann Domaschk and the panzer commander were awarded Knight's Crosses

"House-to-House Fighting Continues in Stalingrad..."

The 62nd Army was now split into two parts with most of its divisions in the factories and railyards and the rest in the towns to the north. Chuikov admits that 3,500 wounded were ferried across the Volga in the first twenty-four hours of the attack and that casualties continued to be heavy. The 37th Guards and 95th Rifle Divisions were to lose 75% of their men and most of their

heavy weapons in or near the Tractor Works. The 112th and 308th Rifle Divisions were also hard hit, and the 84th Armored Brigade was reduced to less than a company of tanks. German troops unknowingly advanced to within 300 yards of the headquarters of the 62nd Army (on the east side of the Barricades Factory) but were driven off by a special security detachment and two tanks. Chuikov sent staff officers to evaluate conditions and to encourage the commanders. No position, however weak, was to be abandoned. Regiments of the 138th Rifle Division (Colonel Lyudnikov) somehow braved enemy fire to cross to the city. Though they were at half strength, Chuikov ordered the new units into the line. Service units and the moderately wounded were also sent forward. The Front command directed artillery and rocket regiments on the east bank to fire on enemy concentrations. Night bombers also increased their missions over the German rear areas.

While Gruppe Jaenecke pressed its attack toward the Barricades Factory, a separate battle was taking place around the northern towns of Rynok and Spartanovka. The XIV Panzer Corps was detailed to neutralize these towns so that their landings could not be used by Soviet reinforcements. After a short rocket and artillery barrage on 15 October, tanks and panzergrenadiers of the 16th Panzer Division moved on Russian defenses along the rail line. The most prominent of these were the "Mushrooms." These two brooding elevations were really huge bunkers armed with machineguns and light artillery. An extensive trench system covered the area. A battalion of the 79th Panzergrenadier Regiment won the smaller fort, but even with assault guns the 64th Panzergrenadier Regiment could not subdue the "Big Mushroom." In the towns pioneers and infantry found themselves fighting house-to-house. Demolition teams had to set their explosives so close that they were splintered by debris. When night fell the cooks and mechanics of the division had to mount guard for the exhausted combat soldiers.

Soviet resistance in the area came from remnants of several rifle brigades and some remnants of the 112th Rifle Division, collectively known as the "Northern Group." An attempted landing by units of the 300th Rifle Division was driven off by the Germans. Gunboats gave some support, but artillery on the east bank was trained on Stalingrad, not these towns. Still, the isolated defenders died hard. The German attack force was able to drive the Russians into a pocket near Spartanovka but lost 30% of its strength in the process. The 16th Panzer Division had no more troops to help the assault. The "Northern Group" was to survive until mid-November even as German guns covered both the river and land approaches.

Between the northern towns and the Tractor Works, the 94th Infantry Division moved to clear the Orlovka creek. Its regiments were so depleted that rocket launchers had to be teamed with the rifle companies. Tough enemy resistance, plus extensive minefields, slowed the progress. One daytime attack cost the 274th Infantry Regiment nearly every company and battalion officer. As the division neared the Volga, it came under increasing fire from the east bank. Enemy barrages also worked over the German divisions west of the "Tennis Racquet" and the Red October Factory. The 71st and 295th Infantry Divisions were too weak to challenge the guardsmen and Siberians opposite them. The 100th Jaeger Division did stage some assaults but with meager gains.

In the factories Gruppe Jaenecke found its headway reduced by a number of factors. The workhalls and cluttered streets hampered the movement of the tanks and personnel carriers; several were disabled by Soviet anti-tank guns firing point-blank from the rubble. Air support was being siphoned off by missions outside of the city, and German heavy artillery could not always react because of increasing shortages in ammunition. Fighting by day, then having to dig in for protection from enemy harassment bombing and shelling at night, the German soldiers began to suffer serious fatigue. Many became victims of the "Russian disease," i.e., dysentery. Since there were no replacements available, the senior medical officer of the Sixth Army warned Paulus that combat efficiency was likely to drop off drastically in the coming days.

A toll was also being exacted upon the Soviet forces. Positions were buried under enemy barrages or cut off by German attacks. Many badly wounded soldiers became prisoners when they could not be evacuated by their comrades. Still the Russian defenders fought on. Foundaries and piles of scrap were converted into pillboxes which had to be blown apart to silence them. Infiltration through streets, tunnels, and sewers kept the positions manned. The 62nd Army also made up an "active defense" with the deployment of storm groups. Their targets were often fortified buildings just taken by the Germans. Sometimes a tunnel would be dug beneath an enemy position which would be blown up in sapping techniques reminiscent of the First World War. Besides aggressive actions, the Soviets also made use of propaganda broadcasts and leaflets which invited the Germans to surrender. A former *Landser,* now a POW of the Red Army, would address his old buddies by name and urge them to join him in the relative safety of captivity.

Faced with a tough, imaginative foe, Paulus had to break the resistance in the Barricades Factory. Fortunately, two veteran regiments of the 79th Infantry Division (Generalmajor Schwerin) had arrived to lead a new assault. These were combined with the 54th Jaeger Regiment, plus two assault gun battalions and three rocket launcher battalions. Together, they assailed the outer shops of the Barricades Factory on 23 October. A short artillery barrage stunned the Soviet defenders, but once in the workhalls, the 79th Infantry Division found its way blocked by interlocking fire from machineguns and light cannons. Attempts to skirt the firing positions were frustrated by additional points built into the *balkas* and retaining walls. By late afternoon five of the ten workhalls were occupied, but the lead battalions had lost 83 men and another 364 wounded.

