In the face of superior enemy pressure the Germans evacuated Tikhvin on 12 December, and all the forces of the Sixteenth Army which had pushed east of the Volkhov River had to be withdrawn to a defensive position on the west bank of the river. During these movements, which were continued until 23 December under especially difficult combat and weather conditions, the mass of the I Air Corps was employed to ease the pressure on the ground forces. Concurrently, the supply traffic across Lake Ladoga and the rail traffic in the combat area of the First Air Fleet were continuously attacked. Because of the importance of railroad interdiction, fighters were also frequently employed in "sweeps" against locomotives, trains, and railroad installations.

The operations of the First Air Fleet during 1941 also included the commitment of Luftwaffe units as infantry. During very critical situations the First Air Fleet was compelled to use all of its available resources to help close grievous gaps in the ranks of the Army. While recently rehabilitated units of the 7th Air Division--then the only paratroop division available--were thrown prematurely into the battle for Leningrad, regular infantry units (such as the 14th Luftwaffe Regiment and the organization of Generalmajor Eugen Meindl) were formed from volunteers from Luftwaffe ground organizations, the antiaircraft artillery, and the signal service of the First Air Fleet. All were immediately employed at the centers of the fighting. These units fought successfully shoulder to shoulder with their hard-struggling comrades of the Army. Their relatively briefer training in ground combat naturally made their losses disproportionately high, but their bearing and fighting spirit contributed vitally to the stiffening of the defensive front.* They became the core of the Luftwaffe Field Divisions which were organized in 1942.

Luftwaffe Participation in Operations BEOWULF I & II

Planning

The capture of Tallinn (Reval) on 28 August and the winning of the western coast of Estonia by German ground forces prepared the ground work for the seizure of the Baltic islands of Muhu, Saaremaa, and Hiiumaa

*Editor's Note: Some German Army commanders, such as Generaloberst Hans Friessner, thought that the employment of inadequately trained Luftwaffe personnel for infantry tasks was a misuse of manpower. See Generaloberst (Ret) Hans Friessner, Verratene Schlachten (Betrayed Battles), Hamburg: Holsten Verlag, 1956, p. 228.

by an attack from the mainland. Responsibility for the execution of this undertaking (Operation BEOWULF) was entrusted to the commanding general of the XXXXII Army Corps, comprising the 217th and 61st Infantry Divisions, to which elements of the Navy and Luftwaffe were assigned. Thus BEOWULF was a joint operation of all the armed forces under one commander.

To seize the islands, two plans, initially involving only the islands of Muhu and Saaremaa, were considered. At the end of June 1941 Army Group North decided in favor of Plan BEOWULF II, which provided for troops operating from the west coast of Estonia, with assembly area at Virtsu, to cross the large strait between the mainland and Muhu and take the islands by an attack from the east.

The reasons for the decision by Army Group North in favor of BEOWULF II over BEOWULF I (which provided for troops operating from northern Kurland, with assembly areas at Roja and Ventspils, to land on Saaremaa in Fettel Bay* and at Salme and take the islands from the south and southwest) were:

(1) There was no need for a rapid seizure of the islands, since the Soviet forces there could not seriously interfere with operations on the mainland or with supplies by sea. It was also believed that the Soviet airfields on the islands could be eliminated by counter-air action.

(2) The passage across the relatively narrow large strait promised to be shorter and therefore safer than a crossing from Kurland. Furthermore, the danger of flanking operations by Soviet naval units was considerably less in the large strait.

(3) The landing on the east side of the islands was expected to be easier, since most of the fortifications were situated on the southwestern and western sides and were especially designed for defense against attacks by sea, such as the amphibious operation of the German Army and Navy against Saaremaa during World War I./

The Terrain and the Enemy

On the whole the terrain on the Baltic islands is level. A few dunes, most of them covered with coniferous trees, range in height from 160

*Editor's Note: Fettel Bay is the name given in the German manuscript, but the Estonian-English version could not be determined.

/See Map No. 10.

feet to 223 feet. In 1941 only a small part of the islands was cultivated; the remainder was wasteland, heather, and swampy terrain with pasture land and scrub forests. Stone walls served as boundaries for farm lands, and there were numerous dolmens on Muhu Island, but owing to danger from rock slides, neither the walls nor the dolmens provided good cover. Muhu was connected with Saaremaa by an embankment about 2 1/2 miles long. The fog which prevails in the Baltic except during the summer months could severely hamper the progress of the operations.

The total strength of the Soviet forces stationed on the Baltic islands was estimated at 20,000. It was assumed that some 10,000 would be in the strongly organized western part of Saaremaa, with the remainder distributed between Muhu, Hiiumaa, and the eastern part of Saaremaa. At points commanding the sea, some 15 coastal batteries, considered to be of heavy and extra-heavy caliber with armored shields or good concrete embrasures were emplaced. It was later confirmed that the estimate of Soviet troop strength and distribution was correct, but that the effectiveness of the batteries had been overestimated, since the guns were only of medium and heavy caliber and only two batteries had armored shields. And while some of the remaining batteries had concrete embrasures, others were emplaced in field artillery positions. A strong fortification system with concrete bunkers was found only on the Sõrve Peninsula, the southernmost part of Saaremaa.

In contrast to the mainland Soviet forces, the garrison on the islands was well fed and equipped. The core of the defense was provided by naval infantry (marine) and coastal artillery units, whose personnel were confirmed communists and fanatical fighters. Bases for light naval forces were situated in Triigi Bay, Kihelkonna Bay, and at Kuressaare (on the northern, western, and southern coasts of Saaremaa respectively).

The only large airfield for landplanes on the Baltic islands was the field at Mõnnuste on Saaremaa, but this was inadequate for modern planes such as the Ju-88. A larger naval air station was located at Papisaare* on the western coast of Saaremaa. In addition, a large number of smaller landing fields were available for landplanes and seaplanes, fields which the enemy used skillfully with his few (20-30) obsolescent aircraft.

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*Papisaare is the German name for this base. The Estonian name for this has not been found, and may have undergone other changes after its incorporation into the U.S.S.R. in 1945.

German Forces

Army. Directing the entire operation was the commanding general of the XXXXII Army Corps, who controlled the 61st and 217th Infantry Divisions. The 217th was entrusted with all covering missions, such as the occupation of the coastal area, artillery flank protection at the crossing points, and early seizure of Kessu Island which threatened the right flank of the crossing. This enabled the 61st Infantry Division to employ all its units as assault troops. Prior to the attack, the 61st assembled three infantry regiments along the Lihula-Virtsu road, with a reinforced reconnaissance battalion in the Saastana area, all ready for embarkation. It was intended, after feints had been made by German naval units against the northern, western, and southern coasts of Saaremaa, to land with the bulk of the division at three places: Lalli (Võlla),* Kantsi,/ and Tusti on the east coast of Muhu. The reinforced reconnaissance battalion was to land at Nõmmküla on the north coast of Muhu on order to attack from two bridgeheads toward the Muhu-Saaremaa causeway.

A company especially organized for combat patrols and equipped with boats and cargo sailing ships was to eliminate the coastal batteries or capture the causeway. The date of the operation depended upon the slow process of moving forward the vessels required for the crossing, but the crossing was tentatively scheduled for the period 11 to 15 September.

Navy. For the crossing operation the German Navy provided Siebel ferries, naval landing barges, fishing boats, and conventional barges, all assembled at Virtsu and in the bays to the south. Craft for the security of the operation and for the feint attacks consisted of mine sweepers, motor mine sweepers, artillery barges, armed fishing trawlers, coastal sailing ships, and barges of the so-called experimental unit. These forces were placed under the control of the Commander of Mine Sweepers North (Fuehrer der Minensuchboote Nord), Kapitaen zur See Kurt Boehmer, and were assembled at Pärnu and Riga, mainly at the latter.

Other naval forces for the diversionary operations were concentrated at Liepāja (Libau), Ventspils, and Turku (in Finland) under the command of the Chief of the 2nd Torpedo Boat Flotilla, Korvettenkapitaen Heinrich Erdmann, or the Commander of Torpedo Boats,

*Võlla is the Estonian name for this site, Lalli the German name.

/Kantsi is not on the coast, but in the interior of Muhu, and is the approximate location of this action.

Kapitaen zur See Hans Buetow. The German Navy planned to carry out three feints:

(1) Operation South Wind (SUEDWIND) was to simulate a landing in the area of Kuressaare and Fettel Bay. At dusk on the day preceding the attack (D minus 1) the units, proceeding at slow speeds, were to be so located that enemy reconnaissance or agents would be certain to observe them. At dawn on D-day, they were to change to a reverse course.

(2) Operation West Wind (WESTWIND) was to simulate a landing on the west coast of Saaremaa. A naval force consisting of the 2nd Torpedo Boat Flotilla, the 2nd and 3rd Motor Torpedo Boat Flotillas, three submarine chasers, and three steamers were to be standing some 30 miles offshore on the late afternoon of D minus 1. After dark it was to change course to an opposite heading. On the night preceding D-day the motor torpedo boats were to stand by in waiting positions outside of Soela Strait and Taga Bay and off Cap Ristna, where they were to be relieved at dawn by the 2nd Torpedo Boat Flotilla.

(3) Operation North Wind (NORDWIND) was to simulate an attack from the rocky Finnish coast. Two Finnish armored ships, a minelayer, and two steamers were to carry out a brief approach on the Baltic islands until dark on D minus 1.*

Air Force. For the execution of Operation BEOWULF II, the First Air Fleet organized within its chain of command/ the staff of the Luftwaffe Commander "B" (Generalmajor von Wuehlisch). Assigned to von Wuehlisch were:

(1) Luftwaffe Commander Baltic (Colonel von Wild) with the 806th Coastal Group (Ju-88's), three squadrons of the 125th Reconnaissance Group,// the I Group of the 77th Bomber Wing (Ju-88's), the II Group of

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*See Map No. 10.

/This staff was authorized and formed for a specified period only, as required for command purposes and coordination of the planned operation.

//On 26 July 1941, the 125th Reconnaissance Group had the following aircraft: Heinkel He-60, single-engine, two-place, biplane, utility, with floats; Heinkel He-114, single-engine, two-place, biplane with short bottom wings, close-reconnaissance seaplane; Arado Ar-95, single-engine, three-place, biplane, with floats; and the Arado Ar-196, single-engine, two-place, low-wing monoplane, coastal reconnaissance and ship-based seaplane. See also Appendix 29, Book 2, original German draft of this study, Karlsruhe Document Collection.

the 26th Twin-Engine Fighter Wing (Me-110's), the Operational Squadron of the Replacement Training Group of the 54th Fighter Wing (Me-109's), and, after 21 September, the 506th Coastal Group (Ju-88's).

(2) The 10th Antiaircraft Artillery Regimental Staff with three heavy and three light antiaircraft artillery batteries.

(3) The 10th Luftwaffe Signal Regiment with one telegraph construction battalion, one field trunk cable construction company, one teletype and telephone platoon, and one radio platoon. Further, there was a special Luftwaffe signal battalion with two signal companies in the airport area and one aircraft reporting director with an aircraft reporting platoon and a Freya radar installation.

The communication facilities and supply requirements of the ground organization for Luftwaffe Commander "B" were prepared and ready for operations after 9 September. The units under von Wuehlisch's command were deployed as follows: the staff of Luftwaffe Commander Baltic had its headquarters at Pärnu, the 806th Coastal Group and (after 21 September) the 506th Coastal Group were at Riga, while the 125th Reconnaissance Group had located its headquarters and 1st Squadron at Pärnu, its 2nd Squadron at Haapsalu, and its 3rd Squadron at Helsinki. Besides these units, the I Group of the 77th Bomber Wing was based at Kuusiku, and the II Group of the 26th Twin-Engine Fighter Wing was at Pärnu, while the Operational Squadron of the Replacement Training Group of the 54th Fighter Wing was deployed first at Pärnu and after 21 September at Mõnnuste on Saaremaa Island where it was supplied by Gigant cargo gliders.*

The antiaircraft artillery was deployed in defense of the ground organization and the harbor of Pärnu, concentrating around Pärnu. A

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*The Messerschmidt Me-321 "Gigant" cargo glider, capable of lifting a payload of about 22 tons. It was normally towed by three Me-110C's, by a single five-engine, twin-fuselage Heinkel He-111 Z, or by a Junkers Ju-290 A-1. The last named aircraft was the most ideal for the task, but was everywhere in short supply, so that the He-111 Z was usually employed. The Gigants mentioned above were probably towed by three Me-110 C's, since these were the towing aircraft then assigned to the 1st Gigant Squadron (5 Gigants and 15 Me-110 C's). See Appendix 34, Book 2, original German draft of this study, Karlsruhe Document Collection.

specially organized light antiaircraft artillery battery, mounted on 12 Siebel ferries, was assigned to the ground forces to directly protect the crossing operation. On the afternoon of 13 September the flying units reported that they were at the prescribed airfields ready for action.

The Course of Operations

The original plan to bring most of the attacking ground forces by convoy from Pärnu to Muhu, after a first wave--crossing in assault boats from Virtsu--had seized a beachhead on Muhu, had to be abandoned. Because it was not certain that mines, which had been laid by the Luftwaffe at an earlier period, could be swept clear in time for the operation, the crossing from Virtsu to Muhu was to be accomplished by the use of assault boats and Siebel ferries.

On 8 and 9 September the 217th Infantry Division launched a surprise attack on the weakly garrisoned islands of Hobu and Vormsi, east of Hiiumaa Island. These islands were taken--as was the island of Kessu, east of Muhu, on 10 September by elements of the 61st Infantry Division--without significant resistance.* Vormsi Island fell on 10 September. Thus, the danger of a flank attack from the north by Soviet naval forces during the crossings to Muhu and Saaremaa was eliminated. Low ceilings, rain showers, and bad visibility limited Luftwaffe activity during these assault operations to fighter protection by the Replacement Training Group of the 54th Fighter Wing.[40]

The unfavorable weather also postponed until 14 September the attack on the 2 1/2-mile causeway joining Muhu and Saaremaa. On 12 and 13 September the 806th Coastal Group; the I Group, 77th Bomber Wing; the II Group, 26th Twin-Engine Fighter Wing; the Operational Squadron, Replacement Training Group, 54th Fighter Wing; and the three squadrons of the 125th Reconnaissance Group arrived at the assigned airfields, previously mentioned, where communications and provisions were in readiness. In like manner, the three heavy and two light batteries of the 10th Antiaircraft Artillery Regiment were moved to protect the airfield and crowded harbor of Pärnu, with elements of the remaining light battery being set up at the airfields at Kuusiku and Haapsalu.

*According to the author, the 217th Infantry Division was originally directed to seize the island of Kessu, but this was later changed so that it was taken by the 61st Infantry Division.

The German Navy carried out its three diversionary operations on 13 September to conceal the intended direction of the attack and to induce the Russians to disperse their forces. Three separate convoys approached the southern, western, and northern coasts of Saaremaa Island* and misled the Soviets into expecting attacks from those points. Air reconnaissance later confirmed that the Soviet command had actually dissipated its forces by deploying them along the coast. After nightfall the German transport steamers turned back on their courses, while the escort units remained on patrol in the offshore waters of the islands. Luftwaffe Commander Baltic units provided the air cover for these diversionary actions, but no Soviet air or naval units were encountered.

The details of the amphibious operation were settled on the afternoon of 13 September at a briefing held at the headquarters of the 61st Infantry Division, in the presence of the commanding general of the XXXXII Army Corps and the Navy and Luftwaffe commanders for the joint operation. Still to be answered were questions as to whether a landing on Muhu would come as a surprise to the Russians after the seizure of Vormsi, Kessu, and Hobu; whether the Soviets had shifted reinforcements, especially artillery, from the western part of the islands to the east side of Muhu; or whether the Navy's feints had really achieved their deceptive, force-shackling effect. Since the XXXXII Army Corps had originally intended to make a surprise landing on Muhu at dawn from assault boats (without artillery and air attack preparation), a predawn landing was requested by the 61st Infantry Division and subsequently given the force of an order by higher headquarters.

Luftwaffe Commander "B" was requested to bomb seven lanes through the mine fields, which were assumed to be along the shore in the landing sector, and to provide continuous air support for the attacking ground troops. The counterproposal to postpone the crossing until dawn and neutralize the enemy by simultaneously concentrated artillery fire

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*The feint operation NORDWIND was really conducted by Finnish rather than German naval forces, and was carried out off the northern tip of Hiiumaa Island rather than Saaremaa. The Finnish coastal armored ship Ilmarinen struck a mine and sank while withdrawing from the operation on 13 September. See Olof Ekman, "Untergang des finnischen Panzerschiffes Ilmarinen," Marine-Rundschau, Vol. LIX, Okt. 1962 ("Sinking of the Finnish Armored Ship Ilmarinen," Naval Review), pp. 301-305. See also Friedrich Ruge, Der See-Krieg 1939-1945 (The Sea War 1939-1945), Stuttgart: K. F. Koehler Verlag, 1954, pp. 156-158.

and commitment of the Luftwaffe could not be considered because the Army had already issued its orders. The assault troop company was ordered to seize and destroy the coastal battery at Kübassaare on Saaremaa Island--the elimination of which was considered absolutely necessary by the Navy--in a surprise airborne and amphibious attack. The briefing ended with the order to begin Operation BEOWULF II early on the following day, 14 September. The landing at Muhu was to take place at 0450 after the preparatory artillery fire and the clearing of the seven lanes through the mine fields by the bombers.

The next morning, the first wave of the 151st Infantry Regiment of the 61st Infantry Division left the mainland in 180 assault boats bound for Muhu. About 15 minutes before they landed, "the neutralization of the enemy began with sudden, concentrated fire of the coast artillery [from the mainland] and aerial bombing and strafing."[41] The first wave landed between 0500 and 0530. It had been delayed 20 to 30 minutes by haze, light rain showers, and heavy swells. Some of the troops did not land at the intended points, having drifted off course because of the strong current in the strait. Because of this, the clearing of the seven lanes through the mine fields by Luftwaffe bombers was cancelled on the initiative of the commander of the bomber formation. The Soviets resisted tenaciously in prepared positions, in part heavily supported by artillery. Principal resistance was met in the Tusti-Kuivastu sector. The enfilading Russian artillery and antiaircraft artillery fire inflicted heavy losses on the approaching assault boats of the first wave and then upon the troops as they attacked across the open beaches. From his Fieseler Fi-156 "Stork," the Luftwaffe Commander "B" observed that German artillery fire from the mainland had little effect because poor weather conditions prevented adequate observation. In this critical situation bombers and twin-engine fighters (Me-110's) replaced the artillery. A narrow bridgehead was established during the morning, after the Luftwaffe had eliminated several Soviet batteries and directly supported the ground attack. In the afternoon enemy resistance decreased noticeably at some points. Nevertheless, only five infantry battalions and one artillery battalion had landed on the east coast of Muhu by 1800, the breakdown of numerous vessels and the heavy swell having considerably slowed the speed of the crossing. The concluding report of the XXXXII Army Corps on Operation BEOWULF II expressly confirmed that the success achieved on the first day was due in decisive measure to the unflagging assistance of the Luftwaffe, which had been committed at the right time and place.

Toward 1500, the 161st Reconnaissance Battalion reported that it had gained a surprise footing on the northern coast of Muhu, had broken the weaker Soviet resistance, and was marching south. All vehicles of

the battalion were brought over there by evening. Before dusk two bridgeheads were won: the first, from Pallasma through Tupenurme to Raugi, and the second, from Tusti to the western edge of the forest between Tusti and Kuivastu.

The planned surprise seizure of the coastal battery at Kübassaare by an assault troop company failed. In the early dawn, one-third of the company, aboard freight gliders, landed immediately north of the battery. However, the amphibious force with two-thirds of the company was delayed by heavy seas and false orientation. At daylight the boats were driven off by gunfire, and the airborne force was encircled just north of the coastal fort.

The naval feints had proceeded according to plan. Units in Operations WESTWIND and SUEDWIND were fired upon by coastal batteries, and a Finnish armored warship, Ilmarinen, participating in Operation NORDWIND, struck a mine and sank on the 13th. Weak Soviet naval forces--motor torpedo boats--were repulsed by aerial attacks.*

On 15 September the movements across the strait to Muhu were still being hampered by hostile artillery fire and heavy swells. Around 1000 hours, the converging attack from the bridgehead--extending from north to east--began toward the causeway connecting Muhu and Saaremaa. Most of the assault troop elements, encircled near Kübassaare, left the peninsula in pneumatic boats dropped by air and were later picked up by naval vessels. By evening of the following day (16 September), all of Muhu, except for a narrow sector along the west coast, had been brought under German control without more serious difficulties.

Meanwhile, air reconnaissance had established that the feint operations of the Navy had caused the Soviet command on Saaremaa to deploy its force along the entire coastline of the island. In particular, no substantial forces stood on the northeast coast opposite Muhu Island. Therefore, Luftwaffe Commander "B" proposed that, under Luftwaffe protection, the ground forces should push forward immediately on the next day over the causeway leading to Saaremaa. To delay the advance by waiting for reinforcements and by making further preparations would give the Soviets

*Editor's Note: It should be noted that the author indicated earlier that "no Soviet air or naval units were encountered" by units of Luftwaffe Commander "B" during the diversionary naval operations. It may be assumed that whatever forces were present had a negligible effect on the German operation.

time to reinforce the eastern shore of Saaremaa. Moreover, since the units attached to Luftwaffe Commander "B" were available for only a few days for the operation against Saaremaa, the commander himself decided to create spontaneously within his own organization the conditions which would facilitate a crossing to Saaremaa as early as 16 September.

On the evening of 15 September, Luftwaffe Commander "B" advised the 61st Infantry Division and the infantry regiments still engaged on Muhu that the swift crossing to Saaremaa would be of special importance at that moment, since the Luftwaffe forces were available only temporarily, and an immediate attempt to cross would thus be supported by all the available air power. This assurance had substantial influence on the independent decision of Captain Pankow to move across the causeway to Saaremaa with his advance infantry forces.

Thus, on the morning of 16 September, bomber and twin-engine fighter units, attacking in waves, covered the infantry during the difficult crossing over the 2 1/2-mile-long stone embankment, which had been only partially demolished by the Russians. These air attacks neutralized the Soviet defenses so effectively that by evening three battalions had established a bridgehead about 7 1/2 miles wide and from 2 to 3 3/4 miles deep on Saaremaa without severe losses. On the following day this bridgehead was extended across the entire breadth of the island to a depth of 6 miles. The crossing to Saaremaa had definitely succeeded.

In addition, units of the Luftwaffe Commander "B" succeeded on 16 September in destroying or disabling in Triigi Bay a fleet of 20 ships, apparently assembled there for an evacuation. On the following day these flying units again protected the crossing movements from Soviet motor torpedo boats which had suddenly appeared on the scene.

With the establishing of a sufficiently sizable bridgehead, the most difficult part of the operation against Saaremaa had been mastered. On the afternoon of 17 September the Luftwaffe Commander "B"--prior to the disbanding of his command--transferred his command authority to the Luftwaffe Commander Baltic. The I Group of the 77th Bomber Wing (Ju-88's) and the II Group of the 26th Twin-Engine Fighter Wing (Me-110's) reverted to the command of the First Air Corps and were transferred to the Leningrad front. To replace them, the 506th Coastal Group, with 14 Junkers (Ju-88) bombers was sent on 21 September to the Luftwaffe Commander Baltic at Riga.

The coastal fort at Kübassaare was captured on 18 September after bitter resistance, and some 400 Soviet marines were taken prisoner. From

then until 23 September the 61st Infantry Division proceeded without serious difficulty to occupy the island as far as the isthmus which leads to the Sõrve Peninsula. In these operations, units of the Luftwaffe Commander Baltic provided vigorous support through bombing and strafing attacks on batteries of artillery, pockets of resistance, and marching columns.[42]

During this period the ground forces were twice supplied by air from two Me-321 Gigant freight gliders which transported 24 tons of ammunition, rations, and fuel from the Estonian mainland to Saaremaa.

On 23 September the attack opened against the Sõrve Peninsula, where unexpected heavy fighting developed, fighting which lasted four days longer than the entire preceding occupation of Muhu and the greater part of Saaremaa. The small peninsula had been organized as a bunker position throughout its entire length and had been heavily mined. Therefore, more than 2,000 land mines had to be removed in a single day, and 41 bunkers had to be taken in battle. Supported by strong artillery, the Russian defenders resisted desperately in the belief that the Soviet Navy would soon hasten to their relief and that the Germans would shoot all prisoners. Here the moral of the Soviet troops, mostly marines, was far above the average for the typical Russian soldier.

The battle for the Sõrve Peninsula, which depended upon the closest cooperation with the infantry in order to launch attacks upon pinpoint targets, such as bunkers, machine-gun nests, and gun emplacements, required a reliable and flexibly adaptable means of transmitting information between aircraft and ground forces. Communication by the use of ground signal panels and other visual means was developed to a very high standard. On this occasion, as in former battles, the employment of Luftwaffe signal liaison teams with the foremost infantry elements proved to be extremely useful. These teams kept the command headquarters constantly and accurately informed by radio on the current situation and on the location of the changing front lines.

In part, the combat area on the peninsula was narrow, only 1 1/4 miles wide. This permitted only three aircraft, at the very most, to operate simultaneously, because attacks on pinpoint targets were carried out at low levels and the restricted area did not allow sufficient freedom of movement. On the ground the infantry advanced foot by foot, averaging a gain of little more than half a mile in a day.

The Soviets offered only slight resistance in the air. Approximately 15 Soviet fighters were based on Sõrve and were indeed cleverly employed in low-level attacks against the German ground forces, but

they disappeared immediately upon the appearance of German fighters. At best they accepted combat with the slow-flying seaplanes of the 125th Reconnaissance Group.

On the other hand, the enemy's antiaircraft defense was remarkable. A strong medium antiaircraft artillery and machine-gun defense was distributed over the entire peninsula, and three heavy batteries were emplaced at its southern tip. All five of the German planes lost in the Sõrve operation were brought down by this Russian ground defense.

The first signs of the collapse of resistance on Sõrve were the transfer of the 11 Soviet fighters still on the peninsula to the mainland on 3 and 4 October, and an attempt by several commissars to escape during the night of 3-4 October in a motor torpedo boat. The boat was set afire by a bomber's guns and sank with all aboard.

A week after the fighting on Sõrve had ended, the 61st Infantry Division began the attack on Hiiumaa, the last of the Baltic islands. Here, too, diversionary naval operations deceived the enemy with respect to the direction of the attack, which was launched from Saaremaa against the southern tip of Hiiumaa. Despite bad weather, the first German aircraft took off before daylight on 12 October, covering the noise of the approaching assault boats and landing craft with the sound of their engines so that at daybreak German infantry surprised the enemy completely and were able to land on the southern end of the island. By evening two bridgeheads were won, from which further advances followed on the next day. The occupation of Hiiumaa was accomplished in about nine days--in some instances against stubborn, individual defenders--and on 21 October the last vestiges of Soviet resistance were crushed. Just as in the capture of Saaremaa, the units of the Luftwaffe Commander Baltic supported the regiments of the 61st Infantry Division on Hiiumaa in an extremely effective manner by continuous air reconnaissance and constant intervention in the ground fighting. They experienced only weak fighter opposition, but in places encountered strong antiaircraft artillery defenses.

On 21 October the High Command of the Armed Forces (OKW) made the special announcement that, with the seizure of Hiiumaa, all of the Baltic islands had been brought under German control, a victory which was due to the exemplary cooperation of the Army, Navy, and Luftwaffe.

Sorties and Losses of the Luftwaffe

In the operations against Saaremaa Island a total of 1,313 sorties was flown: 488 by bombers, 318 by fighters, 118 by twin-engine fighters,

30 by reconnaissance aircraft, 318 by seaplanes, 39 by Mausi aircraft,* and 2 by air-sea rescue planes. In the operations against Hiiumaa a total of 211 sorties was flown. Eighty-six of these were carried out by bombers, 56 by fighters, 7 by reconnaissance aircraft, 53 by seaplanes, and 9 by Mausi aircraft. Total German aircraft losses were eight Ju-88's, two Me-110's, two Me-109's, and one air-sea rescue plane.

Results Achieved by the Luftwaffe

In the Saaremaa Island operation, air attacks on ground targets destroyed 26 batteries, 25 individual guns, 26 motor vehicles, 16 field emplacements, 7 bunkers, 2 observation posts, 1 ammunition dump, 7 permanent barracks, 6 cantonments, and 2 columns of horse-drawn vehicles. In addition, 20 batteries were bombed. Besides this, attacks upon ships destroyed 4 motor torpedo boats, capsized 1 minesweeper, set fire to 2 motor torpedo boats and 10 merchant vessels totaling some 5,500 tons, blew up 2 minelayers, sank 3 merchant ships totaling 2,200 tons, and badly damaged 4 smaller vessels. In the Hiiumaa Island operation many artillery and antiaircraft artillery emplacements, field positions, bunkers, and trucks were heavily bombed.

In all of Operation BEOWULF II the Luftwaffe destroyed 15 enemy planes: one I-16 fighter, nine I-153 fighters, and five MBR-2 flying boats./

Soviet Morale and the Military Situation

During the Baltic island operations the Germans intercepted two revealing letters which uniquely illustrate the condition of Soviet morale and the military situation on the island of Saaremaa. Writing on Saaremaa to his Divisional Commissar (and Chairman of Political Guidance of the Soviet Baltic Fleet), the Regimental Commissar (and Chairman of the Political Branch of the Baltic Coastal Defense Area of the Soviet Baltic Fleet) described in his first letter the numerical superiority of German

*The term "Mausi" refers to aircraft especially fitted to detect and destroy magnetic mines at sea. Generally the Ju-52 transport (the tri-motor work horse of the Luftwaffe) and the Dornier Do-23, twin-engine, medium bomber, fitted with a large, electrically charged ring beneath the wing, detected the mines in low-altitude flights.

/A short-range reconnaissance flying boat, single-engine, four-place, monoplane.

ground and air forces; the damage inflicted upon the German amphibious forces as they approached Muhu and Saaremaa, as well as the downing of Luftwaffe planes; and the tremendous Soviet losses of personnel and materiel. These Russian losses, the commissar attributed to: (1) the overwhelming superiority of the Luftwaffe and its continuous attack on Soviet land and sea targets from 30 August to 10 September and after 13 September; (2) the betrayal of Russian movements by Estonian nationals; (3) the lack of sufficient Russian troops to man all the defenses and the lack of serviceable automatic weapons and reserves for stopping breakthroughs by the Luftwaffe supported ground forces; (4) cowardice and panic among some Russian officers and men, together with the failure to attempt to restore telephone communications, which had been disrupted by the Luftwaffe; (5) the breakdown of political machinery, since all of the commissars had engaged directly in the fighting, with consequent severe losses; and (6) the failure of the higher political and military leadership on the mainland to fill the repeated requests for air support, automatic weapons, and troop replacements; instead, aviation gasoline and bombs had been tardily delivered after the aircraft for which they were intended had been destroyed to prevent capture, while stocks of unneeded wine were received instead of aircraft parts. The commissar closed his letter with the request for immediate air support, artillery shells, evacuation of the seriously wounded, and tobacco, mail, and newspapers for maintaining morale. In his second--and shorter--letter, written on 29 September, he reiterated the tremendous losses suffered from the German air attacks and begged for air support.[43]

The content of the commissar's letters clearly confirms the unusually great and decisive effect of the Luftwaffe's operations in the capture of the Baltic islands.

Lessons Learned

An operation involving the military, naval, and air services should be conducted by one overall commander in chief. A responsible staff should be assigned to him by each participating service. "The task most tedious in preparation and most difficult to accomplish is the procurement and assembly of equipment for the crossing [of the strait between the Estonian mainland and Muhu], as well as the crossing itself." Since their slow speed precluded rapid concentration, the vessels had to be obtained well in advance, and such an assemblage, which undeniably betrays intentions, was hard to camouflage, particularly from aerial reconnaissance. But diversionary operations pointing "to other places" were successfully carried out.

It was decided that the first wave should cross in a surprise assault in the dark, without artillery and air attack preparations, rather than after such preliminaries. Although it had been originally intended that predawn air support of the crossing was to comb lanes through possible mine fields on the beach, this could not be done. Night orientation prevented "sufficiently accurate bombing" and endangered the landing troops, since the lanes were to have been bombed just before the landing of the troops, in order to achieve the greatest possible surprise. The Luftwaffe, however, provided the second assault wave--crossing in the daylight--with fighter protection and close air support. "To avoid losses in attacks upon ground targets a reliable identification of one's own front lines, especially the first wave, is necessary."

The lessons learned in the BEOWULF II operation recommended a number of techniques. The first assault wave should cross silently just before dawn; only after these troops had landed should artillery on the mainland begin firing upon targets close to the beach area; then, at daybreak, Luftwaffe units should furnish close air support to the first wave and "constant" fighter cover over the landing and crossing points. "It is of decisive importance to undertake flanking landings at as many different places as possible," as the 161st Reconnaissance Battalion demonstrated by landing easily, taking the enemy by surprise, and launching an attack upon the extended Soviet flank. Because the telephone cable between the mainland and the islands was taken intact, communications were no problem, but stand-by radio equipment and courier aircraft had been prudently provided. The Luftwaffe signal communication liaison party and the combined use of radio and radar equipment to direct the fighters were particularly valuable. As soon as a bridgehead was well established, prompt selection of land for airfields was important. A fighter squadron and a flight of close-reconnaissance aircraft were easily transferred to Saaremaa, because Gigant cargo gliders could supply them without delay.

