

Winning Outnumbered

Tactical Success and Strategic Failure at Dubno, 1941

BY PATRICK K. O'KEEFE

On 22 June 1941, on the orders of Nazi dictator Adolf Hitler, the *Wehrmacht* launched *Operation BARBAROSSA*—the invasion of the Soviet Union. The campaign consisted of three major axes: a northern axis aimed at Leningrad, a central axis aimed at Moscow, and a southern axis aimed at Ukraine and the Caucasus. The first weeks along the central and northern axes were marked by dramatic encirclements of enormous Soviet armies and rapid advances over huge swathes of Soviet territory. By contrast, the southern axis, along a line running from Rivne to Dubno, Ukraine, began with a brutal, seesaw tank battle between the nearly 800 tanks of the German *Panzer Group 1* and several thousand tanks of the Soviet Southwestern Front.

The opening ten days of war in Ukraine between *Army Group South* and the Southwestern Front saw *Panzer Group 1*'s lead two corps, with 585 tanks, attack into the Soviet Union's main

defensive sector for their resistance against German invasion.¹ The Southwestern Front committed 2,234 tanks to blunt *Panzer Group 1*.² Among that mass of armor, the Southwestern Front had at its disposal 758 T-34 and KV-1 tanks, which with their 76.2-mm. main guns and thick, sloped armor were far better armed and armored than anything in the German arsenal. On paper, the Soviets had every advantage: numbers, technology, and fighting on the defense. Yet *Panzer Group 1* largely had destroyed the mechanized forces of the Southwestern Front by 1 July.³

The United States Army is an army focused on winning the decisive battle, an overwhelming tactical and operational success that translates to strategic victory. For a smaller army that seeks to leverage qualitative advantage over a quantitatively stronger opponent, decisive battle offers the best alternative

Above: German troops crossing the Soviet border, 22 June 1941. *National Archives*

to the long, attritional styles of warfare historically favored by those opponents. The *Wehrmacht* in 1941 was a force built for decisive battle, the latest incarnation of a Prussian-German way of war that sought short, decisive wars against numerically superior opponents using a qualitative advantage and doctrine that emphasized tempo, combined arms, and decision dominance.⁴ The U.S. Army's current operational concept, Multidomain Operations, is the latest in a string of doctrinal constructs stretching back to the 1980s whereby the Army codifies its pursuit of decisive battle in a style that sometimes overtly evokes the German way of war. The Army also champions the concept of Mission Command and views it as central to successful conduct of Multidomain Operations. Mission Command seeks to empower subordinates with the initiative to deviate from higher headquarters' plans when the situation changes on the ground, a concept like the German culture of *Auftragstaktik* (mission tactics), which stresses the object to be accomplished, not the methods by which it would be achieved.

The *Wehrmacht* won impressively decisive victories in Poland, Denmark, Norway, and most strikingly in France against the French army—the world's largest—and its British allies. In the opening weeks of *BARBAROSSA*, it destroyed entire Soviet army groups in the central and northern Soviet Union and continued to do so through 1943 despite the failure of those operational successes to translate to strategic victory. Yet, although analyses of those campaigns are alluring to hold up as vindication of decisive battle doctrine, the border battles in western Ukraine in 1941 are a more valuable lens through which to look. *Panzer Group 1* won an impressive tactical and operational victory against far greater odds and with much more difficulty than in any other campaign. Therefore, it is a better case from which to distill the key elements of their operational approach that enabled them to ultimately succeed despite the opposition and ensure that the U.S. Army is doubling down on those elements in its Multidomain Operations. It also illuminates vulnerabilities in the approach of which the U.S. Army should be aware and seek to guard against, especially in a protracted conflict.

From 22 to 30 June 1941, German forces employing combined arms at all levels and



General Kempf
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empowering subordinates via a Mission Command culture consistently outfought Soviet units that were larger and better equipped. Within *Panzer Group 1*, the dynamic actions of its southern (right) wing, XXXXVIII *Armee*korps (*motorisiert*) [XXXXVIII *Army Corps (motorized)*] under Lt. Gen. Werner Kempf especially are enlightening in this regard, as are the actions of their Soviet opponents under the Southwestern Front commander Col. Gen. Mikhail Petrovich Kirponos, particularly in the Soviet 8th Mechanized Corps. This battle only has been detailed extensively in historiography thus far from the Soviet perspective, and this article provides a balanced narrative combining previous Soviet-centric work and original archival research.⁵

The Opening Moves

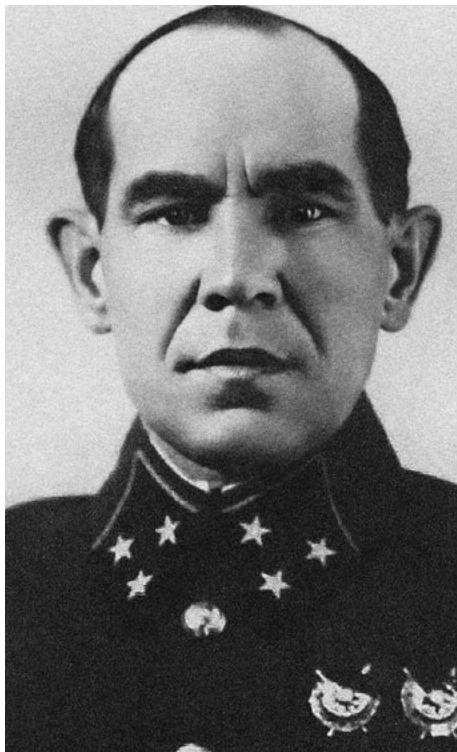
At 0330 on 22 June, German infantrymen from the 57th and 75th *Infantry Divisions* crossed the Bug River in rubber boats and stormed Russian positions on the east bank. By 1130, Kempf judged the penetration sufficient to pull the 11th *Panzer Division* forward to begin exploiting the apparently crumbling Soviet defenses. The 57th and 75th continued battling forward through Soviet fortified regions, reaching a line from Perespa to Zvertiv by 1500. At 1600, the 11th *Panzer Division's* reconnaissance



General Kirponos
Russian State Documentary Film and Photo Archive

battalion linked up with the 75th *Infantry Division* and began coordinating for a forward passage of lines. The Germans quickly facilitated the passage, and by 2000, the 11th *Panzer Division* had captured Perespa, 14.5 kilometers past the frontal Soviet defenses, without firing a shot.⁶

That night, the Soviets assembled forces for an armored counterattack to destroy the penetrating German forces in line with their doctrine. The Soviet 6th Army under Lt. Gen. Ivan N. Muzychenko ordered mechanized forces consisting of three battalions of medium tanks and two motorized infantry battalions from the 4th Mechanized Corps to counterattack German paratroopers landing near Radekhiv. These paratroopers turned out to be only the bailed-out crew of a German Ju-88 bomber. After that discovery, Southwestern Front commander Mikhail Kirponos ordered the entirety of the 4th and 15th Mechanized Corps to counterattack the 11th *Panzer Division* near Sokal. Kirponos also shifted the 8th Mechanized Corps in that direction to prepare for additional counterattacks. The Soviet mechanized corps moved to assemble near Radekhiv overnight, and Kirponos arranged for the morning attack to be supported by a regiment of Soviet Air Force bombers.⁷



General Muzychenko

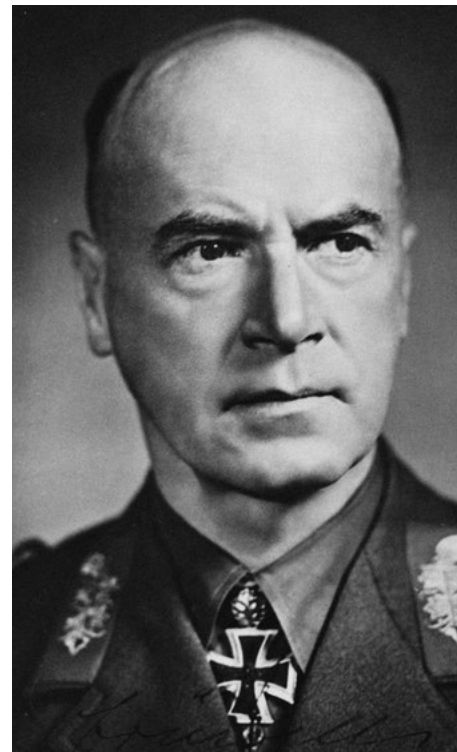
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The Soviet tanks were not concentrated fully by dawn the next morning. At 0330, the *11th Panzer Division* resumed its advance. A *Luftwaffe* reconnaissance flight reported Soviet mechanized forces lying along the division's axis of advance. The commander, Lt. Gen. Ludwig Crüwell, accordingly reorganized his division's *kampfgruppen* (combat units).⁸ Of note, *Kampfgruppe A* (KG A) comprised the division's panzer regiment (*Panzer Regiment 15*), its reconnaissance battalion (*Reconnaissance Battalion 61*), its motorcycle infantry battalion (*Motorcycle Battalion 61*), and a battalion of 88-mm. flak guns from the *General Göring Luftwaffe* ground regiment (*III/Göring*). Shortly before 0515, KG A contacted the five Soviet battalions that had arrived in Radekhiv to destroy the supposed paratrooper attack. *Panzer Regiment 15* had 166 tanks among 5 varieties, whereas the 3 Soviet tank battalions from the 4th Mechanized Corps consisted of a mix of sixty BT-7s and T-34s. The 4th Mechanized Corps was among the best-equipped corps in the Red Army, with approximately 50 percent of its roughly 1,000 tanks being either T-34s or KV-1s.⁹

As KG A approached Radekhiv, it cautiously deployed on line with its tanks in the lead. A battalion's worth of

Soviet artillery then struck it with heavy barrages. At the same time, about sixty Soviet bombers flew over the German tanks, likely Kirponos's promised air coverage. Inexplicably, the bombers did not attack the German tanks and flew off; shortly after, bombs fell on German troops crossing the Bug at Sokal. Supported by artillery fire, Soviet motorized infantry attacked out of Radekhiv, supported by BT-7s following behind. The Soviet infantry and light tanks in the open became easy targets for KG A, which split and began to encircle Radekhiv from north and south. During this maneuver, they encountered T-34 tanks, the first instance of German troops contacting these new Soviet armored machines. The sight of well-placed 37-mm. and 50-mm. armor-piercing rounds deflecting harmlessly off the Soviet tanks instilled great anxiety in the experienced German tankers as the T-34s launched their own local counterattacks. The reports of the ineffectiveness of German tank guns against these new tanks rapidly made its way up the chain; Crüwell, personally accompanying KG A, put *III/Göring's* Flak-88s to work on the T-34s. By noon, a little more than six hours after it began, the fighting around Radekhiv died down as the Soviets withdrew east. This first tank battle had cost the Soviets thirty-five tanks destroyed, including six T-34s. The Germans suffered nineteen tanks knocked out. All but one of these would be repaired and put back into action in the coming days.¹⁰

The circumstances of this first encounter prompted Crüwell to attach *Panzerjäger Battalion 61* to *Reconnaissance Battalion 61* to bolster that organization's firepower against the new threat and enhance their combined arms effectiveness. KG A continued cautiously eastward when a sudden barrage of artillery hit them once more. This barrage heralded the arrival of the Soviet 10th Tank Division from the 15th Mechanized Corps, yet it ceased just as the Soviet tanks attacked. The 10th Tank Division was short some artillery and its second tank regiment. Nonetheless, it committed to the attack with a single tank regiment and its motorized infantry regiment spearheaded by its reconnaissance battalion. The hilly terrain east of Radekhiv allowed the Soviets to take advantage of intervisibility lines to close the distance even as their



General Crüwell

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supporting artillery ceased. However, these intervisibility lines also negated their own standoff advantage. More than one hundred Soviet tanks attacked the *11th Panzer Division*, but the Germans had learned quickly from their earlier experience with the T-34s. Establishing a linear defense backed by *III/Göring's* 88-mm. guns and the entirety of the division's artillery, the Germans used their tank guns to destroy lighter Soviet tanks while leaving the T-34s to the Flak-88s and direct fire from howitzers. An enterprising German lieutenant, commanding a platoon of Panzer IV tanks, noticed that the T-34s carried fuel tanks on their back decks and ordered his platoon to fire high-explosive 75-mm. rounds at the fuel tanks, engulfing two T-34s in flames. Junior Panzer leaders across the division ordered their crews to engage the tracks and road wheels of the T-34s and the KV-1s, another new model of tank making its first appearance. Even though the 37-mm. and 50-mm. tank guns of the Panzer III tanks were unable to penetrate the armor of these tanks, they were more than capable of inflicting mobility kills, making the disabled tanks easy targets for the Flak-88s and howitzers. Meanwhile, the Soviet motorized infantry regiment attacked separately and without

coordination with the tanks. After losing almost fifty tanks and an indeterminate number of infantrymen, the 10th Tank Division withdrew to the east. The *11th Panzer Division* had destroyed upward of eighty Soviet tanks at the cost of seven tanks irreparably lost. Notably, the six additional catastrophic kills from the second engagement were a result of accurate T-34 fire at a range of approximately 800 meters, which shocked the Germans. More significant was the loss of sixty-three German tank crew killed in action, including three junior officers. *III/Göring's* flak crews also took heavy casualties, including the death of a battery commander; these experienced soldiers would not be replaced easily.¹¹

These first Soviet counterattacks, which showed great potential, failed because of poor combined arms application. The initial fighting west of Radekhiv had all the ingredients of a successful combined arms counterattack: a large artillery barrage, a tank-infantry team, and even close air support arriving at the appropriate time. Notwithstanding the critical miscommunication between the Red Army and Soviet Air Forces, which led to that close air support overflying and striking targets 30 kilometers away, the five battalions from the 4th Mechanized Corps caught the *11th Panzer Division* by surprise. The local Soviet commander, Lt. Col. Georgiy Lysenko, fumbled by putting infantry in the lead, with the tanks behind them in a supporting role. This arrangement not only squandered the element of surprise, but it also forced the tanks to advance at the rate of the infantry, making them easy targets for the German tanks and guns. The afternoon engagement east of Radekhiv was an even larger failure of combined arms. The 10th Tank Division commander, Maj. Gen. Sergei Ogurtsov, cut off his artillery barrage far too early. He then used his reconnaissance battalion as the lead element of the attack, rather than exercising tactical patience and employing it in its intended role of providing accurate information regarding German dispositions. This resulted in German firepower shredding its armored cars. Finally, the failure to integrate the infantry and tank regiments in their counterattack led to a complete waste of both units' potentials.