To the north a mixed force of panzers and infantry tried to win a squat structure known as Bread Factory No. 2. They ran into an unexpected concentration of Soviet armor (mostly immobile T-34's). Tank battered tank, but the Germans were able to destroy a dozen of the enemy vehicles. Panzergrenadiers of the 14th Panzer Division stormed nearby apartment buildings and a sports stadium. Extremely heavy casualties left the division with only 750 infantrymen. Clear weather let the VIII Air Corps fly several close support missions. Also, the combined artillery of the divisions and the LI Corps was used to direct suppressive fire against Soviet batteries on the Volga Islands and east bank. When a Soviet observation post was discovered atop a high smokestack in the city, an assault gun battery blasted it apart.

Another target of the German guns were the Soviet gunboats and barges which recklessly approached the west bank. They were trying to bring reinforcements to the 39th Guards Rifle Division which stubbornly held the Barricades Factory. The 300th Rifle Division was able to cross a regiment of new recruits. They were followed by other formations of raw troops. To provide some experienced soldiers, the 34th Guards Rifle Regiment sent a battalion from the oil refinery to the south. In addition to combat forces, Chuikov also received delegations from the *Stavka* and Front command, trying to evaluate the staying power of his army. To them Chuikov emphasized that his priorities were ammunition, men, and rations, in that order. All of the observers promised to do what they could, but the most senior officers privately advised the general that his army must hold with what it had while operations were prepared "elsewhere."

Visitors still came to the headquarters of the Sixth Army, but they were a different sort than those who had appeared at the early stages of the battle. Then there had been propaganda teams looking to glorify the victory which seemed so imminent. Foreign dignitaries and top generals had also flocked in to be present at the historic happening. After nearly two months of stalemate, however, there were no longer any well-wishers arriving to congratulate Paulus. Instead, officers flew in from the General Staff to gather material for their reports before hurrying back to Germany. The most prominent of these was Major Engel who had been sent by Hitler to assess the situation at Stalingrad. The survey was not encouraging. The 24th Panzer Division had the manpower for limited offensive action but barely a dozen tanks. The light battalions of the 100th Jaeger Division were considered capable of attacks although they were badly undergunned. The rest of the divisions in the city were rated as suitable only for defense. Indeed, the 71st and 94th Infantry Divisions had not a battalion of riflemen between them. Major Engel assured Paulus that the shortages would be reported to the Fuehrer, but he warned that major reinforcements were impossible as the Wehrmacht prepared for another winter in Russia

The Last Attack

Paulus knew that bitter weather could kill his men as surely as Soviet bullets, so he readied one more offensive to crush the foe in the factories. The third regiment of the 79th Infantry Division had arrived, and that plus a long association with the division commander, Generalmajor Schwerin, prompted Paulus to name him to lead the new assault. It would be called Operation *Hubertus.* All available combat troops would be combined in its execution. In addition, five pioneer battalions were sent from the west. Although somewhat understrength, they included flamethrowers and demolition experts which were considered crucial to eliminating the fortified enemy positions.

Because of the poor visibility over the city which might frustrate air attacks, Generaloberst Wolfram von Richthofen (commander of the Fourth Air Force) offered to use his airplanes to bring in artillery ammunition for the Sixth Army. However, the shuttle was not implemented to any great extent because of the need for the aircraft elsewhere. Artillery ammunition was saved up for the attack, but in the meantime, 210mm howitzers fired two rounds an hour, day and night, on certain strongpoints. To compensate for the lack of tanks and assault guns, a dozen experimental vehicles mounting 150mm guns would be used for the first time. The operation would still be an infantry endeavor, however, so unique measures were taken to develop a force able to fight and win at close quarters. The result was the *Sturmkompanie* based on heavy automatic weapons. Three divisions in the city were directed to organize these units while another *Sturmkompanie* was marched in from the northern perimeter. The men who were to lead the assault studied a secret report on attacking fortified positions, plus estimates of the enemy based on hazardous reconnaissance patrols made by pioneer officers.

The Soviet defenders were well aware that a German offensive was in preparation. The slackening in artillery fire suggested that ammuni-

tion was being hoarded for a new attack. Just as they had in previous weeks, line-crossers brought back useful bits of information about the enemy's activities. Numerous civilians still lived in Stalingrad, often on the edges of the battlezones. The Germans had tried to identify and control this nonmilitary population, but roadblocks and patrols could still not completely stop infiltration by the city natives. Even without such aids the Soviet commanders could easily foresee the likely target of the enemy attack. The 62nd Army was compressed into a zone approximately six miles long and one mile deep. Since the best German units were opposite the Barricades and Red October Factories, they were the logical objectives.

Soviet soldiers improved ground level bunkers protecting heavy machineguns and antitank guns. Holes were drilled through thick steel plates which covered firing slits so that only muzzles of the weapons would be exposed. Mines and boobytraps cluttered every approach. Tank-killer and flamethrower units were organized from penal companies. The Front command withheld heavy artillery shells but assured Chuikov that the artillery division on the east bank would be able to help him. The general was prepared to distribute small arms ammunition and chocolate rations to the 30,000 troops still in the central area. Infantry battalions of the 45th Rifle Division (Lieutenant Colonel Sokolov) augmented the west bank defenses. Further reinforcements were unlikely since the Volga had begun to fill with ice blocks which disrupted boat traffic. The harrowing weeks of battle and increasing sense of isolation so weakened morale that K.M. Gurov, the commissar of the 62nd Army, ordered political officers into the front lines to maintain discipline.