As on the other fronts, propaganda leaflets dropped by air were effective; especially important (according to the testimony of a Soviet deserter-prisoner) was the situation sketch map printed on the back of the leaflet. With respect to the Russian treatment of German personnel captured during the operation, there were, for example, 12 German prisoners captured after the unsuccessful air landing operation near Kübassaare on the Sõrve Peninsula who were "robbed and then shot, being bound from behind." There was also the shooting--with "hands tied and eyes bound"--of fighter pilot Lieutenant Henkemeier, who had been "at first apparently well treated in the hospital at Küressaare" after

being shot down and wounded, but who was liquidated when the Russians evacuated the city.[44]

Luftwaffe Commander Baltic*

The command of Luftwaffe Commander Baltic (Colonel von Wild), already mentioned in regard to First Air Fleet operations, had been activated at Swinemuende on 1 April 1941. It was organized to provide continuous armed reconnaissance in the eastern part of the Baltic Sea and Gulf of Finland to prevent "surprise attacks by enemy surface and submarine forces"; mine the harbors of Kronshtadt and Leningrad, the Neva River between Leningrad and Petrokrepost, and the White Sea-Baltic Canal; attack the canal lock installations in the Lake Onega area; provide submarine defense and escort convoys, as well as carry out antisubmarine warfare in the Baltic Sea east of 13° East longitude; and attack enemy merchant shipping whenever necessary.[45]

In order to perform these many-sided tasks, the Lufwaffe Commander Baltic was assigned the 125th Reconnaissance Group, equipped with Ar-95's, He-60's, and He-115's;/ the 806th Coastal Group, with Ju-88's; the 9th Air-Sea Rescue Squadron; an air-sea rescue control center; the air traffic control ship Karl Meyer, which was used as a navigational aid and for rescue work; and two crash boats. Temporarily assigned later were the Operational Squadron, Replacement Training Group, 54th Fighter Wing; the 506th Coastal Group; the 1st Squadron, 196th Ship-Based Reconnaissance Group; and the 1st Squadron, 406th Coastal Group. The assigned tasks were to be carried out in close cooperation with the naval authorities committed in the Baltic. Reconnaissance was to be provided exclusively for naval purposes, particularly for the Commander in Chief of Cruisers, Vizeadmiral Herbert Schmundt, Commander of Mine Sweepers North, and Commander of Torpedo Boats. The latter had his command post at Helsinki. Reconnaissance activities were directed primarily toward determining the location of and keeping

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*See Charts Nos. 2 and 6.

/The Heinkel He-115 was a twin-engine, three-place, midwing, reconnaissance and torpedo bombing, utility floatplane. All organizational charts in the Karlsruhe Document Collection show that the 125th Reconnaissance Group had no He-115's. The other aircraft were all floatplanes.

surveillance over surface units of the Soviet Baltic Fleet, in order to give the German Navy sufficient warning in the event of Russian naval attacks.

Reconnaissance over the Gulf of Finland during the laying of German mine and net barriers between Tallinn and Helsinki was of primary importance. In addition, reconnaissance of Soviet submarines was particularly important and covered all of the eastern Baltic (insofar as this was possible with the weak reconnaissance forces available) in contrast to the reconnaissance of Soviet surface vessels, which could remain limited to definite areas. Mining operations against the naval base at Kronshtadt, the Neva River, and especially the White Sea-Baltic Canal, as well as the escort of convoys to Riga and Tallinn, were special tasks for the Luftwaffe Commander Baltic. A small number of mine-clearing aircraft, the so-called Mausi, were also employed successfully in sweeping operations, while the fighter squadron protected both the convoys and the reconnaissance aircraft as best they could with the number of airplanes available. Then, as heretofore mentioned, reinforced units of the Luftwaffe Commander Baltic furnished support to the joint BEOWULF II operation.[46]

German naval operations in the Baltic were also supported indirectly by Luftwaffe cooperation in the war against merchant shipping and in the successful bombing of Soviet naval vessels in port and at sea. If these operations were not coordinated in detail with the Navy, they nevertheless corresponded basically to the orders given to the Luftwaffe Commander Baltic, who also carried out attacks on the lock installations of the White Sea-Baltic Canal at Povenets. The attack of 15 July was especially successful, one lock gate being destroyed by a direct hit from a 2,200-pound bomb, completely stopping all traffic. After the first attacks, the Soviets put the installation back in order and began to transfer submarines and minesweepers to the Arctic Ocean. The exact time when repairs had been completed went unnoticed by the German air reconnaissance because of bad weather, but the German Navy requested, as it had before, a blockade of the Russian submarines and light naval craft in the Gulf of Finland until frost set in or until the canal might be closed by German ground forces, so the 806th Coastal Group carried out a further attack on the Povenets lock installations with 2,200-pound bombs which had new type detonators permitting low-level bombing. The attack was carried out with excellent results under the command of Major Buehring. Again a lock gate was destroyed and the lock basin severely damaged, but the attacking flight of Ju-88's was lost through premature detonations of the bombs. The use of this type of detonator was immediately stopped by the Chief of Luftwaffe Supply and Procurement.[47] However, the German

Navy continued to attach significance to the maintenance of the blockade of the canal by the Luftwaffe.

From 22 June until 31 August 1941 units under the leadership of the Luftwaffe Commander Baltic flew 1,775 sorties, as follows: the 125th Reconnaissance Group, 737 sorties; the 806th Coastal Group, 610; the Operational Squadron, Replacement Training Group, 54th Fighter Wing, 339; elements of the 1st Squadron, 406th Coastal Group, 15; the 1st Squadron, 196th Ship-Based Reconnaissance Group, 66; and the II Group, 1st Bomber Wing, 8 sorties. The last three units were attached to the Luftwaffe Commander Baltic only at times. Organizations of the Luftwaffe Commander Baltic succeeded in sinking 66,000 tons (BRT) of merchant shipping, including five destroyers, one torpedo boat, one patrol or picket boat, two motor torpedo boats, and one small boat.* An additional number of vessels comprising 17,000 tons of merchant shipping were so badly damaged that sinking was probable. The same was also believed to apply to one tanker, one submarine, one torpedo boat, and one escort vessel of 1,200 tons. A third category--ships which were definitely damaged or considered to be damaged by near misses--included: 1 heavy cruiser, 1 flotilla (destroyer) leader; 1 auxiliary cruiser of 6,000-7,000 tons, 17 destroyers, 5 motor torpedo boats, 2 minesweepers, 2 picket boats, 1 cutter, and 132,000 tons of merchant shipping. Luftwaffe Commander Baltic destroyed 46 enemy planes in the air and an additional 12 on the ground against losses of 11 Ju-88's, 3 Ar-95's, 1 Ar-196, and 5 Me-109's, a total of 20 aircraft.[48]

On 27 October the Luftwaffe Commander Baltic was disbanded, the 806th Coastal Group was assigned to the I Air Corps, and the 125th Reconnaissance Group was transferred, because of ice conditions, to Pillau for rehabilitation. The staff, together with a Luftwaffe signal company, remained for a short time at Tallinn, and was transferred at the beginning of November to Berlin. From there it moved early in 1942 to Saki in the Crimea as the staff of Luftwaffe Commander South.

The supply of the Luftwaffe Commander Baltic, which was on the whole accomplished by the I Luftwaffe Administrative Command Headquarters at Koenigsberg, came off smoothly except for a temporary shortage of fuel in July which, however, was quickly overcome by the intervention of the Quartermaster General of the Luftwaffe.† The

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*Confirmed sinkings.

†Generalleutnant Hans Georg von Seidel. (General der Flieger, 1 January 1942.)

Luftwaffe signal communications--wire and radio--were always available in the required capacity and in order. Liaison with the naval authorities was generally smooth and marked with a mutual understanding of individual weaknesses and shortcomings.

On the whole, the Luftwaffe Commander Baltic carried out successfully the assigned tasks within the limits of the forces available. Despite the very high fighting spirit of the crews and the best intentions of the command, these tasks could not be fully accomplished because the Commander Baltic had too few units and did not always have the type of planes best suited to the operations. This viewpoint was generally confirmed by the German Navy which, in its publication No. 601/12, noted that the Luftwaffe Commander Baltic units had supported naval operations in the Gulf of Finland. Units of the First Air Fleet were also detached to the Baltic area from time to time. But naval operations in the Baltic had been repeatedly complicated because the Luftwaffe's main point of effort in the East was in the area of the Second Air Fleet in Combat Zone Center. "Only with weak forces" were Russian coastal waters occasionally reconnoitered, German merchantmen protected, and Soviet naval targets attacked. "Further complicating [matters] was the local separation of the Navy headquarters from those of the Luftwaffe. Despite all difficulties, however, the good will of all command posts concerned must be emphasized, [for] they tried to carry out their extensive assignments with very meagre forces and were eventually successful. . . ."[49]

Chapter 8

AIR OPERATIONS IN THE FAR NORTH IN 1941 (FINNISH-KARELIAN AREA)*

Mission and Strategic Concentration

Command and Missions of the Three Wehrmacht Branches

Pursuant to Directive No. 21 (18 December 1940), the Commander of Gruppe XXI (later German Wehrmacht Command Norway), Generaloberst Nikolaus von Falkenhorst, who was also Chief of the Joint Command Norway, was ordered to make necessary preparations for and to direct operations in the Finnish area. In his capacity he controlled all branches of the Wehrmacht in the Norwegian-Finnish theater. His primary task was the defense of Norway, which made his mission in Finland from the very outset a secondary assignment, causing matters in the Finnish area to suffer. Von Falkenhorst was responsible for moving units into the Petsamo region in cooperation with Finnish forces to protect vital nickel mines, whose yield was urgently needed by the German war industry.

Murmansk was to be seized if sufficient forces were available for the purpose, so that Soviet ground, air, and naval activity in the region might be immediately restricted. To support this action, which aimed initially to sever all Soviet communications with Murmansk, German and Finnish units planned to launch an attack from the Rovaniemi area with the intention of reaching the Bay of Kandalaksha, from which point they could exploit the resulting advantages. The Murmansk offensive was given the code name Operation RENNTIER (Reindeer), and the drive on Kandalaksha was dubbed Operation SILBERFUCHS (Silver Fox).

Adequate naval support from the Kriegsmarine (German War Navy) was expected in these efforts, especially for the Chief of the Joint Command Norway and for General der Gebirgsjaeger Eduard Dietl's German forces on the Arctic coast.

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*This chapter was written with the assistance of Generalleutnant (Ret.) Andreas Nielsen, Chief of Staff of the German Fifth Air Fleet, and, in 1941, also Chief of Air Command Kirkenes (Norway). See Appendix II.

In the course of German-Finnish discussions regarding future operations, it had been suggested that the well-known Finnish Field Marshal Karl Gustav Mannerheim should act as supreme commander of all German and Finnish troops operating in Finland. Although this proposal was warmly accepted by the High Command of the Wehrmacht, it was rejected by Mannerheim on the ground that he would thereby lose a large measure of his political and military independence, since the joint command would have placed him directly under the High Command of the Wehrmacht. Thus Mannerheim commanded Finnish troops in southern Finland, while Generaloberst von Falkenhorst, as Chief of the Joint Command of Norway, was responsible for operations in central and northern Finland. It was agreed, however, that the Finnish III Corps might be placed under German command in central Finland for the operation against Kandalaksha.

The Navy and Luftwaffe were permitted great independence of action, but only within the scope of their operational directives, and were to cooperate closely with von Falkenhorst's command in all joint operations. The permanent interdiction of the Murmansk railroad line, so essential to Soviet operations in the Finnish area, became the main task of the Luftwaffe, since naval forces were too insignificant to be able to render material assistance.

Strategic Concentration

Army. Before the outbreak of the war against Russia, the Chief of the Joint Command Norway, established a Command Headquarters Finland in Rovaniemi. Three combat organizations were set up to carry out the required missions in Finland. These consisted of the XIX Mountain Corps (General der Gebirgsjaeger Dietl) assigned to Operation RENNTIER, and the XXXVI Corps (General der Kavallerie Hans Feige) and the Finnish III Corps (General Siilasvuo), both of which were directed to undertake Operation SILBERFUCHS.

The XIX Mountain Corps, including the 2nd and 3rd Mountain Divisions,* was concentrated in and west of Kirkenes, so that forward elements could cross the Finnish border into Soviet territory immediately

*In the battle for Narvik (Norway) the 3rd Mountain Division, with only 4,000 troops, held off an allied force of 20,000 men. See Walter Hubatsch, Die deutsche Besetzung von Daenemark und Norwegen (The German Occupation of Denmark and Norway), Goettingen: Musterschmidt Wissenschaftlicher Verlag, 1952, p. 252.

upon the opening of Operation BARBAROSSA.

The XXXVI Corps was unable to concentrate its forces before the beginning of the war against Russia because of the possible political consequences of moving into Finland early. Some parts of this force had come from Norway, while other elements had to cross the Baltic Sea from Germany. The approach of this corps was covered by the Finnish III Corps, which was situated in an area about 60 miles south of Salla, around Kuusamo-Suomussalmi. The Finnish unit was to commence its attack upon Loukhi at the same time the Germans opened their attack upon Salla.

All three of these assault forces (each consisting of two divisions and additional corps troops) had only weak supporting artillery and no armored forces at all. The two German corps operated about 210 miles from each other, separated by impassable terrain, so that neither could come to the support of the other. The only lateral communication route was from Rovaniemi to Petsamo, the Arctic route, 120 miles to the rear of the most advanced assembly areas.

Navy. The Naval Commander Arctic Coast (with headquarters at Tromsø) was given the responsibility for naval missions in collaboration with army forces in the Finnish area. This force also furnished a number of naval coast artillery batteries for use from Petsamo to Kirkenes. Although a naval staff was organized in Kirkenes for use in the event of the capture of Murmansk, no naval craft, with the exception of those used for convoy duty, were available for the northern operations from the Naval High Command Norway (Marineoberkommando Norwegen), headed by Generaladmiral Rolf Carls.

Luftwaffe. The Air Command Northern Norway (Col. (GSC) Andreas Nielsen) was established in Bardufoss at the close of 1940 and given the job of preparing airfields and other ground stations in that area, including supplying Finnish airfields which might be used by the Luftwaffe. This organization was placed under the command of the Air Administrative Command Headquarters Norway.*

Since a suitable commander and staff personnel for combat operations in the area were lacking, a tactical staff was organized as Air Command Kirkenes under the direction of the Chief of Staff, Fifth Air Fleet, at Oslo. Units could not be moved to their new locations in advance,

*See Chart No. 6.

nor troops oriented ahead of time, because of the danger of betraying the intended campaign to the enemy. The close relationships existing between German soldiers and some of the Norwegian populace, especially the Norwegian women, obliged Luftwaffe commanders to take special security measures.

Only the airfield at Banak, at the southern end of Porsanger Fjord, and the field at Kirkenes, in northern Norway, could be used for the concentration of air forces, because they were the only fields situated close enough for the range of German planes. These bases were immediately prepared and stockpiled with supplies necessary for combat operations. Kirkenes posed a special problem since it had to be supplied by sea. Because of this fact, as well as the key importance of the position, it was furnished with a long-distance radio station, but the danger of interception prevented it from being used except on very infrequent occasions. Natural geographical obstacles in Norway obliged German forces to make immense efforts to establish connections with the Fifth Air Fleet headquarters in Oslo.[1*]

The Opposing Soviet Forces

Command

Since German intelligence agents had been unable to secure precise information concerning Soviet headquarters before the outbreak of war,[/] the Luftwaffe was unable to destroy those centers at the outset of the conflict. Most of these command posts were discovered only after the interrogation of captured Russian troops.

It was surprising that Russian commanders in the north seemed to expect no attack, especially when the German concentration movements on a broad front had been going on for some time. Nevertheless, Soviet leaders reacted with remarkable quickness and vigor to the German offensives, and were finally able to bring all progress in the Finnish area to a halt. In this achievement almost none of the credit was due to naval or air units, which lent very little support.

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*See Map No. 11 and Charts Nos. 2 and 6.

/The intelligence agents also knew very little about Soviet leadership.

The Soviet Command had the advantage of being able to concentrate its forces near the border in peacetime operations, without creating an air of suspicion. These forces were well supplied by an integrated logistical network and by the Murmansk railroad, a lateral communication route behind the front which gave the Russians special advantages.[2]

The Soviet Army

Estimates of Soviet Army strength prior to the war were made principally from the meager gleanings of German intelligence agents and from reports from the Finnish forces. At least three Soviet corps were anticipated in the area, including considerable armored forces, a fact which was later confirmed at the battle of Salla. The Russians had a great deal more artillery than the Germans in the Finnish area, and much of it was of heavy caliber.

The greatest advantage of the Soviet Army, however, lay in the fact that its troops were generally recruited in regions where extremes of temperature were common, and had conducted maneuvers in the very sectors where operations were about to begin. Being thoroughly familiar with the terrain and its problems, the Russians had a singular advantage over the Germans who knew nothing of the area and who were guided chiefly by inadequate maps and charts.

The Soviet Navy

Germans were completely in the dark with respect to the present or potential strength of the Soviet Navy. At the opening of the campaign German air reconnaissance detected several submarines and six heavy and light cruisers in the naval port of Polyarny at Murmansk, but, because of excellent camouflage of dock installations and frequent changes of mooring, it was impossible to determine the precise strength of the Soviet Fleet in Arkhangelsk or other ports on the White Sea.

The absence of German naval units along the Arctic coast left Soviet forces free to interfere with German troop concentrations and supply movements, yet no such action developed. Soviet naval units concentrated upon defending their own coastal convoys and generally feared to engage even the weakest German Navy forces. The Soviet Navy, in short, lacked initiative and aggressiveness.

Soviet Air Force

Soviet flying forces in the northern area consisted of army and naval air units. German commanders were never able to ascertain whether these organizations functioned under a unified command. Most of the important Russian air bases in this region were around Murmansk, including the large airfield at Varlamovo, the fields at Murmashi (I and II), and a seaplane base at Kola Bay. Two airfields, Niva and Shongui, were also found near Kandalaksha, but these were of relatively minor importance. The facilities at these Soviet air bases were almost uniformly inferior, few of the fields having adequate navigational or communications equipment.

About 200 Russian aircraft were based upon these airfields at the beginning of the war. Eighty percent of these planes were single-engine types, many of which were obsolete. The bulk of the Soviet fighters were Rata I-16* aircraft, which were highly maneuverable, but scarcely a match for the German Me-109. Whatever the deficiencies of the I-16, they were somewhat offset by their advantageous numerical ratio in this area. Approximately 100 Soviet fighters opposed every 16 German fighters.

The Russian bomber force consisted mainly of SB-2's and IL-2's,† although the antiquated SB-2's were being gradually replaced in the summer of 1941 by IL-2's and bombers of British manufacture.

Soviet aircrew training was grossly inferior to German training, and Russian morale suffered accordingly. Most Soviet air operations were carried out in accordance with normal peacetime routines, but heavy initial losses forced them to adopt ingenious methods of camouflage and deception to protect their planes in the air and on the ground.††

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*See footnote, p. 19.

†The SB-2 is a twin-engine, midwing bomber and long-range reconnaissance plane. The IL-2 was the well-known "Stormovik" fighter-bomber, widely used by Soviet forces for close support work. It was a low-wing, cantilever type monoplane, heavily armored, and fitted with 2 cannons, 2 machine guns, and bomb racks. It was a V-type, single-engine plane. See Leonard Bridgman (ed.), Jane's All the World's Aircraft 1941, p. 126c.

††See Generalleutnant a. D. Klaus Uebe, Russian Reactions to German Airpower in World War II, USAF Historical Studies No. 176, Maxwell AFB: USAF Hist. Div., ASI, July 1964, Chapters 4 and 5. Cited hereafter as USAF Study 176.

Soviet airmen flew very few missions each day, and only an occasional flight penetrated into the German rear areas. Since only the leaders of Russian units were entrusted with the knowledge of the attack objectives, German pilots disrupted their missions by shooting down the lead aircraft. The remainder of the Russian formation then dispersed in haste and fled to base by the shortest route.*

Russian fighter pilots were singularly lacking in aggressiveness during most of the war. In order to draw them into battle German fighters often found it advisable to carry along a few bombs to bomb a village or town, so that Soviet fighters would be forced to come to its defense. German fighter pilots, compelled to remain above 18,000 feet over some of the major port targets because of accurate fire by Soviet naval batteries, often viewed the spectacle of Russian interceptors flying several thousand feet below them, simulating fierce combat maneuvers, firing into the empty air space ahead. As soon as the German planes left the area these planes returned to base.† This curious action was later explained by Russian prisoners, who testified that the Commissar had ordered all Soviet fighters to take off when an enemy bombing took place, and to engage the enemy in combat until he had left the target area. Because of their short flight durations, German fighters had to return to their bases within 15 minutes, in any case, allowing Soviet fighter units to report that they had "driven off the attackers." From the ground the sight must have looked impressive and credible.

German Army Operations

XIX Mountain Corps

While the main body of the German Army crossed into Soviet territory at dawn on 22 June 1941, units of the Joint Command Norway began the concentration of its forces in central and northern Finland. No hostile action was taken against them by Soviet forces.

On the extreme left wing of the far northern sector, the XIX Mountain Corps hastened to complete its concentration by 28 June.[3] On the following day, by the light of the "midnight sun," German mountain

*Ibid., pp. 91 and 92.
†Ibid., p. 66.

forces of the XIX Mountain Corps began their drive on Murmansk across the still snow-covered tundra.[4]* Surprise was out of the question since the war against Russia had been in progress on other fronts for a full week, but well-coordinated blows by tenacious mountaineers (supported by Luftwaffe dive bombers) succeeded in breaking down most of the Soviet field fortifications.

The advance continued despite stiffening enemy resistance on the second day, but slowed perceptibly when the dive bomber group of the Air Command Kirkenes was transferred away for the support of the XXXVI Corps in its attack on Salla. Because of this the Litsa River was not crossed until 8 July. Strong Russian counteroffensives began on the following day, and mounted in intensity on 10 July.[5] The need for air support in this area was complicated by the fact that heavy sea traffic had been observed at this time moving from Murmansk through Motovski Bay to the Rybachiy Peninsula, and Luftwaffe assistance was needed there to support the weak corps forces in the Rybachiy Peninsula. The threat of this Soviet sea movement against the rear of the corps' northern flank slowed down the further advance so that little progress was made in July. Increasing Soviet counterattacks were repelled by the Wehrmacht although enemy flanking maneuvers from the south and constant threats of seaborne attacks from the north repeatedly placed the corps in critical situations.

German forces (XIX Mountain Corps and the XXXVI Corps) on the Finnish Front were ordered on 19 July to continue their offensive in accordance with Fuehrer Directive No. 33, even though delays would have to be expected in view of the impossibility of granting air support at the time. As soon as the fighting around Smolensk (to the south) had come to an end, the Luftwaffe intended to transfer a number of dive bomber units to Finland to support arctic units of the German Navy in easing the situation of the XIX Mountain Corps.[6]† At the end of July, however, the Russians succeeded in landing a force from Motovski Bay in the rear of the Mountain Corps, which was thus forced to halt its offensive (on its main front) and resort to positional warfare.

As a result of this development, a new Fuehrer Directive (No. 34 of 30 July 1941) called for the discontinuance of the drive on Kandalaksha in order for the XXXVI Corps to transfer forces for the relief of the

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*The attack had to commence in broad daylight because in these high latitudes the midnight sun was above the horizon throughout the day and night.

†This battle ended on 6 August, but the expected transfer of dive bombers never took place.

northern flank of the XIX Mountain Corps. While the XXXVI Corps came to the rescue of the Mountain Corps, the Finnish III Corps, which had been more successful in its operations in that theater, was to be assigned the task of interdicting the vital Murmansk rail line.

The most tragic aspect of operations in this area was the apparent total ignorance on the part of the German High Command of existing conditions and the possible range of action in the Far North. It was utterly impossible to withdraw forces from the XXXVI Corps in the strength prescribed by the High Command of the Wehrmacht without exposing the uncovered flanks of that unit to dangerous Soviet counterattacks. This would inevitably have meant surrendering the initiative to the enemy. In any case, an acute shortage of transportation would have prevented the timely transfer of reinforcements over the only available route of communication (a distance of 480 miles). Forces moving to the front over this route would have arrived far too late to relieve the mountain troops.

The XIX Mountain Corps was therefore obliged to do as best it could, with assistance from the Luftwaffe when available. Having shifted to positional warfare on its main front, the corps launched an attack against the landed Soviet forces and annihilated them in a thorough operation. Soviet assault in the area of the Mountain Corps' main front (intended to eliminate the German bridgehead across the Litsa River) were meanwhile repulsed by army units in that sector, supported substantially by German air power.

At this time heavy Soviet artillery batteries, placed along the west coast of the Rybachiy Peninsula, had created a serious situation for the seaborne supply traffic of the Finland Army, especially since these guns commanded the entrance to the port of Petsamo. Attempts to neutralize these batteries, concealed as they were in rock bunkers, required the greater part of the then available air power, depriving ground forces elsewhere of more substantial support. This gradually forced German units, especially the mountain corps, to go more and more to the defensive.

In September, after regrouping, the XIX Mountain Corps attempted to recover the initiative, but only slow progress could be made against the now considerably reinforced Soviet forces. Shortly thereafter, the Russians commenced counterattacking, and all that could be achieved

by the Germans was a rather negligible expansion of the existing bridgehead across the Litsa.*

The Battle at Salla and Operations by the XXXVI Corps and the Finnish III Corps

The XXXVI Corps did not complete its concentration movements until 30 June 1941, and opened its initial assault without artillery preparation or aerial bombardment on 1 July, three days after the XIX Mountain Corps had gone into action. Its attack was launched against the fortification system at Salla, a strong series of emplacements, some of which were constructed of reinforced concrete. The offensive bogged down in its initial stages. One unit of the corps (SS Division NORD),† which was used in a frontal assault in the center, panicked on the first day and broke, with the result that the entire division had to be withdrawn from combat. Several days were required to re-form the unit and return it to action. Fortunately for the German forces, Soviet commanders in the area failed to follow up their momentary opportunity.

Despite subsequent heavy air support by the Luftwaffe, German ground forces were unable to capture the fortifications at Salla until 9 July. Once these positions had been taken, however, the most serious obstacle to the conquest of Kandalaksha was removed. During the month of July, Finnish III Corps forces pushed vigorously ahead against tenacious Soviet resistance, and by 27 July its southern units had reached the vicinity of Ukhta, where fighting was particularly hard because of the difficult terrain. In these battles the Finns proved themselves to be masters of forest combat and fought with conspicuous bravery. Some elements of the Finnish Corps also contributed to the capture of the fortifications of Salla.

A few days after the battle began in the XXXVI Corps area, the Russians moved in reserves by the spur rail line from Kandalaksha to Salla. There they launched repeated attacks for nearly a month against German and Finnish forces. Despite Luftwaffe support, the Soviet units

*From 22 June to 23 September 1941 the XIX Mountain Corps lost 2,211 men in action, with 7,854 wounded and 425 missing. See Col. (Ret) Kurt Hermann, General Dietl, Muenchen: Muenchner Buchverlag, 1951, p. 231. See also Map No. 11.

†6th SS Mountain Division, an untried, recently formed unit organized for police work in Norway, which was sent to the XXXVI Corps for its first combat assignment.

posed a serious threat to the German ground advance. Only the immediate resumption of the initiative by the Wehrmacht could stave off the danger.

On 27 July the corps again took up its attack in the direction of Kairala, whence the Russians had gone to establish new positions. Although beset with heavy Soviet resistance, the XXXVI Corps was able by 9 August to win the city of Kestenga. Driving toward the east and southeast it formed the left wing of a pincers movement designed to entrap Soviet forces in and around Kairala. Approaching from the south, the Finnish III Corps reached the vicinity of Loukhi, but the German XXXVI Corps was unable to close the ring because of spirited Russian counterattacks. The German unit was thereby forced to halt its offensive for regrouping operations.

The XXXVI Corps resumed its attacks on 20 August, driving toward Kandalaksha. Two days later it had reached a position nine miles southwest of Alakurti, where it was able to hold its ground against furious Russian assaults. On 24 August the Soviet forces began to evacuate their positions and to withdraw toward the area east of Alakurti. Many, however, were already encircled by Finnish and German units. The encirclement battle of Kairala ended on 27 August with the destruction of the Soviet XXXXVI Corps (including the 104th and 122nd Divisions), thus averting for the time any serious Russian threats.[8]

On 3 September 1941, German troops driving eastward from the Salla area crossed the former Russo-Finnish frontier and by the middle of the month reached a line approximately six miles east of Alakurti. This effort, however, demanded much from Wehrmacht units and most of them were completely exhausted as a result. German forces therefore finished mopping up operations and established the Wehrmann Line, which could be held against Soviet counterattacks until winter.

On 22 September Hitler ordered a halt in the attack then in progress in the Finnish III Corps area, and the transfer of troops thereby relieved to the XXXVI Corps, which was to prepare for a resumption of the drive upon Kandalaksha in early October. It was considered essential to sever the Murmansk rail line before winter. The 163rd Division, which had been assigned to the Finnish Command and had performed so well in the battles of the Finnish Army on the Karelian Front, was to be sent via Rovaniemi to Army Command Norway for participation in the operation. The almost stalemated offensive of the XIX Mountain Corps was ordered to cease, with the exception of operations underway on its northern flank, which for reasons of deception and the improvement of defenses had to be continued. Before the onset of winter

the mountain troops were to capture the greater part of the Rybachiy Peninsula in order to facilitate naval operations associated with the supply movements passing through the ports of Kirkenes and Petsamo for army forces in Finland.[9]

The directive from the Fuehrer's headquarters arrived just as the first blizzards were raging in the northern sector of the front. A few days later weather conditions were the same along the entire extent of the German-Finnish lines. Under such circumstances it was impossible to carry out the terms of the directive. Instead, troops all along the Lapland front prepared for winter positional warfare, a situation which remained unchanged until the end of 1941.

The Finnish III Corps, parts of which materially assisted the XXXVI Corps in its successful assault on Alakurti, fought skillfully and bravely against Russian forces around Ukhta. It then advanced upon Loukhi, drove to the narrows between Lake Pya and Lake Top by the end of September, and held its ground in an advanced bridgehead, fending off all Soviet counterassaults.*

Under the able leadership of Field Marshal Mannerheim, the Finnish Army in the summer of 1941 reached and crossed the former Russo-Finnish border. Some units reached the Arctic Canal, closing it to traffic in the direction of Murmansk. These objectives were attained in heavy fighting at a considerable cost in life and equipment.†

Luftwaffe Participation

Command and Mission

The tactical staff of the Fifth Air Fleet (with headquarters at Kirkenes) controlled, for tactical purposes only, all of the air units committed against Russia in the Far North. All other command authority over these Luftwaffe units rested with Air Commander North (with headquarters at Stavanger) and with Fighter Command Norway.

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*See Map No. 11.

†The Finns called even men of advanced years to the colors, and thousands of women and girls were also included among the fighting forces. Like the Germans, the Finns hoped to use all forces possible to effect a speedy end to the campaign. The resulting strain was severe upon the Finnish economy.

The chief of the tactical staff, generally designated as Chief of Air Command Kirkenes (Col. Andreas Nielsen, GSC), had a completely independent mission to perform, a mission which was only roughly defined in the High Command of Wehrmacht directive. More definite commitments were made in conferences between the Chief of Staff of the Fifth Air Fleet and the chiefs of staff of army and naval headquarters in the North. The principal mission was to support all army and naval operations in the Finnish area. This included: (1) the establishment of German air superiority over all combat areas and coastal portions of northern Norway; (2) operations against hostile land and sea forces; (3) operations against Soviet supply routes, especially the Arctic Canal, Murmansk, Arkhangelsk and Kandalaksha; and (4) the protection of German shipping against attacks by the Western Allies.

Because of the scope of German operations, the extent of the war theater, and the paucity of Luftwaffe forces available, these operations could only be performed "as far as possible" under the existing conditions.

Since the Chief of Air Command Kirkenes also had to act as tactical air commander at an army headquarters, close cooperation between Luftwaffe and ground units was assured.

The Air Forces Assigned

In order to accomplish its mission the following forces were assigned to Air Command Kirkenes:

(1) Reconnaissance units consisted of the 1st Strategic Reconnaissance Squadron, 120th Reconnaissance Group; the 1st Tactical Reconnaissance Squadron, 32nd Reconnaissance Group (both at Kirkenes).

(2) Bomber forces consisted of the 5th Squadron, 30th Bomber Wing, stationed at Banak.

(3) Dive bomber units were formed from the 4th Dive Bomber Group, 1st Air Wing, at Kirkenes.

(4) Fighter forces consisted of the 13th Squadron, 77th Fighter Wing at Kirkenes, and 1 swarm* of aircraft from the 76th Twin-Engine Fighter Wing, also at Kirkenes.

*Usually 5 or 6 aircraft, not a standard organization or designation of unit strength.

Antiaircraft artillery units were not assigned to Air Command Kirkenes, but were provided by the Luftwaffe Administrative Command Norway, a subordinate unit of the Fifth Air Fleet. Army units in the Far North were furnished with the 1st Battalion, 5th Antiaircraft Artillery Regiment, while 1 mixed antiaircraft artillery battalion was sent to the airfield at Banak, and 1 light and 1 heavy antiaircraft artillery battalions were posted at Kirkenes for the defense of the main air base.*

Ground Service Organization

The only two airfields suitable for operations in the northern Norway area were controlled by the Air Commander Kirkenes, acting under the administrative authority of Air Commander North (Col. Alexander Holle) and Air Administrative Command Norway.

Responsibility for the development of the ground service organization and logistical support for these bases rested with Air Command North. Work had commenced in the autumn of 1940 on the expansion of the two fields, Banak and Kirkenes, although it was not known at the time that they would be decisively important for later operations. This project was accelerated once the plan for a campaign against Soviet Russia became known. Delays kept occurring, however, because of the early winter in those latitudes, and the unfortunate necessity [for the Germans] of transporting everything, down to the last nail, by sea. Preparing the two fields in time for BARBAROSSA was thus a task which required the utmost efforts.

The Finnish airfield at Petsamo was also stockpiled with supplies in case the Luftwaffe had to make use of it in the future. Other Finnish airfields would be available to the Luftwaffe in case of necessity. After the movement of German forces into Finland, the Finnish Air Force offered the central Finnish base of Rovaniemi and the tactical airfield at Kemijarvi for Luftwaffe use. The equipping of these bases was accomplished through the Luftwaffe liaison channels in collaboration with the German general attached to Finnish headquarters and the Supreme Commander of the Luftwaffe, so that German flying units could take over these fields at any time. All of the airfields in the area, however, Norwegian as well as Finnish, were makeshift bases at best. None of them measured up to peacetime standards for European flying fields.