On the reverse side, the *11th Panzer Division's* leaders showed the ability



A German soldier sits atop a captured T-34 tank.

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General Ogurtsov

Russian State Documentary Film and Photo Archive

to take in information, analyze it, and develop appropriate courses of action. General Crüwell's commitment of *III/Göring's* 88-mm. guns against Lysenko's T-34s, his rapid reorganization of *KG A*, and the delineation of direct-fire engagement priorities for the *11th Panzer Division's* hasty defense resulted in *KG A's* mauling of a Soviet counterattack of equal or better strength. The benefits of *Auftragstaktik* also showed themselves in

these early battles. First, Crüwell's forward presence with *KG A* was a direct result of *Auftragstaktik's* emphasis on forward command. Second, the actions of platoon leaders across the *11th Panzer Division* in reaction to the new T-34 and KV-1 tanks amplified the effects of the combined arms effort. Decisions to employ ammunition in innovative ways for which it was not designed were the result of an emphasis on junior leaders taking initiative and the inherent trust from higher commanders that comes along with that culture.

The Soviet counterattacks on 23 June 1941 held significant promise as combined arms operations involving infantry, armor, and artillery—yet failed because of misapplication of those arms against improper German weak points. In contrast, the Germans correctly identified weak points against which they could leverage strengths and applied their combat power appropriately. In addition, a culture of junior leader initiative amplified the effects of successful combined arms application. It resulted in the overall destruction of more than 100 Soviet tanks by *Panzer Group 1* for the cost of only seven tanks lost.

Exploitation

On the evening of 23 June, *XXXXVIII AK* published its assessment of the new Soviet tanks, remarking that 37-mm. guns were completely ineffective and recommended the use of the Flak-88s for their destruction. German commands at all levels remarked on heavy Soviet air

attacks hindering forward movement, and the *Luftwaffe* reported being unable to provide close air support or defensive counterair missions in support of the Panzer divisions because of their ongoing struggle for air superiority. In an event seemingly relegated to a footnote at the time, the 11th Panzer Division's motorcycle battalion had, on the initiative of its commander Lt. Col. (first name unknown) von Stockhausen, lunged forward and seized Berestechko late on 23 June. Their quick action secured vital bridges over the Styr River before Soviet forces could arrive at the town and destroy them. This maneuver, seizing Berestechko unopposed, ensured XXXXVIII AK could continue its advance the next day without fighting for a bridgehead. It was another example of the *Auftragstaktik* mindset which would continue to enable German success.¹²



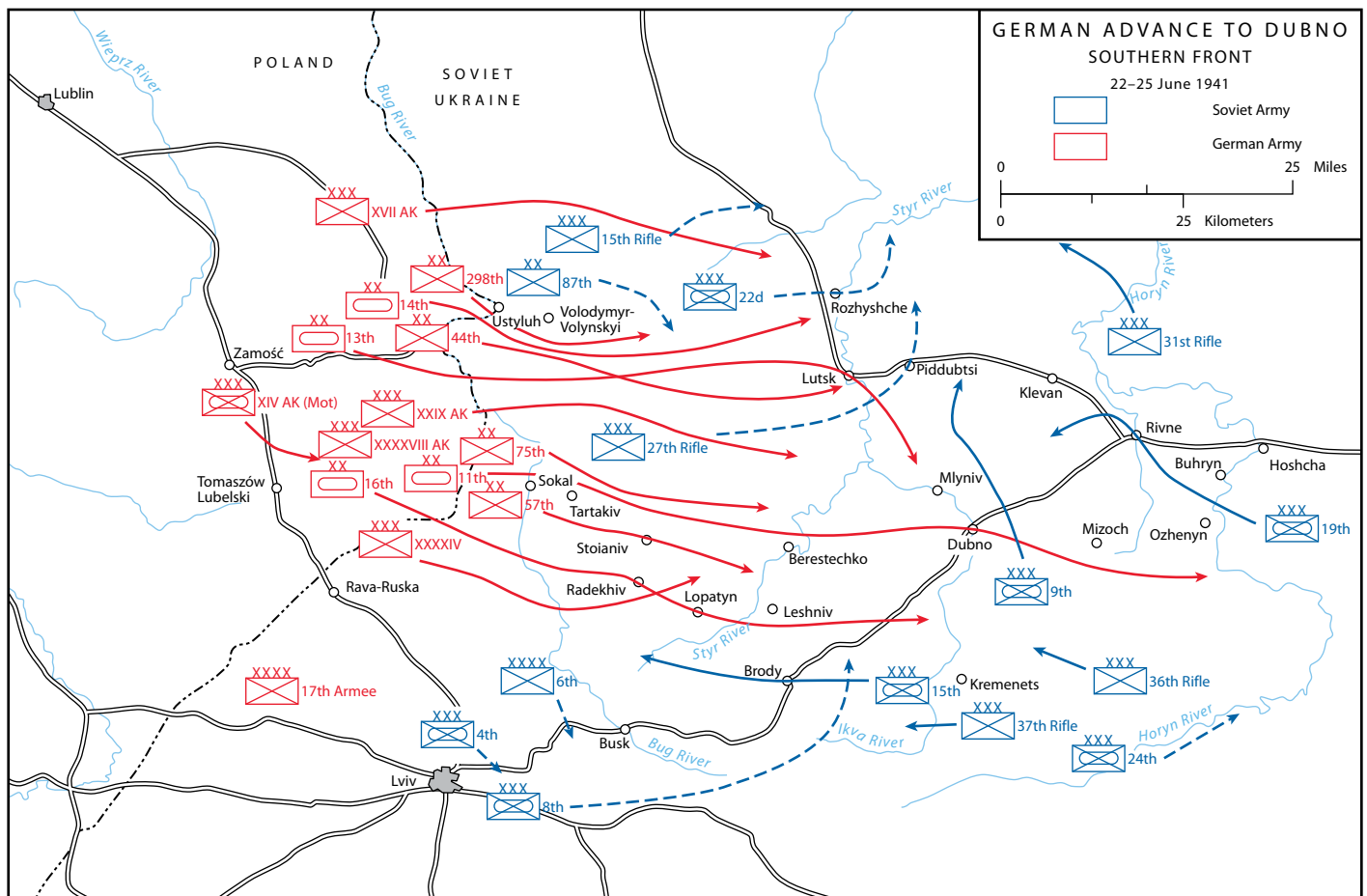
German troops inspect a knocked-out KV-1 tank.

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Meanwhile, General Kirponos and his staff drew up plans for 24 June at the Southwestern Front headquarters. The 15th and 22d Mechanized Corps and the 1st Antitank Brigade were all available for counterattacks, while the 8th, 9th, and 19th Mechanized Corps still were

marching from their starting positions in central Ukraine. Kirponos's chief of staff, Lt. Gen. Maksim Alekseevich Purkayev, argued for adopting a defensive posture for two more days, allowing the 8th, 9th, and 19th Mechanized Corps to arrive

before launching a large counterattack. Kirponos's commissar, Lt. Gen. Nikolai N. Vashugin, however, insisted that the front must counterattack immediately, in line with a directive from Moscow. The primacy of the commissariat, and the





General Purkaev

Russian State Documentary Film and Photo Archive

order from the Stavka, the Soviet armed forces high command, made Kirponos elect to side with Vashugin and direct a counterattack for 24 June.¹³

On the southern wing, the 15th Mechanized Corps would attack Berestechko. As they were finalizing the plan, two important visitors arrived at Kirponos's headquarters from Moscow: General Georgy K. Zhukov, chief of staff of the Red Army, and Commissar Nikita S. Khrushchev, head of the Ukrainian



General Zhukov

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Communist Party. Zhukov berated Kirponos for what he considered a lackluster performance thus far. Although Kirponos had limited German gains in the first two days to less than 40 kilometers, the other three Panzer Groups all had achieved deeper penetrations by that evening, including Col. Gen. Hermann Hoth's *Panzer Group 3* striking almost 125 kilometers toward Vilnius in Lithuania. The Stavka and Stalin clearly expected the Germans to be held farther forward.

Zhukov demanded a counterattack, which Kirponos already had decided upon.¹⁴

XXXXVIII AK's drive on 24 June was spearheaded by the *11th Panzer Division*, with the *16th Panzer Division* hurrying to catch up. General Crüwell formed the *11th Panzer Division* into three *kampfgruppen* to advance on three parallel axes, one around each of its maneuver regiments: *Panzer Regiment 15*, *Schutzen Regiment 110*, and *Schutzen Regiment 111*.¹⁵ The *Schutzen* regiments each traded a motorized infantry company to *Panzer Regiment 15* in exchange for a tank company, and each *kampfgruppe* was rounded out with artillery, antiair, and engineer units to create robust combined arms teams. The *11th Panzer Division* advanced rapidly on 24 June, hampered only by continual Soviet Air Forces attacks. They were all that kept the *11th Panzer Division* from reaching its objective of Dubno that day, as Maj. Gen. Ignaty Ivanovich Karpezo's 15th Mechanized Corps did not counterattack as ordered. German air and ground reconnaissance detected the 15th Corps' armor around 0700 that morning, but merely observed it moving back and forth, shadowing the *11th Panzer Division's* advance without engaging.¹⁶

Eventually, Kirponos sent an order for Karpezo to take up defensive positions and await the arrival of Lt. Gen. Dmitry I. Ryabyshev's 8th Mechanized Corps



General Vashugin

Russian State Documentary Film and Photo Archive



Commissar Khrushchev

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General Karpezo

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that afternoon before launching the counterattack. However, the 8th Mechanized Corps would not linkup with the 15th Mechanized Corps that day. As Ryabyshev's forces traveled through Lviv, insurgents from the Organization of Ukrainian Nationalists—a right-wing nationalist group that had been armed by Germany since 1939—ambushed them. The 8th Mechanized Corps got bogged down in running street battles with the insurgents. The situation continued to deteriorate as members of the People's Commissariat for Internal Affairs (NKVD) began executing Ukrainians in reprisal for the insurgent attacks, which in turn led to civilians fleeing the city and obstructing the roads. By the time the 8th Mechanized Corps disentangled itself from Lviv, it had lost the day. Meanwhile, the *11th Panzer Division* swept aside small Soviet infantry detachments with little comment and reached Verba, 15 kilometers short of Dubno, by the end of the day. That night, General Kempf directed the *16th Panzer Division* to seize Kremenets while the *11th Panzer Division* seized Ostroh.¹⁷

On 25 June, the *11th Panzer Division* continued to attack aggressively at the head of the corps. Despite *Kampfgruppe Riebel* lagging because of resupply issues and terrain difficulties, General Crüwell

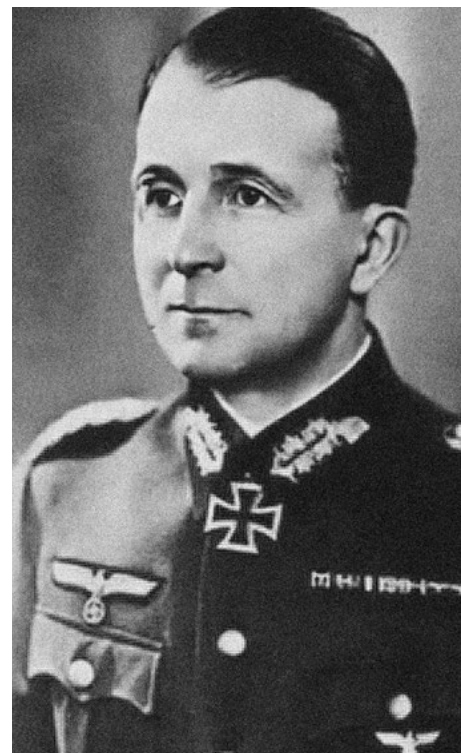


General Ryabyshev

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ordered *Kampfgruppen 110* and *111*, recombined into *Kampfgruppe Angern* under Col. Günther Angern, to continue onward to Dubno, a confidence enabled by the robust combined arms nature of each of them. The Soviet Air Forces continued to bomb the *11th Panzer Division* throughout the day. At 1100, *Kampfgruppe Angern* reached the outskirts of Dubno, where they encountered the Soviet 529th Super-Heavy Howitzer Regiment, a front-level artillery unit equipped with 210-mm. cannons. The Germans captured 2,500 stunned Soviet artillerymen and 42 brand-new howitzers, securing Dubno without much of a fight.¹⁸

As the two infantry-heavy *kampfgruppen* were capturing Dubno, the division's scout element, *Reconnaissance Battalion 231* reinforced with elements of *Panzerjäger Battalion 61*, split off and advanced on the town of Mlyniv, 15 kilometers north, to secure a secondary crossing point over the Ikva River in case the bridges in Dubno had been blown. At 1400, the German scouts encountered a company of sixteen Soviet tanks from the 40th Tank Division defending Mlyniv. Despite having no tanks of its own, *Reconnaissance Battalion 231* attacked the Soviet tanks with a mixture of armored cars, dismounted scouts, motorcycle scouts, infantry guns, and antitank guns. This bold assault was enough to drive the Soviet tanks, with no infantry or artillery support, into retreat and allowed *Reconnaissance Battalion 231* to capture the Mlyniv bridges intact. Shortly thereafter, the Soviet 228th Rifle Division, tasked to defend Mlyniv and Dubno, arrived at their objectives to find both areas in the hands of the *11th Panzer Division*. Had Crüwell not pushed aggressively without most of his armor, he likely would have encountered the 228th Rifle Division firmly entrenched with heavy artillery support. Instead, Soviet rifle forces attacked into German defenses. The Soviets' one advantage was in artillery, as the 228th had been reinforced with two additional regiments, bringing their total indirect fire support to three regiments. One rifle regiment, the 787th, and one artillery regiment, the 366th, attacked Mlyniv, scooping up the wayward tank company along the way. In a display of combined arms skill, the 787th Rifle Regiment's anonymous commander integrated his infantry, armor, and artillery superiority to overwhelm