With a short artillery barrage at 0300 hours Operation *Hubertus* began on 11 November. Ten battalions of German infantry, plus tanks and pioneers, entered parts of the Barricades Factory, the Red October Factory, and nearby shops. Clear weather allowed the VIII Air Corps to do pinpoint bombing on both sides of the Volga. Near the Red October Factory, part of Gruppe Schwerin ran into a Soviet storm group just moving into position. Inside a workhall, heavily-armed soldiers fired point-blank at each other. As the rest of the attack swirled around them, the men inside of the workhall carried on their own private war amidst the rubble. Finally, flamethrowers and hand grenades were used to stifle the Soviet resistance. The rest of Gruppe Schwerin was slowed by enemy bunkers which had to be tackled by explosives-laden pioneers. In the afternoon, a few Soviet tanks tried to split the attackers, but timely intervention by an armored group of the 24th Panzer Division destroyed the tanks.

To the immediate north the 305th Infantry Division battled near a group of oil tanks to win heights on the river bank. The 389th Infantry Division occupied a 350-yard area along the Volga, then had to defend itself from a Soviet counterattack which boiled out of the nearby Barricades Factory. Near the rail loop the 71st and 295th Infantry Divisions combined to clear a housing group. The 100th Jaeger Division enjoyed a rare victory in destroying nineteen small bunkers. Along the entire line, however, the Germans suffered tremendous losses. For example, in their first day of action in the city, the five new pioneer battalions lost 440 men. The 389th Infantry Division could locate 190 casualties, but another 189 men were reported missing!

The 62nd Army had also been severely depleted. At the oil depot the commander of the 112th Guards Rifle Regiment counted only 100 men in each of his battalions. The 193rd Rifle Division had literally bled "to death" in the Red October Factory. When Russian reinforcements tried to land, they were driven back by blazing flak and machineguns. Many soldiers drowned as their boats were sunk by German fire. As serious as the losses in manpower was the reduction of territory held by the Soviet defenders. Many outer positions had been overrun, and the enemy now occupied new areas of the Volga heights. The 138th Rifle Division was cut off along the river behind the Barricades Factory; the division was to remain isolated until mid-December.

Despite the pressures put upon it, the 62nd Army displayed an amazing tenacity and resistance. Counterattacks were quickly organized to challenge almost every German advance. Many of these efforts were too small to be effective, but when carried out at night they unnerved the enemy. Chuikov and his staff juggled units and supplies to maintain an effective defense. Small arms ammunition was alloted by need, not request. Artillery on the east bank also joined the defense. Since the Germans were now so near the river, almost any barrage just beyond the far shore was bound to cause damage. Night bombers flew over the city dropping explosives and flares to disrupt German movements on the ground. After less than five days, Gruppe Schwerin suspended its attacks merely to retain what it had won. The fighting broke off as both sides were overcome by the tremendous carnage.

Turning Point: Operation Uranus

Impatient to finally claim his prize, Adolf Hitler directed the Sixth Army to resume the attack. Paulus acknowledged the message with a promise to win the city, but he was not to get the chance. On 18 November, seven Soviet armies of nearly a million men marched against Stalingrad. They were part of the Operations *Uranus,* the long-awaited Communist offensive. With power and precision the Soviet attackers exploited the extended lines of the Fourth Panzer Army and the weak positions of the Third Rumanian Army. On 22 November, the Soviet pincers met at Kalach, some forty miles west of Stalingrad. The Sixth Army was surrounded.

Left inside the pocket were 260,000 soldiers (including 13,000 Rumanians, 19,000 *Hiwis,* and a scattering of other nationalities) representing twenty-three divisions and over 100 independent formations. Casualties quickly increased due to the intensive fighting, the terrible weather, and the reduced rations. Disease and sheer exhaustion incapacitated many men. Before the last airfield was closed on 24 January 1943, over 30,000 wounded men had been flown out. In addition, 7,000 specialists (mostly staff officers and tank maintenance personnel) were evacuated to the west. A week later, the 123,000 remaining survivors (including 24 generals and over 2,000 other officers) became prisoners. Shorn of their arms and valuables, they marched eastward under the guard of the NKVD.

In Retrospect

To justify the loss of the Sixth Army, Nazi propagandists claimed that its sacrifices had given time for German armies in the Caucasus Mountains and other regions to withdraw before the Soviet onslaught. Certainly these retreats had been carried out in good order, but the German public was stunned by the cost. While Wehrmacht censors withheld the last melancholy letters from the soldiers of the Sixth Army so as not to compound the feeling of despair, survivors of the catastrophe already in Germany quietly told their relatives and friends the details of the debacle. Throughout the Reich doubts began to form about the conduct and purposes of the war. Why had the battle been lost.?

For many an obvious answer was that Stalingrad should not have been attacked at all. Its importance as a transportation and manufacturing center was secondary to the destruction of the Red Army. When the operations in the summer of 1942 failed to eliminate the enemy, a sober reevaluation should have been begun. Hitler seemed to have recognized the true priority (as shown by his dismissal of Bock), but he was also determined to take Stalingrad. Some of his generals did question the logic of the choice in light of the other ongoing battles, but most German military men accepted the target. Once in the city it should have been the responsibility of the *Oberkommando des Heeres* (OKH) to insist on alternative tactics to the meatgrinder methods which were used by the Sixth Army. One option would have been to seal off the city entirely. Since the Volga prevented a rapid envelopment, encirclement would have had to come from the skies. Rather than dropping thousands of bombs on the city, the Luftwaffe could have used the same explosives against the *east* bank to cut off reinforcements and to block evacuation of the city. A more extreme move (proposed by Kurt Student and others) would have been to send in paratroopers and gliders to seize the east bank and bar Soviet reinforcements while Stalingrad was cleared by regular infantry. This scheme failed to consider, however, how the airborne troops were themselves to be supplied or extricated.