*See Chart No. 6 and Map No. 11.

Because of inadequate runways, supply facilities, billets, and communications, normal safety regulations could scarcely be fulfilled to the letter.

Another factor of importance in this theater was the matter of morale. German airmen, accustomed to much better conditions, often complained bitterly about their situation. Despite apprehensions of German flyers, the necessity to observe greater precautions in landing and taking off at these more primitive fields actually resulted in a lower accident rate than at regular bases in continental Europe. The extreme isolation of the troop units in the Far North, especially the ground personnel who had no momentary escape, as did the flyers, required special welfare measures from German special services organizations. Considerable support was rendered to these units by the Reichs Commissioner for Norway.

Operations

Air Command Kirkenes was under orders to initiate purely tactical operations. Missions of this sort were ordered by special directives, most of which involved support of the army or the naval forces. Its primary function was to eliminate hostile air forces.

This command's first attack began simultaneously with the movement of the main German front across the Soviet border. Since the Russians were unprepared for the assault, they made only a feeble response to these incursions by the numerically weaker Luftwaffe forces. Sixty to seventy Soviet planes were caught on the airfield at Varlamovo and destroyed. The surprise was that the Russians would permit this to happen in view of the devastating losses already suffered in the main combat areas. This probably reflected the serious Soviet problem of inflexibility at command levels, and the terrible disruption of their communications because of the invasion farther to the south.

A second attack delivered on the opening day resulted in massive destruction of communications lines and the central power station at Murmansk. Prisoners later testified to the impact made upon shipbuilding yards, workshops, and factories. Some missions were later flown against Russian airfields with little opposition from Soviet ground or air forces.

A further mission of tactical importance was the severance of the Murmansk railroad line, a route which was interdicted more than

100 times during the first six months of battle. Because this interdiction could not be continuously maintained, the bomber squadron of the 30th Bomber Wing (at Banak) was increased in size to a group. Russians, aware of the need to maintain their traffic over the Murmansk rail line, stockpiled repair materials by the sides of the tracks at various points to facilitate quick repairs. The Luftwaffe succeeded by its steady attacks in preventing a large-scale concentration of power being built up in the Soviet Far North, which had the additional effect of blunting many Russian counterattacks.

In response to requests by the High Command of the German Navy, a number of attacks were made against lock installations in the Arctic Canal during the opening days of the campaign and again late in the summer. Nevertheless, the scanty ship traffic on this canal made it a point of secondary importance to the Luftwaffe. Whenever the locks or other parts of the canal were bombarded, the damage was usually repaired by the Russians in remarkably short time. After 9 September 1941, the day on which Finnish Army units reached the southern part of the waterway (the White Sea Canal) near Petrokrepost, the entire Arctic Canal system ceased to be important as a major shipping route. Thereafter only occasional attacks were made against local traffic in the northern part of the canal.

Other important targets in this area were the installations at Arkhangelsk, the Kandalaksha to Arkhangelsk railroad line, and the hydroelectric plant at Nivskiy, north of Kandalaksha, all of which were successfully attacked by the Luftwaffe.[10]

Support of Army Operations

Effective air support of army operations in the Far North began on 29 June and had favorable as well as unfavorable effects upon the German Wehrmacht. While this assistance permitted ground force units to advance rapidly, it also caused them to become overly dependent upon the protective umbrella of the Luftwaffe. German troops thus reacted in an unusually sensitive manner to aerial attacks when occasional Soviet planes were able to penetrate Luftwaffe defenses.

The IV Dive Bomber Group, 1st Air Wing, supported the operations of the XIX Mountain Corps and performed certain secondary duties as requested, while units of the 30th Bomber Wing attacked targets farther in the Soviet rear area. The dive bombers were especially effective in reducing the batteries on the Rybachiy Peninsula.

From the beginning of the campaign strategic reconnaissance units of the German Air Force carried out their missions over distant Russian terrain, securing valuable photographic material for use by the ground forces and by the air command in conducting counter-air operations. Long-distance reconnaissance flights were often hampered, however, by adverse weather.

During the battle for Salla, which began on 1 July 1941 and lasted for more than a week, the dive bomber group carried out continuous operations against Soviet positions and troop concentrations. From the outset it was obvious that the German ground attack would have failed completely without this air support. About 30 planes participated in each attack, and every Luftwaffe aircrew flew four or five missions daily. The approach leg of these flights was about 112 miles, and upon reaching the target it was necessary for the aircraft to remain over the battle area for at least a half hour in order to hamper Russian movements. Because of these factors, it was not surprising that German aircrews were soon on the verge of complete exhaustion.[11]

As soon as victory was in sight around Salla, the dive bomber group (minus one squadron) was returned to Kirkenes to make preparations to support on 10 July the XIX Mountain Corps along the Litsa River. Especially important targets in Litsa Bay and in Motovski Bay were attacked in an effort to prevent a Russian landing behind the northern flank of the mountain units. Keenly aware of the increased Soviet military activity in this sector, the Commanding General of the Fifth Air Fleet (Generaloberst Stumpff) proceeded to the area himself, and thereupon ordered the transfer of two additional bomber squadrons from Stavanger to Banak, thus enabling the Luftwaffe commander at Kirkenes to form an entire group by the end of July.*

The superiority which Wehrmacht forces in this sector hoped to achieve as a result of operations by a full dive bomber group was completely offset by newly arrived Soviet reinforcements. Spirited Russian counterattacks in the northern sector soon forced the Luftwaffe commander at Kirkenes to commit all of his planes in order to defend the German forward positions. Under such conditions the XIX Mountain Corps could scarcely resume its planned offensive. The Luftwaffe was able to fend off attempted Soviet flanking attacks on the corps' southern perimeter, to silence batteries in the neck of the Rybachiy Peninsula,

*See Map No. 11.

and to repel Russian forces which had landed from Motovski Bay on the northern rim of the front in the rear of the mountain troops.

The continuous daylight of the Far North and the exceptionally heavy demands made upon German air units in that theater compelled the Luftwaffe commander to take measures to strengthen his weak organization. On his request the reserve squadron of the IV Dive Bomber Group, 1st Air Wing, was transferred from Christiansand, Norway, and temporarily assigned to the commander at Kirkenes, while the fighter organization in the Far North was increased in size from one squadron to a group by the addition of two squadrons from Norway.

The dive bomber group (Gruppe Blasig),* again minus a squadron, was transferred on 27 July to Rovaniemi, where it was to support the renewed advance of the XXXVI Corps and the Finnish III Corps. In the meantime the Russians had established new advance airfields in the Kandalaksha and Salla areas. Because of this, a squadron of escort fighters was assigned to the bomb group. This air support was a positive contribution to the advance of the XXXVI Corps from Kairala to Alakurti and of the Finnish III Corps in its drive on Loukhi.

During this time the aforementioned Soviet amphibious troops had become a dangerous threat to the northern flank of the XIX Mountain Corps, but Luftwaffe attacks against Soviet naval vessels in Motovski Bay were so successful that the recently landed Russian troops now found themselves virtually isolated and in a most precarious situation. Taking advantage of this fact, the XIX Mountain Corps launched a bold counter-attack and on 3 August completely crushed the Russian opposition on their northern flank. Remnants of these Soviet units attempting to escape by sea were continuously attacked by units of the Air Command Kirkenes. From then on German mountain troops (with air support) were able to control the only Soviet land route for the transport of military supplies in the northern sector of the Far North operational area. This compelled the Russians to ship their equipment and supplies by sea from Murmansk, where their transports were highly vulnerable to air attacks.

Unfavorable weather during the month of September prevented good exploitation of Luftwaffe forces in the Far North, especially along the coastal areas. Reconnaissance units were active insofar as conditions permitted. They soon discovered that the Soviet Air Force was

*Named after its commander, Capt. Arnulf Blasig.

already receiving considerable amounts of equipment (including aircraft) from the Western Allies. Occasionally fighter planes of Western manufacture were sighted by German flyers.[12]* A number of newer Russian fighters also began to appear, which confirmed German suspicions that the Soviet Union was rapidly modernizing its fighter organizations. However, despite the use of improved aircraft, Russian flyers were still unable to contend successfully with Luftwaffe pilots.

Rocky terrain prevented the establishment of German airfields, which placed Luftwaffe fighter units at a disadvantage when reports came in concerning Soviet attacks upon front line ground units. By the time German fighters were on the scene the Russian attacks had often been completed. Forward warning teams helped to correct this problem, but only the installation of radar in 1942 was really effective in this respect.

Bad weather fronts with considerable fog and rain usually traveled from west to east, allowing Soviet aircraft to take off from their fields while the Luftwaffe remained grounded and unable to intercept them. Conditions were even more unfavorable for German fighters operating in the central sector of the Far North in support of the XXXVI Corps and the Finnish III Corps. Here, the closest Luftwaffe airfield (Kemijarvi) was 60 miles behind the front. Until the Soviet air base at Alakurti was taken, German flyers were at a distinct disadvantage, while Russian airmen could operate from a number of advance bases close to the front lines.

Sometimes the only way to protect front line German troops was by the establishment of fighter patrols over the combat area, a tactic which was quickly recognized by the Russians, who then attacked only when no Luftwaffe fighters were in the air. With the seizure of the base at Alakurti by the XXXVI Corps, two squadrons of Luftwaffe fighters were immediately brought in to this advance base and positive steps were taken to expand its facilities for increased German air traffic. It soon became the main base of the Luftwaffe in central Finland. The acquisition of this field dramatically improved the position of the German Wehrmacht in the North. Soviet efforts to recapture it were easily beaten off by the Luftwaffe.

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*Because of Lend-lease and other Allied assistance, by the turn of 1942 the Soviet Union had four to five times as many fighters as the Luftwaffe. See Capt. Karl Otto Hoffmann, "Entstehung, Einsatz und Erfolg der Sowjet-Luftmacht," Luftwaffenring, Nr. 8 ("Origin, Operations and Results of the Soviet Air Power," Air Force Ring, No. 8), 8 August 1956. G/VI/2b, Karlsruhe Document Collection.

With an utter lack of understanding of operational possibilities and general conditions in the Arctic, the bomber group was transferred in September to Rovaniemi, where it carried out a few missions against the Murmansk rail line. At the end of the month it was transferred back to Petsamo (where one squadron had remained) for further operations. Before the group could undertake any missions, however, a heavy blizzard blanketed the area. In mid-October, with the airfield snowed in, personnel of the bomber group embarked by sea for Stavanger, where they were then sent to another theater of war. Their aircraft remained behind at Petsamo.

The onset of winter in late September also stopped all operations of the IV Dive Bomber Group, 1st Air Wing, at Kirkenes. This group was concentrated at Rovaniemi in early October, during a period of favorable weather. From this base it was able to operate with success on the Kandalaksha front, striking billets, troop positions, supply columns, and shelters. Attacks were also made against rail lines and facilities, especially those serving the port of Murmansk. The long approach flight from the base at Rovaniemi made it necessary for all dive bombers to carry auxiliary fuel tanks. As soon as the airfield at Alakurti was captured, however, this was no longer necessary. After a period of hard frost, with temperatures dropping at times to 58° below zero Fahrenheit, it was possible to construct an ice airfield on one of the lakes in the Finnish III Corps sector, where one of the dive bomber squadrons, operating in support of the corps, was more or less permanently based.

The closing two months of 1941 were characterized by a marked decrease in both German and Soviet air activity over the northern theater of operations. A withdrawal of German air units to Norway was also rendered impossible by bad weather conditions.

Cooperation with the Navy in Sea Warfare

Air Command Kirkenes had the full responsibility for the defense of northern Norwegian and Finnish coastal waters since the Navy was without combat units in these areas. Only in August were two German destroyers moved in to the Neiden Fjord near Kirkenes. Here they generally remained inactive since the Soviet Navy carried out few operations.

The mission of the German Navy was to protect supply shipments to the Wehrmacht and the Finnish forces via the northern coastal route.

Luftwaffe units of the naval group of Air Command North were responsible for performing reconnaissance tasks for such convoys and their supporting naval escorts. Air Commander Kirkenes was to supply fighters for the defense of naval and sea transport undertakings within the range of the Soviet air forces. Fortunately for the Luftwaffe the Soviet Air Force never made any serious threats against German convoys in this sector. Had it done so, the weak Luftwaffe fighter units from Kirkenes could never have prevailed. As things turned out, fighters based at Petsamo were sufficient to protect convoys passing Vardø Island bound for Petsamo or Kirkenes.

The greatest danger in this area came from the heavy batteries on the Rybachiy Peninsula, which the Soviets had carefully emplaced and protected. Even dive bombers were subjected to fire from these guns in the course of their attacks, but the Luftwaffe's action successfully prevented any ship sinkings by the concealed batteries.

A further task of Air Commander North was the maintenance of reconnaissance over sea areas east of a line from Spitzbergen to Barents Island to North Cape, and to attack any hostile naval craft observed.

At the end of July a British fleet succeeded in approaching the northern Norwegian coast during a time when the Rybachiy Peninsula was blanketed under a heavy cover of fog. Two British aircraft carriers* were spotted by German observers just as they emerged from a massive fog bank, but this report arrived simultaneously with the news of an attack by carrier aircraft against Kirkenes and Petsamo. Unforeseen circumstances, not the least important of which was the failure of the Russians to launch their diversionary air attack early enough, caused the British venture to fail. The belated Soviet attacks simply alerted German flying units so that they were prepared to meet the enemy attack. By coincidence a German dive bomber unit from Kirkenes was returning to base from a combat mission when it discovered the carriers and auxiliary vessels. Making a snap decision, the squadron leader joined the attack with his planes, strafing the enemy ships with machine guns. Luftwaffe fighters were already engaged in battle against the carrier-borne planes. In the course of the action 28 enemy aircraft were destroyed, 23 by German fighters and 5 more by naval and antiaircraft

*These were probably the Victorious and the Furious.

guns. Only one small coastal vessel was sunk by the British force. Nineteen prisoners were captured by the Wehrmacht.[13]

Although the British prisoners behaved in an exemplary manner under interrogation, their efforts to maintain military security were for naught, since one of them had neglected to remove documents concerning the attack and movie tickets for a theater in Reykjavik, Iceland, from his pockets. From these scraps of paper German intelligence officers were able to trace the origins of the raid.

Aerial mining of northern coastal waters produced very little results. Such missions were disliked by Luftwaffe aircrews, who could see practically no tangible evidence that such mining operations were effective. Nevertheless, the fact that Russian mine sweepers were continually and frantically covering the area was proof that the mining of coastal waters was at least disruptive to the normal course of Soviet transport activities.[14]

Cooperation with the Finnish Air Force

There was no real operational collaboration between the Luftwaffe and the Finnish Air Force, since their sectors of responsibility were hundreds of miles apart and their missions vastly different in character. Liaison officers were regularly exchanged, however, so that a free flow of information was assured between Finnish and German leaders in widely separated combat sectors. There were no causes for friction between the two powers in 1941, nor were there such later in the war.*

During the winter of 1941-42 the Finnish Air Force voluntarily placed the airfields at Kemi on the northern tip of the Gulf of Bothnia and at Pori on the western coast of Finland, north of the Aland Islands, at the disposal of German air units. Kemi was foreseen as a tactical bomber base and Pori as the end terminal of the German air supply route in Finland.

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*Editor's Note: It should be remembered that Finns and Germans fought side by side in 1918 for Finnish independence from Russia, and that the democracies failed to offer assistance to Finland during the Russo-Finnish War of 1939-1940. Germans and Finns thus had a common purpose: to defeat Russia.

Review of Operations in the Far North in 1941

Considering the strength of the Luftwaffe in this area, its operations were highly successful. Great efforts were made by all German personnel to accomplish their missions, despite material and personnel shortages. Yet, in the final analysis, the Luftwaffe failed to attain its objectives in the Far North.

The German High Command should have realized that Russia, as an ally of the Western Powers, would soon be forced to rely on assistance from that quarter, and that such assistance would be forthcoming upon request. It was also not too difficult to see the strategic importance of Arkhangelsk and Murmansk, especially the latter, which remains ice-free all year around.[15] A study conducted by the 8th (Military Science) Branch of the Luftwaffe General Staff showed clearly that more than half of Russia's overseas logistical support came through the ports of the North via the Atlantic route. The events of World War I had already shown the significance of Arkhangelsk and Murmansk to the Russian war economy. If this matter had been soberly examined, it would have been the logical thing to have sent all the forces necessary to close this gap in the North for the duration of the conflict. Had this been done the seizure of the Kola Peninsula and the Karelian area would probably have amounted to a mere mopping-up operation. Far fewer forces could have accomplished the ground objectives if the initial strategic points had been secured at the opening of the campaign.[16]*

The German Armed Forces had its own specific ideas about the allocation of forces and the selection of strategic objectives within the framework of the overall operation against the Soviet Union. Since Finland was treated as a secondary theater of operations from the beginning of the conflict, even the most gifted German and Finnish commanders could not have led their meager forces to a decisive victory. Far greater chances for success might have presented themselves if the Chief of the Joint Command Norway had not divided his forces into three widely separated combat units, but had concentrated upon a single specific strategic objective.

The Luftwaffe's strength was rapidly dissipated over the extensive area of the entire Finnish-Norwegian theater by being required to

*See Maps Nos. 1, 2, 3, and 11.

shift quickly from one place to another, extinguishing "fires" at crucial points on the front. In such a situation no decisive results could be expected. The initial phase of operations in Finland will therefore always be considered as a classical example of the narrowly confined continental concepts of the German Supreme Command, and as one of the significant lost opportunities, which, in its total effect, had much to do with bringing about the final failure of German arms.

Chapter 9

THE FOURTH AIR FLEET TO THE CRIMEA AND ROSTOV-ON-THE-DON

The Battle on the Shore of the Sea of Azov

By late August 1941 Army Group South had completely mopped up the Soviet forces west of the lower Dnepr River, with the exception of units in the strongly fortified naval port of Odessa, which had been invested on the land side by Rumanian forces. Since the Rumanian troops were not strong enough to take the port (German offers of help were at first declined--probably for political reasons), the Rumanian Chief of State, Marshal Ion Antonescu, on 24 September, requested German military assistance.[1]* Two divisions and very heavy artillery were immediately sent in, which was believed to be sufficient to assure the capture of Odessa.

On 26 September the great battle of encirclement east of Kiev came to an end. While the Sixth Army, the First Panzer Group, and elements of the Seventeenth Army of Army Group South were still engaged in the annihilation of Soviet units trapped to the east of Kiev, other components of the Seventeenth Army had advanced eastward and taken Krasnograd (by Army Group von Schwedler)/ and Poltava (by the LV Corps).

In continuing its push to the east, Army Group South had established bridgeheads across the lower Dnepr at Kherson, Berislav, and Dnepropetrovsk, each providing a favorable jump-off site for future operations. It intended to take the Crimea with the Eleventh Army, to

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*Editor's Note: Many Rumanians were unenthusiastic about the war with Russia, especially since by this time they had already recovered the territories which were wrested from them on 28 June 1940 by the Soviet Union. Marshal Antonescu, however, recognized that these gains would be short-lived if the Soviet state was able to threaten Rumania anew. He therefore urged all possible Rumanian assistance to Germany's campaign to defeat Russia.

/This group, organized within Army Group Center on 18 July 1941 was disbanded 18 October 1942. It was commanded by General Viktor von Schwedler. See Maps Nos. 7, 8, and 9.

capture the area around Kharkov with the Seventeenth Army, to form the defense of the extended northern flank of the army group by advancing north of Kharkov with the Sixth Army, to destroy the enemy east of Dnepropetrovsk, and then push forward toward the Donets Basin and Rostov-on-the-Don with the First Panzer Group.

The Fourth Air Fleet, directed to cooperate closely with Army Group South, ordered the IV Air Corps to support the Eleventh Army and to attack the Soviet Navy and its bases on the Black Sea, and, as a secondary mission, to support Rumanian forces in taking Odessa. The V Air Corps of the Fourth Air Fleet was ordered to give primary support to the First Panzer Group and, when necessary, to the Sixth and Seventeenth Armies. About mid-September, before the end of the battle of Kiev, the Eleventh Army* and Rumanian units had begun a new offensive toward the east, but just short of Melitopol they encountered stiff enemy resistance and strong counterattacks which compelled them to go over to the defensive.[2]

Strong Eleventh Army forces were turned south to open the way across the Perekop-Ishun isthmus to the Crimean Peninsula.† These troops received effective support from the IV Air Corps, whose powerful bomber and dive bomber forces attacked troop concentrations, vehicular columns, tanks, field fortifications, bunkers, and positions on the isthmus of Perekop, destroying 195 trucks and 9 tanks.[3]

On 24 September the First Panzer Group of Army Group South attacked toward the south, opened a small bridgehead at Dnepropetrovsk from the east, and destroyed three Soviet divisions at Novo-Moskovsk. The Italian Expeditionary Corps contributed toward this partial victory by advancing southeast from Kremenchug along the east bank of the Dnepr. After rolling up the Dnepr front as far as Zaporozhye, the First Panzer Group proceeded east and southeast and then turned south to

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*Because of the death of Generaloberst Eugen Ritter von Schobert on 12 December 1941, the command of the Eleventh Army was entrusted on 17 September to General der Infanterie Erich von Manstein (Field Marshal 1 July 1942).

†Only two avenues were open to Army Group South for an advance into the Crimea. Since the eastern route, west of Genichesk, was far too narrow for operations, and the Sivash Sea was impassable for infantry, only the isthmus of Perekop could be considered. See Generalfeldmarschall Erich von Manstein, Verlorene Siege (Lost Victories), Bonn: Athenaeum Verlag, 1955, pp. 215-216. See also Maps Nos. 8 and 13.

relieve the Eleventh Army which was fighting in the Melitopol area. The armored group penetrated deeply into the rear of two Soviet armies, while the Eleventh Army renewed its frontal assault.

The High Command of the Luftwaffe reported on 5 October that "the enemy has begun to withdraw from the battle sector Melitopol-Balki in order to evade the threatening encirclement" and that German and Rumanian forces were continuing to pursue him to the Radionovka-Akimovka line, about nine miles west of the Melitopol-Kronsfeld-Balki area.[4] The SS Panzer Division "Adolf Hitler"* broke through Melitopol from the north and advanced to the Berdyansk (now Osipenko) area, where it linked up with armored units of the First Panzer Group which had driven forward to the Sea of Azov. The bulk of the Russian forces withdrawing before the Eleventh Army were thus encircled and destroyed in the "Battle at the Sea of Azov." More than 100,000 prisoners and hundreds of tanks and guns were captured. Soviet troops which had withdrawn in time to escape encirclement were pursued eastward by armored and motorized units of the First Panzer Army./ In a rapid forward drive, armored units reached Mariupol (now Zhdanov), which was taken by surprise. The advance continued, proceeding swiftly along the coast by way of Taganrog, which was captured on 2 October, to a position about nine miles west of Rostov-on-the-Don. The bulk of the First Panzer Army, together with the Italian corps, captured Stalino on 20 October and occupied thereby the center of the industrial Donets Basin.

The initial, extremely heavy Soviet pressure against the Eleventh Army was alleviated by attacks of the V Air Corps (overlapping those of the IV Air Corps) upon enemy columns around Melitopol and by V Air Corps support of the swift German armored advance from Zaporozhye toward Berdyansk. At the same time, the threats to the extended eastern flank of the First Panzer Army were removed by air attacks launched against Soviet columns and troop concentrations in the Chaplino-Pavlograd-

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*1st SS Panzer Division "Leibstandarte Adolph Hitler" was formed from Hitler's bodyguard regiment, the Leibstandarte, and was composed of selected personnel, outfitted with the best equipment available.

/The four armored groups on the Eastern Front were redesignated as "Panzer Armies" on 5 October 1941, each retaining its original number. From 28 July to 3 August 1941, the Second Panzer Group was known as Panzer Group Guderian. In Combat Zone Center, from 3 July to 15 August 1941, the Fourth Army and Second and Third Panzer Groups made up the Fourth Panzer Army. See Map No. 9.

Postyschevo (apparently Krasnoarmeyskoye) area and against rail movements over the line linking Sinelnikovo, Krasnoarmeyskoye, and Stalino and that which linked Pavlograd, Krasnoarmeyskoye, and Yasinovataya. Air attacks on the railroads leading north from Mariupol, Taganrog, and Rostov-on-the-Don further delayed the transfer of Soviet troops and materiel.

By October autumn rains had become commonplace throughout most of central and southern Russia, turning solid fields into sticky morasses. The effects were soon felt by German divisions all along the front. General von Tippelskirch later recalled that upon advancing to Taganrog the First Panzer Army had encountered a period of bad weather in which muddy terrain "almost completely paralyzed the supply system." Tanks, sinking deeply into the mire, could proceed only at a "snail's pace."[5] Temporary improvements in weather conditions were of little help in accelerating troop movements, for as the High Command of the Air Force reported on 16 October, despite an improvement in weather, "roads and streets are still covered with deep, sticky mud," making movements of motorized units and logistical traffic possible only with great losses from numerous vehicular breakdowns.[6]*

V Air Corps Support of the Sixth and Seventeenth Armies

North of the First Panzer Army, the Seventeenth Army, on 2 October, had advanced toward the Severnyy Donets River south of Kharkov, while the Sixth Army commenced its drive on Kharkov and Kursk. At first, both armies moved ahead well, but Russian resistance increased steadily. Under Marshal Timoshenko, who relieved Marshal Budënny, the Russians defended their positions with bitter tenacity. As a result, the Seventeenth and Sixth Armies, in a struggle lasting for weeks, were able to gain ground only slowly. Moreover, bad weather conditions prevailed in this battle sector. The difficulties caused by the completely saturated ground assumed massive proportions and required the utmost exertion from the already exhausted German troops. Often troops and supplies could be advanced only by the use of the so-called Panje wagons.†

*See Figure 34.

†Panje wagons were small, four-wheeled, wooden wagons, with the box of each wagon designed very much like an old-style, wooden coffin. Drawn by two horses or Steppe ponies (Panje horses), they were used in large numbers by the indigenous peasantry of the Soviet Union. See Figure 35.

Figure 34
Wehrmacht vehicle mired down during
the muddy season in Russia, 1941

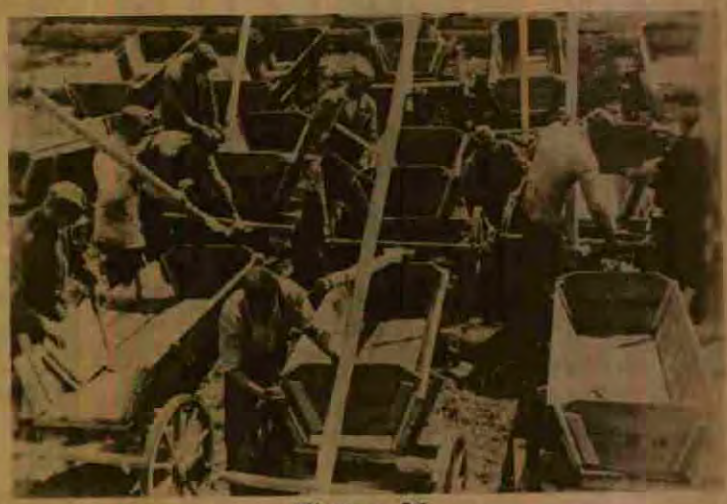

Figure 35
German workmen building Panje
wagons for transport work

Even the forward detachments had to be served by such vehicles. The noteworthy fact here was that the infantry divisions which were provisionally equipped with Panje wagons advanced more quickly and easily than the motorized troops.

The bomber forces of the V Air Corps continued with excellent results the interdiction of Soviet rail movements around and to the east of Kharkov, which had been started during the encirclement battle of Kiev. Waves of Luftwaffe bombers attacked the enemy rail transport system, which was carrying supplies of all kinds and evacuating industrial goods, machines, and even food from Kharkov and the Donets Basin to the north and east. Severe losses were inflicted upon Soviet locomotives and freight cars around Kharkov. When the weather was suitable for hit-and-run raids, Luftwaffe daylight attacks were carried out deep in the Soviet rear areas as far as the Millerovo-Liski-Voronezh line. Moonlight nights were also utilized for attacks on Russian railroads. These missions were directed against the rail lines connecting Kharkov and Bogodukhov, Kharkov and Krasnyy Liman, Kupyansk and Lisichansk, Lozovaya and Slavyansk, Lisichansk and Valuyki, Millerovo and Liski, Kharkov and Kursk, Kharkov and Kurilovka, Kurilovka and Belgorod, Kursk and Kastornoye, and Kastornoye and Valuyki. The main points of effort were then shifted more and more to the lines connecting Kharkov and Belgorod, Kurilovka and Valuyki, Valuyki and Novyy Oskol, Valuyki and Liski, and Millerovo and Liski. From 23 September to 12 October, 95 trains were destroyed, including 4 ammunition and 4 fuel trains; 288 trains were heavily damaged; 12 locomotives were destroyed and 10 badly damaged. Rail traffic was cut in 64 places.

During this period of rail interdiction far in the rear of Soviet lines, the other tasks of the Luftwaffe were mainly neglected. However, the interdiction program strongly supported the German ground forces, for these successful air attacks considerably delayed, and occasionally prevented, the enemy from carrying out a well regulated logistical movement. The certain and increasing loss of special replacement parts, repair materials, and essential special equipment had a decided impact upon Soviet striking power. The great results achieved by the Luftwaffe lead to the assumption that in many instances the Soviet command was unable to carry out its plans and frequently had to give up its attacks or regroupings, planned on a large scale, after recognition of the effects of German air attacks.

The advance of the Sixth and Seventeenth Armies had been complicated by the fact that the very well equipped and supplied airfields

around Kharkov and Bogodukhov--favorably situated near the front--were available to the Soviet air force, permitting increasing attacks which often severely interfered with the maneuverability of German ground forces. German air reconnaissance of these fields showed continuously heavy occupancy. The bases had often before been the targets of German night attacks and daylight nuisance raids. Now, from 25 to 27 September, bomber units of the V Air Corps, under fighter cover, were employed anew in particularly effective attacks against these airfields, destroying at least 43 aircraft on the ground and causing a noticeable reduction in Soviet air activity, especially by the bomber units. German fighter forces protected the air space above the Seventeenth Army and carried out numerous attacks against the airfields at Kharkov in order to systematically attain air superiority over that city, where, by 28 September, 58 Soviet aircraft had been shot down.

Since the V Air Corps had given up almost all of its fighter units to the Second Air Fleet in the center of the front, only the III Group of the 52nd Fighter Wing was still at the disposal of the corps. Unfortunately, due to maintenance difficulties and the III Group's long, uninterrupted commitment in the East, the daily operational strength of the unit sank to an average of 10 to 15 aircraft, and sometimes even less. With this limited strength, there was no possibility of quickly gaining even local air superiority. In addition, difficulties in building up supply stocks at the German fighter base at Poltava temporarily compelled a further limitation of operations. A certain reserve of fighters also had to be kept back to protect the Poltava airfield from the very numerous Soviet attacks. On 22 October the III Group of the 52nd Fighter Wing was transferred to the IV Air Corps for employment in the Crimea.

Bomber units of the V Air Corps, in support of the Seventeenth Army, attacked Soviet forces lodged in villages, armor concentrations, and columns moving on the roads west of Kharkov, particularly the Kharkov-Valki-Poltava road. Successful attacks on numerous armored trains also brought appreciable relief to German ground forces.

Attacks on the command, traffic, and routing center of Kharkov acquired special significance. In a series of nightly nuisance and hit-and-run attacks, Luftwaffe units effectively bombed the Oshova Station, the southern railroad station, and, in particular, the highways leading into Kharkov from the west. Fires in the western part of the city and in the railroad depot area indicated to German reconnaissance the success of the attacks. Between 2 and 9 October the tank factory at Kramatorsk--according to reports of intelligence agents (V-Meldungen) the most important of its kind--was repeatedly and successfully attacked, as was

the aircraft plant Voronezh IV on 20 October.

About 20 October, although severely hampered by the enemy and the weather, the Seventeenth Army and, north of it, the Sixth Army reached the railroad line extending from Lozovaya through the western outskirts of Kharkov to Belgorod. Prior to the occupation of Kharkov, V Air Corps bomber units repeatedly hit Soviet troops and defense positions in the outskirts of the city and on the east bank of the Lopan River with good effect. At the special request of the Sixth Army, the northeastern part of Kharkov was spared from attack, except for those launched by the ground forces. On 23 October, immediately following a successful heavy bombing attack, advance units of the 57th Infantry Division pressed into the city. On the next day Kharkov was firmly in German hands. While the Sixth Army captured Kursk and continued its advance toward the Don River, the Seventeenth Army pressed south of Kharkov into the industrial Donets Basin. From the beginning of their offensives, both armies had been continually supported by most of the flying units of the V Air Corps, directly by attacks against troop movements and concentrations on the roads and communities close behind the enemy front, and indirectly by attacks against the Soviet rail net in the Severnyy Donets River bend and between the Severnyy Donets and the Don.

Very soon after the end of the fighting around Kiev, air reconnaissance had observed a noticeable increase of heavy rail movements from the Rostov-on-the-Don area to the Caucasus, toward Voronezh and Stalingrad--generally in both directions. In particular, the significance of the line running from Baku to Rostov to Voronezh became increasingly evident. The transportation of troops and war materiel--the lattter apparently from Iran--was definitely confirmed as was the "pipeline" of fuel trains. In clear appreciation of the tremendous importance of these movements, the Luftwaffe attacked this rail line as quickly as the operational and supply situation permitted. It also brought under attack the lines from Tikhoretsk to Stalingrad and from Rostov-on-the-Don to Salsk, as well as (occasionally) that from Novorossiysk to Kropotkin and the approach to Krasnodar.