Colonel Angern

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Reconnaissance Battalion 231 and drive it out of Mlyniv before digging in to defend. Meanwhile, the 228th Rifle Division's main assault against Dubno was thrown back. Despite the nearly 3:1 ratio of Soviet advantage in artillery, the lack of armor support doomed this attack to failure. The German *kampfgruppen*, supported as they were by two companies of tanks, repulsed the Soviet assault on Dubno with relative ease.¹⁹

The actions on 25 June reflect the criticality of both combined arms integration and Auftragstaktik culture to the *Wehrmacht's* conduct of operations. The *11th Panzer Division* formed its *kampfgruppen* based on its specific needs and the perception of the enemy situation. Each *kampfgruppe* was a self-contained combined arms team capable and expected to fight independently without the need for the division commander to get involved. This empowered subordinate commanders to make important decisions, such as the commander of *Reconnaissance Battalion 231* deviating from his Dubno objective to secure a secondary crossing at Mlyniv, and enabling the division commander to place himself at the point of friction. Meanwhile, the corps commander could focus on bringing their corps artillery to bear in support of various fights, solve

issues regarding traffic flow between divisions, and engage the *Luftwaffe* to lobby for more fighter coverage for his divisions. The Soviet 787th Rifle Regiment's successful attack to dislodge *Reconnaissance Battalion 231* from Mlyniv proves that some Soviet commanders could leverage combined arms at lower echelons against their more experienced German opponents and find success. This point deserves attention because it stands in such stark contrast to the performance of every other Soviet formation up to that point. It is the proverbial exception that proves the rule. Soviet commanders' overreliance on combined arms considerations at higher echelons at the expense of lower echelons created an asymmetric advantage which the Germans' combined arms teams were able to exploit to the fullest. By the evening of 25 June, XXXXVIII AK had advanced slightly more than 100 kilometers, still significantly behind its peers in *Army Groups Center* and *North*, and still had not yet engaged the bulk of Soviet armor in Ukraine.

First Counterattack

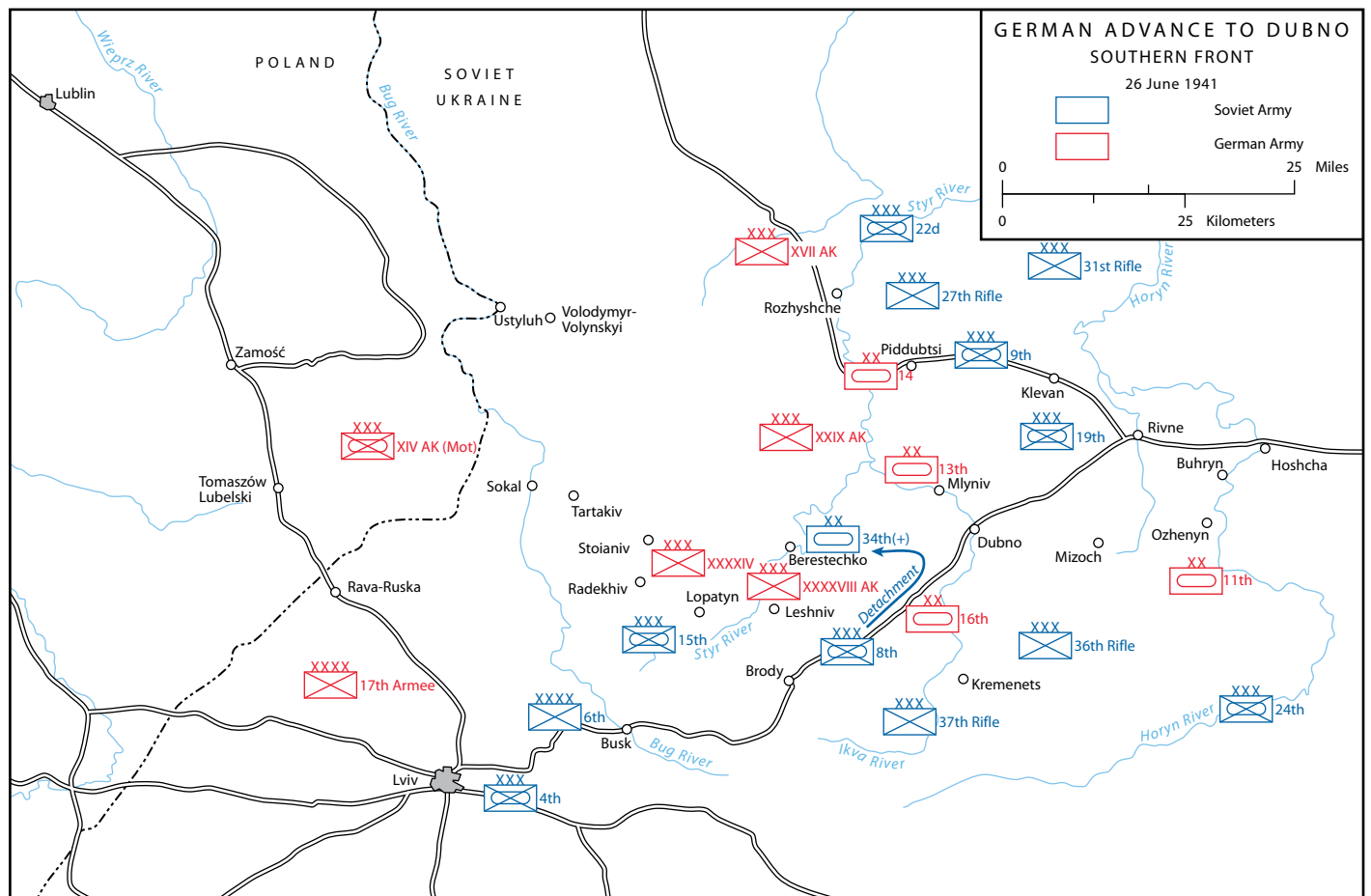
That engagement was soon coming. At 0500 on 26 June 1941, the 11th Panzer Division

continued its advance eastward from Dubno, while the 16th Panzer Division set off southeast from Berestechko. German Sixth Army pulled infantry divisions up behind these two armored spearheads to protect their flank overnight, eliminating Kempf's key concern at the time. *Army Group South* headquarters alerted all its subordinate commands to expect a major Soviet counteroffensive on 28 June and attached a battalion of Flak-88s from *Flak Regiment 7* to XXXXVIII AK for use against the heavier Soviet tanks they had been encountering. Kempf attached this battalion to the 16th Panzer Division.²⁰

Opposite the Germans, Kirponos directed the Soviet counteroffensive to begin at 0900 on 26 June. In the southern grouping of forces, the 15th and 8th Mechanized Corps attacked north on schedule. The 15th Mechanized Corps was short its 10th Tank Division, temporarily combat ineffective after its encounter with the 11th Panzer on 23 June. Its motorized rifle division, the 212th, was placed into a defensive posture at Brody, leaving the 37th Tank Division attacking alone. The 8th Mechanized Corps attacked with all three of its divisions, albeit at

just above 50 percent strength owing to mechanical failures and *Luftwaffe* air attacks; the corps' older model tanks had been particularly hard-hit. Nevertheless, this meant the 8th Mechanized Corps attacked with more than 450 tanks. The 8th Mechanized Corps was among the more seasoned Soviet units, having fought in Poland as the 4th Cavalry Corps under a skilled, experienced commander in Lt. Gen. Nikolai N. Vashugin. The 12th Tank Division, mainly equipped with the new T-34 and KV-1 tanks, formed the center, while the 34th Tank Division attacked to the northeast and the 7th Motorized Rifle Division to the southwest. Kirponos directed the bulk of his aviation support to this southern thrust. The Soviet Air Forces flew almost 300 sorties in support of the 15th Mechanized Corps, dropping 26,000 pounds of ordnance. The 8th Mechanized Corps was supported by almost 500 sorties delivering a staggering 250,000 pounds of ordnance, pummeling the Germans throughout the day.²¹

At 0900, the German 57th Infantry Division, still subordinated to XXXXVIII AK and guarding the rear right flank of the 16th Panzer Division, reported that they



had suddenly come under fierce attack by Soviet tanks supported by heavy artillery fire and air support. This was the 12th Tank Division, which quickly brushed aside the forward German reconnaissance forces and attacked toward Leshniv. However, the Soviet plan began to unravel quickly. The attacks of the 12th Tank, 34th Tank, and 7th Motorized Rifle were not coordinated at the corps level. Each division attacked its own objective relying on its own organic assets. The 7th Motorized Rifle Division was supposed to attack on line with the 7th Tank Division from the 15th Mechanized Corps, but that unit's delays in attacking meant the 7th Motorized Rifle Division did not enter the fight until 1300, four hours after its two sister divisions. After sweeping through the *57th Infantry Division's* forward elements, the 12th Tank Division smashed into the German main defensive line at the town of Leshniv. Using its motorized infantry regiment under cover of suppressive artillery fire and the heavy attacks from the air forces, the Soviets forced a crossing of the Slonivka River south of Leshniv and began enveloping the *57th Infantry Division* with their tanks. At 1200, XXXXVIII AK's war diary recorded grimly: "The situation at Leshniv is critical."²²

Alerted to the danger by his chief of staff, Kempf, who was forward following the *11th Panzer Division*, took charge of the situation. Turning around to head toward the crisis point, he took several critical actions that would salvage his flank and exploit the weaknesses in the Soviet plan. The first was a request for XXXXIV *Armeekorps* to reinforce his right flank, taking over security responsibility from the *57th Infantry Division*; XXXXIV *Armeekorps* began moving into position. Second, Kempf ordered the *16th Panzer Division* to abandon their attack and face about. They would come to the support of the *57th Infantry Division* and strike the Soviet 12th Tank Division in its right flank. Third, Kempf demanded and received both fighter and close air support from *Fliegerkorps V*. The corps staff vectored in the attacking Ju-88 and He-111 bombers on the 12th Tank Division. Critically, Kempf ordered the *Luftwaffe* bombers to attack Soviet artillery positions, not tanks. This was the first time in the fighting in western Ukraine that *Fliegerkorps V* conducted close air support, previously

operating almost exclusively in an offensive counterair and interdiction role. This represented an important addition to the Germans' combined arms approach in the battle. *Fliegerkorps V's* Bf-109 fighters pounced on the Soviet Air Forces bombers, who were operating without significant fighter coverage. Indeed, many of the Soviet fighters had been equipped with bombs in a ground attack role, leaving them at a disadvantage against their opponents. This air battle diverted Soviet Air Forces attention from supporting the ground attack, and the bomber divisions of the Southwestern Front instead focused their attacks on German airfields, removing a critical force multiplier from the Soviet advance just at the moment of breakthrough. *Fliegerkorps V* confirmed they shot down at least 68 Soviet aircraft on 26 June alone, and Soviet reports record the loss of 173 aircraft by the evening of 27 June; 26 June was "a black day for the Air Forces of the South-Western Front."²³

Meanwhile, the tanks of the Soviet 12th Tank Division broke through the *57th Infantry Division* and continued driving north. However, the tank regiments did not wait for their supporting motorized rifle regiment to remount and continue onward; having seized the bridgehead across the Slonivka, the infantry's task

was complete. The Soviet tanks therefore rushed on alone, aiming to exploit their breakthrough into operational depth, and they succeeded in cutting XXXXVIII AK's ground line of communications west of Berestechko. At 1400, two things happened nearly simultaneously. First, *Fliegerkorps V* unleashed its air attacks against the 12th Tank Division's artillery and logistics trains, destroying all the artillery's prime movers and killing most of the Soviet artillerymen. Second, the *16th Panzer Division's* lead *kampfgruppe* contacted the 12th Tank Division's flank. The two exploiting Soviet tank regiments suddenly found themselves without support facing a German *kampfgruppe* of tanks, motorcycle infantry, and the *16th Panzer Division's* antitank battalion, supported directly by corps artillery. The lead Panzer battalion attacked prematurely, losing four tanks in a tank duel in an oat field before retreating. Once the *kampfgruppe* employed its full combined arms weight, the 12th Tank Division's two tank regiments took the worst of the fighting. The Germans used their tanks, infantry guns, and 37-mm. Pak 36s to score mobility kills on the T-34s and KV-1s, and used the antitank battalion's complement of 50-mm. Pak 38s and the attached Flak 88s from *I*



Soviet tanks advance ahead of supporting infantry.