Since the long city could really only be approached from one side, the reasonable course would have been to advance enough units to engage the Soviet defenders, then stop. Once the ends of Stalingrad were secured and a contiguous line was established near the factories, the soldiers of the Sixth Army could have patrolled the captive Russian garrison. Aggressive probes would have forced the 62nd Army to man every inch of its line. Artillery barrages and air bombing (even with restrictions) would have kept the enemy at bay and prevented a build-up of forces. These conditions were met in mid-October. The Sixth Army would have been able to dig in for the winter and not have had to endure the strain of mounting futile attacks. Instead, the burden would have been placed on the 62nd Army, thereby reversing the dilemma of Stalingrad: Soviets, not Germans, would have had to challenge well-fortified positions. If the Red Army chose not to do so, the Sixth Army would have been able to improve its rear areas and supply situation. Threatening enemy concentrations, as at Beketovka, could have been eliminated by Army Group B. Operation *Uranus* might have been aborted had Paulus not decided to enter the factories.

For the *Stavka* the defense of Stalingrad was really a Hobson's choice. Not to do so would have encouraged the Nazi advance and perhaps have lost the southern flank. To fight in a city beyond a river, however, was no simple matter. The Soviets apparently thought that the Germans would recoil once they had met a stout defense. When that did not occur, the Red Army had to counter every enemy effort with an equal effort. Those who have argued that the Communists used Stalingrad as bait to trap the Sixth Army have not appreciated how the Germans almost prevailed in the early weeks of the battle. Only in October when it appeared that the Germans were overextended and irrationally committed to taking the city did Stalin and his advisors begin to see an unexpected opportunity. If the Sixth Army was held on the Volga, its weak flanks could be crushed. To do so meant sustaining Chuikov's army long enough to keep it alive but not at the expense of greater operations. The losses in manpower and materials were frightful. And Stalingrad was destroyed. However, the Soviets accepted the cost since in return they eliminated an enemy army and served notice of their own strength. The war on the

Eastern Front was never the same after that momentous confrontation of the Volga.

As the fighting surged to the west, Stalingrad was left to begin its long recovery. For several years after the war, Stalingrad was called the "city without street numbers" because the many months of battle had literally obliterated every road and every building. Thousands of homeless refugees joined the native Stalingraders to clear the rubble and build a new city. Known today as Volgograd (since the old WWII dictator is no longer in favor), the emphasis is still on industrial production. Testimonials to the battle are everywhere. A museum houses relics of the fighting and gives a (Soviet-oriented) interpretation of the conflict. A small building with bullet-scarred walls commemorates the valorous action of the guardsmen. Bronze statues near Mamayev Kurgan remind visitors of the blood shed for that ancient hill. A huge monument lists the names of every Russian, soldier or civilian, who died in the city. On state occasions veterans proudly wear a medal "For the Defense of Stalingrad" with its khaki ribbon split by a single crimson band.

No memorials exist for the Sixth Army. Years after the war barely 5,000 of its soldiers survived Soviet prison camps to return home. They were among the last enemy prisoners released by the Communists. Most of their countrymen had already forgotten about these veterans. During the battle Adolf Hitler had considered a "Stalingrad Shield" to honor the victory, but the project was cancelled as the fighting in the city took its fatal turn. He should have done better for the army which literally died for his ambition in the streets of Stalingrad.

THE ARTILLERY

Even as the battle of Stalingrad began, both the Germans and the Soviets realized that a critical component in their arsenals would be the artillery. In previous campaigns on the Eastern Front, the Germans had used artillery with great effectiveness. The Russian fondness for the "God of War" was also well-known. In a set-piece battle like Stalingrad, whichever side gained a superiority in artillery could well be the victory. However, both the Germans and the Soviets faced problems in the employment of their guns, in part because of the battlefield itself, but also because of circumstances peculiar to the two armies.

All of the German divisions entering the battle zone had their full complement of guns and batteries. These were usually in the 75mm to 150mm range with a few divisions using converted or captured guns. In addition, as many as nine battalions of army artillery were deployed, some with guns above 200mm. These units also included heavy howitzers capable of high angle fire over buildings or into *balkas;* they could also be depressed to fire directly into reinforced positions. With the absence of the Red Air Force, the Germans were able to use their rapid-fire antiaircraft guns as infantry support weapons. The three regiments of heavy and light *nebelwerfers* were also appreciated by the riflemen. Perhaps the most popular close support weapon, however, was the assault gun. The *Sturmgeschuetze* could accompany the infantry in nearly every situation to provide both devastating firepower and armored protection.

As the retreating divisions and brigades of the 62nd Army fell back to Stalingrad, they abandoned much of their artillery. The deficits were made up in part by new guns found in the city, but few of the Soviet units on the west bank had their authorized amount of artillery during the battle. Rather than try to redress their disadvantage, Soviet commanders wisely built up the artillery on the east side of the Volga where it could be more easily supplied and also protected from the German advances and the ever prowling Stukas. When the enemy entered the city in mid-September, the 62nd Army could fire only 575 guns andmortars. By 1 October, thanks to the creation of a new artillery division, the number had risen to over 880 pieces. In early November, Chuikov could count on nearly 1,200 guns and mortars to defend the city from both sides of the Volga. Most were standard Soviet artillery weapons in the 76mm to 122mm range along with several behemoths of 203mm caliber. Several batteries of antiaircraft guns helped protect the river crossings. Finally, numerous rocket launchers peppered the west bank. Indeed, one "Katyusha" regiment survived in the city, by firing from the river edge, and then retreating back into tunnels dug into the steep cliffs.