Inadequate supply of the airfield at Taganrog often prevented its use by bomber forces; its use would have increased the bombers' range into the Caucasus region. The mostly unknown variations in weather characteristics over such great distances and the strong enemy fighter defense along the main route also made operations very difficult. Nevertheless, considerable forces succeeded in flying as far as Mineralnyye Vody, and over a period of several weeks destroyed a large number of

trains. The High Command of the Luftwaffe mentioned these attacks in a report of 24 October, stating that in the southern section of the Eastern Front, German fighters, while escorting bombers, flying reconnaissance, and carrying out fighter sweeps, shot 40 Soviet planes out of the sky on 23 October. Most of the Luftwaffe bombers supported the ground forces by attacking "field and artillery positions and communities occupied [by Russian troops] in the area around Ishun" and columns of Soviet trucks withdrawing around Kharkov and Belgorod. Lighter bomber forces attacked various targets on the rail lines connecting Rostov-on-the-Don, Armavir, and Mineralnyye Vody, Krasnodar and Armavir, and Kharkov and Kupyansk, destroying seven trains, one of which was a fuel train, and damaging many others. On the Crimean east coast, off Feodosiya, two bombers sank a medium-sized merchantman.* Lastly, some 25,000 leaflets were dropped over the Ishun area.[7]

The conveyance of troops and materiel from Caucasia and, especially, Transcaucasia to the areas of Rostov-Stalingrad and Voronezh-Moscow and the evacuation of materiel and industrial equipment from the Donets Basin-Rostov sector were severely interrupted by these railway interdictions. In the course of the attacks, bombers of the V Air Corps (Fourth Air Fleet) alone destroyed 79 trains and damaged 148 others by direct hits.

Conquest of the Crimea

The objective of the Crimean operation was already clearly defined in the OKW directive of 21 August 1941. The Crimea was to be seized to safeguard the vital Rumanian oil region. Mobile forces and other units were to proceed rapidly across the Dnepr to the peninsula before Soviet reinforcements could arrive by land or sea.[8/]

The Crimean Peninsula was nearly separated from the mainland by the Sivash Sea, a salt marsh or mud flat, which was so shallow that

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*Editor's Note: These vessels traveled by night whenever possible to avoid German air attacks.

/Editor's Note: It was the Soviet control of the waters of the Black Sea that posed the greatest threat to the Rumanian oil region. As long as this control remained, the Crimea was always a likely place for flanking operations against German units in the South, and served as an air base for attacks against Rumania.

it could not be crossed in assault boats. The narrow isthmus west of Genichesk provided space for only one road and railroad embankment, with numerous bridges. Thus, only the isthmus of Perekop, slightly more than four miles in width, with virtually no cover, heavily mined, traversed by the 50-foot-deep "Tatar Ditch," and with strong field fortifications, could be utilized for the attack. Farther to the southeast, the Ishun defile (which also had strong field defenses), with its salt lakes, then had to be penetrated.* The fighting for the narrow approach to the Crimean Peninsula, the isthmus of Perekop and Ishun, was certain to be exceptionally tough and costly, but there was no other possible way to attack.

Meanwhile, to the west, Rumanian troops, supported by German units, entered Odessa on 16 October and occupied the naval base which the Russians had systematically demolished and evacuated. Evacuation movements of Soviet forces within the harbor of Odessa, as well as at sea (hoping to reach the Crimea or points farther to the east), were attacked by bombers of the IV Air Corps (Fourth Air Fleet) with good results.

Units of the IV Air Corps assisted the southern wing of Army Group South (Eleventh Army), which on 11 October, immediately after the termination of the battle on the shore of the Sea of Azov, turned its full weight against the Crimea. By 19 October Eleventh Army forces had entered the peninsula and had broken through the "stubbornly defended" Soviet positions. The following day the Luftwaffe command commented that "north of Ishun our troops are fighting in the breaches of enemy fortifications which are organized in depth." In defense, the Soviets counterattacked repeatedly at points of German penetration, trying desperately to regain their former positions.[9]

The Russians employed their air forces--actually for the first time in a point of main effort--over the narrow, completely level, steppe-like isthmus. The treeless and bushless terrain offered no cover for the attacking troops of the Eleventh Army against the continuous attacks by very strong Soviet bomber and ground-attack units. General von Manstein, commanding the Eleventh Army, stated later that the Soviet Air Force dominated the sky, and with its bombers and fighters attacked every target sighted. German infantrymen and artillerymen at the front, and even vehicles and horses in the rear, had to be protected by trenches or foxholes.

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*See footnote 4, p. 203.

In order to meet these attacks more effectively, the employment of German fighters was concentrated under the leadership of Col. Werner Moelders (who, for his 100th aerial victory, had been the first officer of the German armed forces to be awarded the Knight's Cross of the Iron Cross with Oak Leaf, Swords, and Diamonds) while bomber units of the IV Air Corps increasingly attacked enemy airfields in the Crimea, in order to strike the enemy at his bases and thus lessen his effectiveness. Concurrently, dive bombers struck the strong ground positions on the isthmus. "Only when Moelders and his fighter wing were brought to the army"* toward the end of the fighting were the Soviet planes swept from the sky by day. But the enemy still continued its attacks at night.[10]

The size and the strength of Soviet air operations on the Eastern Front at this time were greater than at any time since the beginning of the war. During the last half of October, for example, situation reports of the Luftwaffe Intelligence Branch showed that Soviet air strength on the southern front averaged around 130 bombers and 200 fighters. The bulk of these forces was at any given time employed around Ishun.[11] Low-level attacks by Soviet ground-attack planes, and medium-level attacks by Soviet conventional bombers, were carried out around the clock against German infantry which was wearily fighting its way through the numerous, fortified defense lines. At night Soviet air attacks succeeded in penetrating far behind the German front lines.[12] Soviet troops, supported by very heavy artillery fire--60 batteries had been identified by 24 October--carried out without interruption strong counterattacks, partly by hand-to-hand fighting, which were repulsed with very severe losses to both sides.[13] German dive bomber and bomber units hammered incessantly at the enemy. Field positions, concentrations of artillery, bunkers, pockets of resistance, troop concentrations and assembly areas lay under the daily hail of bombs from the IV Air Corps, whose strength on 1 November consisted of 6 bomber, 3 dive bomber, and 4 fighter groups.[14] Despite heavy opposition, bolstered by bad weather and roads and the flooded Chatyrlyk River (south of captured Ishun), the German gains were considerable.

Achieving notable success were the fighters under the direction of Colonel Moelders, which were committed chiefly in fighter sweeps over the battlefield.[15/] On 27 October, the High Command of the Luftwaffe,

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*Colonel Moelders became fighter units commander in the Crimea; it appears that his 51st Fighter Wing was never transferred to that area, but remained in the general sector of Army Group Center.

/The 77th Fighter Wing under Maj. Gotthardt Handrick scored its 800th aerial victory on 20 October 1941.

reporting on the assault on the Crimea, stated that on the morning of 26 October German ground forces had renewed their attack on both sides of the Ishun-Simferopol road, penetrating the strongly fortified positions and throwing back the stubborn enemy. The Russians had concentrated most of their strength--eight infantry and four cavalry divisions--against the German center and western flank, but they suffered severe losses when their counterattacks were repulsed. Luftwaffe bomber and dive bomber units, supporting mainly the ground forces, destroyed many guns and vehicles in attacks upon enemy defensive and battery positions, troop concentrations, and moving columns south of the Ishun area.[16]

After ten days of exceptionally hard fighting, the breakthrough down the isthmus was achieved (28 October), opening the way to the Crimea. Units of the IV Air Corps then harried the retreating Russian forces. The Soviet command was no longer able to establish organized resistance to delay the rapidly pursuing troops of the German Eleventh Army. On 1 November Simferopol was taken and on the 16th, Kerch. Except for the fortress of Sevastopol, which was besieged on the land side, the entire peninsula was now under German control and cleared of Russian forces. Thus, the Soviet air base which had been a potential threat to the Rumanian oil region was eliminated.

Following the seizure of the Crimea, continuous air reconnaissance over the Black Sea was particularly important. Considering that in 1941 the Soviets had command of that sea, Russian commando raids or even larger enemy landings from Sevastopol, the eastern coasts of the Black Sea, and the Sea of Azov had to be reckoned with at all times.* However, with the low operational strength of the Luftwaffe reconnaissance forces in the area and with the prevailing adverse weather conditions of rain, fog, and snow, the necessary round-the-clock surveillance was not possible.

Yet during the mopping-up operations, the enemy supply system was attacked not only by the IV Air Corps but by the V Air Corps in overlapping strikes on the ports of Sevastopol, Kerch, Anapa, Novorossiysk, and others. Shipping in the Sea of Azov and the Black Sea also were continuously attacked. Besides the destruction of supplies, the objective was to delay the embarkation and debarkation of enemy troops, which had been identified in these harbors by aerial reconnaissance, and to destroy the harbor installations. All of these attacks were very successful.

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*See footnote *f*, p. 210.

Besides heavy damage to the harbor facilities at Yeysk, Novorossiysk, Primorsko-Akhtarsk, Rostov-on-the-Don, and particularly at Kerch, units of the V Air Corps alone, by concentrated unit attacks and ceaseless individual nuisance raids, definitely sank 16 ships totaling about 18,000 gross register tons, and set afire and otherwise damaged 18 other vessels comprising at least 15,000 gross register tons. In December, bombers of the IV Air Corps attacked oil refineries and storage sheds at Tuapse.*

At this point a black day for the Luftwaffe must be mentioned. At the end of the difficult air operations over the Crimean Peninsula, Colonel Moelders flew to Germany to attend the state funeral for Generaloberst Ernst Udet, one of the most famous of German fighter pilots of World War I and a leading figure in the rebirth of the Luftwaffe in the 1920's and 1930's. Coming in in a fog on 22 November 1941, the He-111 aircraft in which Moelders was a passenger lost its second engine and crashed, just short of the airfield at Breslau-Gandau.[17] Werner Moelders, the bravest and most successful German fighter pilot in the Spanish Civil War and (at the time of his death) in World War II, was killed. The death of this youthfully fresh, but characteristically mature, Inspector of Fighter Pilots was an irreplaceable loss to the Luftwaffe.†

On 17 December the Eleventh Army opened its attack on Sevastopol, supported by a specially organized close support unit of the Fourth Air Fleet. After favorable early progress the Eleventh met stiffening resistance by the fortress garrison so that the enveloping ring could be contracted only very slowly against continuing counterattacks from the fortress area.

Strong Russian forces landed on 26 December on both sides of Kerch, and a few days later at Feodosiya. General Halder noted the effectiveness of these Soviet amphibious operations in his diary entry of 26 December, pointing out that the situation around Kerch was critical within 24 hours after the Russian landings. On 28 December he declared that the Kerch problem was not yet cleared up and that Soviet reinforcements were being brought in. Two days later he wrote: "Again a difficult

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*See Figure 36.

†General der Flieger Helmuth Wilberg, a World War I flyer, considered at one time to have been the "natural commander" of the Luftwaffe died in an air crash on 20 November 1941. Chief of Special Staff "W," which directed the German expeditionary force in Spain, 1936-1939, and holder of numerous high staff positions, Wilberg was retired 31 March 1938. Thus three of Germany's best known flyers died in the same month and year.

Figure 36
Oil refineries and installations on the Black Sea Coast burning after German air attacks, 1941

day. In the Crimea the enemy landing at Feodosiya has created a formidable tactical situation. Nevertheless, the army group [South] has decided to continue the attack on Sevastopol." On New Year's Eve, Halder reported another day beset with serious problems. At Sevastopol the attacks of the 22nd German Infantry Division had been unsuccessful and had to be suspended in order to make forces available for Feodosiya. "The enemy [has] reinforced himself and expanded." New Year's Day was likewise unpromising for the German forces in the Crimea. In Halder's words, the situation was "tense and difficult to clear up without new forces."

On 1 January 1942 the Luftwaffe temporarily halted the enemy, but three days later the situation was again critical. The Soviets had sent small forces ashore at Yevpatoriya and were reinforcing Feodosiya. These landing operations, supported by strong naval and air units, took the German defenders completely by surprise, for their naval and reconnaissance had noted neither the preparations for the operation--assembly of shipping and loading of troops--nor the approach of the Russian forces by sea from Sevastopol and Novorossiysk. Despite bad weather, all units of the Fourth Air Fleet were committed against the enemy ashore, in order to support the weak German ground forces in their resistance and to destroy the enemy in his bridgehead. While the Soviet force at Yevpatoriya could soon be destroyed (at least in the beginning Halder believed this landing to be merely a local tactical operation), the landings at Kerch and Feodosiya led to the loss of the entire Kerch Peninsula. On 15 January Halder wrote: "On the southern front the attack has begun on Feodosiya. Good initial success. . . ." On 24 January, however, he announced that the attack on the Crimea had been suspended.[18]

From Halder's remarks it is clearly evident that the Soviet amphibious operations were highly effective. Although at first believed to be only tactical successes, the landings soon had serious strategic consequences for the German Army:

(1) The attack upon Sevastopol, which had just commenced, had to be postponed, but considerable German enveloping forces continued to be tied down. The capture of Sevastopol was delayed until late in 1942.

(2) Strong elements of the Eleventh Army had to be diverted for defense against the landed enemy forces at Feodosiya and Kerch.

(3) In difficult and protracted fighting, the Eleventh Army had to restore the situation in the Crimea and again capture the Kerch Peninsula, with a corresponding loss of time.

The effect upon Luftwaffe operations was also serious:

(1) The IV Air Corps of the Fourth Air Fleet remained confined to constant direct and indirect support of the Eleventh Army.

(2) The staff and elements of the V Air Corps had been transferred from the Fourth Air Fleet area to Brussels late in November, with the intention of organizing a mine-laying air corps to be used against England. However, half of the staff had to be returned to the combat area of the Fourth Air Fleet as Special Staff Crimea (Sonderstab Krim), under General der Flieger Robert Ritter von Greim, and the intended organization of a mine-laying air corps was discontinued.*

The Setback at Rostov-on-the-Don

The attack of the First Panzer Army on Rostov-on-the-Don had been scheduled for 3 November 1941. With a strong left wing it was to proceed in the general direction of Shakhty, envelop the extended flank of the Soviet front before Rostov and destroy the enemy forces there, take possession of the city, and establish bridgeheads across the Don River. The V Air Corps was to support this operation. The tactical operations staff of the corps was transferred to Mariupol (now Zhdanov) where, in closest collaboration with the operations staff of the First Panzer Army, also at Mariupol, it would carry out the employment of the air units. Delayed by bad ground conditions and fuel shortages, the Panzer attack did not begin until 5 November, but at first it won a good area of ground. Only the left wing of the First Panzer Army (XXXXIX Mountain Corps) was delayed on the Nigishin River/ and southwest of Dyakovo by the bitterly fighting Russians. Vigorous action by the close support forces of the V Air Corps at Dyakovo, the key point in the Soviet defense, enabled the 1st Mountain Division to capture the town. Influenced by the air attacks on Dyakovo and by the accompanying waves of attacks on the roads leading east from there, the enemy hastily withdrew, thereby eliminating the

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*The other half of the V Air Corps staff, under the corps chief of staff, was transferred to Combat Zone Center (Smolensk) in order to prepare for assuming conduct of the fighting in the central sector of the front as the Staff, Luftwaffe Command East (1 April 1942). The VIII Air Corps was released and in May 1942 transferred to Combat Zone South (Crimea). See Map No. 13.

/Since no English or Russian version could be determined for this river, the spelling indicated in the German manuscript has been retained.

threat to the flanks of the armored units south of Rovenki, which were then pressing southward.

On 6 November a pouring rain set in which made the roads bottomless and forced the First Panzer Army to temporarily suspend the attack. A few days later a heavy frost further crippled the movements of the motorized units. Vehicles and tanks froze in the mud into which they had sunk and frequently had to be freed with pickaxes. The lack of heating equipment* had disagreeable effects on the flying units although they endeavored by every means possible to carry out flying operations. At 5° Fahreneheit an attempt was even made to preheat the engines with hot-air boxes improvised from the medical service equipment.

Long-range air reconnaissance revealed that Russian traffic on the rail lines north of Rostov-on-the-Don, particularly those leading east from Valuyki, had increased considerably. For the first time, trains consisting entirely of locomotives (40 to 60 in a group) were observed. Bombers of the V Air Corps flew continuous attacks against these trains, so that from 4 to 20 November they destroyed 12 trains and 51 locomotives and damaged 161 trains and 32 locomotives.

German fighters in 578 sorties shot down 65 Russian planes in front of the First Panzer Army. But as a result of the cold, German fighters on alert-readiness (Alarmrotte)/ at the very important advance base at Taganrog were frequently unable to take off during the numerous enemy air attacks. Similarly, antiaircraft artillery guns were often unable to fire because of the lack of nonfreezing grease. On 12 November the 54th Bomber Wing and the 55th Bomber Wing (less one group) were withdrawn from action and transferred to Germany. Thereafter, the bomber forces at the disposal of the V Air Corps consisted of a single group of the 55th Bomber Wing with an average operational strength of 6 to 9 aircraft.

The extremely strained supply situation endangered the overall employment of aircraft in the further course of operations. Derailment

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*Supplies could not be brought up over the sticky and bottomless roads and paths, nor were the railroads fully operational. Every item of supply for the German Army and Luftwaffe had to be flown to the front. See Figures 37 and 38.

/Alert-readiness (Alarmrotte) units normally consisted of two aircraft and flying personnel ready to take off within a few minutes. In fighter units they were usually already in their planes waiting for an alarm.

Figure 37
German airfield in Russia
during muddy period, 1941

Figure 38
Provisional warming ovens for German
aircraft engines in Russia, 1941

of trains through sabotage considerably delayed the arrival of fuel, and frequent periods of bad weather prevented air supply of units of the Close Support Air Commander. These organizations had only flying personnel and equipment and advance technical personnel at their disposal. Trucks of all kinds, including some from Army service installations, antiaircraft artillery batteries, and Luftwaffe signal units, were borrowed in order to make the most essential vehicles at the airfields available to the Close Support Air Commander, and thus available for operations.

Moreover, winter clothing, rations, motor fuel, and other additional supplies required by units of the Close Support Air Commander had to be brought in by air. The only reason that the fighter and dive bomber units of the Close Support Air Commander were out of action through lack of fuel was because frequent bad weather severely limited operations.

Generalmajor von Waldau, Chief of the Operations Staff of the High Command of the Luftwaffe, remarked in his diary on 21 October, in regard to the supply situation and the influence of weather upon the armies, that at Rostov-on-the-Don "good progress [is] hindered only by fuel and weather conditions."[19] On 15 November he observed that at Rostov there was no progress, sometimes for reasons of supply, sometimes because of weather conditions.[20] That month General Halder commented that both the southern and central sections of the front were "under the influence of wretched weather."[21]

On 17 November the First Panzer Army, with a strong right wing (II Army Corps), renewed the attack on Rostov-on-the-Don. A thrust along the Tuzlov River rolled up the strong Soviet position, and the capture of the Tuzlov bridges enabled the 14th Panzer Division and the 60th Infantry Division (Motorized), which meanwhile had approached the scene, to push toward Rostov. Despite bitter enemy resistance the armored units continued the drive toward the south, and on 19 November stood between three and six miles from Rostov. Strong Soviet forces, comprised of some 10 divisions and 2 armored brigades, attacked the covering party of the First Panzer Army from the northeast, on the road between Nakhichevan and Rovenki and the XXXIX Mountain Corps, in an effort to relieve the troops defending the city. In spite of the extremely stubborn defense by the covering force of the SS "Viking" Division,* the Soviets succeeded in breaking through at several points.

*See p. 56.

In general, however, the Russian attacks were beaten off, and the situation again restored, but only after fairly heavy German losses.

By 20 November the situation on the east flank of the First Panzer Army became so threatening that air support was urgently requested. The Fourth Air Fleet, therefore, assigned at first a group of the 27th Bomber Wing, and shortly thereafter the entire wing, to the V Air Corps for employment against the enemy forces on the east flank.

Because of the weather during the period 17 to 20 November the Close Support Air Commander was unable to intervene successfully, apart from providing scanty fighter cover. During the crisis on the First Panzer Army's eastern flank, however, the Close Support Air Commander--despite a 500-foot ceiling and a light snowfall--responded to the order of the V Air Corps by immediately sending fighters to attack in that area, while Ju-87 units recklessly struck heavily-occupied villages in front of the withdrawing security elements of the SS "Viking" Division. Bombers attacked advancing Russian troops, their billeting centers, rail traffic, and detraining areas deep in the rear of Soviet forces facing the First Panzer Army.

On 20 November von Kleist's First Panzer Army, which had driven past Rostov on the north, forced its way into the city from the east. The next day Rostov-on-the-Don was in German hands. Because of the widespread publicity given to the capture of this important city, Kleist saw the value of holding it for reasons of morale and prestige. In the days that followed, Russian forces, which had probably been brought up in haste from the Caucasus, launched powerful counterattacks. Approximately 14 fresh divisions, with strong armored and air support, ruthlessly and relentlessly attacked the right flank of the First Panzer Army, advancing, in part, over the frozen delta of the Don River. On the 28th the Soviets retook Rostov.[22]

During this period of crisis for Army Group South, a serious conflict arose between Hitler and the commander in chief of the army group, Field Marshal Gerd von Rundstedt. Concerning this affair, Halder wrote on 30 November that the First Panzer Army needed to retire still farther but that Hitler had forbidden its withdrawal to the line running from Taganrog to Mtschus,* along the Mius River, and to the mouth of the Bachmutka River (where it joins the Severnyy Donets). When von Rundstedt replied that Hitler's order was "impracticable" Hitler

*Editor's Note: The spelling indicated in the German manuscript.

relieved him of his command and appointed Field Marshal von Reichenau to carry out his [Hitler's] orders.[23] Thus, von Reichenau became the new Commander in Chief of Army Group South. In his diary entry for 1 December, Halder described the outcome of this change and noted that in a discussion held that day in regard to the situation he [Halder] had asked Jodl (who was present), as Chief of the OKW Operations Staff, to inform Hitler that "to expose troops to a tactical defeat in front of the Mius position is nonsense." By mid-afternoon enemy motorized forces had broken through the SS "Adolf Hitler" Division's intermediate position in front of the Mius River, and von Reichenau requested Hitler's permission to fall back that night to the Mius position. The Fuehrer's permission was granted at once.* Halder commented that they were thus at the point where they could have been the evening before. "Strength and time have been sacrificed and von Rundstedt lost."[24]

North of the First Panzer Army strong Soviet counterattacks compelled the Sixth and Seventeenth Armies to draw back behind the Severnyy Donets. Still near its easternmost point of advance was the extreme left wing of Army Group South (left wing of the Sixth Army), holding positions southeast of Kursk, where it kept contact with the Second Army of Army Group Center.

The withdrawals of the armies, especially of the First Panzer Army, were supported by the V Air Corps, with additional assistance by units of the IV Air Corps. Army Group South concluded that the ceaseless and audacious attacks by units of the Fourth Air Fleet had thwarted the primary Soviet tactical objective, the breakthrough toward Taganrog, and denied them their secondary objective, the isolation of the Rostov salient and the destruction of the southern wing of the First Panzer Army, and that the orderly withdrawal of German ground forces was achieved only by the severe and continuous air attacks against the Soviet offensives. Prisoners and deserters reported that the German air attacks had inflicted tremendous personnel and materiel losses upon the Soviet assailant and that the force of the Russian counterattacks had been considerably diminished, if not broken.

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*Editor's Note: Von Rundstedt, an officer of the "old school," took few pains to hide his contempt for Hitler, whom he dubbed "the Bohemian Corporal." Von Reichenau, however, was one of Germany's youngest field marshals, and one who at the time mentioned enjoyed Hitler's confidence.

In concluding the description of this part of the eastern campaign, it can be stated that Army Group South failed to carry out simultaneously its tasks of capturing the Crimea, occupying the Donets Basin, and reaching the Caucasus oil region. The reasons for this failure were, first, that the forces of Army Group South were too weak for such widespread objectives, and, secondly, that the weather extraordinarily impaired and hampered the advance, especially of the mobile units. The forwarding of supplies, particularly of fuel and ammunition, came to a standstill; indeed, it even failed completely from time to time. Only uninterrupted air transportation was able to alleviate the temporary, but very critical, supply situation.

In the same way the forces of the Fourth Air Fleet were too weak to support simultaneously the advance of four armies, attack Soviet flying forces and their bases, interdict enemy rail traffic carrying troops and supplies, prevent the movement of oil from the Caucasus, and force the Soviet naval and merchant vessels into their Black Sea ports and there destroy them.

Most of the troops and commands of the Army and the Luftwaffe had been committed directly, without rest, from the heavy fighting at Kiev to the new operations to the south, and they were simply exhausted, the army by the long, wearisome marches and ground combat in the Ukrainian mud and the Luftwaffe from flying unending sorties. Materiel--tanks, aircraft, and trucks--was likewise worn out and expended in these incessant operations. Recognizing this state of affairs, Halder commented: "The mobile striking power is spent. We must reconcile ourselves to this."[25]

Hoffmann von Waldau, remarking on this extremely critical period, noted on 3 December that 16 Russian divisions had launched an attack which was increasing in intensity. Despite severe losses around Rostov, the Russians pierced the positions of the Leibstandarte (1st SS Panzer Division)* and badly mauled the 60th Infantry Division (Motorized), which had to be withdrawn under violent enemy pressure. (As noted earlier, it was at this time that von Rundstedt, after "a series of misunderstandings," had been relieved.) Then, late on 2 December, the Mius River defenses were occupied and expected to hold. Von Waldau noted that at this time there was more need in the Luftwaffe for ground crews and warming devices than for aircraft; moreover, the cold hampered the servicing of the planes, so that there were never enough of them ready for operations.

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*See footnote *, p. 204.

During the night of 1 December, Hitler flew to Mariupol for a personal conference with the command of the First Panzer Army.* The trip was a success and resulted in adequate clarification of the situation, yet it was clear that the Russian campaign still had not achieved its final objective. Rostov had been lost, together with the bridgeheads east of the Don River, a region which had been foreseen as the starting area for a drive on Maykop.

On the 6th, von Waldau became concerned about Russian troop concentrations around Yeysk, which pointed to a Soviet intention "to attack from the south over the nearly frozen-over Sea of Azov, with a simultaneous envelopment movement in the north." He considered this situation to be most critical since the German forces available, while sufficient to stop a frontal attack, could not halt large-scale flanking movements. With a temperature of almost zero (Fahrenheit) on the 6th, the Sea of Azov continued to freeze. According to von Waldau, the view that an operation across the ice would be too dangerous and costly was not valid where the Russians were concerned because of their disregard for human life; the view also lost validity because of the possible tactical effects and results which might be achieved by such an attack.

On 15 December Army Group South repelled all attacks on the front held by the First Panzer Army, and the Seventeenth Army was holding its positions. The Soviet attacks were further complicated by the condition of the roads. The arrival of reinforcements at the front in this area permitted the Wehrmacht to stabilize its positions for the time being.[26]

When the staff of the V Air Corps and corps troops were transferred from the Fourth Air Fleet to Brussels on 30 November, as mentioned heretofore, it left only the IV Air Corps to carry out the many and varied tasks of the air fleet. The corps supported Army Group South in its new winter positions as best it could in the constant critical defensive battles.[27]

In a critical analysis of the overall situation of Army Group South at the turn of the year 1941-1942 it must be unequivocally stated that, although army group forces had succeeded in occupying the Crimea (with the exception of Sevastopol), and although the army group retained possession of the greater part of the Donets Basin, the German military command nevertheless had, in the Rostov area, suffered its first major reversal in the conduct of its operations in the East.

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*Commanded by Generaloberst Ewald von Kleist. See footnote ƒ, p. 204.

Chapter 10

WITH THE SECOND AIR FLEET TO MOSCOW

The Double Battle of Bryansk-Vyazma

Since the end of the German advance in the Smolensk area,* the Fourth and Ninth Armies had found themselves in continuous defensive action against incessant Soviet counterattacks east of the Roslavl-Smolensk line. Now, as the encirclement battle of Kiev came to a close, Army Group Center regrouped to continue operations against Moscow.

The initial German successes against Soviet units in the area between the wings of Army Group Center and Army Group South had created a favorable situation for a decisive offensive operation. On 6 September Hitler issued Directive No. 35, which prescribed the measures to be taken against the Soviet forces under Marshal Timoshenko, then in action against Army Group Center. These enemy forces were to be destroyed within the short time remaining before the onset of winter. For this purpose, all Army and Luftwaffe forces which could be spared from the flanks were to be brought together in good time and committed in the operation.

In an integrated operation, Army Group Center's southern wing (Second Army and Second Panzer Group) was to drive toward the southeast and south to meet units of Army Group South (Sixth Army and First Panzer Group) proceeding northeast across the Dnepr, and there to destroy Soviet forces within the triangle formed by Kremenchug, Kiev, and Konotop. Immediately after this operation, elements of the Second and Sixth Armies and the Second Panzer Group were to regroup. Not later than 10 September, motorized infantry divisions of Army Group South (with strong Fourth Air Fleet support) were to attack suddenly from the Seventeenth Army's Kremenchug bridgehead, the attack to proceed northwest via Lubny. And, moving against Poltava, the Seventeenth Army was to seize the Kharkov area. At the same time, the attack on the Crimea, also supported by the Fourth Air Fleet, was to continue from the lower reaches of the Dnepr; the southward drive of the mobile forces to Melitopol were expected to "bring substantial advantages for the mission of the Eleventh Army."

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*See Chapter 3, p. 44. See also Maps Nos. 4, 5, and 8.

Hitler ordered Army Group Center to prepare for an attack against Timoshenko's army group at the end of September. The object of this action was to destroy the Soviet forces east of Smolensk by a double envelopment, driving in the general direction of Vyazma, with strong armored forces pushing ahead on the wings. Mobile forces were to be concentrated: (1) on the southern wing, probably southeast of Roslavl, to attack northeastward with available units of Army Group Center and the specially assigned 2nd and 5th Panzer Divisions, and (2) in the Ninth Army area, to strike probably through Belyy, with "the strongest possible elements" to be moved from Combat Zone North to support the drive. "Only then, if the bulk of Army Group Timoshenko is defeated in this . . . operation of annihilation," would Army Group Center be sent toward Moscow, its right wing along the Oka River and its left along the upper Volga. The Second Air Fleet, reinforced with units from the northeastern area, was to concentrate its efforts on the flanks of the army group, with most of its dive bomber units (VIII Air Corps) deployed there in support of the mobile ground forces.*

Hitler stipulated that operations in Combat Zone North were to be carried out in conjunction with Finnish forces attacking across the Karelian Isthmus, Leningrad was to be encircled, and Petrokrepost (Schluesselburg) was to be taken not later than 15 September,/ so that "substantial portions of the mobile troops and the First Air Fleet, especially the VIII Air Corps," would be available for Army Group Center. But first, the Leningrad encirclement ring was to be strengthened, especially on the eastern side, and the Luftwaffe, weather permitting, was to carry out a heavy bombing attack, mainly upon the city water works. Units of Army Group North were to proceed northward across the Neva River as soon as possible to assist the Finnish advance against the former Finno-Russian border fortifications, to effect a substantial reduction in the size of the battle sector, and to eliminate the airfields in that area. To prevent enemy naval forces from escaping into the Baltic, Finno-German forces were to seal off the Bay of Kronshtadt with mines and artillery fire. When forces became available, the Leningrad battlefield was also to be "screened to the east as far as the lower Volkhov," but union with the Finns at the Svir River was not to be attempted until the enemy was defeated around Leningrad.

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*See Map No. 13.

/See Maps Nos. 11 and 12.

The Fuehrer directed that the attack by Army Group Center toward Moscow be covered by a flank column from Combat Zone South composed of available mobile forces driving in a northeasterly direction, and on the left flank by Army Group North units, which were to contact the Finns and push ahead "on both sides of Lake Ilmen."*

In a supplemental instruction to Directive No. 35, Hitler required that all motorized divisions of Army Group South be combined with the First Panzer Group for the attack from the Kremenchug bridgehead, because no Fourth Air Fleet units would be "available for the support of an attack from the Dnepropetrovsk bridgehead," a point which was to be held by the 198th Infantry Division and Italian or Hungarian forces.[1]

After the war, Kesselring wrote that, beginning on 15 September, preparations for the attack had been carried out "with burning heart but cool head" and that he had discussed the details of the joint operation with the commanders in chief of the Second, Fourth, and Ninth Armies and the interested armored groups. The tactical mission of the Second Air Fleet units had been preceisely defined: the I and II Antiaircraft Artillery Corps/ were assigned ground tasks at the points of main effort to provide supporting and assault artillery fire, concentrating on the right wing of the army group; the close support units of the Luftwaffe were to clear the way for the ground forces, especially armored units, and attack enemy movements on the battlefield. The heavy bomber forces were to close off the battle area to the rear.[2]

The Second Panzer Group (Second Panzer Army after 5 October 1941) had already launched its attack with strong II Air Corps (Second Air Fleet) support from the Putivl area on 30 September in order to reach Orel as quickly as possible. For this operation the air corps had regrouped and now had its command post at Shatalovo. The 3rd and 53rd Bomber Wings were based at the airfields Shatalovo East and Shatalovo West; to protect these fields, which were repeatedly attacked by Soviet bombers and ground-attack aircraft, a fighter unit was located at an advanced airfield east of the fields. The 28th Bomber Wing was based at Bobruysk, while the 2nd Squadron of the 122nd Long-Range Reconnaissance Group operated from the airfield Smolensk South. The II Close Support Air Commander was assigned two groups of the 1st Dive Bomber Wing, three groups of the 77th Dive Bomber Wing, and two groups

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*See Map No. 12.

/The II Antiaircraft Artillery Corps had been transferred from Combat Zone South to Combat Zone Center

of the 210th Ground-Attack Wing, respectively.* The fighter forces of the II Air Corps consisted of four groups of the 51st Fighter Wing and three groups of the 3rd Fighter Wing.