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Battalion, *Flak Regiment 7* to destroy the Soviet armor. The fighting was fierce and lasted past nightfall as the Germans first succeeded in reestablishing control around Leshniv and then reopened their ground line of communications. Devoid of infantry and artillery support, the two Soviet tank regiments retreated.²⁴

To the west, the 7th Motorized Rifle Division attacked feebly with its infantry in the lead and its tanks providing supporting fire from behind, making no progress against German positions. To the east, the 34th Tank Division attacked toward Berestechko. Given the greater distance the 34th Tank had to cover, the Germans had more time to react when they spotted the oncoming Soviet division. Elements of the *Regiment General Göring (RGG)* held Berestchko, which included its motorcycle infantry battalion and a *Flak-88* battalion. To deal with the impending Soviet tank attack, *Panzer Group 1* reinforced XXXXVIII AK with the *Panzerjäger Battalion 670* that was equipped with *Panzerjäger I* tank destroyers.²⁵ Kempf formed *Kampfgruppe Eisermann* by attaching the 670th to *Motorcycle Infantry Battalion 165* from the 16th *Infantry Division (Motorized)*, the corps' trailing element, and dispatched the *kampfgruppe* to Berestechko. As the Soviets' 34th Tank Division attacked Berestechko and took fire from RGG's *Flak-88s*, *Pak 36s*, and infantry guns, it suddenly also came under enfilading fire from its left flank and a heavy artillery barrage. *Kampfgruppe Eisermann* had deployed to the left of the 34th Tank Division, using the mobility of the *Panzerjäger Is* and *Motorcycle Battalion 165's* towed antitank and infantry guns to gain a position of relative advantage on the Soviet flank. Because the 34th Tank Division was equipped with T-26 and BT-series tanks, even the 37-mm. *Pak 36* antitank guns were able to penetrate the Soviet armor at considerable ranges. Like the 12th Tank Division, the 34th Tank Division had outpaced its supporting infantry, and after losing thirty tanks, it broke contact with the Germans and withdrew out of direct fire engagement range.²⁶

Although the remainder of XXXXVI-II AK was fighting desperately between Leshniv and Berestechko, Crüwell's 11th *Panzer Division* continued its aggressive eastward attack. By evening, *Kampfgruppe Angern* had advanced 30 kilome-

ters, driving the Soviet 228th Rifle Division before it in disorder. On its left wing, *Kampfgruppe Riebel* with the bulk of *Panzer Regiment 15* advanced 11 kilometers to Molodava Tretya before contacting the Soviet 43d Tank Division from the 19th Mechanized Corps. Weakened by breakdowns of tanks and trucks and by *Luftwaffe* attacks, the 43d Tank's committed strength was about 150 tanks and 650 mounted infantrymen. The engagement between the attacking *Kampfgruppe Riebel* and the 43rd Tank Division was roughly even in terms of size and composition of forces. The fact that the 43d Tank was equipped almost entirely with T-26 light tanks meant all tanks involved could destroy each other. The tank duel ebbed and flowed, and Crüwell became unhappy with the lack of progress. He once again task-organized his forces, creating a new *Kampfgruppe Usedom* under the commander of *Reconnaissance Battalion 231*. *Kampfgruppe Usedom* consisted of the reconnaissance battalion, *Pioneer Battalion 61*, an antitank company, a tank company, two batteries of *Flak-88s*, a battery of 105-mm. howitzers, and a battery of 150-mm. howitzers. Maj. Horst von Usedom and his *kampfgruppe* conducted a relief in place with *Kampfgruppe Riebel*, which sped quickly southeast. *Kampfgruppe Usedom*,



Major Usedom
Bundesarchiv

with its static firepower fixed, began attriting the 43d Tank Division while *Kampfgruppe Riebel's* tanks turned its left flank. This occurred at the same time as the 13th *Panzer Division* from III *Army Corps (motorized)* was turning the 19th Mechanized Corps' right flank.²⁷

As the 11th and 13th *Panzer Divisions* outmaneuvered the 19th Mechanized Corps and forced it to withdraw, Colonel Stockhausen, commander of *Motorcycle Battalion 61*, once again turned the moderate tactical success into an operational impact during the night of 26–27 June. In another display of the advantages of *Auftragstaktik* culture, Stockhausen deduced that given the relative ease with which they had penetrated the 228th Rifle Division, there were likely no significant Soviet forces in front of him. He decided to lead his battalion onward while the remainder of *Kampfgruppe Angern* dug in at Mizoch. The motorcycle infantry dashed forward and, as their commander expected, met no Soviet resistance. They reached Ostroh, 28 kilometers from Mizoch. As they arrived, the Germans encountered a small garrison and the motorcycle scouts of the Soviet 173d Reconnaissance Battalion. The German motorcyclists drove off their opponents and, finding the Ostroh bridges intact, began to entrench. Unbeknown to the Germans, the Soviet scouts belonged to 109th Motorized Infantry Division from 5th Mechanized Corps, which was en route to Ostroh with the exact same goal: secure Ostroh and its bridges and dig in to defend. Thus, the initiative of a single battalion commander not only doubled his corps' effective penetration for the day, but also completely negated Soviet plans for a third defensive line held by a fresh mechanized corps.²⁸

On 26 June, Southwestern Front commander Kirponos orchestrated a counter-attack in line with existing Soviet doctrine. Focusing on combined arms at the Army and Front level, Kirponos envisioned a force of two, later three, rifle corps supported by an antitank brigade fixing the advancing German mechanized forces of XXXXVIII AK, while four Soviet mechanized corps enveloped the Germans from both north and south. A prodigious effort from his air forces would support this, flying more than 750 sorties and delivering more than 275,000 pounds of ordnance. However, interference from Zhukov led to

the rifle corps attacking instead, separating them from their supporting antitank brigade and leaving them at the mercy of the Germans' combined arms *kampfgruppen*.

The Soviet decision to dedicate most of its fighters to ground-attack roles rather than to fighter sweeps or escort missions meant that the Soviet Air Forces suffered greatly on 26 June. Kirponos chose to reallocate their sorties from ground attack to offensive counterair to regain air superiority. Meanwhile, the various mechanized units of the counterattack continued to repeat the same mistakes which their comrades had made since 22 June: although artillery support continued to range from adequate to extremely effective, infantry and tank regiments continued to be employed separately at the division level. The 8th Mechanized Corps' penetration of XXXXVIII AK's flank created a crisis for the Germans, but the Soviets' failure to support their exploiting tanks with any of their motorized infantry represented a flaw in combined arms application that nevertheless was essentially in line with Soviet doctrine.

Throughout the fighting, German *Auftragstaktik* culture continued to pay outsized dividends. By this point, Colonel Stockhausen had twice used initiative to lead his battalion forward to seize critical bridgeheads well ahead of his division after assessing the enemy situation and finding it permissible. On a more constant level, *Auftragstaktik* culture's mutual trust enabled German commanders to task-organize several times throughout the shifting situations of 24–26 June without fear of loss of effectiveness. German *kampfgruppe* leaders continued to display the initiative required of them to outthink and outfight their Soviet opponents.

By the evening of 26 June, Kirponos's counterattack had failed to slow the German advance significantly. In the south, 8th Mechanized Corps, which had achieved the most success of any Soviet formation thus far, had been contained and repulsed. The 109th Motorized Rifle Division from the 5th Mechanized Corps was about to enter the battle for Ostroh, although the bulk of its two tank divisions were being loaded up onto trains to be shipped north to Western Front, which was collapsing in front of *Panzer Groups* 2 and 3. The counterattack had not achieved its intended effects, but it had been far from disastrous. In multiple engagements

the Soviets had fought well, worrying the Germans and reinforcing Soviet confidence. With significant forces still available, Kirponos and his staff gathered to plan a new counterattack for the next day.²⁹

General Counterattack

Kirponos's main concern was the startling breakthrough of the *11th Panzer Division* all the way to Ostroh. Because of poor reconnaissance, Kirponos knew neither the size nor strength of the German forces occupying that city. He feared the German *Panzer* troops could begin encircling Muzychenko's 6th Army from the north. Unlike Maj. Gen. Mikhail I. Potapov's 5th Army, which had been fighting against two German motorized corps, the 6th Army was facing only German infantry and accordingly had not lost much ground. The penetration to Ostroh now imperiled the 6th Army's rear area, and Kirponos ordered Muzychenko to withdraw and establish a new right flank at Kremenets. Kirponos then planned to have three rifle corps establish a new defensive line from Kremenets to the northeast and pull all four mechanized corps behind them to consolidate and reorganize before a renewed counterattack. However, when Kirponos's staff sent this plan to Moscow, the Stavka immediately forbade any withdrawal and demanded Kirponos counterattack immediately on 27 June. To still pull eastward while complying with Moscow's orders, Kirponos changed the axes of both the 15th and 8th Mechanized Corps' attacks from north to northeast: the 15th Mechanized would attack toward Berestechko, while the 8th Mechanized would attack Dubno. From the north, the 9th and 19th Mechanized Corps would likewise attack toward Dubno, aiming to encircle and destroy the *16th* and *11th Panzer Divisions*. The time for the general counterattack was set for 0900 on 27 June.³⁰

The rapid advance by the *11th Panzer Division* combined with the Soviet attack on Leshniv and Berestechko on 26 June left XXXXVIII AK in a state of confusion as to the location of its subordinate elements. Establishing a solid right flank became corps commander Werner Kempf's primary focus. Starting in the early morning hours, the *57th Infantry Division* conducted local counterattacks to reestablish its defensive positions that it had lost the previous day. It then



Mikhail I. Potapov, shown here as a lieutenant general.

Russian State Documentary Film and Photo Archive

transferred under XXXXIV *Armee* corps, which assumed flank responsibility from Leshniv to the west. Kempf ordered the *16th Infantry Division (Motorized)*, lagging because of clogged roads, to expedite its advance to Berestechko and assume flank security for the *16th Panzer Division*. Kempf had lost all radio contact with the *16th Panzer* and had no idea where its commander, Brig. Gen. Hans-Valentin Hube, was located. *Panzer Group 1* sent orders to III AK and XXXXVIII AK to immediately press the enemy, because there were "signs that the enemy in front of *Panzer Group 1* is falling back." Although it was true that all four Soviet mechanized corps in the 5th Army area had broken local contact the previous evening, Kempf rightly assessed that the danger had not passed; in the *Auftragstaktik* spirit, he ignored orders to press his advance in favor of reforming the integrity of his corps because of his superior local understanding.³¹

At the leading edge of the corps, the *11th Panzer Division* consolidated at Ostroh. Traveling since early morning, *Kampfgruppe Angern* began arriving at the city at 0500, reinforcing the motorcyclists who had charged ahead so

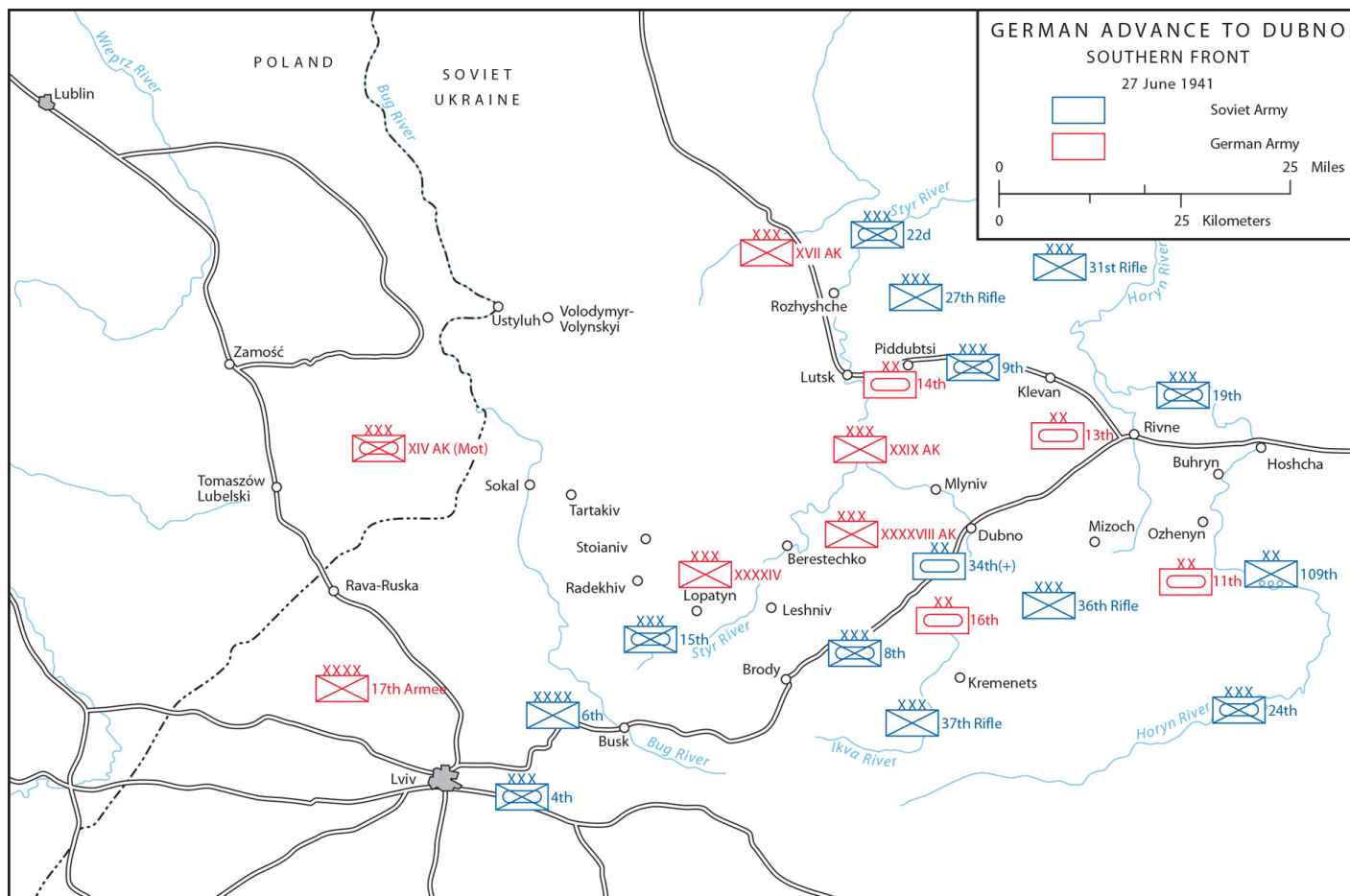


General Hube
Bundesarchiv

boldly. However, elements of Col. N. P. Krasnoretzkiy's 109th Motorized Division attacked Ostroh before all *Kampfgruppe Angern* was in position; at the time of the attack, there was only *Motorcycle Battalion 61* and *Schützen Regiment 110*.