To use their artillery properly, it was important that the Germans and the Soviets be able to see the enemy and then adjust their guns accordingly. The Sixth Army had superior target acquisition capabilities for several reasons. Control of the air enabled artillery spotters to discover Russian positions on both sides of the river, and enabled the Germans to emerge victorious in the early artillery duels. Occupation of key heights, such as Mamayev Kurgan, provided excellent vantage points for artillery observation teams. Once a likely target was noted, information about it was evaluated by corps level artillery staffs which would coordinate fire by both the divisions and the separate battalions. Most German batteries were readily mobile and benefited from a very flexible organization, so that the guns could be shifted along the front, as needed.

By contrast the Soviet artillery lacked any help from aviation spotters. Observers on the low-lying and flat east bank literally had to "look up" to see into the city. Soviet soldiers did infiltrate German lines to identify targets, but their range was limited. Once a target was discovered, that information had to be conveyed over to the east bank, either by underwater telephone lines (which frequently malfunctioned) or by courier. The Soviets rarely used radios because of the superb German intercept service which constantly monitored the area. To coordinate the fire mission, competent artillery commanders were available, but their flexibility was reduced by the static positions of the guns. Concrete-lined emplacements protected the weapons from anything short of a direct hit by a heavy bomb or shell but also limited the traverse of the guns. Many could only fire straight ahead. Thus, the growing concentration of artillery on the east bank was directed to cover specific areas, such as the factory area, the rail loop, and the most important landing sites in Stalingrad.

Within the constraints already described, the city battle might have still developed into history's greatest artillery duel except for the shortage in ammunition which plagued both armies. For the Germans the deficit was in part caused by the prolonged fighting which exhausted the original allotment of shell, forcing the Germans to chose between either massive barrages *or* support operations, but not both. Another limiting factor was the long supply line from the west which depended on a single railroad, trucks, and horse-drawn wagons. Delays and bottlenecks were inevitable. As a result, the heavy artillery was chronically forced to a weekly rather than daily bombardment. German gunners in Stalingrad could ruefully joke that "hundreds of batteries are in position before the city, but each has only one round of ammunition." Ironically, the Luftwaffe kept its batteries well supplied by flying in more than enough ammo for its 20mm or 88mm flak units.

However, these problems were more like a nuisance when compared to the Soviet ones. The 62nd Army had to depend on shells shipped across the Volga for its artillery in the city. The guns on the east bank suffered severe restrictions in ammo supply, at first to build up reserves in case the Germans did cross the river, then to provide an abundance of shells for Operation *Uranus.* Chuikov and his artillerymen protested these limitations but to little avail. Russian munitions sometimes contained defects in materials or manufacture which caused misfires or ruined the artillery pieces.

Faced with a constant shortage of ammunition, both armies had to develop specialized firing techniques. The Sixth Army usually limited its artillery fire to a very intense thirty minute barrage designed to bombard the defenders into oblivion — just before the major assaults. There was simply not enough ammo for the around-the-clock firing or the constant harassment shelling the Germans would have preferred. As a result, the Soviet soldiers became aware of the enemy timetable, and once the barrage lifted, they would come out of their shelters (which could resist all but a direct explosion from a heavy shell) and take up their positions to engage the German infantry. Occasionally, acting on good intelligence information, the Germans would coordinate a surprise shelling against a likely Russian headquarters bunker or supply dump. Such tactics often were spectacularly successful.

The Soviets also concentrated their artillery, either to support an attack by their soldiers or to shatter German troops assembling for an assault. Russian guns on the west bank seldom fired for more than a few minutes, both to conserve ammunition and to avoid elimination by the ever alert Germans and their brutally efficient counter-battery fires. Harassment barrages, particularly by the rocket battalions on the east bank, kept the Germans wary of most open spaces. While the battle of Stalingrad had the potential to become totally decided by a great artillery contest, it developed instead into a confrontation of limited *but intense* cannonades against specific area. And if it were not for the nagging shell shortage and the nature of the city itself, the *whole battlefield* might literally have been plowed under by a sheer blanket of high explosives. ■■

THE TACTICS

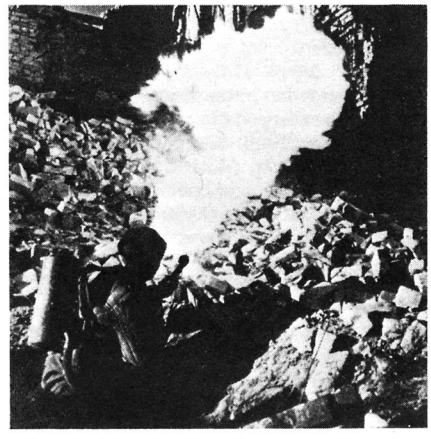
Neither the Sixth Army nor the 62nd Army had extensive experience in fighting house-to-house, so their conventional tactics proved inadequate in the streets of Stalingrad. As the aggressors, the Germans found that their techniques of envelopment and breakthrough meant little when the enemy held block after block. In trying to eject the invaders, the Soviets learned that their usual methods were too slow and clumsy. As it became obvious to both sides that artillery and airpower alone would not be decisive in the city, they turned to refining their infantry tactics and organization in hopes of gaining dominance on the strange battlefield.