On 1 October the Luftwaffe reported that German armored units had advanced from the Glukhov-Yampol line and that the bulk of the bombers, supporting the ground forces, had successfully attacked Russian troop concentrations and columns of tanks and trucks in the Glukhov-Bryansk-Kursk area.[3]

General Halder remarked in his diary on the following day that the Second, Fourth, and Ninth Armies (of Army Group Center) had begun Operation TAIFUN (Typhoon)/ at 0530 hours "in shining autumn weather" and that the Second Panzer Group, despite a lagging right wing, had gained some ground, although by noon the attack of the other armies and armored groups had won "only 6 to 12 kilometers of enemy territory." In some sectors, even "hurried withdrawal movements" had occurred.[4]

The Second Panzer Group of Army Group Center, continuously supported by II Air Corps units, reached Orel on 3 October; its left wing had turned against the rear of the enemy facing the Second Army at Bryansk. Enemy air activity was very lively, with Soviet bombers and ground-attack aircraft, flying mostly in small formations of three to six planes, continuously attacking the German assault columns and airfields. The II Air Corps laid particular significance upon quickly advancing the close support and fighter units as closely as possible behind the attacking ground forces. Therefore, immediately after the fall of Orel, fighter units were brought forward to the airfield at that point. In the days that followed, this field also became a base for the air transport of supplies, since poor road conditions severely limited the forwarding of supplies and made all such operations on the ground extremely difficult. For example, 132,100 gallons (500 cubic meters) of fuel and other materiel

*The 210th Ground-Attack Wing is also frequently designated the 210th Bomber Wing, and was outfitted with Me-110 twin-engine fighters, equipped to carry small (SD-2) fragmentation bombs. See Figure No. 39.

/Cover designation for Army Group Center's operation against the armies of Timoshenko.

Figure 39
Me-110's attacking Soviet ground positions,
Battle of Smolensk, 1941

had to be flown in for the Second Panzer Group.* Furthermore, the II Close Support Air Commander had transferred dive bomber units to this airfield which were deemed to be worthwhile targets by Soviet flyers.

On 4 October Halder observed that Operation TAIFUN was proceeding in a "classic" manner, since the Soviets were cooperating in the development of the encirclement by holding their lines rigidly wherever they had not been attacked.[5] Two days later Halder noted that the pocket would soon be closed.[6] The new large-scale attack had taken the Soviet forces completely by surprise.

Very strong action by the Second Air Fleet--with the II Air Corps reinforced by units of the Fourth Air Fleet and the VIII Air Corps transferred swiftly from the Leningrad area to just north of Smolensk--contributed decisively to all the penetrations and breakthroughs by the ground forces. The II Air Corps supported the advance of the Second and Fourth Armies, and particularly the Second Panzer Group on the right wing of the army group, while the VIII Air Corps deployed its units before the Ninth Army, especially ahead of the Third and Fourth Panzer Groups on the left wing.[7]

The severity of the fighting in Combat Zone Center is shown by the report of the High Command of the Luftwaffe for 4 October, which stated that 48 dive bombers and 32 bombers, supporting ground forces, made successful daylight attacks on rail lines and troop movements in the Sumy-Lgov-Kursk area. Then, 202 dive bombers and 188 bombers, some of them in actions integrated with operations of Panzer units, struck Soviet positions, supply movements, troop concentrations, and rail targets in the Bryansk-Spas-Demensk-Sukhinichi area. Further, some 152 dive bombers and 259 bombers were sent over the Belyy-Sychevka-Vyazma area in support of the army. These attacks destroyed some 22 tanks (including 4 of 52 tons), 450 motor vehicles, 11 horse-drawn limbers, 7 tractors, and 3 fuel depots. In addition, these attacks hit a motor park, destroyed 6 guns and put 7 more out of action, and wrecked a bunker and 3 antiaircraft artillery emplacements. Fires and demolition were

*Meantime, road conditions from Orel to Tula had become so bad that air supply was necessary for the 3rd Panzer Division, which had just arrived at Tula (following Group Eberbach, commanded by Col. Heinrich Eberbach of the 4th Panzer Division). Generaloberst Heinz Guderian, Erinnerungen eines Soldaten (Recollections of a Soldier), appearing in an English version entitled Panzer Leader, Heidelberg: Kurt Vowinckel Verlag, 1951, pp. 208, 222.

inflicted everywhere, particularly at Sukhinichi, Yukhnov, Kaluga, Belyy, and Sudzha. Suffering various degrees of damage were 10 railroad depots, while rail lines were frequently interdicted and 37 trains damaged or destroyed. It was even believed that greater losses than those shown above had been inflicted upon Soviet personnel and materiel, although these additional losses could not be verified.[8] On 7 October the High Command of the Luftwaffe reported that the Soviet front in Combat Zone Center had been pierced at three points and that "some 70 large enemy units" in the vicinity of Bryansk and Vyazma would soon be encircled and destroyed. Soviet resistance there was weakening, and signs of disintegration were becoming apparent. Approximately 800 bombers, comprising most of the bomber strength, supported the ground forces and successfully attacked infantry and tank assembly areas, columns of trucks, and communities occupied by Soviet forces. These attacks took place in the areas of Sukhinichi-Kaluga-Chern and Kholm-Vyazma-Spas-Demensk. In addition to the silencing of four artillery positions, the bombs destroyed several bunkers, 8 machine-gun nests, 40 horse-drawn limbers, 34 artillery pieces, 650 vehicles of various kinds, and 20 tanks.[9]

On 7 October units of the Third and Fourth Panzer Armies met near Vyazma. By 10 October, one pocket of Soviet forces had been formed south and one pocket northeast of Bryansk and one west of Vyazma. Although by 13 October the northern pocket was almost completely annihilated by extremely heavy Luftwaffe attacks, elements of the forces of the two southern pockets (south of Bryansk and the pocket west of Vyazma) succeeded in breaking out to the east by making continuous assaults upon the weak positions in the ring. The escaping forces were then constantly pursued and attacked by units of the II Air Corps. These breakout and breakthrough efforts cost the enemy exceptionally high casualties and materiel losses, because at the normally very narrow gaps in the circle--frequently bridge crossings over rapid streams, swollen from rain and snow--thousands of men and vehicles were pressed tightly together. Some combat units reported that a bombing miss on such a compact mass of troops and equipment would be simply impossible! The two southern pockets surrendered on 17 and 20 October.*

The extent of these encirclement battles around Bryansk and Vyazma is indicated by the Luftwaffe report of 15 October which announced that the enemy had mopped up in the pocket west of Vyazma; elements of

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*See Map No. 9.

some 10 armored and 40 infantry divisions, belonging to four Soviet armies, had been taken prisoner or destroyed. To date, 800 tanks and about 3,000 artillery pieces had been destroyed or captured and over 500,000 prisoners taken. To the south and north of Bryansk entrapped Russians were compressed even more tightly together. The OKL report of 15 October declared that "Their final destruction is imminent." Yet the enemy continued his futile attacks in an effort to escape. German ground forces had pushed on to Pesochyna, north of Kaluga, and to Kliny, northeast of Detchino. Borovsk was taken by armored units, while parts of the Wehrmacht attack force at Vereya battled against superior enemy forces. German infantry troops took Nikolo-Pustyn, north of Gzhatsk, and motorized units pushed forward southeast of Lataschino* to Fedorovskoye. After violent house-to-house fighting Kalinin was in German hands, as "strong enemy counterattacks were repulsed." Similar attacks were halted northwest of Staritsa. Around Rzhev, where military operations were plagued by heavy rains and snow, fighting was still in progress, with German infantry nine miles northwest of that city and five miles west of Sytkovo. Although the snowfall had slowed considerably by 15 October, the "bottomless roads" continued to complicate "large-scale movements and the supply of the troops." In the territory between Vyazma and Kalinin large numbers of Russian stragglers had thrown away their weapons and were trying to reach home.[10]

The antiaircraft artillery of the Luftwaffe had also played a considerable part in the success of the battles of encirclement, as shown by the activity of the II Antiaircraft Artillery Corps, which had been transferred from the area of the Fourth Air Fleet to Combat Zone Center and assigned to the Second Air Fleet for the new operation against Moscow. Thus, on 22 October the High Command of the Luftwaffe reported that in the fighting around Vyazma, this antiaircraft artillery corps had, between 2 and 13 October, shot down 29 Soviet planes; destroyed 17 bunkers, 18 fortified field positions, 14 armored cars, 5 defensive posts, 104 artillery pieces, and 94 machine guns; captured or destroyed 579 vehicles of various types and a freight train; routed 7 columns and a cavalry squadron; and repulsed 23 infantry attacks. The antiaircraft artillery corps also thwarted all enemy attempts to break through the sides of the pocket, mopped up a village housing enemy units, and took 3,842 prisoners.[11] From reports and announcements it is evident that all units of the Second Air Fleet had a large share in the success of the encirclement battles of Bryansk and Vyazma.

Editor's Note: This form is the spelling given in the German manuscript. The English version could not be determined.

After the encirclement of Timoshenko's armies in the Bryansk and Vyazma pockets, German infantry divisions had relieved armored units in the area so that the latter could immediately push on to the east. From 7 October on, the weather, which had at first been good, deteriorated rapidly, and by the end of the month the operations of Army Group Center against Moscow had come to a standstill because of impassable roads. Armored units could no longer move ahead; even the horse-drawn vehicles were immobilized by the mud, which was often three feet deep. In the Kalinin area Army units could only be supplied by air. Toward the end of October, as a result of the completely bogged-down condition of advance airfields, operations of Second Air Fleet units were heavily restricted and, at times, impossible. The heavy snowfall mixed with rain, which began about mid-October, considerably curtailed Second Air Fleet activities and brought every movement of the ground forces to a halt by the end of the month. In his diary entry of 16 October, General von Waldau noted that "the boldest hopes are disappearing under rain and snow. . . . everything remains stuck in bottomless roads," while temperatures fell to as low as 17.6° Fahrenheit, followed by 7 to 8 inches of snow and more rain.[12] Kesselring later wrote that the "unfavorable flying weather complicated air support operations" and that a combination of rain and snow, together with the effects of excessive traffic loads carried by "the heaviest tracked vehicles" and the plowing up of roads by bomb craters, slowed (and after 5 October almost halted) ground movements. Rations had to be air-dropped to some units of the Second Panzer Army, and because of a critical lack of winter clothing troops of this army were subjected to severe physical and mental strain.[13*] As an example of the impact of the weather on flying, the Luftwaffe reported that weather conditions during the night of 20-21 October had been unfavorable for operations along the entire front, with the exception of the southeastern part of the Ukraine. During daylight hours on 21 October, bombing and reconnaissance operations on the front were curtailed because of "low, multi-strata clouds, continuing rainfall, and frequent bad visibility,"[14] but the desire of the Luftwaffe command to fight and the high combat morale of the Second Air Fleet were clearly demonstrated that day when the air fleet, despite the bad weather, committed 168 bombers, 49 fighters, and 2 reconnaissance planes in support of ground operations.

The sustained heavy fighting by the ground forces, the difficulties in command and supply for Army and Luftwaffe, the unprecedented stresses

*Editor's Note: Soviet troops were then fully equipped with winter clothing.

on all troops, and the exceptional demands upon men and equipment can be seen from comments by Hoffmann von Waldau and reports of the High Command of the Luftwaffe.[15] Von Waldau wrote on 21 October that local gains had been achieved in the drive on Moscow but that small crises had developed at Kalinin as a result of "desperate attempts by the enemy to hold the most important supply line for the logistical support of his front" in and north of the Valdai Hills, which lay east-southeast of Lake Ilmen.[16] On 23 October the High Command of the Luftwaffe reported that on the preceding day difficult weather and road conditions had made planned movements impossible, and that the determined Soviet defense had permitted "only local successes." German troops reached the Svapa River northeast of Rylsk, while in the sector between Mtsensk and Kaluga infantry forces advanced to the Zusha and Oka Rivers. Wehrmacht forces then won bridgeheads across the Protva River near Vysokinichi and across the Nara south and northwest of Naro-Fominsk. Only at Belev, on the west side of the Oka River, was the enemy able to hang on to a bridgehead. Rear German divisions, often spread out over as much as 25 miles, had great difficulty in closing their ranks. Bad roads made their supply problems especially difficult, sufficient artillery and antitank weapons could rarely be brought forward, and the efforts demanded of the dismounted troops was "unusually high." Soviet defenses were concentrated along the road running from Maloyaroslavets to Moscow, on either side of the highway between Mozhaysk and Moscow, and west of the town of Ruza, with various reinforcements being brought in for support. Futile enemy attacks were also launched against the northern, western, and southeastern parts of Kalinin.[17] On the 22nd the Luftwaffe committed 481 bombers, 123 fighters, and 20 reconnaissance aircraft, mostly in support of the Army, against troop concentrations, tank assembly areas, and communities occupied with Soviet troops, while a smaller number of planes bombed rail lines and some airfields. On the 23rd, sorties were carried out by 458 bombers, 140 fighters, and 17 reconnaissance planes, mainly against armored and infantry concentrations, particularly around Kalinin and the area bounded by Mtsensk, Tula, and the terrain north of Rshev. Then, on 24 October, field positions, artillery emplacements, columns, and communities billeting Soviet forces, especially in the sector around Mtsensk and Tula, were attacked by 441 bombers, 208 fighters, and 13 reconnaissance aircraft, while railroad lines were interdicted by smaller formations. And, as final examples of the extent of the Luftwaffe's daily commitment in the attack against Moscow, on 25 October, 455 bombers, 173 fighters, and 23 reconnaissance planes supported the ground forces by attacks in the areas around Mtsensk, Mozhaysk, Kalinin, and Volokolamsk. Two days later, however, weather conditions permitted only one aircraft to be committed east of the battle area.

By 26 October, bad roads had seriously impaired the advances of the motorized units and infantry in Combat Zone Center, which resulted in a wide separation of those units. Fuel for the armored forces had to be brought up by air transport. Leaving all their heavy vehicles and almost all of their motorized vehicles behind, the infantry forces in the southern sector of Combat Zone Center renewed their attacks.[18]

Besides supporting the ground forces--the principal mission at the point of main effort--the Luftwaffe continually and successfully attacked airfields and railroads. In one of these operations bombers of the II Air Corps destroyed 10 trains loaded with armored vehicles. On another day, direct hits on a rail line destroyed 55 trains and damaged 22 others so badly that they could no longer proceed. One episode from these great battles of annihilation deserves mention because of its distinctive features as a case in which air power alone succeeded in keeping a route open for the ground forces. The enemy, holding a bridge over the Snopot River, was subjected to such a heavy and uninterrupted 1 1/2-hour bombing and strafing attack by close support units of the II Air Corps that his attempts to blow up the bridge were delayed long enough for German armored units to arrive and capture this important crossing.

During the Second Panzer Army's drive to the northeast against Tula, a serious crisis arose in the area around Teploye, some 37 miles south of that city. In the attempt to outflank heavily fortified and bitterly defended Tula, the forward units (right wing) of the LIII Army Corps unexpectedly encountered a strong Soviet combat group consisting of two cavalry and five infantry divisions and one armored brigade.* While the German tanks could move only with difficulty, the Soviet T-34 tanks attacked, unhampered by the mud and mire. When air reconnaissance determined that the enemy was approaching the only firm road in the line of advance of the Second Panzer Army, the Orel to Tula road, along which the army's units were standing in columns, the II Air Corps decided upon an unusual action. Although the weather was so bad that the aircraft ran the danger of colliding with trees on the many small hills of the region, a large number of bombers were employed in very-low-level attacks and actually succeeded in discovering the Soviet tanks which had already arrived close to the Orel-Tula road. Part of them were then destroyed and the remainder forced to retreat. This action, however, was costly to the Luftwaffe, and some of the participating

*Editor's Note: The exposed eastern flank of the Second Panzer Army almost invited an attack by Soviet forces.

bombers even returned home with fragments and splinters from their own bombs in their wings.

The frost which now set in so facilitated the movements of the German armored, motorized, and infantry forces in the next few days that the ground situation was restored by 13 November.[19] It is understandable that the operational strength of the units had sunk unusually low through continuous operations and from the extremely difficult weather and the poor ground conditions. Thus, not only the climate--rain, storms, snow, and cold--but also the constantly diminishing operational strength of the Luftwaffe units reduced the expected destructive effect of German air attacks upon the enemy.

Climate and Time Decide the Issue

After operations had come to a halt early in November, the German command then had to decide whether it would still be possible to achieve the desired objective before winter arrived in earnest. Therefore, in a conference of chiefs of staff held in Orsha on 13 November, the Chief of the Army General Staff, Generaloberst Halder, discussed the overall situation and the intentions of the high command. Some of the primary points of discussion were:[20]

(1) Future conduct of military operations would become increasingly a matter of organization and leadership.

(2) Although the previous operations of the war had proceeded according to plan, it was now time to go beyond the preparation conceived by the Army General Staff.

(3) It was now vital to decide whether the progress of operations against Russia had achieved the objectives desired in 1941, and whether it was still necessary and possible to expand these operations before the end of the year. In consideration of these problems it would be necessary to bear in mind that the continuance of the Russian war, as well as of the entire war, would be generally subject to certain economic restrictions. A shift in emphasis to air and naval operations could also be expected to "play a large role in the future."

(4) The fundamental concept of the Russian campaign in 1941 was "to force a decision that would permit a clear shifting" of the major war

effort from Russia back to England and thereby from ground to naval and air operations.

(5) In respect to the timing of the continuation of operations, General Halder stated that in his opinion the drive on the Caucasus could continue in January, while the Sixth Army and Army Group Center could continue to the end of November, but armored units were to resume the attack only when roads were firm. In these circumstances it was necessary to depart from the principles laid down in the regulations.[21]

In a spirit of excessive optimism caused by a period of mild frost, a renewed assault on Moscow was ordered for 17 November. During the first days of the new attack the weather was actually sunny with only light frosts, and the troops--exhausted as they were by their prolonged, severe battles against a tenaciously resisting foe and by their laborious forward struggle through mud, rain, storms, and heavy snowfall--set out on what they expected would be their last great trial of strength, the capture of the Soviet capital. After a few days, however, the weather changed abruptly. Fog, snow, and temperatures of -22° Fahrenheit and below considerably reduced the operational strength of the Luftwaffe units in Combat Zone Center, which had already been severely weakened by the withdrawal of the staffs of some units of the Second Air Fleet and the II Air Corps for transfer to Italy.*

General von Waldau noted on 15 November that these Second Air Fleet units were being withdrawn slowly from Combat Zone Center "so that the calculated and reported deadlines, transportation, rehabilitation, rearmament, and deployment could be maintained on a large scale." Much detailed work was involved; "trifles, the most exacting observance of which are of decisive importance."[22]

On 13 November, General der Flieger Bruno Loerzer, commanding the II Air Corps, issued an order of the day which proudly enumerated the outstanding performance of all corps units since 22 June. Addressing the men of the corps, Loerzer noted that five months of steady fighting against the Soviets had "essentially destroyed the fighting power of the enemy." The corps had played a decisive role in the battles of Minsk, Bialystok, Gomel, Smolensk, Kiev, and Vyazma-Bryansk. Convincing evidence "of the heroic deeds of the soldiers and commanders of all participating units" were the successes achieved. Between 22 June and 12 November the flying units flew over 40,000 day and night sorties,

*See Maps Nos. 13 and 14.

destroying 3,826 Soviet planes (2,169 in aerial combat and the remainder on the ground), 789 tanks, 614 artillery pieces, and 14,339 vehicles of every type, and probably destroying 281 additional aircraft and damaging 811 more. An additional 240 machine-gun nests, field positions, and artillery emplacements were attacked with "devastating results," while 33 bunkers were put out of action or destroyed. Besides these targets, rail lines were attacked 3,579 times, resulting in the severing of tracks 1,736 times, in the destruction of 159 trains and 304 locomotives, and damage to another 1,584 trains and 103 locomotives. Finally, columns, troop concentrations, and points where trains and vehicles were loaded and unloaded were ceaselessly attacked, inflicting very heavy losses upon the enemy. More than 23,150 tons of bombs had been used in the fighting since 22 June. Antiaircraft artillerymen of the corps well supplemented aerial combat achievements by repulsing 300 attacks by 1,000 planes. The accuracy of German antiaircraft fire was shown by the Soviet loss of 100 aircraft (confirmed) and 23 probables to Luftwaffe Flak units.

Loerzer also praised the work of the Luftwaffe signal service personnel, whose tireless efforts in all kinds of weather had provided the "necessary communications without which a close and satisfactory command of the units of the air corps would not be conceivable."[23] Despite extremely bad roads and constant threat of enemy attack, the signal men had established and operated some 1,865 miles of wire and transmitted 30,000 teletype and 40,000 radio messages. The aircraft reporting detachments employed in the front lines had created conditions essential for the successful defense against enemy air attacks, while the air traffic control teams had vitally assisted in orienting German air units over the far-reaching expanse of Russian territory. And the liaison parties assigned to front line army units did an exemplary job in relaying "the situation and wishes of the ground forces to the headquarters of the corps," thus making possible successful cooperation, especially with the tank forces. None of this could have been achieved without "the unprecedented and devoted action of the flying crews and the friendly, unflagging readiness of the ground personnel to help." And, Loerzer concluded, "If in such a proud moment of reflection upon our performances we consider also the losses which we have suffered through the death of many a faithful comrade, we know also that the significance of their sacrifice is to point the way to our continued struggle, the battle for victory."[23]

Only the VIII Air Corps remained in Combat Zone Center, where on 1 December it assumed command over the II Close Support Air Commander--formerly under the direction of the II Air Corps. On the ground, army operations were making only slow progress at this juncture

and in spite of the best intentions of the air command and its troops, unfavorable weather conditions made it impossible to render to the ground forces the measure of air support they had hitherto received and had become accustomed to expect. Many of the advance airfields now occupied by German units consisted only of a sea of mud which made take-offs and landings impossible.

On the other hand, the Soviets committed their air strength all the more strongly. They could do this because many well-developed airfields were available to them in the Moscow area, fields which could be used in the poorest weather. The nearness of the Germans to the Russian capital also caused the enemy, quite naturally, to strengthen his forces with all available means for the defense of the city. Strong antiaircraft artillery, situated at all of the airfields in the Moscow area, made German counter-air operations exceptionally difficult. Powerful, concentrated attacks against these enemy airfields could not be made because flying forces needed for the attacks were lacking; all units were required for commitment in the immediate situation for the direct and indirect support of the ground forces. The higher army headquarters themselves, despite thorough briefing, showed little or no understanding for the air situation. Yet, in spite of the reduced Luftwaffe support, progress was made along the entire front by Army Group Center.[24]

On 27 November von Waldau noted in his diary that the Russian front showed no "substantial changes" and that although the troops appeared to be "fairly ready" he no longer believed that the offensive could succeed. "Cold, poor condition of equipment and clothing, have limited their striking power." While Istra and Solnechnogorsk, northwest of Moscow, were captured, there was "neither the possibility of effecting a complete encirclement of Moscow nor such a close approach to the capital that the armament works could be eliminated by artillery bombardment."[25] By 3 December von Waldau observed that the attack had generally drawn to a halt with the objective, Moscow's encirclement, unattained. And although "Leningrad can still be reached," Rostov-on-the-Don and its bridgeheads had been lost as starting points for a drive on Maykop. Yet, von Waldau did not see these events as causes for pessimism because a vast territory with highly important manufacturing centers and sources of raw material had been captured, while the Russians had lost about 3,600,000 men as prisoners of war and 1,400,000 dead. Still, he expected the war to become "harder and more prolonged."[26]

The Luftwaffe attacked repeatedly to facilitate the advance of the ground forces, but it could not prevent the German armies in their

weary struggle against enemy and weather from being slowly, but surely, exhausted. On 9 December, von Waldau noted that the higher levels of command were finally beginning to appreciate what had been learned about weather conditions, and that this realization was "decisive for the new directive, which essentially determines the winter field position and . . . plans the measures for winter and spring."[27]

On 22 November General Halder commented in his diary that the troops had reached the limit of their endurance, and a week later he recognized the need to issue orders for the transition to winter status. On the 30th, he wrote that Hitler and those closest to him "have no idea of the condition of our troops and move about with their thoughts in a vacuum." Halder lauded the performance of the weakened troops in penetrating organized Soviet positions as a "tremendous" feat, but declared on 1 December that these troops were clearly no longer fit for operations.* Halder wrote on 7 December that neither Hitler nor the High Command of the Wehrmacht (OKW) realized the condition of the German troops and were engaged in "petty faultfinding."[28]

In front of Moscow the Soviets scraped together their last available forces. New, recently formed, in part uneducated, and poorly trained forces were brought up from everywhere for the defense of the city. In continuous counterattacks the enemy attempted to halt the German advance.[29] Generals "Mud" and "Winter" supported the enemy most effectively, and finally with decisive results. The German campaign against the Soviet Union had reached its zenith.

A desperate attempt on 4 December to renew the attack failed. "No command could drive farther ahead these troops, who had given their utmost in the face of incredibly severe conditions." After the many remonstrances of the preceding weeks against overstraining the troops had been ignored, Nature compelled Hitler on 6 December to

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*Editor's Note: By this time German ground units had lost scores of men because of frostbite. Expecting to win a short campaign, the High Command had failed to order winter clothing except for the 60 divisions which were to occupy Soviet Russia. Unexpected bad weather and logistical problems, however, prevented even this amount from reaching the front. Many German soldiers were fighting in their regular field blouses in December of 1941.

discontinue the attack, although he ordered the Wehrmacht to hold the territory which it had won.[30*] Thereupon, operations in the center came to a halt, and over the German armies of Army Group Center a terrible crisis now arose which also affected all the other fronts.

The Crisis Before Moscow

On 8 December 1941, Directive No. 39 was issued because the "onset of a surprisingly early and severe winter" with its related supply difficulties had led to the immediate discontinuance of the offensive and a shift to the defensive. The directive required that the defense govern itself according to the following objectives:

(1) Areas vitally important to the Russians for tactical, strategic, or military-economic purposes were to be held.

(2) Forces of the Wehrmacht in the East were to be afforded the greatest possible opportunities for rest and rehabilitation.

(3) Conditions requisite for the renewal of large-scale offensive operations in 1942 were to be created.

In detail, the directive outlined specifically the measures to be taken by the Army with respect to defensive dispositions: winter quarters for front line troops; rehabilitation of all troops, especially those from motorized and armored units; simplification of supply conditions in relation to the location of the front line and the eventual thaw; establishment of defensive positions in the rear areas; and, lastly, special missions, such as the immediate capture of Sevastopol and a winter offensive, when the weather permitted, by Army Group South into the lower Don and Severnyy Donets region to secure a starting point for operations into the Caucasus in the spring.

As the primary task of the Luftwaffe in this period, Directive No. 39 required the German air units to interfere as much as possible with the rehabilitation of Russian armed forces by launching attacks upon the training and armament centers, particularly those at Moscow, Leningrad,

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*Editor's Note: General Friedrich Fromm, Commander of the Replacement Army, suggested to Brauchitsch, before the futile December offensive against Moscow and while German prestige was high, that peace offers be made to the Soviet Union.

Voronezh, Gorkiy, Shcherbakov, Stalingrad, Rostov, and Krasnodar. Soviet communications "by which the enemy lives and by whose use our own front sectors were threatened" were to be continually interdicted. In addition to counter-air operations, the Luftwaffe was to fully support the ground forces in defense against both Soviet air and ground attacks.

In this directive Hitler approved the organizational boundaries of the army groups and the order of battle and distribution of flying units remaining in Russia, and ordered that, as ground operations ceased, the various units were to be withdrawn, where feasible, for training and rehabilitation. Rest and rehabilitation centers were to be established very close to the front, thereby providing a "ground organization" which would permit "a swift shifting of forces and reinforcements from withdrawn units." This was to provide for defense against possible winter attacks as well as to allow for German winter operation in the Don-Severnyy Donets region.

"Continuous, overlapping, and far-reaching" aerial reconnaissance was particularly important in order to be able to "detect early and to keep under surveillance enemy regroupings." Hitler, moreover, reserved for himself the right to approve any withdrawal of forces from the front before Moscow, which had been earlier foreseen, for operations in the theater of Commander in Chief South.* Air defense would be maintained to protect troop billeting and supply areas and the most important rear area communications. To counter "identified massed concentrations of enemy air attack forces," it was planned to hastily assemble the German fighters into massed fighter forces.

The Navy stood as security for the sea route to Helsinki, which would be less hazardous after the port of Hangö and the island of Osmussaar had been captured, so that these sea lanes could be more fully utilized by merchant shipping and for the supply of German forces in Finland. Small cargo ships, especially designed for use in the Black and Aegean Seas, were to be built in very large numbers in Germany and in the allied and occupied countries.[31]

The envisioned partial withdrawal of Army Group Center began on 13 December. (By that date, in severe fighting, the Germans had

*Editor's Note: Field Marshal Kesselring became Commander in Chief South (Oberbefehlshaber Sued) 1 December 1941 in addition to his command of Luftflotte 2 (Second Air Fleet). This assignment covered operations in Italy, Africa, and the Mediterranean areas.

pushed to within 12 1/2 miles of Moscow at various points.) Russian forces hit these withdrawal movements with powerful counterattacks, launched by numerically superior, newly arrived, and winter-hardened Soviet forces,* dressed in good winter clothing. These attacks frequently caused very serious crises. The withdrawal battles of the German armies--made especially difficult by the severe cold and the lack of winter equipment among the ground forces--were supported by attack waves of the VIII Air Corps and the II Close Support Air Commander, insofar as weather conditions would permit. In these crucial days--for the first time in the central sector of the Eastern Front--ground personnel of the Luftwaffe and antiaircraft artillery and Luftwaffe signal service units were organized into "Luftwaffe combat units" and committed in ground combat in support of Army units which were fighting under particularly difficult conditions.† Additional help was given by the arrival of an air transport commander (Col. Fritz Morzik) and five Ju-52 groups from Germany for assignment to the VIII Air Corps to carry out urgent air transport duties.††

On 16 December, Hitler issued an order to the ground forces of Army Groups North, Center, and South to hold fast to their positions with "fanatical resistance," without "retreating a step," and to "defend to the last man" the farthest point of advance to the east, in order to maintain the encirclement of Leningrad, prevent the loss of heavy equipment and weapons in the central sector, and, hopefully, to gain time for reinforcements to arrive. Army Group South, meanwhile, was to hasten its capture of Sevastopol so that reserves could be released from the Crimea.

Hitler directed that the VIII Air Corps be reinforced without delay by a full bomber group from the Western Front, three newly activated bomber groups, a twin-engine fighter group withdrawn from the night fighter forces to replenish two similar groups of the VIII Air Corps, four newly activated air transport groups, and one transport

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*Editor's Note: Many of these new Soviet replacements had been sent in from Siberia, fully equipped with winter camouflage and protective clothing.

†Editor's Note: These Luftwaffe combat units (Luftwaffen-Gefechtsverbaenden) were forerunners of the Luftwaffe Field Divisions (Luftwaffen-Felddivisionen) which were established in the autumn of 1942. Twenty of these divisions were assigned permanently to the German Army 31 October 1943. See various articles on the subject, A/VI/4, Karlsruhe Document Collection.

††See Figure 40.

Figure 40
Panje sleds carrying loads from Ju-52 air transports, Russia, winter 1941

Figure 41
Iced-up engines of Ju-52 transport plane at a German airfield in Russia, December 1941

group transferred from the Fourth Air Fleet. The four new air transport groups were to be equipped with the Chief of Training's "last Ju-52's" and all but the most essential courier planes of the various staffs and agencies of the Luftwaffe. These groups were to bring with them elements of the 4th SS Standarte* from Kraków. At the same time the Fourth Air Fleet's air transport group, when transferring to the VIII Air Corps, was to carry a march battalion from Army Group South for a special mission of undisclosed purpose.[32]

The Fuehrer directive concluded with specifications for measures to be taken for the strengthening of the Eastern Front: badly weakened units were to receive replacements; some divisions in the West which were fully equipped for winter were to be moved to Combat Zone Center into places where there were insufficient units, while divisions remaining in the West were subject to possible loss of their winter equipment to units in Russia. In addition, infantry units with little artillery were to be re-equipped first, and all transports were to be "fitted out with ovens and ample food supplies." Army group commands were to establish priorities for bringing up reinforcements and supplies. All German forces in the homeland "which can guard, build, or fight and which are not employed in a vital mission" were to be organized, obtain winter clothing from their present areas, and stand by for transfer to the East.† The availability of all such forces was to be reported directly to Hitler. Finally, besides the four divisions to be provided by the replacement army, the greatest possible number of fighting units, mobile for winter combat, were to be organized in battalion strength and equipped with skis and sleds. Reports on the state of combat readiness and the number of such units were to be made to Hitler.[33]

This Fuehrer directive clearly shows the intervention by the supreme military and political leadership, that is, by Hitler, into details of tactical and strategic operations and into disposition of forces, organization, and training. These Luftwaffe operations also reveal the obligation to use newly activated units, the weakening of the last Luftwaffe forces in the West, the allocation of air transport groups for tactical purposes, and the risky and serious inroads into the training of new crews, especially those of bomber units. By the withdrawal of over 100 Ju-52's, a grievous disruption and curtailment of training activities inevitably had to occur, which sooner or later would lead to a shortage of replacement aircrews at the front.

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*Editor's Note: A unit corresponding in size to an army regiment.

†Editor's Note: This force included Army guard battalions, Luftwaffe guard battalions, SS units in Berlin, and the Reichs Labor Service from the West and Poland.

In the midst of this crisis, which threatened to expand into a catastrophe, Hitler accepted the resignation of Field Marshal Walther von Brauchitsch and, on 19 December, assumed supreme command of the Army himself.[34*] Von Tippelskirch wrote after the war that at the time Hitler made the decision it was the only one possible which held any promise of success. Hitler alone had led the Army as far as Moscow, he alone had "the suggestive power to give it new impulses," and "he enjoyed the unqualified confidence of the troops." His decision thus had an inspiring influence. Even the higher commanders, despite their frequent critical opposition, clearly understood the "fascinating significance" of Hitler's decision./ After the offensive of 1941 had been halted, Hitler forbade voluntary withdrawal. Application of this "fixed and uncompromising" measure meant that the Army had to dispense with operating in space and led to a series of tactical and strategic crises

*Editor's Note: Hitler, angered at the withdrawal of German Army units before Moscow, blamed von Brauchitsch for the situation. Von Brauchitsch, although ostensibly retired for reasons of poor health, was in reality removed by Hitler.