Krasnoretzkiy's artillery was not yet in position. Of his twenty-three available tanks, only six were at the forward staging area, and seventeen others along with fifteen armored cars were moving from the railhead. Anxiety about the loss of Ostroh's bridges overwhelmed any good sense, as Krasnoretzkiy ordered his two motorized rifle regiments and his reconnaissance battalion to attack Ostroh without indirect fire support. Advancing under the suppression of only their 76-mm. infantry guns and six tanks, the motorized riflemen and scouts forced their way into Ostroh. The German defenders likewise were caught with their artillery still on the march and could reply only with small arms and infantry guns. As more of *Kampfgruppe Angern* arrived in Ostroh, Colonel Angern fed them into the southern part of the town where the Soviets had concentrated the bulk of their combat power. This, along with the wounding and evacuation of Krasnoretzkiy around 1000, enabled the Germans to retake the southern bridge. However, the fighting was still fierce, and Angern sent an urgent request to Crüwell for reinforcements.³²

Crüwell was traveling with the tank-heavy *Kampfgruppe Riebel* to expedite its advance. At approximately 1200, the lead battalion arrived at Ostroh and began maneuvering around the Soviet's northern flank. The German tanks enveloped the Soviet right flank, bypassing it and striking the 109th Motorized Rifle Division's center. At this point, the remaining seventeen BT-7 tanks and fifteen BA-3/6 armored cars that were available to the 109th were committed to the battle, counterattacking the lead Panzer battalion.³³ The *11th Panzer Division's* war diary remarked on the courage and hard-fighting skill of Soviet tank crews, but the battalion-sized Soviet formation could not prevent the center from collapsing under attacks from front and rear. The sudden envelopment caused a rout of the 109th Motorized Rifle Division's center and left, which, in turn, produced the complete isolation of two Soviet battalions in northeastern Ostroh. These encircled Soviets held on tenaciously to the northern bridge until evening, with *11th Panzer Division's* *Schützen* (infantrymen) battling forward slowly through the streets. Near nightfall, 109th Motorized Rifle Division's artillery



was finally in position and began a heavy bombardment of Ostroh in support of a renewed attack by the division's motorized rifle regiments. Soviet Air Forces attacks accompanied this starting at 1700 and lasted for several hours. By this point, the entirety of the *11th Panzer Division* was firmly ensconced around Ostroh and it easily repulsed the infantry assault. They completed clearing the northeast section of the town near midnight. The isolated Soviets fought almost to the last soldier.³⁴

To the *11th Panzer Division's* rear, XXXXVIII AK was experiencing its second crisis in as many days. Crüwell's rapid consolidation of his division at Ostroh occurred during a period of intermittent radio communications; the corps headquarters would not receive a report from the *11th Panzer Division* until 1430, by which point the division was concentrated forward. This exacerbated Kempf's already tenuous grasp of the positions of his units. Meanwhile, aided by renewed reconnaissance efforts, Kirponos sought to take advantage of a now massive gap in XXXXVIII AK's lines: the *16th Panzer Division's* *kampfgruppen* were strung out between Leshniv and Kremenets, while the *11th Panzer Division* was 60 kilometers forward at Ostroh.³⁵

Into this gap, Soviet 8th Mechanized Corps commander Lt. Gen. Dmitry Ryabyshev thrust a task force under the command of 8th Corps Commissar Nikolai K. Popel consisting of the 34th Tank Division's 190 tanks and fresh motorized rifle and artillery regiments, 25 T-34s and KV-1s from the 12th Tank Division, and the 2d Motorcycle Regiment. Ryabyshev and Popel had argued to delay their attack until 28 June to allow them to get the 7th Motorized Rifle and 12th Tank Division back into the fight but Southwestern Front Commissar Lt. Gen. Nikolai N. Vashugin, who insisted upon immediate counterattacks, had threatened them with execution for treason.³⁶

The Soviets attacked around 1400, shortly before the *11th Panzer Division's* reports reached Kempf. The Soviet task force cut 35 kilometers into the center of XXXXVIII AK. As he achieved this breakthrough, however, Popel did not keep the force consolidated, instead launching separate formations in different directions, thereby diluting his combat power and separating his arms. The 2d Motorcycle Regiment and the 67th



Commissar Popel, shown here in a postwar photo.

Russian State Documentary Film and Photo Archive

Tank Regiment's KV-1s and T-34 tanks attacked the highway west of Dubno, ambushing and destroying elements of XXXXVIII AK's intelligence section and supply convoys heading to that town. The 68th Tank Regiment, consisting of one battalion of T-35 heavy tanks and two battalions of T-34s, attacked the infantry-heavy *Kampfgruppe Hube* from the *16th Panzer Division* near Verba. Other Soviet forces encountered elements of the *11th Panzer Division's* field trains and destroyed them.³⁷

By nightfall, when Popel halted for lack of visibility, the 67th Tank Regiment had occupied the southern outskirts of Dubno, while the 68th Tank Regiment had encircled *Kampfgruppe Hube*. The *11th Panzer Division* at Ostroh and the tank-heavy *Kampfgruppe Wagner* from the *16th Panzer Division* at Kremenets likewise were encircled completely. Ryabyshev worked tirelessly to extricate the 7th Motorized Rifle Division from its engagement near Leshniv, and by nightfall two additional battalions of motorized riflemen had linked up with Popel. The 8th Mechanized Corps now had more than 200 tanks, 8 battalions of infantry, and an artillery regiment established in a salient stretching 35 kilometers deep and 20 kilometers wide. At 2100, Kempf reported to *Panzer Group 1* commander Col. Gen. Paul Ludwig Ewald von Kleist that the situation was



General Kleist

Bundesarchiv

critical, and he had no clear idea as to the status of the *11th Panzer Division*. In Kempf's opinion, all effort should be made to clear the enemy salient before any further advance was contemplated; if not, he feared both the *11th* and *16th Panzer Divisions* might be destroyed. They agreed that getting the tanks and infantry of *Kampfgruppe Hube* relieved from their encirclement was to be the priority, after which an effort could be made to reach *Kampfgruppe Wagner* and then the *11th Panzer Division*.³⁸

On the other side of the battlefield, Kirponos also had lost radio contact with some of his forces. To the south of the 5th Army, the 6th Army had pulled back as ordered but still was fighting well against the German infantry that opposed it. With the loss of Ostroh, Kirponos positioned the 24th Mechanized Corps to the southeast to intercept the *11th Panzer Division* if it attacked south. Upon hearing news of the 8th Mechanized Corps' breakthrough to Dubno, Kirponos issued orders for renewed attacks by the 9th and 19th Corps to slam the jaws of the counterattack shut. Kirponos ordered the 5th Army to go on a general offensive in support of the 8th Mechanized Corps, along with the 36th and 37th Rifle Corps. The 15th Mechanized Corps was to strike Berestechko in support the 8th Mechanized Corps' left flank. All available aviation would support this attack.³⁹

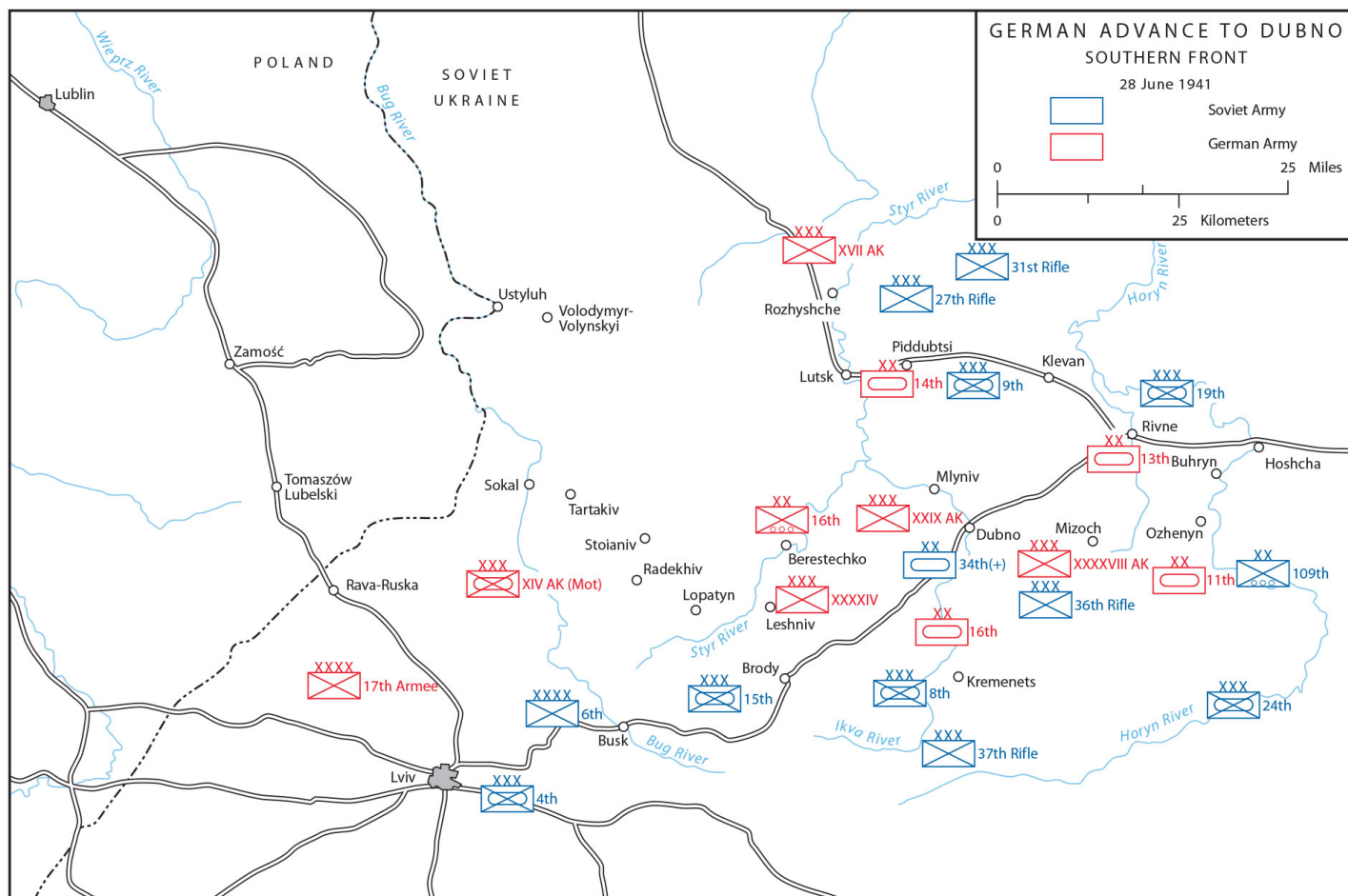
As 28 June dawned, both sides launched simultaneous attacks toward the Dubno salient. By 0700, the German *11th Infantry Division* arrived in Dubno, reinforcing the paltry and scattered defenses. Meanwhile, *Luftwaffe* aircraft conducted reconnaissance on the size and disposition of 8th Mechanized Corps' forces, providing critical information to Kempf as he prepared to rescue his encircled formations. Further east, the Soviet Air Forces unleashed heavy attacks against the *11th Panzer Division*. Attacks by the Soviet 109th Motorized Infantry Division continued throughout the day on 28 June, but its lack of armor support prevented it from making any headway against the *11th Panzer Division*. Nevertheless, the focused attention from the Soviet Air Forces and Soviet artillery inflicted heavy casualties on the isolated *11th Panzer*; one German sergeant stated after the war that the air attacks against Ostroh on 28 June were the heaviest the division experienced for the entirety of the war.⁴⁰

To the south, Soviet 8th Mechanized Corps commander Ryabyshev put all his effort into feeding more troops into the

salient to reinforce Commissar Popel, who assumed defensive positions against the coming German counterattacks. The first attack came from the infantry-heavy *kampfgruppe* under *16th Panzer Division* commander Hube. Using a combination of Flak-88s, infantry guns, antitank guns, and even close infantry assault with grenades, *Kampfgruppe Hube* launched a counterattack against the 68th Tank Regiment, which had no supporting infantry or artillery. Luring the enemy tanks in, *Kampfgruppe Hube* encircled one Soviet battalion, destroying twenty-two tanks and forcing the 68th Tank Regiment to withdraw by noon; the first encircled German unit was free. The withdrawal of the 68th Tank Regiment also meant that there were no longer any strong Soviet forces between the *16th Panzer Division's* two main *kampfgruppen*. The reunited *16th Panzer Division* turned its attention to the lead elements of the 7th Motorized Rifle Division advancing toward Popel's position. By 1400, this infantry force was destroyed, receiving no help from the tanks of 68th Tank Regiment. The local counterattacks by the *16th Panzer Division* had not freed only its own encircled units,

but they had also driven a wedge between Popel's group and the remainder of the 8th Mechanized Corps.⁴¹

Kempf reassessed the situation. With strong Soviet mechanized forces both north and south of him, Kempf determined that his next move needed to be dealing with Popel's division-sized task force near Dubno. However, before Kempf could direct the *16th Panzer* to face about and attack north, the main bodies of the Soviet 7th Motorized Rifle Division and 12th Tank Division attacked north. Ryabyshev, hurrying to reestablish contact with Popel, put an emphasis on speed instead of cohesion, resulting in detachments of both Soviet divisions engaging the Germans in succession. This allowed the *16th Panzer Division* to defeat them piecemeal with combined arms teams against individual groups of Soviet tanks or motorized infantry. Although the Soviet forces did not threaten the *16th Panzer Division* seriously, they were fixed in place defending against repeated attacks until evening. *Fliegerkorps V* also aided the *16th Panzer* with close air support. As in earlier fights, *Luftwaffe* bombers targeted not the forward



maneuver forces, but Soviet artillery, wreaking havoc and killing so many gun crews that by nightfall a lieutenant was in command of the 12th Tank Division's artillery regiment. Toward the end of the day, the German 75th and 57th Infantry Divisions entered the fight on the 16th Panzer Division's right flank and the three divisions plus *Sturmgeschütz Battalion 191* counterattacked the 7th Motorized Rifle Division. Pressed hard and fearing the Germans would envelop the 7th Motorized Rifle, Ryabyshev ordered the 8th Mechanized Corps to retreat to the southeast. To the west, the 15th Mechanized Corps' attack against the German XXXXIV Armeekorps floundered because of employing single-arm attacks.⁴²