Thorough reconnaissance was attempted before every operation. The Sixth Army relied heavily on aerial photographs, radio intercept, and prisoner interrogations to pinpoint enemy positions. Since the divisional reconnaissance units were usually kept back as a mobile reserve, the front line battalions sent out their own men as scouts. Pioneer officers proved especially adept at evaluating Soviet fortifications. All information was keyed to low-scale maps which identified features by a grid system. The data could then be used by the air arm and artillery as well, an important key in all German operations. Because it lacked the technical means for long-range reconnaissance, the Soviet command had to depend on prisoner reports and patrols. The latter were dispatched by the sector headquarters, usually in four-man teams. A few trained individuals remained behind the lines to radio in reports on enemy activities. Landmarks were often described by nicknames. As the fighting raged around certain objectives, they became known to everyone by either their configuration (e.g., the "L-shaped House"), function (e.g., the "Chemist's Shop"), or location (e.g., Rail Station No. 1). Captured documents were eagerly examined by both German and Soviet intelligence officers.

Because of the density of multi-level buildings (and cellars) in Stalingrad, both sides had to reduce the frontages assigned to their assault units. Simply passing through the city blocks was not enough, since each building had to be entered and searched along the way. One infantry company was considered adequate to clear a single city block, alloting one squad or platoon per building. An apartment complex or factory might require a reinforced battalion of riflemen plus engineers and tanks. Built-up areas also impeded movement so that objectives were kept short range (sometimes, only the next block or major structure). The Germans usually aimed for specific phase lines (such as a street or *balka*) whereas the Russians tried for more general objectives (like Mamayev Kurgan or a housing project).

Once an objective was chosen and analyzed, the support (aviation, artillery, etc.) was tailored to the mission. The Germans used bombs and heavy shells to reduce and isolate the objective and then hopefully stun or demoralize the defenders while the Soviets were more indiscriminate, preferring saturation over precision. Actual jump-off times varied. At first, the Sixth Army had opted for dawn attacks, but then shifted to later morning assaults. In part this was done to increase visibility for the ground artillery spotters and air elements. Also, Russian spoiling raids and barrages postponed some German operations. When trying to regain lost ground, the Soviets might counterattack at any time. Usually the fighting broke off at dusk, although by mid-October, the soldiers of the 62nd Army displayed an affinity for night actions which was seldom matched by the Germans.

Once underway, the attacker would use speed and concealment (including smoke) to close on the objective. The infantry would usually move in single file along the street, with men assigned to watch for mines, snipers, etc. The Germans often assigned tanks (or assault guns) to the motorized infantry. The riflemen would stay in their half-tracks until contact was made. The reluctance of the panzergrenadiers to dismount forced the German commanders to strip the forward elements of their vehicles and to deploy the men along each side of the street beside the tanks. Mobile cannons and flak guns added punch to the assault. While the Sixth Army usually attached one tank platoon per infantry company, the Soviets commonly employed their tanks as stationary field guns or as blocking forces. If tanks were used offensively by the 62nd Army, they were sent ahead alone or in pairs, followed by a cluster of



Soviet soldier using flamethrower at Stalingrad.

riflemen. To their credit, however, the Soviets were the first to get their troops off the streets in order to move through buildings, yards, and even sewers. These new routes added an important element of surprise.

Once an objective was reached, entry could be made in a number of ways. At first, the Germans had arrogantly gone through doors or ground-level windows, but enemy booby traps and firepower claimed too many lives. Two alternatives were then tried. One was to blast open a new entrance through a wall using heavy howitzers or explosives. The Soviets also used this method but refined it by going through adjacent walls to neighboring buildings or else excavating a tunnel from cellar to cellar. Another alternative was to enter the building from as high a level as possible, then clear the structure downward, floor by floor. Sometimes a crude bridge of planks could be devised to connect nearby buildings. The Germans often ascended ladders to the second or third story, while the Soviets were masters at scaling walls and climbing ropes held by grappling hooks.

Once inside, the lead man would toss a hand grenade into the room or hallway. Before the smoke had cleared, his partner would stick his weapon through the opening and spray the area. Deployed as teams, the assault group would clear every room, attic, and cellar, while a covering team outside would stand ready to cut down any enemy who might try to flee. Speed was essential. Besides automatic sidearms (many Germans preferred the Soviet PPSh-41 over their own machine pistols), daggers and blackjacks were wielded in hand-to-hand fighting. The Soviets also carried the so-called "Stalingrad spade" to lob grenades or to bash skulls. Crowbars helped dismantle walls, while satchel charges and flamethrowers were usually decisive against particularly difficult strongpoints. Even as the building was being secured, friendly machineguns were set up at the corners and on the roof to block any enemy counterattack. As the structure was occupied, communications were established with the main headquarters, and fresh units arrived to reinforce the position.

While these tactics were known to be the most successful, they placed a strain on the average German or Soviet infantry company which was trained and equipped to operate as part of a larger unit, not in independent teams. Leadership and firepower were especially deficient. The 62nd Army made the first organizational change by creating "storm groups" of 80 to 100 volunteers to specialize in house-to-house fighting. Every man was given a specific task and briefed on the overall operation. He was armed with a submachinegun and hand grenades, while mortars and machineguns were added to his group. One or two assault teams, composed of a dozen men each, would lead the attack, followed by a more heavily armed reinforcement team and then a reserve detachment. Soviet commentators have implied that every regiment had a storm group, but the battle records show that only the most elite formations could train and equip the storm groups. They were quickly consumed in the many counterattacks but did ruin the German chance for a rapid occupation of the city.