/Editor's Note: The Luftwaffe apparently enjoyed a greater measure of Hitler's confidence than did the Army, as may be noted from the remarks of Army leaders. Von Manstein remarked that Hitler "had a certain eye for strategic possibilities as shown by his decision for the plan of Army Group A in the West . . . [but that] he failed in his ability to assess prerequisite conditions and possibilities for accomplishing a strategic thought." He also pointed out Hitler's abject refusal to countenance any arrangement of command except absolute, direct control of operations in the person of the Fuehrer. Erich von Manstein, Verlorene Siege (Lost Victories), Bonn: Athenaeum Verlag, 1955, pp. 303-305, 438. Guderian viewed Hitler as a man "raw in speech and manner," who saw all traditions as obstacles in his revolutionary path. The fall of Brauchitsch, said Guderian, "placed the power of command directly in the hands of Hitler. This was for all practical purposes the end of the old, Prussian-German stamp upon the General Staff." Erinnerungen eines Soldaten (Recollections of a Soldier), Heidelberg: Kurt Vowinckel Verlag, 1951, p. 422. Kesselring has noted that "the most competent leaders, Field Marshals von Rundstedt, von Leeb, List, von Weichs, von Kleist, and von Manstein, as well as Generalobersten Guderian, Hoth, and others, were at some time relieved of their commands [in Russia] by Hitler." Gedanken zum Zweiten Weltkrieg (Thoughts on the Second World War), Bonn: Athenaeum Verlag, 1955, p. 121.

and brought about an extremely serrated front line.[35*]

As was the case in Combat Zones South and North, a crisis now occurred also in the center, where a decision was being sought. This crisis, however, was incomparably greater because the Soviets had naturally assembled their strongest and best units around Moscow and, seeking a decision in their own favor, had gone over to a counteroffensive.[36]

In October 1941 the German supreme command headquarters had been considering the minimum forces which would be required in the East after the cessation of hostilities, with Halder noting in his diary on 8 October that following the eastern campaign it was intended to leave behind under two air fleets the following forces:

(1) Two bomber and three fighter groups, one reconnaissance squadron, and one antiaircraft artillery regiment at Leningrad, and three bomber and four fighter groups, one reconnaissance squadron, and two antiaircraft artillery regiments at Moscow, all units under the command of the First Air Fleet.

(2) Three bomber, three and one-half fighter, and three dive bomber groups, one reconnaissance squadron, and two antiaircraft artillery regiments, all under the Fourth Air Fleet.[37]

But by the end of December the Germans were scraping together all the forces possible to throw against the large-scale Soviet counterattacks which already were beginning, while in contrast to the October plan to leave air units at Leningrad, Moscow, and other key captured places was the teletype message of 24 December 1941 from the OKW, stating that Hitler, confirming his oral decisions, had ordered the High Command of the Luftwaffe to withdraw air units from operations against Britain in order to prepare them for short term operations on the Eastern Front, either in support of Army Group North or Center, as the situation required.[38] The effects of the Soviet counteroffensive on the

*Editor's Note: General Plocher believes that no withdrawal was possible on a large scale because of a lack of solid defensive positions to the immediate rear and the probability that German units would have been rolled up in the course of a general retreat. The order by Hitler to defend the front line was, in Plocher's opinion, a wise decision which came at precisely the most favorable time to help bolster the lines.

overall German distribution of forces is clearly evident; the Eastern Front had to be strengthened at the expense of other fronts--in this case, at the expense of operations against England.

In the central sector the Luftwaffe had become what might be called a "fire brigade," which carried on operations and was expected simultaneously to extinguish countless fires. Independent operations by the Luftwaffe could no longer be considered. Because they could be used swiftly and flexibly, flying units were invariably used to give direct support to the harassed armies. Thus in Combat Zone Center the Luftwaffe command had also become completely dependent upon tactical and strategic plans and procedures of the Army. The Luftwaffe had become more and more an effective long-range arm of the artillery and an auxiliary weapon of the ground forces. The Luftwaffe, created originally in the spirit of the Italian General Giulio Douhet* and General-leutnant Walter Wever† as an independent strategic force, was now thrown into a battle of annihilation in a downright suicidal manner in support of the Army, thus contradicting all of the wishes and intentions of the founders of the Air Force.††

A Review of German Air Operations in 1941

In what was then an unparalleled series of victories, the German Wehrmacht, supported on all fronts by the Luftwaffe, in 1941 penetrated deeply into the heart of European Russia, and threatened the very existence of the Soviet Union. During this campaign the Russians suffered terrible losses in both men and materiel, but the magnitude and difficulties of the offensive effort virtually exhausted the capabilities of the German Armed Forces. In these far-flung operations German troops were required to fight in climates to which they were unaccustomed, varying from extreme heat to bitter cold, in dampness, drought, storms, and snow. Because of improper preparations--Hitler firmly believed that the issue could be decided before plans for a long-term war became

*Italian general (1869-1930) who was an early advocate of strategic air power.

†First Chief of the General Staff of the Luftwaffe, a far-sighted, able, and highly respected officer who met his death in an air accident 3 June 1936.

††Editor's Note: One of the principal obstacles to the creation of a strategic air force in Germany was Generaloberst Hans Jeschonnek, Chief of the Luftwaffe General Staff, a man who considered Hitler a genius and who steadfastly opposed the idea of strategic air warfare.

necessary--and the unexpected conditions, the logistical support of the German Army and Air Force was seriously deficient and eventually almost nonexistent. Serious reverses halted the German advance in many parts of the front before 1941 was out, especially in the central sector. Driving rains, endless tracts of deep, sticky mud, and snow storms and freezing cold deadlocked many communication routes and proved to be decisive factors in the first year's operations. By the end of the year it was clear that Germany had failed to reach its desired strategic objectives and that the Soviet Union would not be defeated by Hitler in a "lightning war."

By late 1941 air transport services had become a recognized part, in fact a vital part, of the overall supply program for German forces in the East, but Luftwaffe reserves were insufficient to meet the demands of the time.* Transport aircraft became ever more scarce as the German Air Force attempted to compensate for its losses by withdrawing large numbers of planes from the air training commands. The Luftwaffe, unable to meet its air transport commitments, also used bombers for regular transport and air dropping assignments, with the result that badly needed combat aircraft were lost while performing missions for which they were never intended.

But no demands upon the Luftwaffe were greater than those of the ground forces asking for tactical support. In many cases the only possible means of relieving the perpetual crises in certain areas was to throw all available air forces into action, even aircraft which were barely operational. German Air Force personnel demonstrated a remarkable devotion to duty in their efforts to support the hard-pressed ground forces, but the effects of combat had a much harsher effect upon the Luftwaffe than upon the Army. The air forces, being more complex in character and staffed by technically trained personnel who were difficult to replace, suffered more immediately from the war than did the German Army, with its sounder and more robust organizational structure.

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*Editor's Note: Once Germany had embarked upon a multi-front war the opportunity for building up a reserve force had passed. Luftwaffe commanders were subsequently forced to support critical places at the front by withdrawing units from other fronts or training centers. War involvement in other areas, therefore, proved to be the "straw that broke the camel's back."

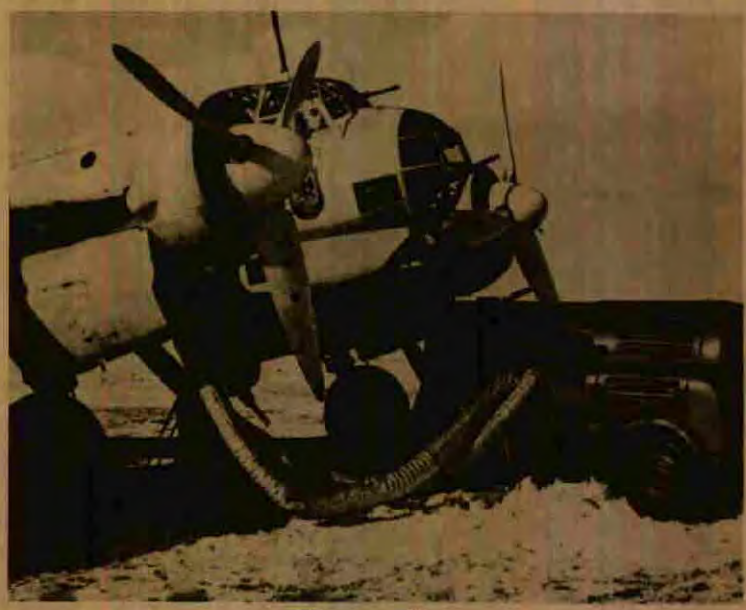

Figure 42
Ju-88-A-15 bomber engines being heated by warming device at a Luftwaffe base in Russia, December 1941

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Paramount among German failures in 1941 was the stalemate of the Wehrmacht before the gates of Moscow. Luftwaffe leaders generally agreed that the Soviet capital could have been captured that year if: (1) the Balkan campaign had not delayed the opening of the attack upon Russia; (2) troops used for the assault on Moscow had been rested for a shorter time after the end of the battle for Smolensk and thus committed at an earlier date; and (3) climatic factors had been considered, including preparations for winter clothing, cold-resistant lubricants, engine warmers,* wide-tracked vehicles, and other appropriate equipment at the front.

General V. M. Sokolovski of the Soviet Army attributed the German failure to seize Moscow and the successful Russian stabilization of the front to: (1) the strong Soviet will to resist (probably enhanced by imprudent occupation policies of the German government in conquered areas); (2) the increased output of armaments by Soviet factories (a factor which was badly underestimated by German leaders); (3) German weaknesses in rear areas (due in part to poor communications routes as well as to the unwise treatment of the civil populace by German government agencies, which tended to encourage partisan activities); and (4) the loss of faith by German soldiers in the invincibility of their armies. Other Russian leaders could find little reason for the termination of the initially so successful German offensive.† According to Field Marshal Kesselring, one Soviet general called the deadlock before Moscow a "repetition of the incomprehensible miracle of the Marne," which saved "Moscow in 1941 as it had saved Paris in World War I." Some have suggested that the Luftwaffe was surprised by the arrival of winter-trained Siberian troops in Moscow, who helped to turn the tide of battle. Evidence shows, however, that German leaders were aware of the

*Editor's Note: Luftwaffe personnel found that engines which were stopped overnight in the sub-zero temperatures could frequently not be started again. Because of this, all sorts of engine warming devices were improvised. See Figures 41 and 42.

†Editor's Note: German forces, elated at the tremendous amount of booty and the number of prisoners captured in western Russia, failed to note that the Soviet field armies had not been defeated, since thousands had withdrawn to the East. German commanders failed to revise their plans accordingly before the arrival of winter, but instead rushed headlong into the interior of the Soviet Union with all available forces. Lacking any reserves, even the slightest reversal of the situation was bound to have disastrous results.

arrival of reinforcements as early as August of 1941 and that the winter arrivals had been sighted by aerial reconnaissance. 39

The question has been raised whether the Luftwaffe could have done more to support the German Army or to expedite its advance. Greater efforts might have been possible if the forces of the Luftwaffe had not been so thinly spread over such a great area. As the war progressed, attrition destroyed the Luftwaffe's scanty reserves and kept it from fulfilling even the tactical assignments for ground force units. Since the requests of the Army could not be satisfied in all places simultaneously, it should not have been surprising that efforts to gratify all such demands would eventually bleed the Luftwaffe white.

At the beginning of the campaign the German Air Force swept the Soviet Air Force from the skies and destroyed nearly all of its obsolete aircraft. This could have been a decisive victory if the Luftwaffe had been able to stifle the reconstruction of Russian air forces through a destruction of the Soviet aircraft industry and the closing of the ports of Murmansk, Arkhangelsk, and the Black Sea area. This it was not able to do. Strategic objectives in the Soviet Union might have been attained if the Luftwaffe had carried out systematic strategic operations. By the end of October it should have been clear that the "Blitzkrieg" warfare was not going to work. A joint request at that time by the General Staffs of the Army and the Luftwaffe asking for an interruption in operations to prepare for all-out strategic air warfare might have succeeded, but this was not done.* Since all significant operations over Britain ceased about the time of the invasion of Russia, at least two bomber wings should have gone at once to the East for strategic assignments. These units (4th and 28th Bomber Wings) were eventually sent to the East anyway, but by the time they arrived they were desperately needed for tactical purposes and to fill in the gaps caused by the increasing attrition rates among other Luftwaffe combat units.

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*Editor's Note: Even had the Luftwaffe made the decision to use strategic air power, and even if the High Command of the Wehrmacht had approved this type of action, the question could be fairly raised whether the Luftwaffe had the proper type of aircraft and equipment to carry out such operations. Too, it should be borne in mind that air forces had to be used against the British in the West and in support of German troops still fighting in Cyrenaica.

The principle of concentration of forces was not uniformly observed among Luftwaffe units in the Soviet Union. Real concentrations of air power were observed on only two occasions in 1941, once in the general advance upon Leningrad and again during the offensive against Moscow. At all other places the German Air Force was employed in a piecemeal fashion, usually in accordance with the demands of front line ground units. Unfortunately for the Luftwaffe, German ground forces found themselves in a series of crises at the very time when Air Force reserves were at a critically low ebb and when combat air units were least able to give support. By the winter of 1941-42 the effects of war were beginning to tell heavily upon Luftwaffe organizations in Russia and in other theaters as well. It was the beginning of the death of the German Air Force.

FOOTNOTES

Chapter 1

1. Generalfeldmarschall Albert Kesselring (Ret.), Soldat bis zum letzten Tag (Soldier to the Last Day), Bonn: Athenaeum Verlag, 1953, p. 114. Cited hereafter as Kesselring, Memoirs.

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APPENDIX I

The Fuehrer and Supreme Commander
of the Wehrmacht
High Command of the Wehrmacht
Wehrmacht Operations Staff
National Defense Branch (Group I)
No. 33 408/40, Top Secret

Fuehrer Headquarters
18 December 1940

Directive No. 21

OPERATION BARBAROSSA

The German Wehrmacht is to make preparations for the conquest of Soviet Russia in a swift campaign (Operation BARBAROSSA), even before the war against England has ended.

Toward this end, the Army will employ all available forces, with the exception of those required to protect the occupied territories against surprise attacks.

The Air Force will have the important task of making available for the support of the Army in the eastern campaign forces in such strength as to make it possible to count upon a speedy conclusion of the ground operations, and the task of making certain that enemy air attacks will inflict as little damage as possible upon the eastern part of Germany. This concentration of forces in the East will be limited only insofar as it will be necessary to assign sufficient troops to adequately protect the entire combat zone and arms-producing region under our control against enemy air attacks, and to make sure that offensive operations against England, especially her supply shipments, will not come to a halt.

Naval operations will definitely continue to be concentrated against England, even during the entire campaign in the East.

I shall issue the order for the strategic concentration of forces against Soviet Russia, if the occasion arises, eight weeks prior to the contemplated start of operations.

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Those preparations which require a longer period to get under way should - as far as this has not been done already - be initiated immediately and be concluded by 15 May 1941.

However, it is of decisive importance to make sure that there is no indication of any plan to attack.

The preparations made by the High Commands are to be based on the following elements:

I. OVER-ALL OBJECTIVE:

The bulk of the Soviet Army stationed in western Russia is to be annihilated in bold operations and with far-reaching drives of armored spearheads; the withdrawal to the rear of elements [of the enemy] at fighting strength is to be prevented.

Thereupon a line will be reached in rapid pursuit beyond which the Russian Air Force will no longer be able to attack the [German] Zone of Interior. The final objective of the operation is the establishment of a general line extending from the Volga to Arkhangelsk which will constitute a covering line against Asiatic Russia. In this way, the Air Force, if necessary, will be able to destroy the last remaining Russian industrial areas in the Ural.

As a result of these operations, the Russian Baltic Fleet will be quickly deprived of its bases, which will render it unfit for combat. From the very beginning of the operation, we must, by means of powerful blows, prevent the Russian Air Force from taking any effective [counter] measures.

II. PROSPECTIVE ALLIES AND THEIR MISSIONS:

1. We can count on Rumania's and Finland's active participation in the war against Soviet Russia on the flanks of our operations.

The Wehrmacht High Command (OKW), in accordance with current requirements, will arrange and determine the manner whereby the fighting forces of these two countries will be placed under German command.

2. Rumania's task will consist in pinning down the enemy troops they are facing in joint operation with the German forces stationed there, and on the whole, in rendering assistance in the rear areas.

3. Finland's mission will be to cover the strategic concentration of the German northern Army Group (parts of the XXI Group) withdrawing from Norway and to carry out joint operations with this group. In addition, Finland will be assigned the task of depriving the enemy of the use of Hangö (Hanko).

4. We have reason to believe that Swedish railways and roads will be available for the assembly march of the German Army Group North at the latest beginning with the start of operations.

III. THE CONDUCT OF OPERATIONS:

A. Army (approval of the plans submitted to me):

In the Zone of Operations, which is divided by the Pripyat Marshes into one southern and one northern part, the emphasis will be placed in the North. Two army groups will be assigned here.

The army group in the southern part - in the center of the overall front - will be charged with the task of advancing with especially strong armored and motorized units from the area around Warsaw and north thereof and to rout the enemy forces in White Russia. This will perforce make it possible for large portions of the mobile troops to pivot to the north in order to be able to annihilate the enemy forces fighting in the Baltic States, acting in joint operation with Army Group North advancing from East Prussia in the general direction of Leningrad. Only after the success of this most urgent mission has been assured, which should be followed by the occupation of Leningrad and Kronshtadt, should offensive operations for the capture of the important communication and armament center Moscow be continued.

A simultaneous attempt to accomplish both objectives could be justified only by a surprisingly rapid collapse of Russian resistance.

The defense of Norway is still the most important mission of the XXI Group, even during the campaign in the East. Those forces which are available beyond these requirements will be committed in the North (the Mountain Corps), first of all for the defense of the Petsamo region and its ore mines and also of the Arctic Sea Route. Following that, they will push forward, in joint operation with Finnish forces, for an attack against the Murmansk railway and in order to prevent the land shipments of supplies destined for the Murmansk area. Whether or not it will be possible to conduct such an operation with larger numbers of German forces (2-3

divisions) advancing from the area of Rovaniemi and south thereof depends upon Sweden's willingness to place her railways at our disposal for such a strategic concentration.

The main body of the Finnish Army will be charged with the mission (in keeping with the progress made by the German northern wing) of tieing down as many Russian troops as possible by attacking west of or on both sides of Lake Ladoga, and to take possession of Hangö.

The army group committed south of the Pripyat Marshes will also attempt a double envelopment. Strong forces concentrated on both wings are to achieve the complete annihilation of the Russian troops in the Ukraine west of the Dnepr. The main attack will be directed from the Lublin area toward Kiev, while the forces concentrated in Rumania will cross the lower Pruth River and form the other arm of a wide envelopment. The Rumanian Army will have the mission of tieing down the Russian forces which are to be caught between the two pincers.

Once the battles south and north of the Pripyat Marshes have been brought to a successful conclusion, pursuits will be launched with the following objectives:

In the south the Donets Basin, highly important from a military point of view, must be seized without delay.

In the north the swift capture of Moscow. The capture of this city means a decisive victory, politically and economically, and, in addition, spells the elimination of the Russians' most vital railway hub.

B. Air Force:

The Air Force will be charged with the responsibility to paralyze insofar as possible the activities of the Russian Air Force and put it out of commission, and to support the operations of the Army at its points of main effort, particularly in the Army Group Center area and along the north wing of Army Group South. According to their significance for the course of the campaign, the Russian railways will be severed by air attacks. The most important railroad installations (river crossings!) will be seized by bold operations by parachute and airborne troops. The [Soviet] armament industry should not be attacked during the major operations in order to be able to concentrate all Luftwaffe elements against the enemy air force and for the direct support of the Army. Strategic attacks, particularly against the Ural region, are advisable only after the mobile operations have been concluded.

C. Navy:

In this campaign, besides safeguarding our own coast, the Navy will have the mission of preventing the escape of enemy naval forces from the Baltic Sea. After Leningrad has been seized the Russian Baltic Fleet will have been deprived of all its bases. Since its situation will then be completely hopeless, major naval engagements prior to that time must be avoided. After the Russian Fleet has been put out of commission, it will be essential to safeguard the total maritime traffic in the Baltic Sea, including the supply shipments for the northern army (mine sweeping).

IV. All measures which are to be taken by the Commanders in Chief on the basis of this directive should definitely concur in one point: they are to be referred to as precautionary measures in case Russia should change her present attitude toward us. The number of officers who will be assigned to early preliminary duties is to be kept as small as possible, and then only insofar as is necessary for the performance of their individual duties. Otherwise the danger exists that our preparations may become known - the execution date of which has not even been set - and very serious political and military complications will be the result.

V. I await the reports of the Commanders in Chief concerning their future plans which are to be based on this directive.

All services of the Wehrmacht will report to me via the Wehrmacht High Command (OKW) on the measures which they contemplate, including their chronological progress in preparations.

signed: ADOLF HITLER

APPENDIX II

BIOGRAPHICAL SECTION OF IMPORTANT PERSONALITIES

Generalleutnant Heinrich Aschenbrenner

Served in the infantry in World War I. After the war qualified as a pilot, and from August to September 1931 was attached to the Russian 20th Air Force Brigade during the time when German air units were proscribed. Aschenbrenner served as Air Attaché in Moscow 1939-40 and as Chief of Signals for the German Second Air Fleet 1940-42. With the exception of a tour of duty in Norway in 1943, Aschenbrenner served during the remainder of the war as Chief of Signals of the High Command of the Luftwaffe.

General der Flakartillerie Walter von Axthelm

Von Axthelm served in the field artillery during World War I. Following the war he transferred to the antiaircraft artillery arm. In 1931 he became a General Staff officer in the Reichswehr Ministry in Berlin, and on 1 April 1935 transferred to the Luftwaffe as a member of the Reichs Air Ministry and Inspector of Antiaircraft Artillery. During World War II he became the most prominent antiaircraft artillery officer in the Luftwaffe. His promotion dates of significance were: Colonel, 1 February 1939; Generalmajor, 28 May 1940; Generalleutnant, 1 October 1942; and General der Flakartillerie, 1 April 1944.

Field Marshal Fedor von Bock

A nephew of the famous General von Falkenhayn, who headed Germany's Imperial Army Command 1914-16, Bock was one of Germany's most able commanders. In World War I he won numerous decorations. During the Polish Campaign of 1939 he commanded Army Group North, and in 1940 directed Army Group B in the West. In the invasion of Russia, 22 June 1941, he commanded Army Group Center. On 18 January 1942 he assumed command of Army Group South until he was sent to the Reserve Army 15 July 1942. He was killed with his family on a road in northern Germany by Allied fighters 5 May 1945.

General der Flieger Walter Boenicke

A World War I flyer, Boenicke was an early member of the new Luftwaffe. During 1941 he served as Chief of Staff of the I Air Corps under the command of General Foerster. Promoted on 1 September 1943 to Generalleutnant and on 1 March 1945 to General der Flieger, Boenicke was also active with antiaircraft artillery forces. He died in 1947 while in British captivity.

General der Flieger Rudolf Bogatsch

General Bogatsch served during World War I as an infantry officer of the line and as a General Staff officer. He left the active service to join a unit of "irregulars" organized to combat Polish incursions along the Silesian border in 1921. He served thereafter in infantry and cavalry units in the Reichswehr. On 1 April 1933 he was promoted to Lieutenant Colonel and assigned to the Reichs Air Ministry. Thereafter he held numerous important posts in the new Luftwaffe, including command positions in the antiaircraft artillery forces, and in air administrative and training commands. Holder of the Knight's Cross, he was promoted to General der Flieger 1 July 1941.

General der Infanterie Guenther Blumentritt

Blumentritt was a highly decorated infantry officer in World War I. After the war he served in various capacities in the German General Staff (then called Truppenamt) in the Reichswehr. In December of 1941 he became Oberquartiermeister I (Chief Quartermaster) in the Army High Command, and served in this office until 25 September 1942. From 25 September 1942 to 5 September 1944 Blumentritt was Chief of the General Staff of the German Command in the West, and from 3 February to 20 March 1945 served as head of the German Twenty-Fifth Army. He has rendered invaluable assistance to the German Historical Monograph Project of the U.S. Army under the Office of the Chief of Military History, and has written a number of significant military works.

Field Marshal Walther von Brauchitsch

One of the senior German Army commanders, von Brauchitsch was groomed for General Staff duties even prior to World War I, a war

in which he served with distinction. Emerging from the war as a Major in the General Staff Corps, he soon became a leading figure in the new Reichswehr. On 4 February 1938 he became Commander in Chief of the German Army, a post which he held until 19 December 1941. Retired ostensibly on grounds of poor health, he was actually forced out by Hitler, who was angered at Brauchitsch's order to withdraw the German Army to safer defensive positions in the face of furious Soviet counterattacks around Moscow. Hitler then took personal command of the Army, which thereafter lost its last remnant of Prussian control.

Field Marshal Ernst Busch

An older Army officer who served with honor during World War I, Busch served in various staff positions in the Reichswehr Ministry during the 1920's and early 30's. He commanded the Sixteenth Army in the West from 15 October 1939 to the end of March 1941, and at the end of May moved to the East with his unit to prepare for the war against the Soviet Union. On 11 October 1943 he relinquished command of the Sixteenth Army to assume command of Army Group Center, and on 15 April took command of German Forces in the North (Western Front). Long suffering from a heart ailment, he died in 1945 while in British custody.

General-Admiral Rolf Carls

Carls served with distinction in the German Imperial Navy during World War I. By 1936 he was Admiral of the German Fleet, and served during 1936 and 1937 in Spanish waters. He assumed command 1 November 1938 of the German Naval Station Baltic, and on 21 September 1940 directed German Naval Command North, a post he held until 1 March 1963. He was promoted to General-Admiral 19 July 1940, and was killed in an Allied air attack upon Germany in April 1945.

General der Flieger Paul Deichmann

General Deichmann served as an infantry officer, an aerial observer in the First World War, and later as an officer in the Reichswehr. In 1934 he transferred to the Reichs Air Ministry as a technical advisor. During World War II he served as Chief of Staff of the II Air Corps in the West and later in Russia. From 20 August 1942 to 15 June 1943 he was Chief of Staff to the Wehrmacht Command South under Field Marshal Kesselring. Deichmann subsequently held other important posts

in the Luftwaffe, including the command of the IV Air Administrative Command (Austria). A recipient of the Knight's Cross, General Deichmann lent invaluable assistance to the USAF Historical Division's German Historical Monograph Project in Karlsruhe as well as to the Fuehrungsakademie of the Bundeswehr.

Generaloberst Otto Dessloch

Dessloch, a senior Wehrmacht officer in World War II, was born in Posen and served during World War I in a Bavarian cavalry regiment and later as a pilot and squadron commander in the West. After the war he served in the Reichswehr. In 1926 he took air training in the Soviet Union, at a time when such activities were forbidden in Germany by the Treaty of Versailles. He became a Generalmajor and Commander of Air Division 6 by 1939, and at the outbreak of war against Russia commanded the I Antiaircraft Artillery Corps. He later commanded the Fourth and Sixth Air Fleets. A Knight's Cross winner, Dessloch survived the war.

Generaloberst Eduard Dietl

Born in Bad Aibling, Bavaria, Dietl served with distinction in the Bavarian Army in World War I. After the war he served in the new Reichswehr. An expert skier and mountaineer, Dietl was active in the formation of the German Mountain Troop organization. In 1941, following a successful campaign around Narvik, he took command of the XIX Mountain Corps in northern Norway and Finland. On 20 January 1942 he assumed command of the German Army Command Lapland, and on 20 June 1942 of the Twentieth Mountain Army. This highly popular and able general (Generaloberst 1 June 1942) was killed in an air accident 25 June 1944.

Generaloberst Nikolaus von Falkenhorst

During World War I von Falkenhorst served with distinction in a Prussian infantry regiment. After the war he remained in service. He commanded the XXI Army Group in the Norwegian Campaign, and on 15 April 1941 assumed command of Army Command Norway in Norway and Finland. On 20 January 1942 he took command of all Wehrmacht forces in Norway, a post he held until 18 December 1944. Sentenced to death by a joint British-Norwegian court after World War II, his sentence

was first commuted to life imprisonment, then to ten years, and on 23 July 1953 remitted.

General der Flieger Martin Fiebig

Colonel, 6 January 1938; Generalmajor, 4 January 1941; retired 1955. Fiebig was among those officers who trained in the Soviet Union in the late 1920's. He was a specialist in close support operations and later commanded Air Division 1, VIII Air Corps, II Air Corps, and finally was Commander in Chief of Luftwaffe Command Northeast.

General der Flieger Veit Fischer

Fischer was a veteran of World War I, having served in the Army. He was active in the development of the new Luftwaffe in the early 1930's, and on 20 April 1936 was promoted to Colonel. Prior to the outbreak of World War II he had attained the rank of Generalmajor and on 1 December 1940 was promoted to Generalleutnant. In 1941 and 1942 he commanded Staff for Special Duties in Air Administrative Commands II and I, respectively, and Headquarters of Air Administrative Command Moscow. Promoted on 1 June 1942 to General der Flieger, Fischer later commanded Air Administrative Commands XXVII and VIII.

General der Flieger Helmuth Foerster

A highly decorated veteran of World War I, Foerster served during part of that conflict as a flying officer. He reentered the military service 1 March 1934 as a Lieutenant Colonel in the Luftwaffe. On 1 March 1936 with his promotion to Colonel he assumed command of Bomber Wing "General Wever." He commanded an air division in the Polish Campaign, and by 1 January 1940 had attained the rank of Generalleutnant. He was Chief of Staff of the Fifth Air Fleet in the Norwegian Campaign, a member of the German-French Peace Commission of 22 June 1940, and Wehrmacht Commander in Serbia in 1941. On 22 June 1941 he commanded the I Air Corps (East), and from 1 October 1942 until the war's end served as Chief of Administration, Reichs Air Ministry. He was pensioned (1952) as a Lieutenant Colonel.

Reichsmarschall Hermann W. Goering

Goering, credited with 20 aerial victories in World War I, was the last commander of the famous Fighter Wing No. 1. After the war he promoted aviation ventures in Sweden and Germany, avidly supporting the vociferous Nazi Party, of which he was an early member. Forced to flee to Sweden after Hitler's 1923 "Putsch" in Munich, he returned to the Reich and became a leading political figure. Persuading aging President von Hindenburg to make him an infantry general, the stage was set for his selection 1 March 1935 as Commander in Chief of the Luftwaffe and promotion in 1938 to Field Marshal. On 19 July 1940 he became the only Reichsmarschall in Germany. Congenial, but also ruthless at times, he was fond of sumptuous living, increasingly shirking his command duties, eventually even losing favor with Hitler. Removed from his post 23 April 1945, he only escaped a worse fate by the intervention of his own troops. Tried and sentenced in the main trials at Nuremberg, he took his own life 15 October 1946.

Field Marshal Robert Ritter von Greim

Greim was credited with 28 aerial victories in World War I, in which he earned a hereditary title from the King of Bavaria and numerous distinctions. He helped organize Chiang Kai-shek's Chinese Air Force in the 1920's, and organized the German Commercial Pilot's School in Wuerzburg. He reentered military service 1 April 1934 as a Luftwaffe Major in command of Fighter Wing "Richthofen." In 1939 he commanded Air Division 5, and from 1940-43 commanded the V Air Corps. In July 1943 he assumed command of Luftwaffe Command East (later designated Sixth Air Fleet). Promoted 25 April 1945 to Field Marshal, he was given Goering's post as Commander in Chief of the (then almost nonexistent) Luftwaffe. A Knight's Cross winner, he committed suicide in 1945 shortly after his capture by American forces. Few commanders were more popular among German airmen than Greim.

Generaloberst Heinz Guderian

A World War I soldier who served with distinction, Guderian served in the Truppenamt (Troop Office, a cover for the General Staff after World War I) of the Reichswehr between wars under Col. Freiherr von Fritsch. During the Polish and Western campaigns he commanded an armored group. From May of 1941 to 5 October 1941 Guderian

commanded the 2nd Panzer Group in Russia. He was then retired because of differences with Hitler. On 21 February 1943 he was recalled to duty as General Inspector of Armored Forces, a position he held until the end of the war. He was promoted 19 July 1940 to Generaloberst. Guderian wrote a number of books and articles of note after World War II concerning German military history, and died in the 1950's.

Generaloberst Franz Halder

This distinguished staff officer won numerous decorations in World War I, and served as a member of the German General Staff between wars. In early 1938 he became Chief Quartermaster I in the High Command of the German Army, and on 31 August 1938 was appointed Chief of the General Staff of the Army, a post he held until his resignation 24 September 1942. An eminent strategist, Halder often found himself at odds with Hitler, which led to his decision to resign. After World War II he served as the driving force in the U.S. Army's German Historical Monograph Project under the direction of the Office of the Chief of Military History. He also lent assistance to the USAF Historical Division's German Historical Monograph Project.

Generalleutnant Adolf Heusinger

Heusinger served from World War I through World War II, being a distinguished staff officer in each conflict. From 1937 on he was Chief of Operations Branch, Army General Staff, where he became a well known personality. Implicated in the 20 July 1944 plot against Hitler, he was never cleared of charges when the war came to an end. After 18 months imprisonment by the Allies, he was released and later became a highly respected general officer of the West German Bundeswehr. An attempt in December 1961 by Soviet authorities to discredit him by claiming he had been responsible for wartime atrocities was investigated and summarily rejected by U.S. officials.

Generaloberst Hermann Hoth

Generaloberst Hoth was chiefly a combat commander and distinguished himself in both World War I and World War II. He participated in the Polish and Western campaigns, and on 22 June 1941 commanded the 3rd Panzer Group in Russia. On 5 October 1941 he assumed command of the Seventeenth Army, a post which he held until June 1942 when he took

charge of the 4th Panzer Army (Eastern Front). In November 1943 he became Commander of German Forces Erzgebirge (Ore Mountains in Bohemia). Hoth, promoted 19 July 1940 to Generaloberst, was tried in the High Command of the Wehrmacht (OKW) trials in Nuremberg 1947-48 and sentenced to 15 years imprisonment at Landsberg.