Within his rapidly constricting salient, Popel consolidated his tanks, infantry, and artillery southwest of Dubno and intended to launch an attack. However, the situation in and around Dubno had changed significantly. The German 111th Infantry Division had reinforced the artillery of the meager garrison, while the 44th and 75th Infantry Divisions were closing rapidly from the west. Before Popel could begin his attack, his forces were hit by a heavy barrage of German artillery from both the north and west. The arrival of the 111th Infantry and the closing in of XXIX Armeekorps' corps troops gave the German defenders an overwhelming artillery advantage over Popel, who had only three battalions of guns. The fierce German artillery fire focused on counterbattery, and by 0900 had reduced Popel's 34th Motorized Artillery Regiment to three guns through unrelenting barrages. Without artillery support, Popel's attack floundered as the German artillery was free to target advancing Soviet tanks. After losing thirty tanks for no appreciable gain, Popel prepared to try again under cover of darkness.⁴³

Last Gasp

Rain soaked both sides over the night of 28 June, and 29 June dawned with scattered rainfall. At 0400, Popel led a portion of the 34th Tank Division in a renewed assault on Dubno. He had been unable to establish radio communications with any friendly formations but heard heavy fighting from both north and south and hoped that the Southwestern Front's general counteroffensive was close to success. The

best course of action seemed to be to try to link up with Maj. Gen. Konstantin K. Rokossovsky's 9th Mechanized Corps north of Dubno. With his artillery destroyed the previous day, Popel's tanks and motorized infantry attacked without suppressive indirect fire on the German defenders. In Dubno, the 111th Infantry Division and Artillery Command 108 brought their antitank guns and artillery pieces to bear on the advancing Soviets.⁴⁴ Popel committed his KV-2 tanks with their massive 152-mm. cannons as a main part of the attack, and they made a strong impression on the Germans. Despite his lack of artillery support, Popel was able to concentrate enough tanks and infantry to break through the 111th Infantry Division's left flank and block the main highway east of Dubno around 0945. This created great anxiety at the headquarters of both XXXXVIII AK and Panzer Group 1.⁴⁵

In response, Kempf ordered the 16th Panzer and 16th Infantry Division (Motorized) to counterattack against the left flank and rear of Popel's group. Panzer Group 1 commander Paul Ludwig Ewald von Kleist also informed Kempf that the elite 44th Infantry Division was closing on Dubno. 16th Panzer Division commander Hube formed *Kampfgruppe Sieckenius* with Panzer Regiment 2, a battalion

of Schützen, and a battery of Flak-88s to break through toward Dubno. *Kampfgruppe Sieckenius* attacked northeast, encountering elements of Popel's group holding the town of Verba. By 1400, *Kampfgruppe Sieckenius* had captured Verba and continued its advance toward Dubno. By 1700, Artillery Command 108 reported that they had pushed back the Soviets blocking the highway east of Dubno and their position in the open was untenable against the massed artillery, to which they had no response. *Kampfgruppe Sieckenius* continued its attack northeast, its tanks rushing ahead of its infantry. It was the Soviets' turn to pounce upon tanks unsupported by infantry with a combined arms attack. Around 2130, Panzer Regiment 2 ran into dug-in Soviet tanks near Ptycha. As they engaged, the German tankers found themselves under close infantry assault. Soviet motor riflemen charged the tanks, climbing aboard and firing into open hatches or attaching satchel charges to the sides. Having outpaced their own Schützen, Panzer Regiment 2 lost ten tanks in brutal close-quarters fighting before being able to break contact back to the south. The Soviet tanks and infantry pursued the retreating Germans, forcing Hube to bring the remainder of the 16th Panzer Division



A destroyed T-34
Bundesarchiv



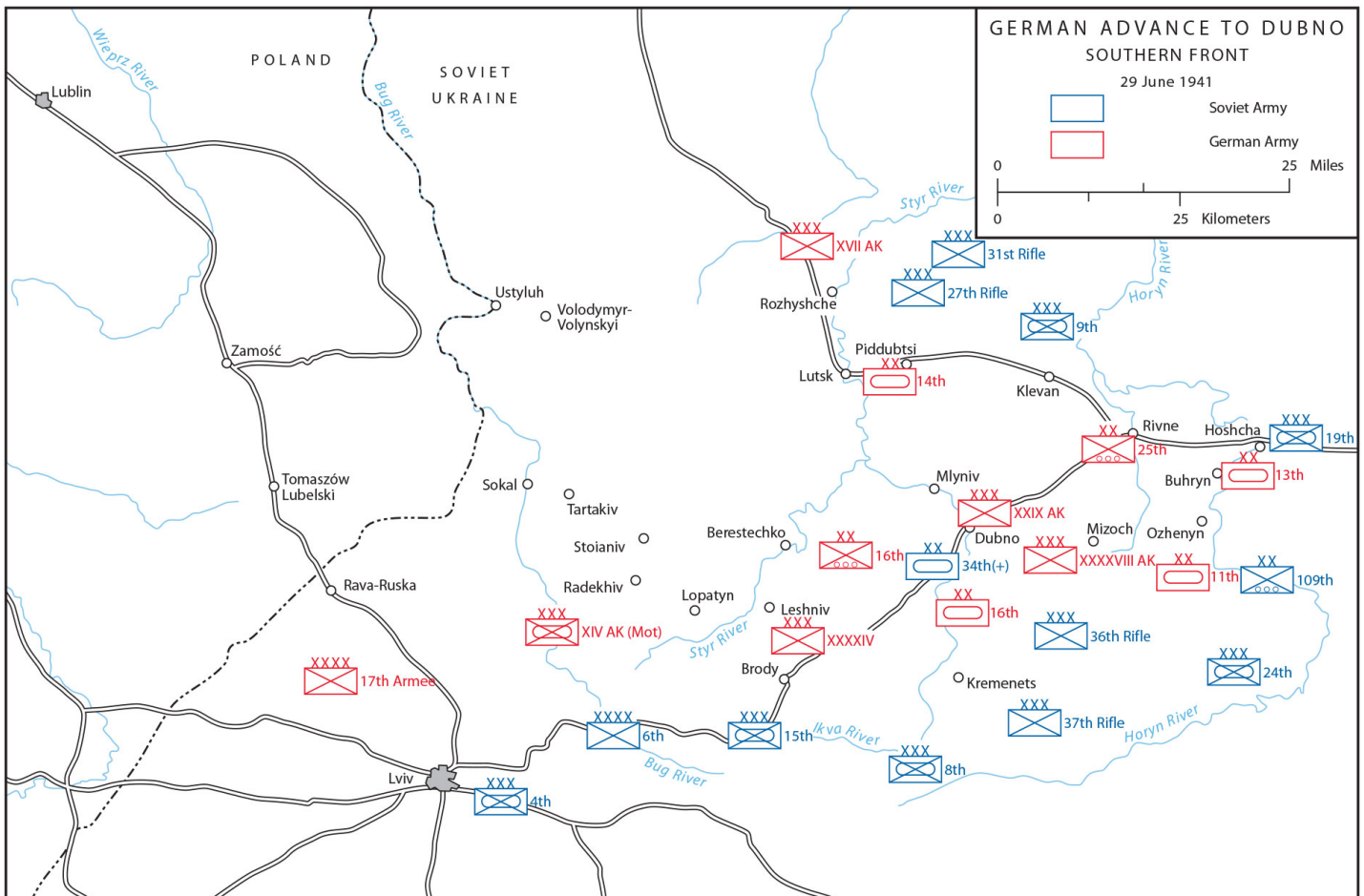
General Rokossovsky (left) shown here with General Zhukov.
Russian State Documentary Film and Photo Archive

secure way of contacting the commissar. His division commanders reported they were low on fuel and ammunition, and two days of assaulting the German defenses had resulted in losses for no progress. To make matters worse, the German *57th* and *75th Infantry Divisions* had consolidated their gains during the night and continued to advance, meaning the 8th Mechanized Corps now occupied a salient surrounded on three sides. Unless he acted now, Ryabyshev knew he would be encircled. He decided to move southwest in the direction of the 6th Army. Under the cover of night, the 8th Mechanized Corps broke contact in good order and escaped its salient with few casualties and without German pursuit.⁴⁷

On the 8th Mechanized Corps' left flank, the sudden introduction of the lead elements of the German *XIV Armeekorps* (*motorized*) into the battle threatened the 15th Mechanized Corps. The *9th Panzer Division* attacked southeast from Zibolky, splitting the 15th Mechanized from the 6th Army to the south. However, 15th Mechanized Corps commander Karpezo was able to slip his corps away without much harassment, annoying *XIV*

out of its blocking position to the south to stem the Soviet counterattack near Verba. This was a rare example of excellent Soviet combined arms integration, which showed how effective it could be against the Germans when employed correctly.⁴⁶

Meanwhile, 8th Mechanized Corps commander Ryabyshev had made the difficult decision to abandon Popel and his task force to its fate. Having lost his corps cryptology equipment and personnel to a *Luftwaffe* air strike overnight, he had no



Armeekorps commander Lt. Gen. Gustav Anton von Wietersheim. Thus, by nightfall on 29 June, the Soviet mechanized forces had withdrawn the southern wing of their attempted envelopment of XXXXVIII AK.⁴⁸

At Ostroh, the 109th Motorized Rifle Division and the late introduction of the 213th Motorized Rifle Division from the Southwestern Front's reserves still was pressing the *11th Panzer Division* hard. The Soviets still had air supremacy over Ostroh and continued to pound the Germans throughout 29 June. These air attacks along with heavy artillery fire from the newly arrived 404th Artillery Regiment and armored trains suppressed the *11th Panzer Division* and enabled the two Soviet divisions to advance on Ostroh. However, the 109th Motorized Division was now without armor, and its infantrymen suffered heavily. The 213th Division, however, brought tanks to the fight. As their comrades in the 109th were being massacred east of Ostroh, the 213th attempted an enveloping attack from the north. Throughout the day, Crüwell shifted tanks and infantry around Ostroh to hold off the attacks but finally made the decision to destroy the northern bridge and consolidate his troops in defense of the southern bridge. As night fell, the *11th Panzer Division* had weathered the storm yet again.⁴⁹

Kirponos Yields

After moving his command post further east, Southwestern Front commander Mikhael Kirponos took stock of the situation on the morning of 30 June. General Potapov's 5th Army remained undefeated in detail and had fallen back, albeit in some disorder, to a line along the Horyn River from Klevan to Hoshcha. However, the bridgeheads of the *13th Panzer Division* at Buhryn and the *11th Panzer Division* at Ostroh had split the 5th Army in half. South of the 213th Motorized Rifle Division outside Ostroh, there was a gap of more than 30 kilometers to the next 5th Army unit, the 36th Rifle Corps. Additionally, the introduction of the German *XIV Armeekorps* finally looked ready to unhinge the 5th Army's link to the 6th Army to the south. The 6th Army, as well as the 26th and 12th Armies to its south, were all withdrawing in good order under pressure, but Kirponos assessed that if the German bridgeheads at Buhryn and Os-



General Wietersheim
Bundesarchiv

troh could not be destroyed, *Panzer Group 1* would swing around behind them. Any good order would be lost, and those armies would fall into a similar catastrophic encirclement like the one that Western Front had suffered at Minsk several days before. Kirponos once again petitioned Moscow for approval for a general withdrawal to a new defensive line to the east. By this time, the Stavka had finally come around and approved the withdrawal. Having already planned for the 5th Army to conduct a counterattack on 1 July, Kirponos reiterated that order: the 5th Army's counterattack would hopefully fix *Panzer Group 1* and enable the 6th, 12th, and 26th Armies to withdraw safely beyond the German Panzer divisions' ability to encircle them. Popel's group and the 5th Army would be left to their fates, a necessary sacrifice to ensure the survival of the Front. With the issuing of Kirponos's withdrawal order on 30 June, the border battle ended in German victory.⁵⁰