The value of these shock troops was not lost on the Sixth Army which devised its own special units for Operation *Hubertus* in mid-November. These were known as *Sturmkompanies* of 150-175 men each. The *Sturmkompanie* consisted of three rifle platoons, a heavy weapons platoon, and a supply element. Officers and NCO's carried submachine guns, and the men had rifles and pistols; every member had at least two hand grenades. Each section manned a light machinegun, while heavy machineguns and mortars were used in support. Pioneers with high explosives and flamethrowers were assigned as necessary. Despite efforts to brief every man on fighting in fortified areas, the *Sturmkompanies* were essentially up-gunned infantry companies. Well-armed and slightly overstrength, the *Sturmkompanies* were always expected to lead the attack into the factories. Little relief was available from the neighboring units which had been stripped for their benefit. The *Sturmkompanies* were a desperate gamble by the Sixth Army, and as events proved, they were asked to do too much. Paulus and Chuikov both came to realize that what they needed in Stalingrad was not so much a handful of elite formations to carry the burden, but rather an entire army suitably trained and equipped to fight house-to-house. ■■

THE COMMANDERS

For Generals Paulus and Chuikov, the battle of Stalingrad was more than an armed conflict; it was a test of two military systems. Neither commander was allowed by his countrymen to forget the importance of his mission, but neither man enjoyed the freedom of action that he felt he needed to do the job. Some of the constraints were derived from the type of combat. Others were imposed by the institutions of the Nazi and Communist states. Paulus and Chuikov bore these pressures every day. Victory in the streets of Stalingrad would come to the general who could overcome his enemies both inside and outside the city.

Friedrich Paulus was raised in a family of civil servants in the province of Hesse-Nassau. He was not a Prussian aristocrat and never placed a "von" before his surname. Paulus used intelligence and industriousness, plus social grace, to excel as a staff officer and instructor. The growing panzer corps helped him advance in rank despite a small army. When war began, Paulus served brilliantly as the Chief of Staff of the Sixth Army in its initial campaigns, then shifted to other duties for a year and a half. When the commander of the Sixth Army died, Paulus returned to take charge in January 1942. The successful encirclement of Soviet forces at Kharkov earned him the Knight's Cross. As Operation *Blau* unfolded to the east, there was no reason for the man known for his organizational skills to question the plan or the experts who designed it.

The son of a shoemaker, V. I. Chuikov had taken up arms as a teenager in the Bolshevik Revolution. His military talents kept him in the Red Army where his low rank protected him from the Stalinist purges which destroyed many of his superiors. Service with the troops improved Chuikov's knowledge of men and weapons. Despite a reputation for competence, Chuikov was also known for a certain abrasiveness. He fought well in the Russo-Finnish War, then was sent to China as a military *attache*. Such exposure to foreign armies was rare for a Soviet officer. When the Nazi invasion threatened the Volga, Chuikov was ordered home to serve in a variety of units as either temporary commander or chief of staff. Important superiors, such as Yeremenko, took note of his determination and innovative talent. When it became necessary to change the leadership at Stalingrad, Chuikov was a logical choice.

To command effectively, a general must have good working relations with those below and above him. In dealing with his subordinates, Paulus adopted a conventional attitude, relying heavily upon the staff system. Since his area of operations extended along a wide front from the Volga to miles west of the Don, Paulus could not personally inspect every sector. He usually stayed at his headquarters and only rarely visited the front lines. The legendary efficiency of the General Staff provided the data and advice needed for routine matters. However, because of his isolation, Paulus lacked a "feel" for the fighting in the city. On important points he seems to have deferred to his chief of staff, Arthur Schmidt, or to his principal combat leader, Seydlitz. Major operations were turned over to old friends, such as Jaenecke and Schwerin, so they could gain command experience (however futile the efforts). This eschewal of responsibility did not go unnoticed. After the Russian encirclement, Paulus lost control of major elements of his army, like the LI Corps, and seemed unable to reassert his authority.

When Chuikov took charge of the 62nd Army, there was little opportunity for radical change. The army was already backed up against the Volga, and the old staff was still in place. Despite the urgency of the situation, Chuikov at first kept a low profile. He allowed the chief of staff, N. I. Krylov, to continue operations while he evaluated the situation. Then, Chuikov took swift action. Subordinates who showed a lack of resolution (such as the commander of a rifle brigade who hid on an island while radioing false reports) were summarily removed. When units leaders (e.g., Sarayev of the 10th NKVD Division) questioned his orders, Chuikov coldly reminded them that his authority came from the highest levels. Perhaps most importantly, Chuikov lived with his army in the city. He inspected front line headquarters and knew most of the commanders. Chuikov was also personally aware of every facet of his army from the disposition of supplies to the deployment of anti-tank guns. This willingness to share the hardships of his men generated strong loyalty for Chuikov.

As the vanguard of German operations in Russia, Paulus could have been expected to enjoy a special claim to the means necessary for victory at Stalingrad. Certainly Army Group B made every effort to support the Sixth Army, even at the expense of other units. However, the battle in Stalingrad was only one part of a vast campaign. For those in Berlin and Vinnitsa it seemed enough that Paulus' army had more divisions than any other German field command at that time. Hitler himself declared that with such a force Paulus should be able to storm the heavens. Such an outlook did not allow an accurate appreciation of the man and material requirements for city fighting. When colleagues of Paulus on the General Staff tried to point out these problems, they were reminded that the Fuehrer himself had called for the fall of Stalingrad.

It did not help that some of Paulus' peers, such as Richthofen of the Fourth Air Fleet, lamented the tactics employed by the infantry units in the city. As the conflict continued, the spokesmen for the Luftwaffe, the supply command, etc., all defended their services and criticized the other branches. When the Sixth Army was encircled and appeared headed for extinction, much of this animosity subsided in the general effort to save the army. Even Hitler was willing to turn over some local control to Manstein in the breakthrough operations. But by then it was too late, both for the Sixth Army and for its commander.