Generaloberst Hans Jeschonnek

Jeschonnek served ably in World War I and in World War II. Between wars he served in the Reichswehr and promoted various aviation groups. On 1 September 1933 he transferred to the Luftwaffe as a Captain and began his meteoric rise in the Luftwaffe General Staff. By 1 February 1939 he had become Chief of the Luftwaffe General Staff, on 19 July 1940 was promoted to General der Flieger, and on 1 March 1942 to Generaloberst. Although a protege of General Wever, Jeschonnek remained a bitter opponent of strategic air power. He often differed with Goering and occasionally with Hitler, whom he considered a genius. His appointment as Chief of the General Staff of the Luftwaffe represents the first clear break with the older traditions of the Reichswehr. The circumstances surrounding his suicide 19 August 1943 provide an interesting insight into command and policy problems in the Luftwaffe.

Generaloberst Alfred Jodl

Jodl, a Bavarian, served in the field artillery during World War I, winning several significant decorations. After the war he served in a number of staff positions in the "100,000 Man Army." From 1935 to 1939 he headed the Home Defense Branch of the German Army, and on 22 August 1939 became Chief of the German Army Operations Office. From 8 August 1940 until the end of World War II he headed the Wehrmacht Operations Staff. Jodl (Generaloberst 1 February 1944) was tried and convicted in the main trials at Nuremberg, and executed 16 October 1946.

Field Marshal Wilhelm Keitel

This officer entered the military service just after the turn of the century, served ably during World War I, and remained in service after 1918. By 1 September 1939 he had risen to the post of Chief of the High Command of the Armed Forces, an office he held until the end of World War II. Hitler found him useful chiefly because he could rely upon him to be a "Yes man," and one who might help keep the old Reichswehr

officers in line; he was, for this very reason, held in somewhat lesser esteem by the professional officer corps. He was often unwilling to contradict Hitler on vital issues. He was tried and convicted in the main trials of the OKW at Nuremberg and later executed 16 October 1946.

Generaloberst Alfred Keller

Keller won the highest decorations during World War I as Commander of Bomber Wing 1, and was an "old eagle," having flown before 1914. He advanced civil aviation enterprises in the 1920's and in 1934 returned to the Army as a Major. On 1 March 1935 he transferred to the Luftwaffe and subsequently served in several administrative commands. On 1 March 1939 he was promoted to General der Flieger and took command of the IV Air Corps. From 22 June 1941 to 28 July 1943 he commanded the First Air Fleet in Russia. A respected Luftwaffe officer, Keller survived the war.

Field Marshal Albert Kesselring

Kesselring, undoubtedly the best known Luftwaffe combat commander to Americans, served with distinction in World War I and later in the Reichswehr. He transferred to the Luftwaffe 1 October 1933 and became a general in 1934. He held several administrative commands until 1938, when he took command of the First Air Fleet. In 1940 he assumed command of the Second Air Fleet and served in the West and in Russia. From 1 December 1941 to 11 June 1943 he commanded the Second Air Fleet and German Forces in the Mediterranean, and from 26 July 1943 to 10 March 1945 commanded Army Group "C" and German Forces in Italy, as well as defense forces in the West and South. Known as "smiling Albert," he was an extremely able and popular commander. After World War II he rendered great assistance to the USAF Historical Division's German Historical Monograph Project in Karlsruhe, where his presence encouraged other German military officers to support the program. Promoted 19 July 1940 to Field Marshal, Kesselring died 16 July 1960.

Field Marshal Ewald von Kleist

Born in a famous Prussian family, 31 of whom had won the coveted Pour le Mérite, Kleist served with distinction in World War I and successfully made the transition from the cavalry forces to armored units

after the war. Retired 28 February 1938, he was recalled to duty as Commander of the XXII Army Corps 1 September 1939. He later served in the West and in the Balkans with armored units. On 22 June 1941 he took part in the invasion of Russia at the head of the 1st Panzer Group, and on 22 November 1942 assumed command of Army Group "A" (East), with which he served until 30 March 1944. An eminent field commander, Kleist was delivered to the Tito government in 1946 by the Americans, and in 1948 he was turned over to the Soviet Union, where he is reported to have died in a Russian prison.

Field Marshal Guenther von Kluge

Von Kluge, a Posener, had an outstanding record as a mountain artillery officer in World War I. Between the wars he served in staff, line, and administrative positions in the Reichswehr. He commanded the Fourth Army in Poland, in the West, and along the German-Soviet border. On 22 June 1941 he participated in the Russian campaign with the Fourth Army. On 18 December 1941 he assumed command of Army Group Center, which post he held until his transfer 12 October 1943 to the Fuehrer Reserve. From July 1944 to 17 August 1944 he commanded Army Groups "B" and "D" in the West. An avowed enemy of Hitler, he participated in the plot of 20 July 1944. Summoned to appear in Berlin, obviously for Gestapo interrogation, von Kluge took poison on 19 August 1944. An able and respected officer, he was another of the old Army men who had early become disenchanted with Hitler and his schemes.

Generaloberst Guenther Korten

General Korten served ably in the First World War, in which he won several decorations of note. By 1939 he was one of the leading personalities in the Luftwaffe. From 1 September 1939 to October 1939 he served as Chief of the General Staff of the Fourth Air Fleet in Poland, from early 1940 to July 1940 as Chief of the General Staff of the Third Air Fleet in the West, and in April 1941 assumed the position of Chief of the General Staff of the Fourth Air Fleet in the Balkans, a unit with which he served in Russia as well. From July 1942 he held the commands of the I Air Corps, Air Force Command Don, First Air Fleet, and on 25 August 1943 became Chief of the General Staff, Luftwaffe, a post he held until 22 July 1944. An able staff officer, he was seriously wounded in Count von Stauffenberg's bomb attempt on Hitler's life, and died two days later.

Field Marshal Georg von Kuechler

An outstanding soldier of World War I, von Kuechler later served in the Reichswehr, and held various administrative posts until World War II. He commanded the Third Army in Poland, the Eighteenth Army in the West, and on 22 June 1941 directed the Eighteenth Army in the invasion of the Soviet Union. From 16 January 1942 until 9 January 1944 he was Commander of Army Group North on the Eastern Front. He was promoted to Generaloberst 19 July 1940 and to Field Marshal 30 June 1942. After World War II he was sentenced to 20 years imprisonment as a result of the OKW trials in Nuremberg. In 1951 his sentence was remitted to 12 years and on 18 February 1955 he was freed.

Field Marshal Wilhelm Ritter von Leeb

One of the oldest commanders who served during World War II, von Leeb served with great distinction in the Bavarian Army during World War I. Having retired from active duty 28 February 1938, he was recalled to duty on 3 September 1939 and given the command of Army Group "C." On 1 April 1941 he assumed command of Army Group North, which he commanded until 16 January 1942, when he finally retired from the service. Deeply steeped in the older traditions of the Imperial Army, von Leeb was highly respected by the officer corps, but often differed with Hitler. Promoted 19 July 1940 to Field Marshal, he resigned 16 January 1942.

Generaloberst Alexander Loehr

General Loehr was an Austrian national, born in Croatia, who saw extensive service as a flying officer and as a member of the Austro-Hungarian General Staff during World War I. By 1938 he had become Commander in Chief of the Austrian Air Force, a position he held for a time after the Anschluss of 1938. From 18 March 1939 to 24 June 1942 he commanded the Fourth Air Fleet in Vienna, Poland, the Balkans, and in Russia. Thereafter he commanded German Armed Forces in the Southeast and Army Group "E." His efforts to protect the pro-German Croatians in the closing days of World War II earned him the enmity of Tito's forces. Promoted 9 May 1941 to Generaloberst. Executed after a flimsy trial by the Yugoslavs 16 February 1947.

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Generaloberst Bruno Loerzer

A Berliner, Loerzer won numerous distinctions during World War I while serving in Fighter Wing 26. He was credited with 44 aerial victories, making him one of Germany's top "aces." In 1919 he fought in the Baltic, and in 1920 left the service. Between World War I and the early 1930's he promoted various flying ventures. On 1 April 1935 he returned to duty as a Colonel in the Luftwaffe, and by 4 February 1939 had become a general officer and Commander of Air Division 2 (later designated II Air Corps). On 29 May 1940 he was promoted to General der Flieger, and on 16 February 1943 to Generaloberst. Having served on various fronts, he was made Chief of the Personnel Branch, Reichs Air Ministry on 23 February 1943. From 19 June 1944 until the war's end he was Chief of Luftwaffe Personnel, responsible for National Socialist leadership. He survived the war.

Generalmajor Bruno Maass

A World War I flyer, Maass served as Commander of Bomber Wing "General Wever" during 1936-37, as Chief of Staff of the 3rd Luftwaffe Command Headquarters, as Chief of Staff of Luftwaffe Administrative Command VII, and in several positions in connection with the Luftwaffe Mission to Rumania. His final service was performed as a member of the Office of the Commanding General of Aviation, Reichs Air Ministry. Promoted 1 August 1941 to Generalmajor, he was hospitalized in 1944 and saw no further action.

Field Marshal Carl Gustaf Freiherr Mannerheim

A great Finnish statesman and military leader, Mannerheim came from an old military family, and was one of the top cavalry officers in the Imperial Russian Army prior to and during World War I as well as being a member of the Imperial War Council. In December of 1917 he left the Czar's service and took command of the Finnish Army of Liberation. German units were dispatched by the Kaiser to help him drive out the Russians. Mannerheim held the degree of Doctor of Philosophy and made substantial contributions in the field of geography. A great peacetime statesman and officer of the "old school," he again proved his mettle during the Russo-Finnish War of 1939-40 and during World War II, in which he served as Commander in Chief of Finnish Armed Forces.

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Field Marshal Erich von Manstein

This famous soldier, the son of General Eduard von Lewinski, was later adopted by General Georg von Manstein. He served in some of the finest units in the German service and distinguished himself in Belgium, East Prussia, Poland, Serbia, France, and Courland during World War I. By 1939 he had become Chief of Staff of Army Group South (von Rundstedt), and on 18 September 1941 assumed command of the Eleventh Army in the East. On 22 November 1942 he took command of Army Group Don, on 14 February 1943 of Army Group South. Many rate him as the finest strategist in the German Army during World War II. A much more reflective and considerate person than Hitler, von Manstein often had differences with his leader. On 30 March 1944, after a final disagreement with Hitler, von Manstein resigned. His work Verlorene Siege (Lost Victories) is one of the best military histories concerning German operations in World War II.

General der Artillerie Erich Marcks

A proven soldier in World War I, Marcks was Chief of the General Staff of the Eighteenth Army by the outbreak of World War II. By 1940 he had become a divisional commander (101st Light Infantry Division). He later became Commander of the LXXXIV Army Corps in the West. Marcks, son of the famous German historian, was promoted 1 October 1942 to General der Artillerie. This officer, whom von Rundstedt called "a superior commander," fell near St. Lô, France, 12 June 1944.

General der Flieger Rudolf Meister

Meister was an aerial observer in several flying units during World War I, and served in Field Flying Detachment 420 of the Freikorps (Free Corps) after World War I. From 1928 to 1930 he received training in the Soviet Union in military aviation. Meister then served with various schools and in General Staff branches of the Luftwaffe. On 19 December 1939 he became Chief of the General Staff, I Air Corps; on 15 October 1940 Chief of Staff of the VIII Air Corps; and on 1 September 1943 he assumed command of the IV Air Corps. Meister became Commander of German Air Forces Denmark on 15 October 1944, and finished his service as Chief of the Luftwaffe Personnel Office.

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Field Marshal Erhard Milch

Milch served during World War I as a member of Fighter Group 6. After the war he left the service and entered private aviation business. On 22 February 1933 he was appointed State Secretary of Aviation and given the rank of Colonel in the Luftwaffe. On 20 April 1936 he was promoted to General der Flieger, and on 1 November 1938 to General-oberst. Milch received his Field Marshal's baton 19 July 1940. Although many were at odds with Milch, he was considered to be a competent technical officer, with great talents in this field. He was also the person who blocked the route of subordinates seeking access to Reichsmarschall Goering. He survived the war.

Colonel Werner Moelders

This young officer began his military service in a Reichswehr unit in 1931. By 1935 he had transferred to the Luftwaffe for pilot training. During the Spanish Civil War (1936-39) he became a fighter squadron leader, and was credited with 14 aerial victories. At the outbreak of World War II he commanded a group in the 53rd Fighter Wing. In October 1940 he assumed command of the famous 51st Fighter Wing, and in 1941 took on the additional duties of Inspector of Fighters. This extremely gifted flyer and commander performed exemplary tasks on every front from the opening of the war until his death in an air accident 22 November 1941. At the time of his death he was Germany's top "ace" and had won its highest decorations. His loss was a great blow to the Luftwaffe.

Generalleutnant Andreas Nielsen

Born in Flensburg, Nielsen served during World War I and in the Reichswehr between wars. On 9 November 1923 he participated in the Hitler "Putsch" in Munich, and in 1928 went to Russia for flying training. In 1939 he went to Spain as a Bomb Group Commander in "Legion Condor." He then held a number of important staff assignments. On 19 October 1940 he became Chief of Staff, Fifth Air Fleet (Norway and Finland), a post he held until 24 December 1943 when he became German Luftwaffe Commander Denmark. On 21 May 1944 he became Chief of Staff, Air Fleet Reich, and finally assisted in the demobilization of the Luftwaffe in northern Germany in 1945. After two years of English captivity, he was released and became one of the principal contributors to the USAF Historical Division's German Historical Monograph Project. He died in April 1957

Field Marshal Friedrich Paulus

A World War I and Reichswehr staff officer, Paulus rose to Chief of Staff, Army Group 4 and Quartermaster I of the Army High Command by 1 August 1939. In January 1942 he was promoted to General der Panzertruppe and given the command of the Sixth Army in Russia, which he was forced to surrender 1 February 1943 at Stalingrad. Made a Field Marshal by Hitler 30 January 1943, his marshal's baton was flown in by air just in time for his capture as the first German Field Marshal taken in World War II. His actions during the Stalingrad campaign are still controversial. Later (probably not by choice) he took part in the "Freedom Committee" of captured German officers who sought to "sell" Communism and induce Germany to surrender. Paulus also became an Inspector of the People's Police in East Germany. He is now deceased

General der Flieger Kurt Pflugbeil

Pflugbeil was a World War I flyer, a member of the Border Police in Upper Silesia in 1919, and back in service by 1920. On 31 March 1928 he went to Russia to receive aerial bombing training. In the early 1930's he served in Germany and in Italy, and in 1935 Pflugbeil transferred to the Luftwaffe. By 1939 he was a Generalmajor, and on 7 August 1939 took command of the VIII Air Corps. From 13 January to 26 August 1940 he directed the Air Administrative Command which served Luftwaffe units in France and Belgium. Thereafter, until 4 September 1943, he commanded the IV Air Corps, much of which time he served in the East. General Pflugbeil, an able commander, completed his service as Commander of the First Air Fleet and survived the war. He died 31 May 1955.

Generalleutnant Hermann Plocher

See "About the Author" in the front part of this study.

Grand Admiral Erich Raeder

This distinguished naval officer was born in Wandsbek in 1876 and had a brilliant record in World War I, in which he saw action in the great "Cruiser Battle" off Dogger Bank in April of 1915, and served as Chief of Staff to Admiral Franz Hipper in the "Battle of Jutland" 31 May 1916. He later commanded the cruiser Cologne, and from 1928 to 31 May 1935

headed the German Naval Command (Marineleitung). From 1 June 1935 to 30 January 1943 he was Commander in Chief of the German Navy, and from that time until the war's end served as Admiral-Inspector of the Navy. Exemplifying the best traditions of the Imperial Navy, he often had serious disagreements with Hitler, resigning his command in early 1943. Tried in the main trials at Nuremberg, he was sentenced to life imprisonment in 1946, freed in 1955, and died in November 1962.

Field Marshal Walter von Reichenau

Von Reichenau served with valor in World War I and remained in service after the war. In the early 1930's he held various significant Army administrative positions. On 1 September 1939 he assumed command of the Tenth Army and served in Poland. In October 1939 he took command of the Sixth Army, a post he held until 30 December 1941 when he was assigned as Commander of Army Group South. Although apparently he enjoyed Hitler's early confidence--he made him a Field Marshal on 19 July 1940--he recognized the Fuehrer's shortcomings. A few weeks prior to his death on 17 January 1942 (heart attack), he had taken over von Rundstedt's command. Questions have been later raised concerning his sudden replacement and unexpected demise.

Generaloberst Hans Reinhardt

Reinhardt served ably in World War I and in the Reichswehr. By 5 October 1941 he had become Commander of the Third Panzer Army, which he directed until 16 August 1944. He then served until 25 January 1945 as Commander of Army Group Center. On 25 January 1945 he assumed command of Army Group North, a post he held just two days. Promoted 1 January 1942 to Generaloberst, he was sentenced in 1948 in the OKW trials at Nuremberg to 15 years imprisonment. On 27 July 1952 he was pardoned and freed.

Field Marshal Dr. Ing. Wolfram Freiherr von Richthofen

A cousin of the famous Baron Manfred, Wolfram also served in Fighter Wing No. 1 during World War I, being credited with 8 aerial victories. He later served in the Reichswehr and during the 1920's earned his doctorate in Engineering at Hanover. In 1936 he went to Spain with "Legion Condor" to assist General Franco. A year later he was Chief of Staff of that unit, and in the last year of war became Commander

of "Legion Condor." After experience in the Polish and Western campaigns, he was promoted 19 July 1940 to General der Flieger. On 22 June 1941 he commanded the VIII Air Corps in the East, and on 4 July 1942 assumed command of the Fourth Air Fleet. In 1943 he took command of the Second Air Fleet. Promoted to Field Marshal 16 February 1943. He was once an enemy of dive bombing, but later became a staunch enthusiast of such operations, which he carried out effectively in southern Russia. He died of a lingering illness in Austria on 12 July 1945.

Generalmajor Hans-Detlef Herhudt von Rohden

General von Rohden began his military service before World War I, and later served in that war as an infantry officer. After the war he was given special training for General Staff work. In 1935 he transferred to the Luftwaffe, serving with the Reichs Air Ministry. At the outbreak of war in 1939 he commanded a bomber group in Schwerin, and later became Chief of Staff of the IX Air Corps in the West. For three months in 1941 he was Chief of the General Staff, First Air Fleet in the East, and in 1942 was Chief of the General Staff, Fourth Air Fleet. He served in 1943 as instructor in the Air War Academy, and in 1944-45 as Chief of the 8th (Military Science) Branch of the General Staff of the Luftwaffe. Known afterward for some of his historical contributions to the history of air power, much of his work was unfinished. He died 17 December 1952 in the Taunus Mountains.

Colonel Hans-Ulrich Rudel

Son of a Lutheran pastor in Silesia, Rudel began his service in 1936. Commissioned 20 April 1938, he was immediately assigned to a dive-bomber group. During the Polish campaign he flew as a strategic reconnaissance pilot. He also served in the Western campaign. On 22 June 1941 he was again a dive-bomber pilot, in which capacity he won Germany's highest decorations. Promoted to Colonel 1 January 1945, Rudel flew 2,530 combat missions over the most critical areas of the front, destroyed 519 tanks (enough for an armored corps), numerous fortifications, the 23,500-ton Soviet battleship Marat and many smaller vessels, and remained in the East from 1941 until the war's end. Wounded five times, the last time losing a lower leg, he returned to action and continued his record. Already the recipient of the Knight's Cross with Oak Leaf, Swords, and Diamonds, Hitler devised for him the unique addition of the Golden Oak Leaf. Having survived the war, Rudel went to Argentina, where he works for an aircraft firm.

Field Marshal Gerd von Rundstedt

One of the older officers who served in World War II, Rundstedt represents not only an older age group, but in some respects the better traditions of the old Army. Highly decorated in World War I, he continued to serve in the Reichswehr after the war. Already a general in the 1920's, Rundstedt retired 31 October 1938. With the approach of World War II he was recalled and given the command of Army Group South for the Polish campaign. He then commanded Army Group "A" in the Western conflict. On 22 June 1941 he was in command of Army Group South in the East. Because of differences with the Fuehrer he was retired 3 December 1941. Aloof, aristocratic, and hostile to many of Hitler's ideas and mannerisms (including his coarse language), Rundstedt dubbed him the "Bohemian Corporal." He was again recalled and again retired before being finally placed in command for the Ardennes offensive. Imprisoned in 1945 by British authorities, he was released 5 May 1949 for reasons of illness and advanced age. Von Rundstedt died 24 February 1953.

Generalleutnant Josef "Beppo" Schmid

"Beppo" Schmid, who died 30 August 1956, was a Bavarian who entered the service after World War I, serving with Ritter von Epp's Freikorps (Free Corps). Commissioned in the infantry in the 1920's, Schmid transferred 1 July 1935 to the Luftwaffe, and became a member of its General Staff. On 22 June 1941 this officer was Chief of the 5th Branch (Military Intelligence) of the Luftwaffe General Staff. Schmid held various command positions in the Luftwaffe during World War II, but he is best known as a Luftwaffe intelligence officer in the Luftwaffe General Staff. A colorful and sometimes controversial character, Schmid was a participant in the Hitler "Putsch" of 9 November 1923. After the end of World War II he contributed to the USAF Historical Division's German Historical Monograph Project in Karlsruhe. He died suddenly on 30 August 1956.

Generaloberst Eugen Ritter von Schobert

Ritter von Schobert served with distinction in the German Army during World War I, winning some of the highest awards for valor and a hereditary title from the King of Bavaria. He continued his military service after the war, moving rapidly ahead in the Reichswehr. By 1938 he commanded Army Administrative Area VII (Munich). In June of 1941 he was in command of the Eleventh Army in Rumania and went into battle

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with his organization. He was killed instantly on 12 September 1941 when his Fieseler "Stork" liaison aircraft landed on a Russian mine.

General der Flieger Hans-Georg von Seidel

A veteran of the First World War, von Seidel was in the General Staff of the Army High Command before the end of the conflict. He left the Army in 1920 as a Captain of Cavalry, and returned to the service 1 April 1934 as a Major in the new Luftwaffe. By 1 September 1939 von Seidel had become a Generalmajor, and on 20 July 1940 was promoted to Generalleutnant. At the opening of the Russo-German war, von Seidel was General der Flieger and Quartermaster of the Luftwaffe. His final assignment was in command of the Tenth Air Fleet. He survived the war.

General der Flieger Hans Seidemann

Seidemann barely missed World War I, having entered the Cadet School before the termination of the conflict. He served later in infantry units in Potsdam and Munich. He transferred 1 July 1935 to the Luftwaffe in the rank of Captain, and rose rapidly in the General Staff. From 1 December 1938 to 30 June 1939 he served as Chief of Staff of "Legion Condor" in Spain. At the outbreak of World War II he was Chief of Staff, VIII Air Corps. On 6 August 1940 he became Chief of Staff, Second Air Fleet, a position he held until 1 August 1942. Seidemann later served (1943-44) as Air Commander Africa, as Commander of Luftwaffe Forces Tunis, and in 1945 commanded the VIII Air Corps. He was promoted 1 March 1945 to General der Flieger.

Generaloberst Adolf Strauss

Adolf Strauss served with great distinction during World War I, winning numerous significant decorations. By 1928 he had risen in the Reichswehr to the rank of Major and belonged to the Staff of the Infantry School in Dresden. He held a number of important posts, including (from November 1938 to the outbreak of World War II) that of Commander of Army Administrative Area II (Stettin). After service in the Polish conflict, he took part in the Western campaign. On 30 May 1940 he assumed command of the Ninth Army, which he later commanded in the invasion of the Soviet Union, until his retirement 15 January 1942. After World War II he was released from British custody 5 May 1949 on grounds of age and ill health.

General der Infanterie Heinrich von Stuelpnagel

This highly gifted commander was an ardent enemy of Hitler. Having served with honor during World War I and in the Reichswehr after the war, he was, by 1938, Chief Quartermaster I in the German Army High Command. In 1940 he presided over the Armistice Commission in France--he was known to speak very good French and to have a sympathetic attitude toward the French people--and later assumed active commands. From 22 June to 5 October 1941 he commanded the Seventeenth Army in the East. He was then retired to the Fuehrer Reserve. From February 1942 to 21 July 1944 he served as German Commander in France. During this time he was active in the plot to kill Hitler, and arrested the SS and SD detachments in Paris to ward off civil war at the time of von Stauffenberg's attempt, 20 July 1944. When the plot failed he set these units free, but he was immediately summoned to Berlin. Near Verdun he attempted suicide, but was rescued by the SS driver. Although blind in one eye, he was tried, convicted, and hung 30 August 1944.

Generaloberst Hans Juergen Stumpff

Generaloberst Stumpff entered military service before World War I, saw much war service during that conflict, and became a General Staff officer in the Reichswehr after the war. In 1933 he transferred to the Luftwaffe as Chief of the Personnel Office, Reichs Air Ministry. From 1 June 1937 to 31 January 1939 he was Chief of the General Staff of the Luftwaffe. During the first part of 1940 he commanded the First Air Fleet. On 11 May 1940, with his promotion to Generaloberst, Stumpff took command of the Fifth Air Fleet (Norway and Finland), a post he held until 5 November 1943. He later commanded defense units of the Reich until the capitulation. He was primarily an administrative officer, and basically an Army man, but received high decorations in both World War I and World War II.

General der Infanterie Georg Thomas

Thomas began his service in 1908, served during World War I, and later in the "100,000 Man Army." By 1 September 1939 he had become Chief of the Economic and War Armaments Office of the High Command of the Wehrmacht. At the end of 1942 he was relieved of those duties pertaining specifically to the War Armaments Office, but continued as Chief of the War Economy Office. On 16 January 1943 he was also

appointed General for Special Duties with the Chief of the High Command of the Wehrmacht (Keitel), but on 15 August 1944 he was relieved of all active assignments by Field Marshal Keitel, who thought he painted too pessimistic a picture of Germany's potential and the future course of the war. He remained in the Fuehrer Reserve until the end of the war.

General der Infanterie Kurt von Tippelskirch

This well-known officer won numerous distinctions in World War I, held important offices in the Reichswehr, and was a leading commander in World War II. His most significant commands were the Fourth Army (East) from 5 June 1944 to 18 July 1944, the Fourteenth Army in Italy from December 1944 to 17 February 1945, the Fourth Army (East) from 15 April to 27 April 1945, and finally the dual assignment as Commander of Army Group Vistula (East) and Commander of the Twenty-First Army (East) from late April to the end of the war. Von Tippelskirch has written a number of discourses on military science and a one-volume history of World War II.

Generaloberst Ernst Udet

The internationally famous stunt pilot and aviator Ernst Udet was one of Germany's top aces in World War I. During that conflict he flew in the famous Fighter Wing No. 1 under Baron Manfred von Richthofen, and amassed 62 aerial victories, second only to the famous "Red Knight." After winning Germany's highest decorations, Udet became a commercial and stunt flyer, traveling to Africa, Greenland, the United States, and other countries. In the United States he persuaded the German government to purchase two Curtiss dive bombers, which had made a profound impression upon him. In 1936 he was back in service as Chief of the Technical Office of the Luftwaffe, and a year later was a Generalmajor. Udet held this post until his death, although he found the internal political strife of the German High Command distasteful and depressing. He knew little of the technical aspects of aircraft research and development, and found himself unable to stand fast amid the pressures of rival aircraft firms, all seeking contracts. His suicide on 17 November 1941 was obscured from the public as an "accident which occurred while testing aircraft."

Generalmajor Otto Hoffmann von Waldau

One of Germany's most gifted Luftwaffe General Staff officers, his sudden death in 1943 was a severe blow to the German Air Force. He distinguished himself early in the 1930's as a man with a clear vision for air operations and possible applications of air power. Above the average in his many-sided talents, von Waldau had a more or less running argument with Jeschonnek, an ardent compromiser with Goering and Hitler. He served ably in the early part of World War II as Chief of Operations Branch, General Staff of the Luftwaffe. In early 1942 he was relieved by Goering and soon thereafter posted as a flying commander (Air Commander Africa). In 1943 he became Luftwaffe Commander Southeast (Balkans), where he died in an air accident. His loss was irreplaceable. Before World War II this brilliant General Staff officer had warned of the military potential of the United States and its Allies. Most of his words, however, were unheeded.

General der Artillerie Walter Warlimont

Warlimont served during World War I as a battalion and regimental adjutant and finally as an artillery battery commander. He remained in the Army in the 1920's and 1930's. In 1929 he was a liaison officer with the U.S. Army in the United States. In 1936 he went to Spain at the outbreak of civil war to head up Hitler's assistance program to General Franco, a mission which was handled with great skill and dispatch. In 1937 he held command positions in the artillery, and on 1 November 1938 was appointed Chief of the National Defense Branch, High Command of the Wehrmacht, and Deputy Commissioner for the Chief of the Wehrmacht Operations Office. On 1 January he became Deputy Chief of the Wehrmacht Operations Staff under Jodl, a position he held until released for health reasons on 6 September 1944. Said to have been the mind behind the Wehrmacht Operations Staff and the vehicle through whom Jodl reached the ear of Hitler, he was sentenced to life imprisonment in the OKW trials at Nuremberg. The sentence was later commuted to 18 years, and finally remitted in the 1950's.

Field Marshal Maximilian Freiherr von Weichs auf Glonn

This senior Army officer won numerous laurels as a cavalry officer in the First World War, and remained in service after the fall of the German Monarchy in 1918. Von Weichs served in Poland and commanded the Second Army in the Western campaign and the Balkans, as

well as in Russia. On 7 July 1942 he assumed command of Army Group "B" in Russia, and vainly tried to persuade Hitler to permit the withdrawal of Paulus' Sixth Army from the Stalingrad area. Von Weichs, who received his marshal's baton 1 February 1943, took over German Forces in the Southeast (Balkans) 22 August 1943. Tried in the Southeast Trials at Nuremberg, he was released because of poor health 3 November 1948.

Generalleutnant Walter Wever

Wever was in many respects the "Father of the Luftwaffe." A highly gifted organizer, temperamentally well suited to high command, he demonstrated his talents in World War I and in the Truppenamt (Troop Office, a cover for the German General Staff) of the Reichswehr. Wever was the first Chief of the General Staff of the Luftwaffe, and held this position until his untimely death in 1936. He was of a completely different mold than Goering, and saw clearly the future of air power, especially strategic air power. Wever was keenly aware of the work of Douhet, but he also remembered problems of defense which he considered in relation to future air warfare. One of Wever's most valuable assets was the ability to inspire confidence, stifle discord, and promote harmony in his organization. His favorite idea was the creation of a four-engine bomber force capable of flying beyond the Urals and back. This plane he called the "Ural Bomber." Some progress was made in this direction, but after his death in an air accident 3 June 1936 his plans were jettisoned. Had he lived the Luftwaffe might have been a much more formidable organization.

Generalmajor Wolfgang von Wild

Von Wild served as a naval cadet in World War I, was commissioned in the German Navy in 1923, and saw action with irregular units in the Baltic and with Ehrhardt's Naval Brigade in Upper Silesia and Berlin. In the mid-1920's he transferred to the Luftwaffe, and by 1 September 1939 had risen to the rank of Major. He participated in the Polish campaign with coastal air units, and on 21 April 1941 was made Air Commander Baltic. On 30 October 1941 he assumed command of the post Air Commander Atlantic, which he held until 1 November 1942, when he became Air Transport Commander I (Southeast) at Athens. He held various other important Luftwaffe posts, climaxing his career as Air Attaché to Tokyo. He was promoted 1 March 1945 to Generalmajor.

Generalleutnant Heinz-Hellmuth von Wuehlisch

This highly decorated veteran of World War I was an able officer. As Chief of Staff, First Air Fleet, he was largely responsible for laying the foundation for the initial air thrust into Russia. After 1942 he was Chief of Staff to the Commanding General, Holland, and distinguished himself at Arnhem. At the termination of World War II, von Wuehlisch served as an Air Defense Commander near Hamburg.