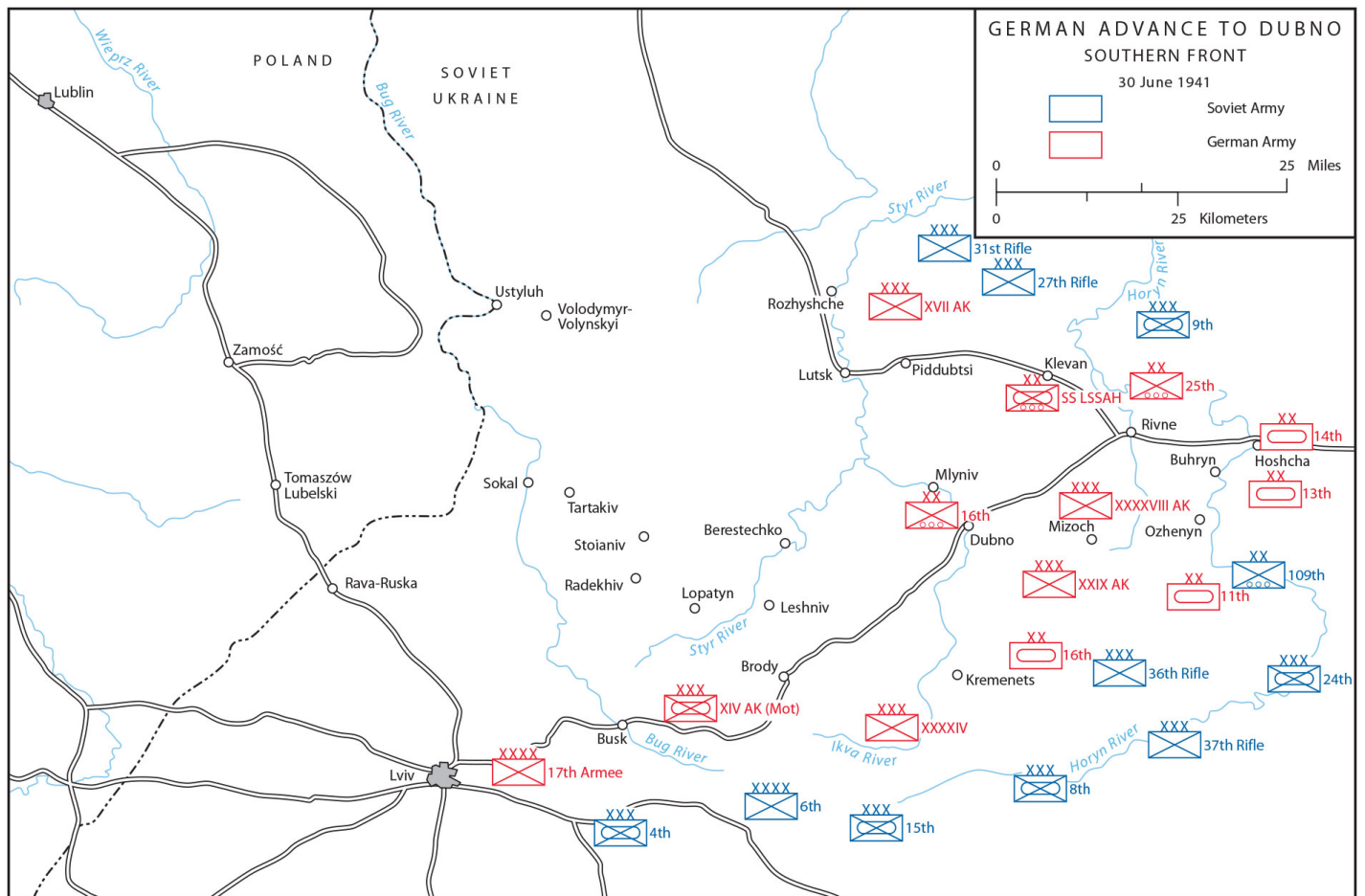
Within the Dubno pocket, Commissar Popel's task force attempted to break out from 30 June to 1 July. Running a gauntlet of German artillery, aircraft, infantry, and armored formations, Popel's group was decimated and lost all their vehicles. Nine hundred dismounted survivors, led by Popel, eventually slipped through German lines and retreated 161 kilometers on foot to rejoin the Southwestern Front on 23 July. At Ostroh, a task force of the

213th Motorized Rifle Division and what remained of the 109th Motorized Rifle Division bravely held the *11th Panzer Division* in place while the 5th Army retreated, but by the end of 1 July this ad hoc blocking force "practically ceased to exist as a military formation."⁵¹

In northwestern Ukraine, German forces consolidated their gains, conducted maintenance, and prepared to pursue the withdrawing Southwestern Front. *Army Group South* had achieved an Army Group-level penetration, with *Panzer Group 1* as its breach force. Kleist's Panzer divisions had unhinged the entire Soviet defensive line south of the Pripyat marshes. Yet, as flawed as Soviet combined arms integration and command style were, they had blunted *Army Group South's* offensive and then withdrew in good order. The Southwestern Front had lost nearly all its armor, but it remained a coherent headquarters capable of prolonged resistance, unlike its counterparts in the Western and Northwestern Fronts. The 5th Army's remnants fled into the Pripyat marshes, where they would continue to harass *Army Group South's* left flank while the remainder of the Southwestern Front fought on stubbornly. This enabled the evacuation of much of the vital industry from Ukraine, including the Donets Basin's armaments factories. Kirponos's tenacious resistance would be the major factor in Hitler's decision to dispatch Col. Gen. Heinz Guderian's *Panzer Group 2* away from Moscow toward Ukraine, where he and Kleist finally would encircle and destroy the Southwestern Front in late September at the Battle of Kyiv. This was a critical result. For several weeks on the eve of the Russian winter, German attention deviated from the drive to Moscow. It ultimately would doom the *Wehrmacht's* attempts to take the capital in 1941 and would enable the Soviet counteroffensives to stabilize defensive lines. On 20 September 1941, while attempting to break out of the encirclement east of Kyiv with his staff and 800 troops, German mortar fire killed General Kirponos.⁵²

Conclusions

The case of XXXXVIII AK's engagement with the mechanized corps of the Southwestern Front is important to study for a modern U.S. Army wrestling with the problem of fighting at a potential technological disadvantage on the offense while



outnumbered. The tactical and operational successes of Kempf's formation have positive lessons, as they demonstrate the importance of combined arms integration and highlight the ways in which mission command-style culture gives leaders advantages in initiative and decision-making. However, the *Wehrmacht's* experiences also provide warnings. For all its tactical and operational success in unhinging the Southwest Front, *Panzer Group 1* ultimately failed its strategic objective to envelop and destroy the Southwest Front in the border region. Additionally, the costs of a mission command-style command and control philosophy, which emphasizes junior leader initiative, creates high casualties among those same leaders. Those casualties in turn degrade that organization's effectiveness and endurance if the conflict does not end quickly.

German divisions in *Panzer Group 1* and *Sixth Armee* destroyed approximately 1,614 Soviet tanks in close combat. For this bounty, *Panzer Group 1* recorded 85 tanks destroyed, with 200 more in various states of maintenance because of either breakdown or battle damage. The Soviets lost tanks at a rate of 19:1 in close combat, and the ratio

is still 5.7:1 if assuming the 200 German tanks in maintenance were all battle damaged. By the standards of any army, a force attacking and winning against an enemy which holds a nearly 4:1 numerical advantage as well as a technological edge is worthy of study. Numerically, it is the most impressive German armor accomplishment of the Second World War, far outpacing the Battle of France, the achievements of both *Army Groups Center* and *North*, and any of Rommel's North African battles. Such a lopsided tactical victory would be the envy of many commanders past and present, especially those in pursuit of decisive battle.⁵³

Combined arms integration and employment were critical to German success against the Southwest Front. The primary example is the dominance of German combined arms task forces over Soviet single-arm formations. The creation of these *kampfgruppen* was a fundamental tenet of German doctrine, yet organizational doctrine is only one piece of the puzzle. Soviet tank and motorized rifle divisions also were envisioned as combined arms formations, yet these units faltered owing to a lack of

experience as well as a flawed doctrine that viewed combined arms more as a practice in which each arm accomplishes its mission in support of the other arms, rather than in conjunction with them. Consistently, smaller German combined arms teams, primarily formed of tanks, infantry, antitank guns, and artillery, achieved tactical success by leveraging asymmetric advantages through the application of multiple combat arms, which used capabilities to protect the vulnerabilities of the others. The Soviets, even when they formed combined arms teams, often failed to apply those arms in a manner which exploited capabilities to cover for vulnerabilities. This allowed *Panzer Group 1's* subordinate divisions to isolate and destroy portions of Soviet formations in detail rather than taking on the entirety of the larger and better-equipped enemy units. Although none of these smaller engagements were decisive on their own, the consistency with which German tank-infantry teams defeated Soviet single-arm forces aggregated across the battlefield and across eight days of fighting to result in the destruction of multiple Soviet mechanized corps.

Two additional examples are the comparative use of artillery and airpower. Sufficient artillery on both sides supported most of the engagements between German and Soviet forces. Artillery was a known killer of soldiers and materiel, with tanks and infantry both vulnerable to its firepower. Neither infantry nor armor normally was able to counter enemy artillery, making it a key asymmetric asset for both sides. Although Soviet commanders nearly always employed their artillery in this manner against German infantry and tanks, German commanders made counterbattery fire the primary purpose for their artillery. Realizing the asymmetric advantage that artillery gave, the Germans made it a priority to target Soviet guns. Once these weapons were neutralized or destroyed, German commanders were free to focus their artillery on Soviet infantry and armor formations with impunity. German commanders repeatedly used aviation in the same way, targeting Soviet artillery to remove it from the battlefield while Soviet aviation struck German maneuver units instead. Although German infantry and armor units undoubtedly suffered under Soviet artillery fire initially, they had to withstand it for only a short period while their higher headquarters eliminated the Soviet guns with counterbattery and air-delivered fires. Once the guns had been silenced, German ground formations were free to maneuver without fear of Soviet artillery.

A critical function enabled all these air and artillery strikes: targeting. Aggressive German ground and air reconnaissance gave *Panzer Group 1*'s commanders and staffs the ability to identify and prioritize high-payoff targets and then allocate their deep fires against them. The Soviets conducted little ground reconnaissance and were without effective air reconnaissance for the first four days of the battle, severely hampering their ability to conduct adequate targeting even if they had wanted to do so. Effective reconnaissance enables effective targeting, and together they form an important cornerstone of combined arms integration.

Aside from combined arms, *Auftragstaktik* was foundational to *Panzer Group 1*'s success. Throughout the battle, lower-level leaders made crucial decisions that altered the course of the battle and provided decision advantage for the Germans over the top-down Soviets. The

most notable example of this was Colonel Stockhausen, commander of *Motorcycle Battalion 61*. Twice during the border battles, Stockhausen led his mounted infantry forward in daring lunges to seize bridgeheads over major rivers on his own initiative. The first, on 23 June, prevented Soviet forces from blowing the bridges at Berestechko and enabled the *11th Panzer Division* to penetrate deep into Soviet lines the next day against little opposition. The second attack seized the two bridges at Ostroh before the Soviet 109th Motorized Rifle Division could get to the town and fortify it. The inability of the Southwest Front to reduce the *11th Panzer Division*'s bridgehead at Ostroh after several days was the main factor in Kirponos's decision to retreat.

Yet the success of *Panzer Group 1* also holds warnings for the U.S. Army today. Combined arms integration and mission command at all levels require highly trained and intelligent leaders, especially at lower echelons. The *Wehrmacht*'s operational concept demanded that those leaders insert themselves at the point of friction to best assess the situation and make the appropriate decision within a commander's intent. It asked for inspirational leadership in combat, gained by shared hardships and leading from the front. It led to great success, but those demands had a heavy cost. As an example, from 22 June to 21 July 1941, the *14th Panzer Division* suffered 399 killed in action and 960 wounded in action. Officers and noncommissioned officers (NCOs) accounted for 93 and 247 of those, respectively, or roughly 25 percent. By 31 October, 141 officers in the *14th Panzer Division* had been killed compared to 795 enlisted soldiers of all ranks including NCOs—meaning officers killed in action alone accounted for 15 percent of all those killed in action. This was a permanent loss of 40 percent of the division's officers in four months of combat without even considering wounded, whereas enlisted soldiers killed in action, including NCOs, were between 7 percent and 23 percent of their starting strength.⁵⁴ The casualties were particularly grievous among the combat units: only a single staff officer and two supply officers were among the total killed, meaning loss rates in combat units were even higher.⁵⁵

Modern armies structured for decisive battle and mission command should pay

close attention to the lessons of western Ukraine in 1941. Early attempts at a decisive battle against an enemy with the strategic depth and endurance to resist enormous blows may fail even if the attacking force finds incredible tactical and operational success. These blows also will reduce operational effectiveness as the necessary leaders become casualties at a rapid pace. Many decisive battle doctrines do not account for this scenario, and have no provision for attritional, positional-style warfare in the long term under reduced-quality leaders. An examination of this possibility today can reduce the pain of adaptation in combat. This examination also will pay dividends in the likely event that long periods of positional attrition warfare persist between opportunities for deep maneuver. Acknowledging and planning for these periods more fully can prevent high-quality units from battering themselves into combat ineffectiveness during conditions in which no decisive maneuver is possible.

The performance of XXXXVIII AK illustrates the enormous benefits of having a combined arms concept that permeates throughout a warfighting organization coupled with a mission command-style approach to leadership that generates decision advantage across formations. However, these practices cost them dearly in well-trained, combat-experienced leaders



A Soviet soldier killed in battle lies in front of a knocked-out T-34.

Bundesarchiv

and ultimately did not result in decisive victory. For militaries seeking to fight outnumbered on the offense and win via decisive combined arms maneuver, the armored clashes at Dubno are worthy of close study for both the advantages on which to capitalize and, more importantly, the risks against which to guard.

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Notes

1. *Panzer Group 1* had 793 tanks in its inventory but only committed its third corps on the last day of fighting.

2. Of the 4,525 tanks in the Southwestern Front's inventory, only 2,234 tanks made it into actual close combat with German ground forces. The remaining 39 percent remained behind in depots for lack of crews, broke down en route, became mired in mud, or were destroyed by the *Luftwaffe*.

3. Robert Forczyk, *Tank Warfare on the Eastern Front, 1941-1942: Schwerpunkt* (Barnsley, UK: Pen & Sword Military, 2020), 23; David M Glantz, ed., *The Initial Period of War on the Eastern Front, 22 June-August 1941* (London: Routledge, 2012), 32-33, 37-38, 259, 282; David M. Glantz and Jonathan M. House, *When Titans Clashed: How the Red Army Stopped Hitler*, updated and rev. ed. (Lawrence: Kansas University Press of Kansas, 2015), 40; A. V. Isaev and Kevin Bridge, *Dubno 1941: The Greatest Tank Battle of the Second World War* (Warwick, UK: Helion & Company Limited, 2019), 228-29; Boris Kavalerchik, *The Tanks of Operation Barbarossa* (Havertown, PA: Casemate Publishers, 2018), 63, 162-79.