If Paulus had to contend with competing bureaucracies and high level carping, Chuikov suffered from excessive attention from his superiors. The Red Army sought compliance by detailed plans and inquiries which stifled individual initiative. To the military command was added a political component of advisors from the Communist Party who shared equal status with army leaders at every level. Throughout the battle Chuikov had to please committees and managers who controlled nearly every aspect of his army. Visitors, both in and out of uniform, constantly monitored his performance. Such interference aggravated Chuikov's natural belligerence and often put him at odds with other commanders.

As the build-up continued for Operation *Uranus*, the needs of the 62nd Army were subordinated to the forthcoming offensive. Reinforcements were regulated, sometimes by the *Stavka* itself, so that Chuikov had little voice in the choice or arrival of troops in his army area. Indeed, Chuikov's zone of control extended barely east of the Volga bank. Out of the city, his supply dumps, staging areas, and river transport were all determined by the Front command. The east bank artillery of the 62nd Army was centralized in the special division which helped coordinate fire, but it was not always responsive to conditions in the city. Chuikov had to plead daily with the Front command for enough shells to prolong his defense. In many ways, Chuikov was treated more like an assistant of a minor corps than the commanding officer of a principal army.

The operations at Stalingrad exposed an ironic dichotomy between the German and Soviet methods of making war. A Nazi commander was given a mission and then expected to perform like a hero. A Communist commander was issued his orders which he was to carry out like a clerk, whatever the costs. Chuikov bridled under the restrictions of his system, while Paulus could not live up to the ideals of his army. Their frustrations were increased in late 1942 by the demanding battlefield on the Volga. ■■

Field Marshal Paulus surrenders.

AIR POWER

The commitment of airpower at Stalingrad was a one-sided affair, heavily weighted in favor of the Luftwaffe. At this stage of the war, the Red Air Force was inferior to the Germans in the quality of pilots and aircraft. In the summer offensive of 1942, the 3d Fighter Wing "Udet" cleared the skies above the advancing Sixth Army. By the end of August, the 8th Air Army which was to defend Stalingrad had lost almost all of its fighters, leaving but 150 aircraft, most of which were obsolete or in need of repair. Soviet airmen then turned to small-scale raids. Throughout the battle groups of two to twelve bombers (often crewed by women) would fly night harassment missions, dropping bombs on German supply dumps or troops concentrations. These attacks rarely caused great damage beyond disturbing the enemy's sleep. As the Sixth Army pushed into the city, the Red Air Force also sent bombers on daytime missions. Usually they were diverted from their targets by German fighters. Attempts were made to air-drop agents behind the enemy lines, but most were captured upon landing. Occasionally, a pair of Soviet fighters would streak across the Volga to strafe a German artillery battery or column, then disappear before they could be intercepted. German air and flak superiority inhibited decisive action by the Red Air Force until bad weather grounded all aircraft.

The German VIII Air Corps, under Generalleutnant Martin Fiebig, controlled three bomber wings, six dive bomber groups, a ground-attack group, plus four fighter groups. Bombing raids in late August and early September were aimed at enemy artillery positions and rail lines in Stalingrad. Individual targets, such as factory buildings, were pinpointed on aerial photographs. Successive air attacks dropped some 2,000 bombs per square kilometer. Rubble from the collapsed structures was strewn across streets and roads, thereby limiting enemy movements. However, German ground units also had to traverse the city, so the destruction was not always helpful. Gutted buildings also made ideal cover for Russian snipers and anti-tank guns. Attempts to neutralize Soviet strongpoints by air were thwarted in part because of the small targets and also because of the close proximity of friendly troops. Smoke and dust reduced accuracy of even low-flying dive-bombers.

By the end of September, major elements of the VIII Air Corps had to be transferred to operations outside of Stalingrad. This reduction, plus the continuing futility of bombing in the city, prompted Paulus to call for a greater effort against Soviet supply lines and artillery batteries on the opposite bank of the Volga. Bombing runs by the VIII Air Corps, however, failed to destroy permanently any rail line or road that brought reinforcements from the east. River traffic could be slowed but not blocked by air attacks; ground-based automatic weapons sank more boats than did German aircraft. Soviet artillery on the east bank could also not be silenced because of the superb camouflage and disciplined firing techniques of its guns. Luftwaffe airplanes flying to the east were limited by their range (they left from airfields far west of Stalingrad) and increasing enemy antiaircraft fire (particularly by mid-October). Most ominously, the VIII Air Corps lacked the aircraft for long-range reconnaissance. Despite the indications of a Russian build-up, there were not enough camera-equipped airplanes to study the activity beyond the Don and Volga Rivers.

Once the Sixth Army was encircled in November, the Luftwaffe had to be called upon to supply the besieged force by air. Paulus' quartermaster estimated that the army would require 750 metric tons of supplies per day. Luftwaffe transport officers calculated that they might be able to fly in 200 tons daily, but Reichsmarschall Goering insisted that 500 tons should be the goal. Due to a scarcity of transport aircraft, medium bombers were also used to haul the supplies. Aircrews were sent from other fronts and training units in Germany. Plunging temperatures grounded many aircraft and snow storms cancelled several flights. As the Soviet armies reduced the area of the Sixth Army, Russian antiaircraft guns lined the approaches to the only two airfields still open in Stalingrad. Deliveries did average 90 tons a day under most flying conditions, but rarely was the delivery above 150 tons. When the airfields were occupied, the German aircrews tried air-dropping provisions into the city with little success. In the futile effort to supply *Festung Stalingrad* by air, the Luftwaffe suffered the irreplaceable loss of over 2,000 men, 500 transports, and 200 other aircraft. For the Germans air supremacy at Stalingrad could not make up for failure on the ground. ■■