4. Carl Builder, *The Masks of War: American Military Styles in Strategy and Analysis* (Baltimore, MD: Johns Hopkins University Press, 1989), 86-92. See also Robert M. Citino, *The German Way of War: From the Thirty Years' War to the Third Reich* (Lawrence: University Press of Kansas, 2005).

5. This article is a significantly condensed and edited version of the author's Command and General Staff College Master of Military Art and Science thesis, "Graveyard of Tanks: Combined Arms and Mission Command in Western Ukraine 1941," which covered the entirety of the border battles between *Panzer Group 1* and the Southwestern Front, including the actions along the northern flank involving *III Armeekorps (motorisiert)*, *9th Mechanized Corps*, *19th Mechanized Corps*, and *22d Mechanized Corps*. Please feel free to contact the author for a copy of the entire thesis.

6. XXXXVIII Armeekorps (AK) (motorisiert), *Kriegstagebuch 1, Heft II [War Diary 1, Notebook II]*, Series T314, Roll 1138, Records of German Field Commands Corps, National Archives and Records Service, (Washington, DC: General Services Administration, 1962), 482-83; *Panzergruppe 1, Operationsabteilung, Anlage 3 Z. Kriegstagebuch Nr. 6. Operationsakten [Operations Section, Appendix 3 Z. War Diary No. 6. Operational files]*, Series T313, Roll 4, Records of German Field Commands Armies, National Archives and Records Service (Washington, DC: General Services Administration, 1962), 563, 573.

7. Isaev and Bridge, *Dubno 1941*, 53-60.

8. "Battle groups" are equivalent to the U.S. Army concept of task forces.

9. 11 Panzer Division, *Kriegstagebuch, Kriegsgeschichtliche Berichte Der Division, Einsatz Russland, 1941 [War Diary, Division War History Reports, Russia Operation 1941]*, Series T315, Roll 2320, Records of German Field Commands Divisions, National Archives and Records Service (Washington, DC: General Services Administration, 1962), 17-20; Forczyk, *Tank Warfare*, 56-57; Glantz, *Initial Period of War*, 248-24; Isaev and Bridge, *Dubno 1941*, 80-87; Victor Kamenir, *The Bloody Triangle: The Defeat of Soviet Armor in the Ukraine, June 1941* (Minneapolis, MN: Zenith Press, 2010), 139-44.

10. 11 Panzer Division, *Kriegstagebuch*, 17-20; Glantz, *Initial Period of War*, 248-64; Isaev and Bridge, *Dubno 1941*, 80-87; Kamenir, *Bloody Triangle*, 139-44.

11. 11 Panzer Division, *Kriegstagebuch*, 17-20; Forczyk, *Tank Warfare*, 56-58; Isaev and Bridge, *Dubno 1941*, 80-87; Kamenir, *Bloody Triangle*, 139-44; *Panzergruppe 1, Operationsabteilung*, 489-90.

12. *Panzergruppe 1, Operationsabteilung*, 657-58, 670-71, 676, 680; XXXXVIII AK, *Kriegstagebuch 1*, 488-90.

13. Glantz and House, *When Titans Clashed*, 57-61; Heinz Guderian, *Panzer Leader* (1952; repr., New York: Da Capo Press, 2006), 152-55; Isaev and Bridge, *Dubno 1941*, 84-91; Kamenir, *Bloody Triangle*, 126-27.

14. Glantz and House, *When Titans Clashed*, 57-61; Guderian, *Panzer Leader*, 152-55; Isaev and Bridge, *Dubno 1941*, 84-91; Kamenir, *Bloody Triangle*, 126-27.

15. Referred to from here on as *Kampfgruppe Riebel*, *Kampfgruppe 110*, and *Kampfgruppe 111*.

16. XXXXVIII AK, *Kriegstagebuch 1*, 490-94; Isaev and Bridge, *Dubno 1941*, 89-97; Kamenir, *Bloody Triangle*, 151-56; *Panzergruppe 1, Operationsabteilung*, 757, 761, 791, 797; 11 Panzer Division, *Kriegstagebuch*, 21-22.

17. John A. Armstrong, "Collaborationism in World War II: The Integral Nationalist Variant in Eastern Europe," *Journal of Modern History* 40, no. 3 (Sep 1968), 396-10; Kamenir, *Bloody Triangle*, 151-56; Franz Kurowski, *The Brandenburgers: Global Mission* (Winnipeg, MB: J. J. Fedorowicz, 1997), 92-93; Isaev and Bridge, *Dubno 1941*, 89-97; *Panzergruppe 1, Operationsabteilung*, 785, 792, 797.

18. 11 Panzer Division, *Kriegstagebuch*, 23-24; XXXXVIII AK, *Kriegstagebuch 1*, 494-98; Isaev and Bridge, *Dubno 1941*, 97-99; Kamenir, *Bloody Triangle*, 165-166; *Panzergruppe 1, Operationsabteilung*, 935.

19. 11 Panzer Division, *Kriegstagebuch*, 23-24; XXXXVIII AK, *Kriegstagebuch 1*, 494-98; Isaev and Bridge, *Dubno 1941*, 97-99; Kamenir, *Bloody Triangle*, 165-66; *Panzergruppe 1, Operationsabteilung*, 935.

20. III AK (motorisiert), *Führungsabteilung, Kriegstagebuch 6 [Command Section, War Diary 6]*, Series T314, Roll 182, Records of German Field Commands Corps, National Archives and Records Service (Washington, DC: General Services Administration, 1962), 924-26; XXXXVIII AK, *Kriegstagebuch 1*, 499; Glantz, *Initial Period of War*, 272; Kamenir, *Bloody Triangle*, 172-75; *Panzergruppe 1, Operationsabteilung*, 955.

21. XXXXVIII AK, *Kriegstagebuch 1*, 499; Isaev and Bridge, *Dubno 1941*, 135-37, 145-46; Kamenir, *Bloody Triangle*, 183-84, 188.

22. XXXXVIII AK, *Kriegstagebuch 1*, 499; Isaev and Bridge, *Dubno 1941*, 127-31; Kamenir, *Bloody Triangle*, 183-88.

23. XXXXVIII AK, *Kriegstagebuch 1*, 499-503; Isaev and Bridge, *Dubno 1941*, 129-46; Kamenir, *Bloody Triangle*, 183-89.

24. Ibid.

25. Panzerjäger Is were captured 47-mm. Czech antitank guns mounted on Panzer I chassis.
26. Isaev and Bridge, *Dubno 1941*, 134–35; Kamenir, *Bloody Triangle*, 189–91; Panzergruppe 1, *Operationsabteilung*, 1023, 1028, 1050; XXXXVIII AK, *Kriegstagebuch 1*, 499.
27. 11 Panzer Division, *Kriegstagebuch*, 24–25, 745–46; Isaev and Bridge, *Dubno 1941*, 146; Kamenir, *Bloody Triangle*, 176–79; 13 Panzer Division, *Ia*, *Kriegstagebuch 5*, 1941 [Chief of Operations, War Diary 5, 1941], Series T315, Roll 2325, Records of German Field Commands Divisions, National Archives and Records Service (Washington, DC: General Services Administration, 1962), 58–60.
28. 11 Panzer Division, *Kriegstagebuch*, 24; Isaev and Bridge, *Dubno 1941*, 146–47; Kamenir, *Bloody Triangle*, 178–79; Leo Nierhorster, “Motorcycle Regiment, Mechanized Corps, Soviet Army, 22 June 1941,” World War II Armed Forces: Orders of Battle and Organizations, 4 Apr 2015, http://www.nierhorster.org/012_ussr/41_organ/corps_mech/mc_mcl-rgt.html.
29. Isaev and Bridge, *Dubno 1941*, 146–47; Kamenir, *Bloody Triangle*, 178–79.
30. Isaev and Bridge, *Dubno 1941*, 137–44; Kamenir, *Bloody Triangle*, 192–94.
31. XXXXVIII AK, *Kriegstagebuch 1*, 504–6.
32. 11 Panzer Division, *Kriegstagebuch*, 25–26, 767; Isaev and Bridge, *Dubno 1941*, 146–47; Kamenir, *Bloody Triangle*, 197–98.
33. The BA-3 and BA-6 armored cars were equipped with 45-mm. tank guns and had armor of equivalent thickness to a BT-5 or T-26 tank. They were essentially wheeled light tanks.
34. 11 Panzer Division, *Kriegstagebuch*, 25–27, 749–50; Isaev and Bridge, *Dubno 1941*, 146–47; Kamenir, *Bloody Triangle*, 198–99.
35. XXXXVIII AK, *Kriegstagebuch 1*, 505–6.
36. Isaev and Bridge, *Dubno 1941*, iv–vi, 141–43; Kamenir, *Bloody Triangle*, 199–206.
37. T-34s still were being referred to here as heavy tanks because of their size, armor, and main gun caliber. XXXXVIII AK, *Kriegstagebuch 1*, 505–7; Isaev and Bridge, *Dubno 1941*, iv–vi, 141–45; Forczyk, *Tank Warfare*, 62; Kamenir, *Bloody Triangle*, 207–9; 11 Panzer Division, *Kriegstagebuch*, 749–50.
38. XXXXVIII AK, *Kriegstagebuch 1*, 505–7; 11 Panzer Division, *Kriegstagebuch*, 749–50; Forczyk, *Tank Warfare*, 62; Isaev and Bridge, *Dubno 1941*, iv–vi, 141–45; Kamenir, *Bloody Triangle*, 207–9.
39. Kamenir, *Bloody Triangle*, 213–17.
40. XXXXVIII AK, *Kriegstagebuch 1*, 509; Kamenir, *Bloody Triangle*, 222, 227–28.
41. XXXXVIII AK, *Kriegstagebuch 1*, 509–10; Isaev and Bridge, *Dubno 1941*, 148–49; Kamenir, *Bloody Triangle*, 225–26.
42. XXXXIV AK, *Kriegstagebuch 2, Teil 1* [War Diary, Part 1], Series T314, Roll 1025, Records of German Field Commands Corps, National Archives and Records Service (Washington, DC: General Services Administration, 1962), 811–18; XXXXVIII AK, *Kriegstagebuch 1*, 511; Panzergruppe 1, *Operationsabteilung*, 1159; Isaev and Bridge, *Dubno 1941*, 149–52; Kamenir, *Bloody Triangle*, 226–28.
43. XXXXVIII AK, *Kriegstagebuch 1*, 511; XXXXIV AK, *Kriegstagebuch 2*, 811–18; Isaev and Bridge, *Dubno 1941*, 149–52, 166; Kamenir, *Bloody Triangle*, 226–28; Panzergruppe 1, *Operationsabteilung*, 1159.
44. An Artillery Command was a headquarters overseeing several units of Army-level artillery subordinated to a corps or operating together at the Army level.
45. XXXXVIII AK, *Kriegstagebuch 1*, 512–13; Isaev and Bridge, *Dubno 1941*, 166–67; Kamenir, *Bloody Triangle*, 229, 234; Panzergruppe 1, *Operationsabteilung* 1191, 1197–98.
46. XXXXVIII AK, 513–15; Isaev and Bridge, *Dubno 1941*, 167–68; Wolfgang Werthen, *Geschichte Der 16. Panzer-Division, 1939–1945* [History of the 16th Panzer Division, 1939–1945] (Freiberg, Germany: Podzun Publishing House, 1958), 46–47.
47. 57 Infanterie Division, *Ia*, *Kriegstagebuch 5*, 1941 [Chief of Operations, War Diary 5, 1941], Series T315, Roll 980, Records of German Field Commands Divisions, National Archives and Records Service (Washington, DC: General Services Administration, 1962), 13; LV AK, *Ia*, *Kriegstagebuch 1* [Chief of Operations War Diary 1], Series T314, Roll 1367, Records of German Field Commands Corps, National Archives and Records Service (Washington, DC: General Services Administration, 1962), 464; Isaev and Bridge, *Dubno 1941*, vii; Kamenir, *Bloody Triangle*, 232–43.
48. XIV AK (motorisiert), *Kriegstagebuch, Führungsstaffel* [War Diary, Command Section], Series T314, Roll 529, Records of German Field Commands Corps, National Archives and Records Service (Washington, DC: General Services Administration, 1962), 20; 9 Panzer Division, *Ia, Ic, IIa*, *Kriegstagebuch Mit Anlagen, Tätigkeitsberichte* [Chief of Operations, Chief of Intelligence, Adjutant War Diaries with Appendices, Activity Reports], Series T315, Roll 533, Records of German Field Commands Divisions, National Archives and Records Service (Washington, DC: General Services Administration, 1962), 9–10; Kamenir, *Bloody Triangle*, 235.
49. Isaev and Bridge, *Dubno 1941*, vii; Kamenir, *Bloody Triangle*, 236.
50. Kamenir, *Bloody Triangle*, 229–30, 236–39.
51. *Ibid.*, 247–49, 254.
52. David Stahel, *Kiev 1941: Hitler's Battle for Supremacy in the East* (Cambridge, UK: Cambridge University Press, 2012), 74–98, 264, 348; James Sterrett, “Southwest Front Operations, June–September 1941” (master’s thesis, University of Calgary, 1994), 63–90.
53. Glantz, *Initial Period of War*, 28–37; Isaev and Bridge, *Dubno 1941*, 199.
54. Officer loss numbers include those listed as “died of wounds” at a field hospital. Enlisted accounting lists only included killed and wounded. If taking only killed into account, the number is 7 percent. If applying the same died of wounds ratio to the enlisted casualties as officers, the number expected would be approximately 23 percent. Notably, noncommissioned officers are accounted for in the enlisted data, meaning that leader killed rates would dwarf junior soldier rates.
55. 14 Panzer Division, *Ia*, *Kriegstagebuch 2, 1941* [Chief of Operations, War Diary 2, 1941], Series T315, Roll 656, Records of German Field Commands Divisions, National Archives and Records Service (Washington, DC: General Services Administration, 1962), 800, 1194; 11 Panzer Division, *Kriegstagebuch*, 177–78.