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APPENDIX III

LIST OF GAF MONOGRAPH PROJECT STUDIES

I. Published

Study No.	Title
153	The German Air Force versus Russia, 1941
163	German Air Force Operations in Support of the Army
167	German Air Force Airlift Operations
173	The German Air Force General Staff
175	The Russian Air Force in the Eyes of German Commanders
176	Russian Reactions to German Air Power
177	Airpower and Russian Partisan Warfare
189	Historical Turning Points in the German Air Force War Effort

II. To Be Published

150	The German Air Force in the Spanish War
151	The German Air Force in Poland
152	The German Air Force in France and the Low Countries
154	The German Air Force versus Russia, 1942
155	The German Air Force versus Russia, 1943
156	The Battle of Britain

No.	Title
	Operation Sea Lion
158-60	The German Air Force versus the Allies in the West
161	The German Air Force versus the Allies in the Mediterranean
162	The Battle of Crete
164	German Air Force Air Defense Operations
165	German Air Force Air Interdiction Operations
166	German Air Force Counter Air Operations
168	German Air Force Air-Sea Rescue Operations
169	Training in the German Air Force
170	Procurement in the German Air Force
171	Intelligence in the German Air Force
172	German Air Force Medicine
174	Command and Leadership in the German Air Force (Goering, Milch, Jeschonnek, Udet, Wever)
178	Problems of Fighting a Three-Front Air War
179	Problems of Waging a Day and Night Defensive Air War
180	The Problem of the Long-Range Night Intruder Bomber
181	The Problem of Air Superiority in the Battle with Allied Strategic Air Forces
182	Fighter-Bomber Operations in Situations of Air Inferiority

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Study No.	Title
183	Analysis of Specialized Anglo-American Techniques
184	Effects of Allied Air Attacks on German Divisional and Army Organizations on the Battle Fronts
185	Effects of Allied Air Attacks on German Air Force Bases and Installations
186	The German Air Force System of Target Analysis
187	The German Air Force System of Weapons Selection
188	German Civil Air Defense
190	The Organization of the German Air Force High Command and Higher Echelon Headquarters Within the German Air Force
194	Development of German Antiaircraft Weapons and Equipment up to 1945
Extra Study	The Radio Intercept Service of the German Air Force

LIST OF MAPS

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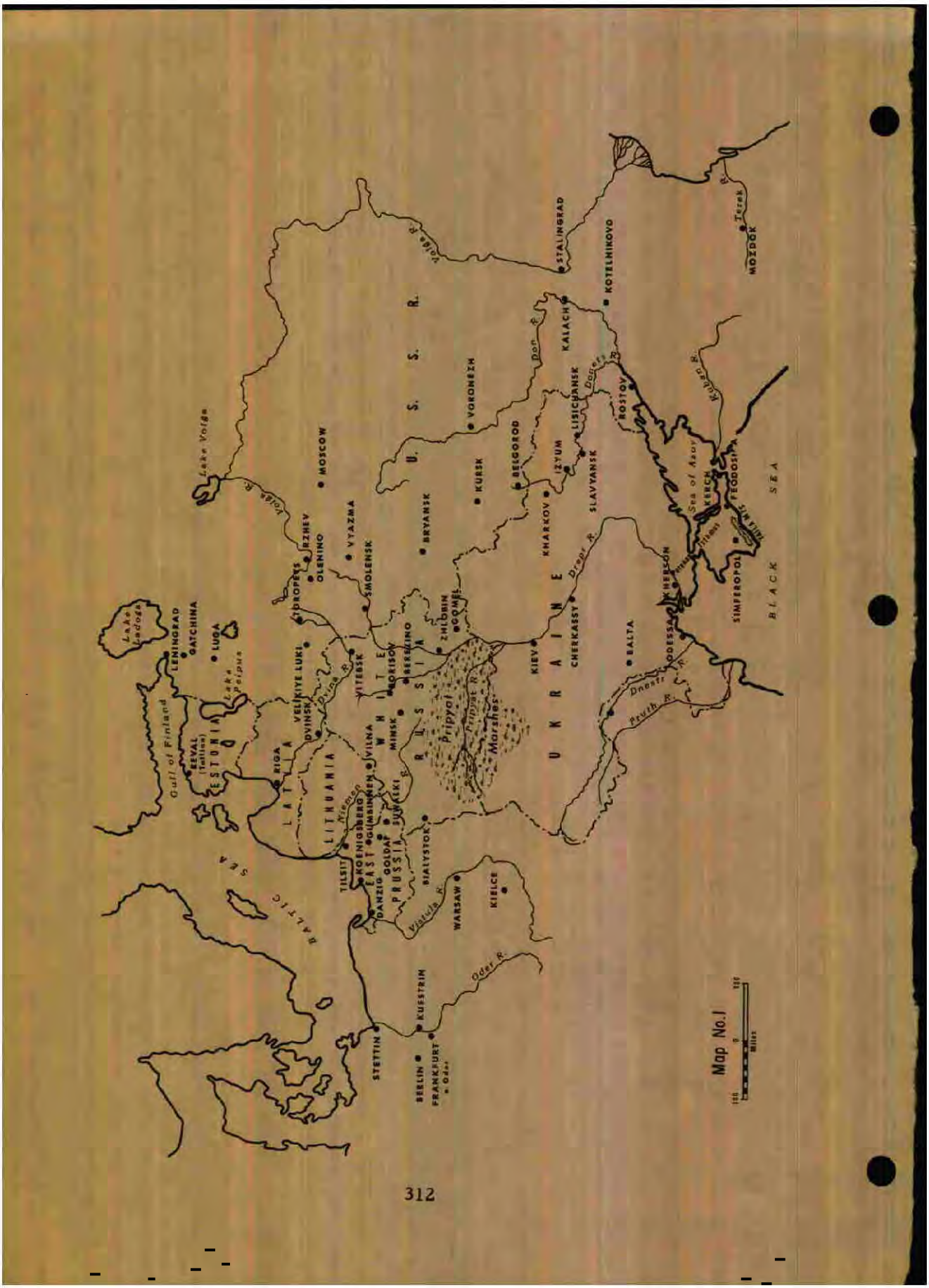

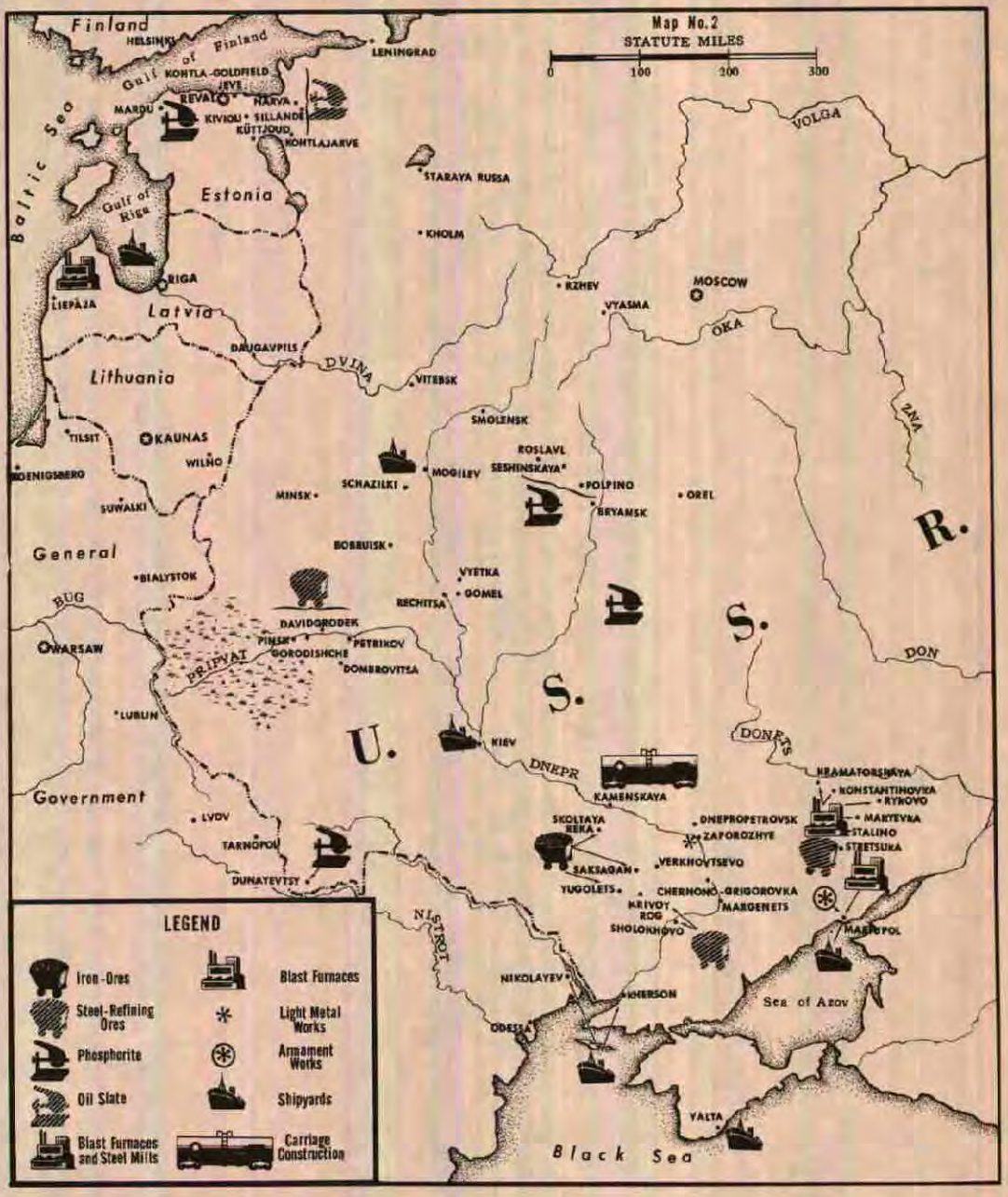

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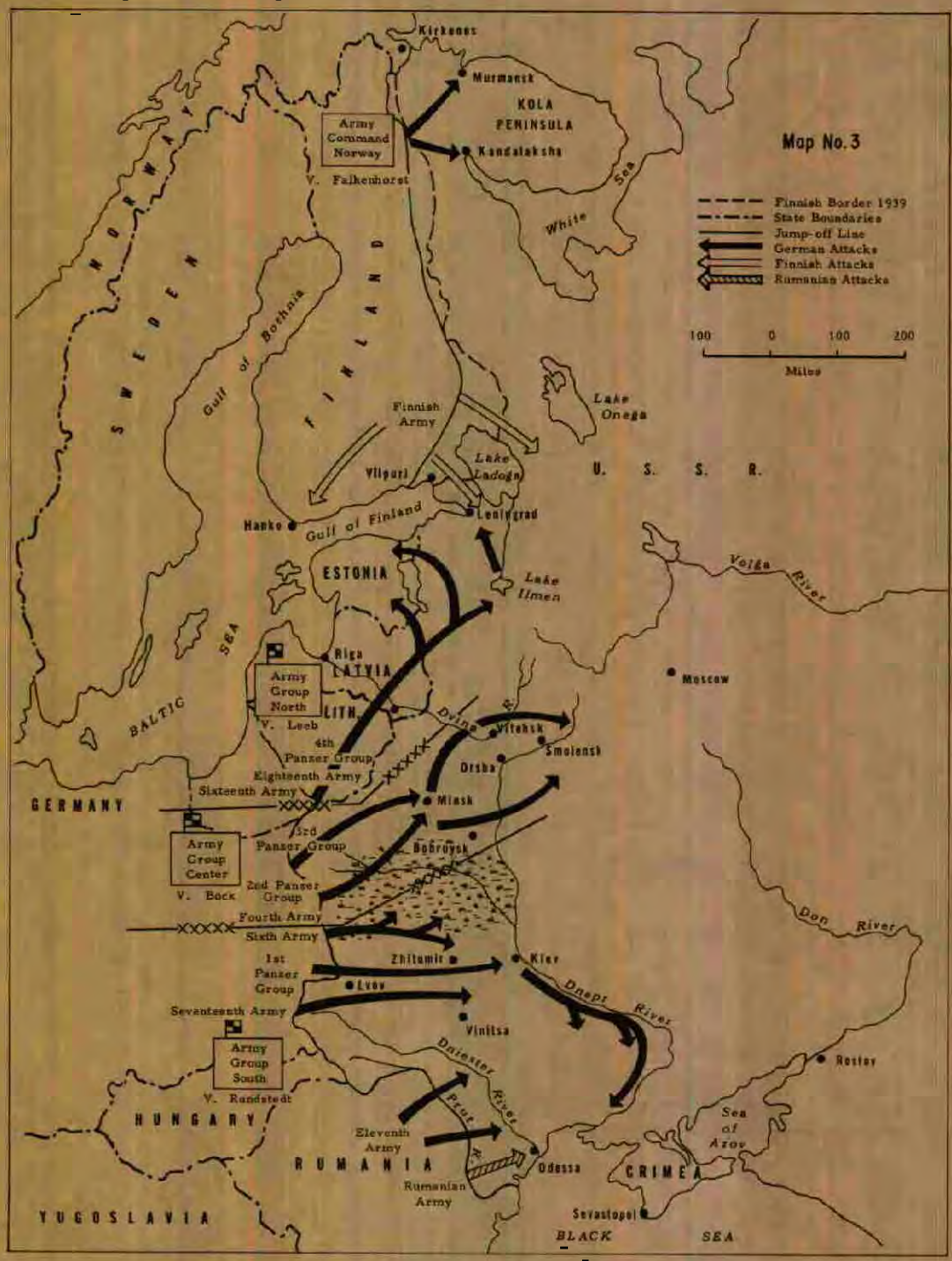

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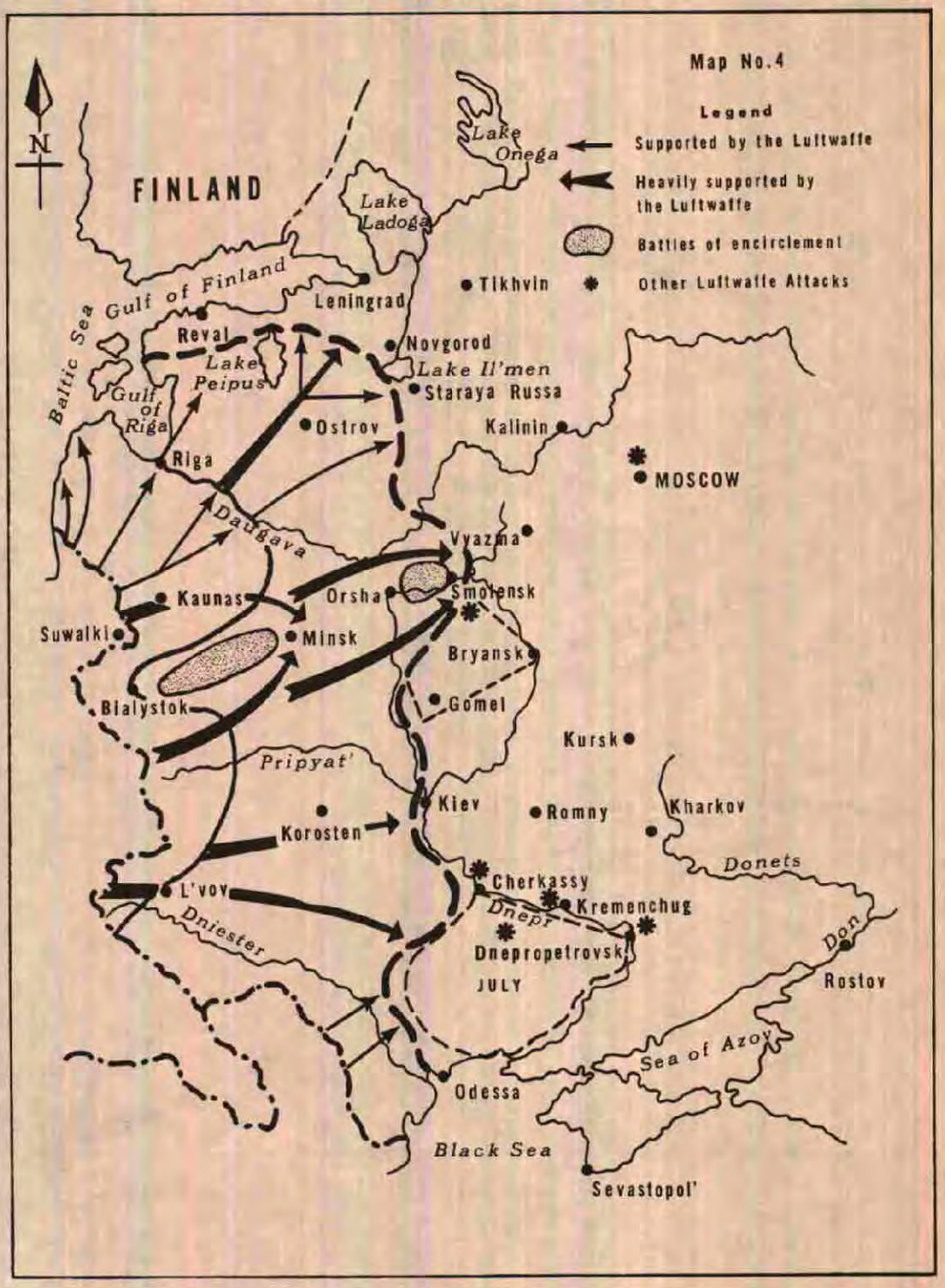

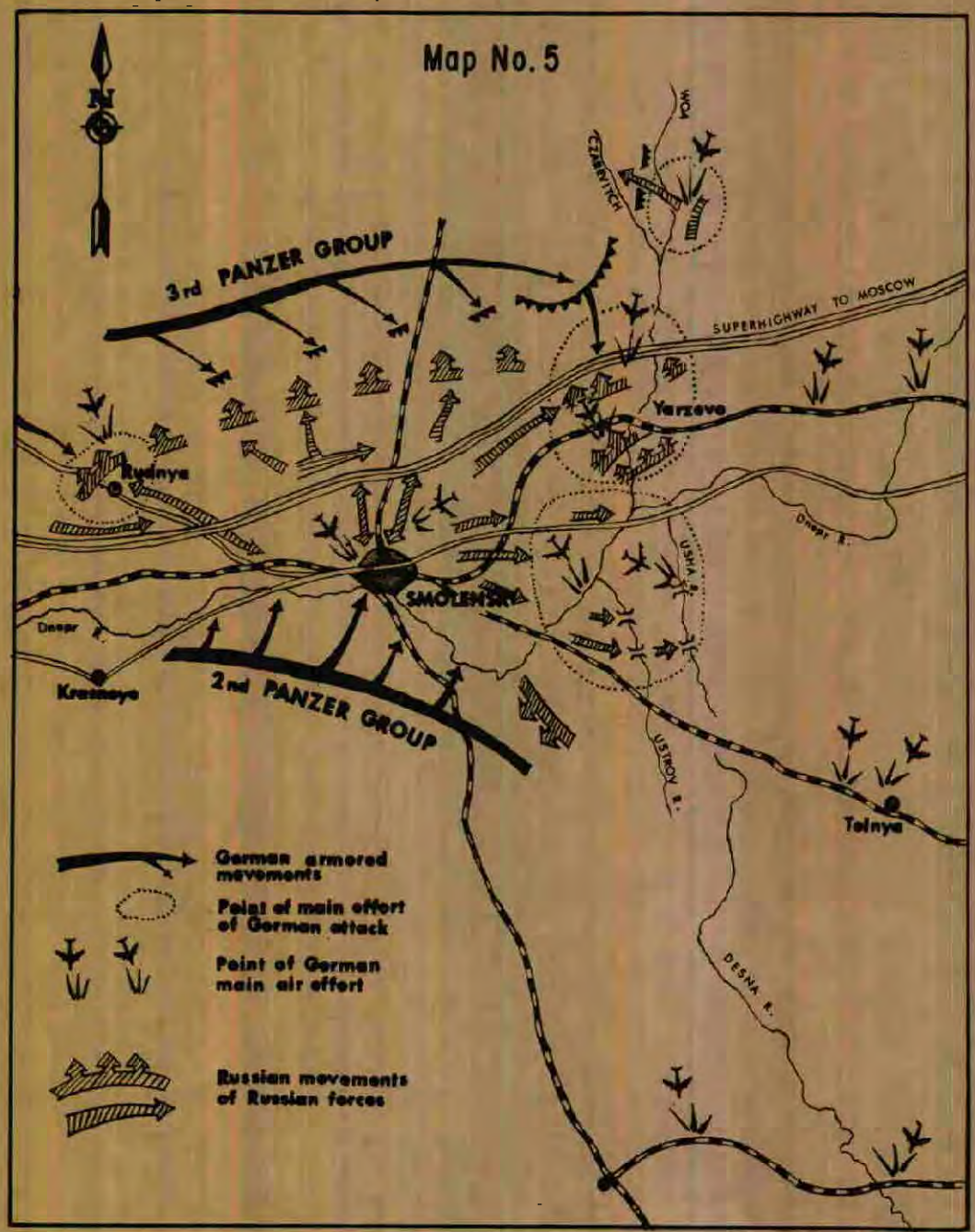

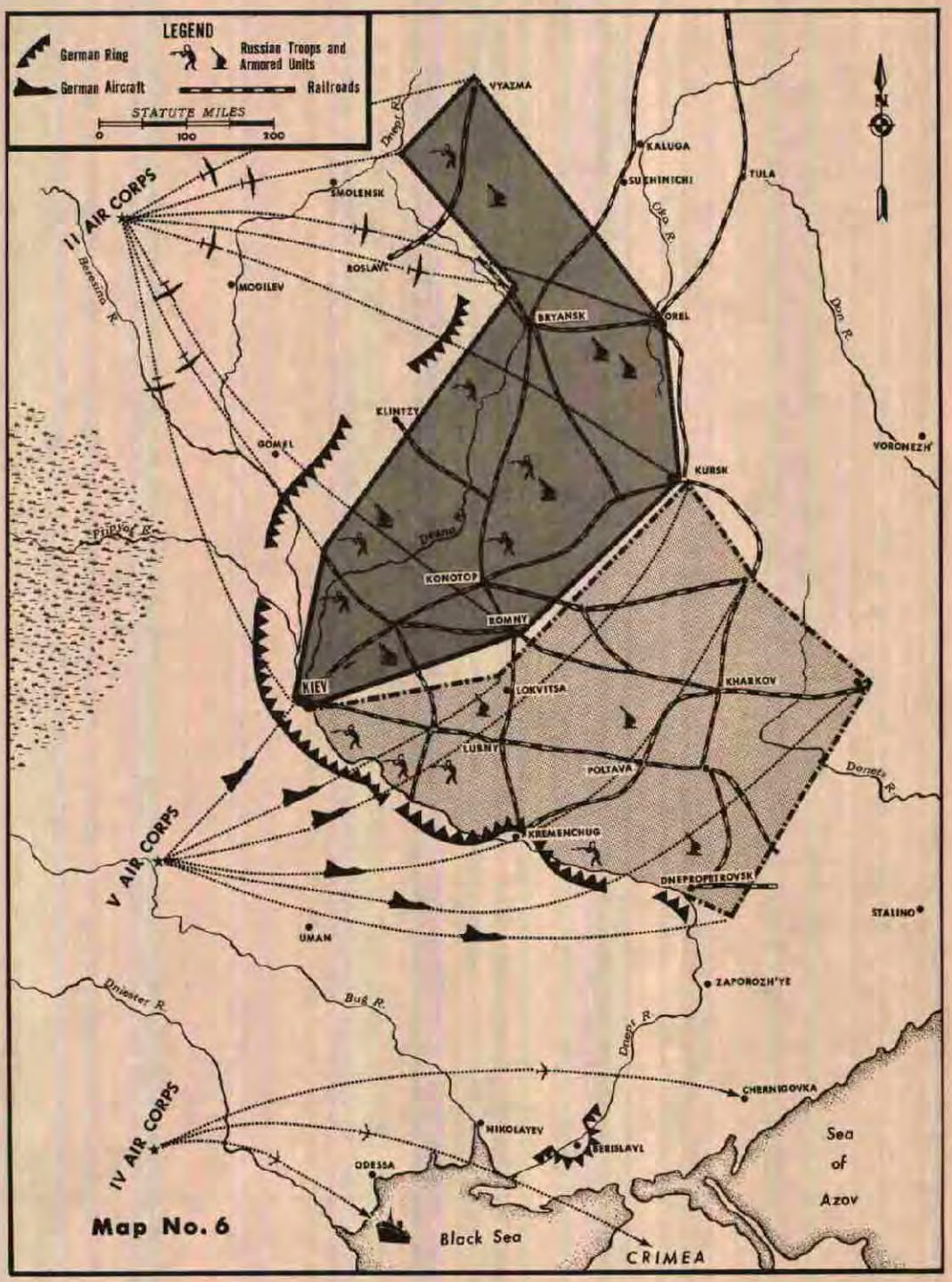

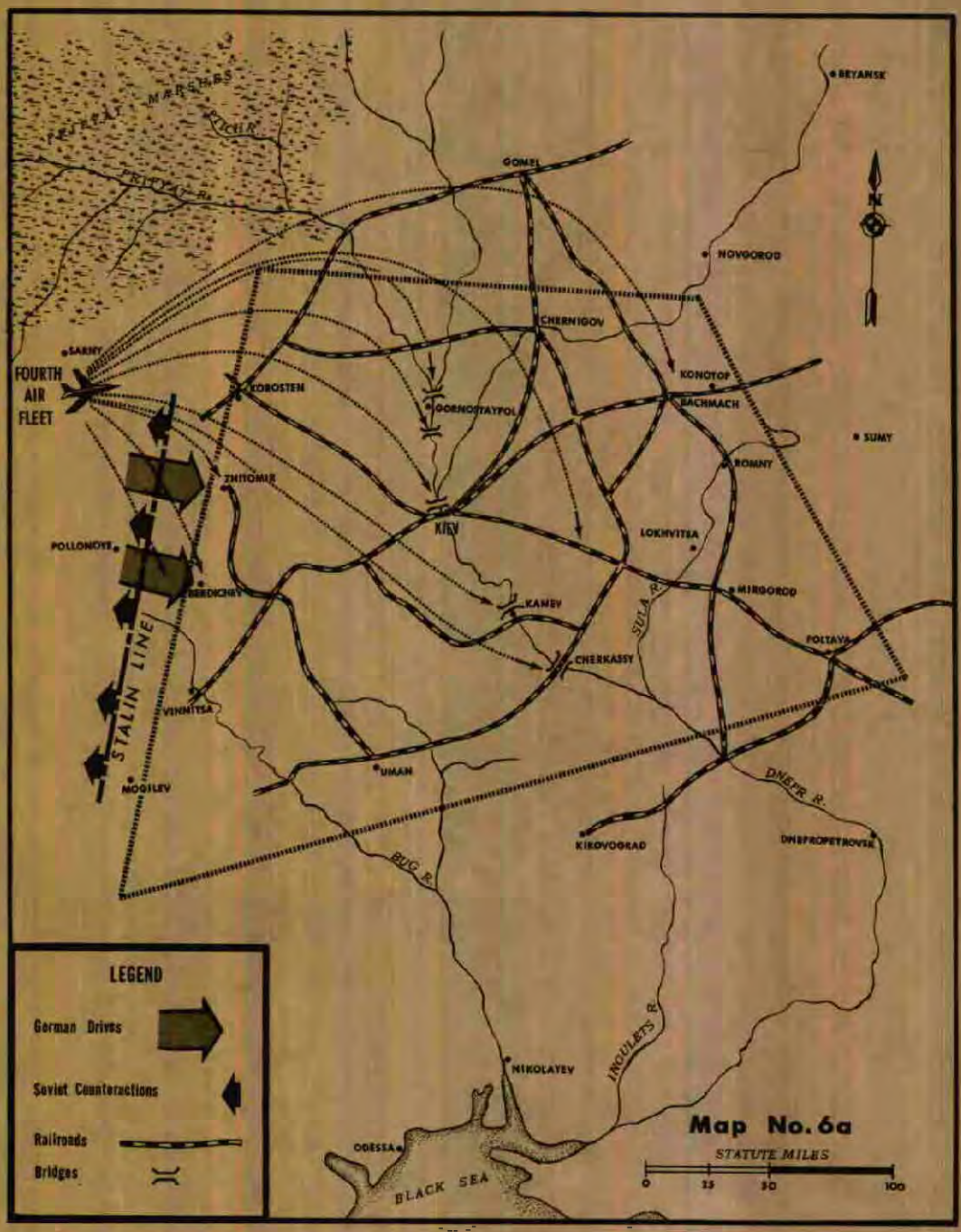

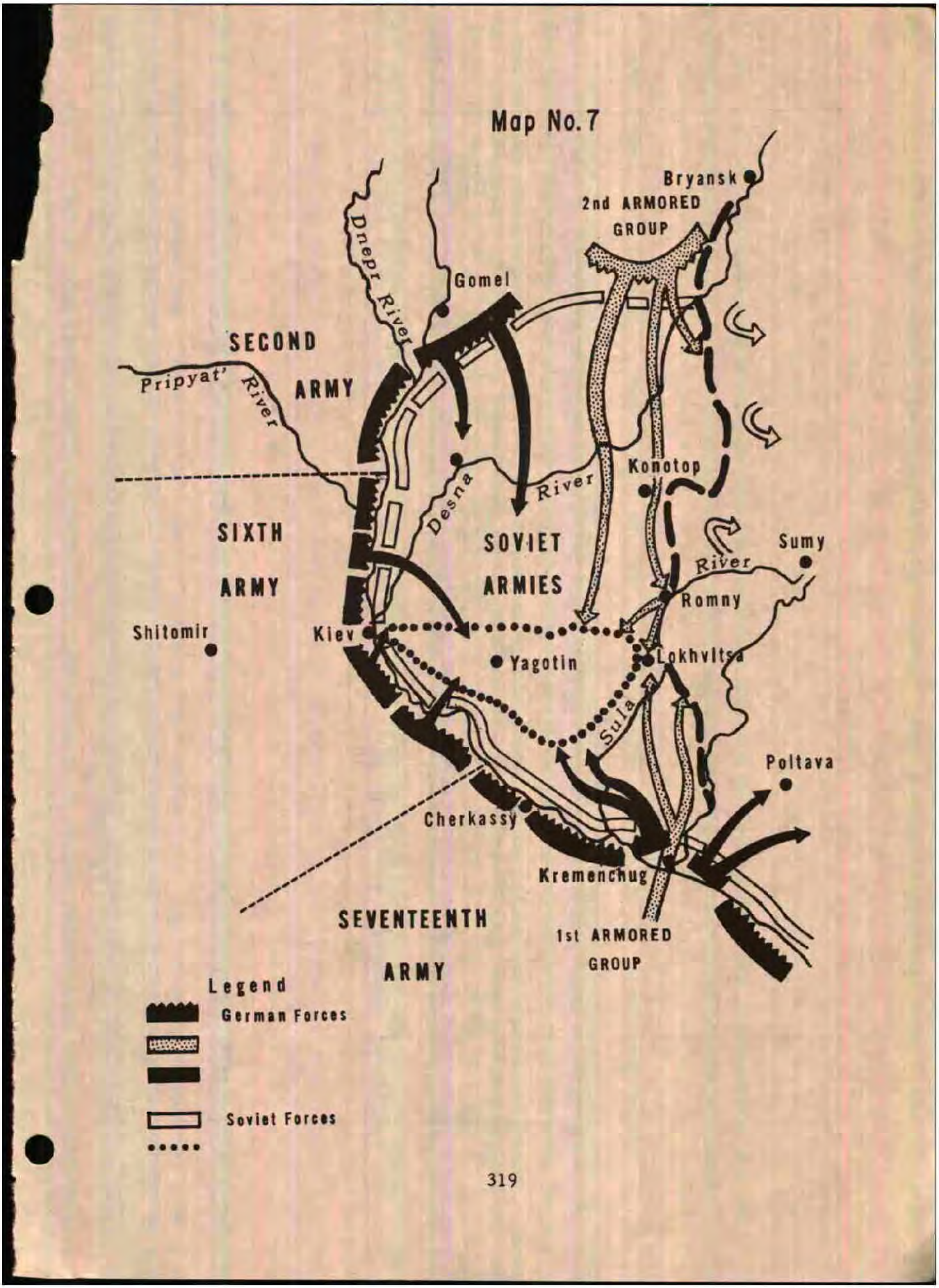

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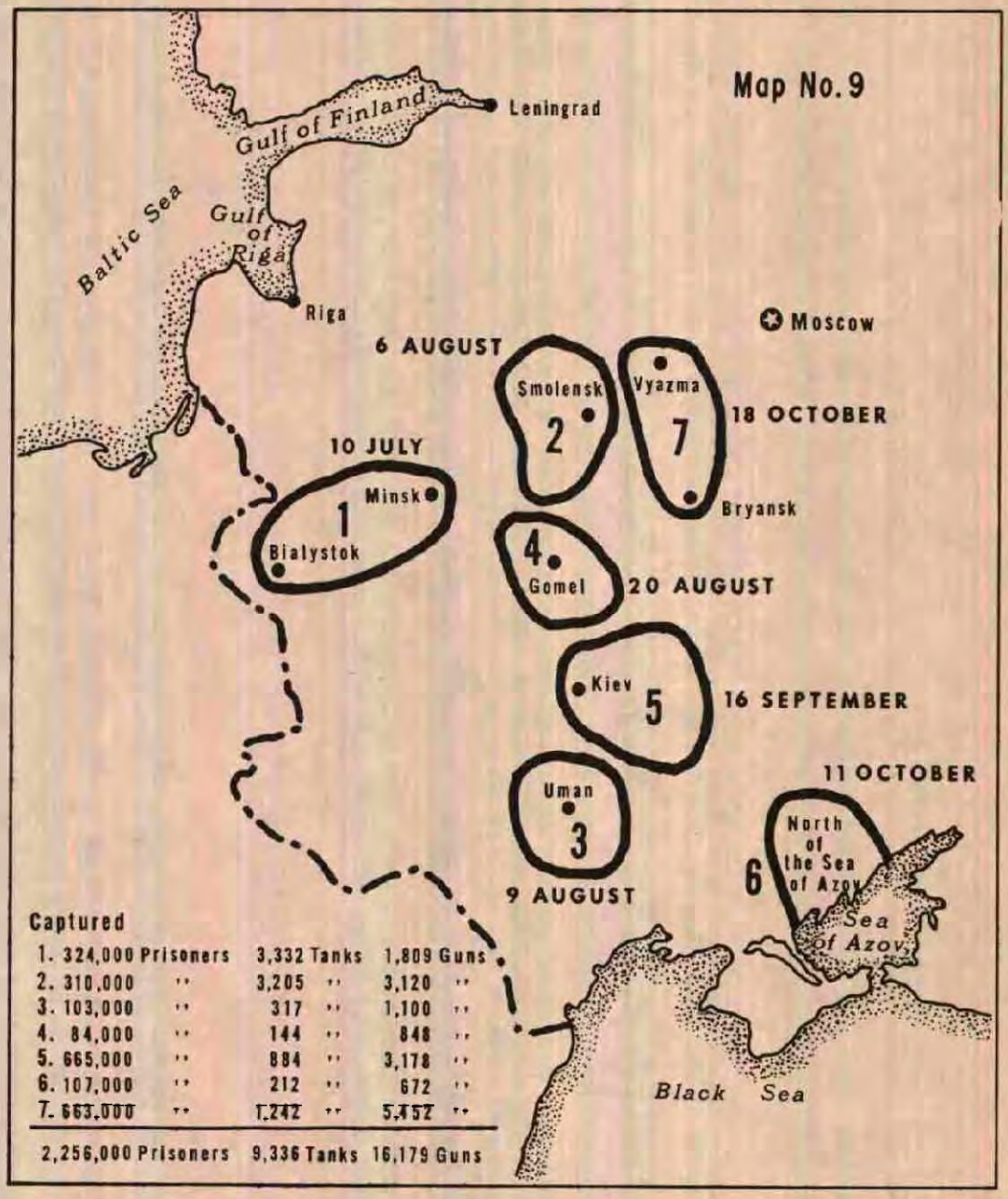
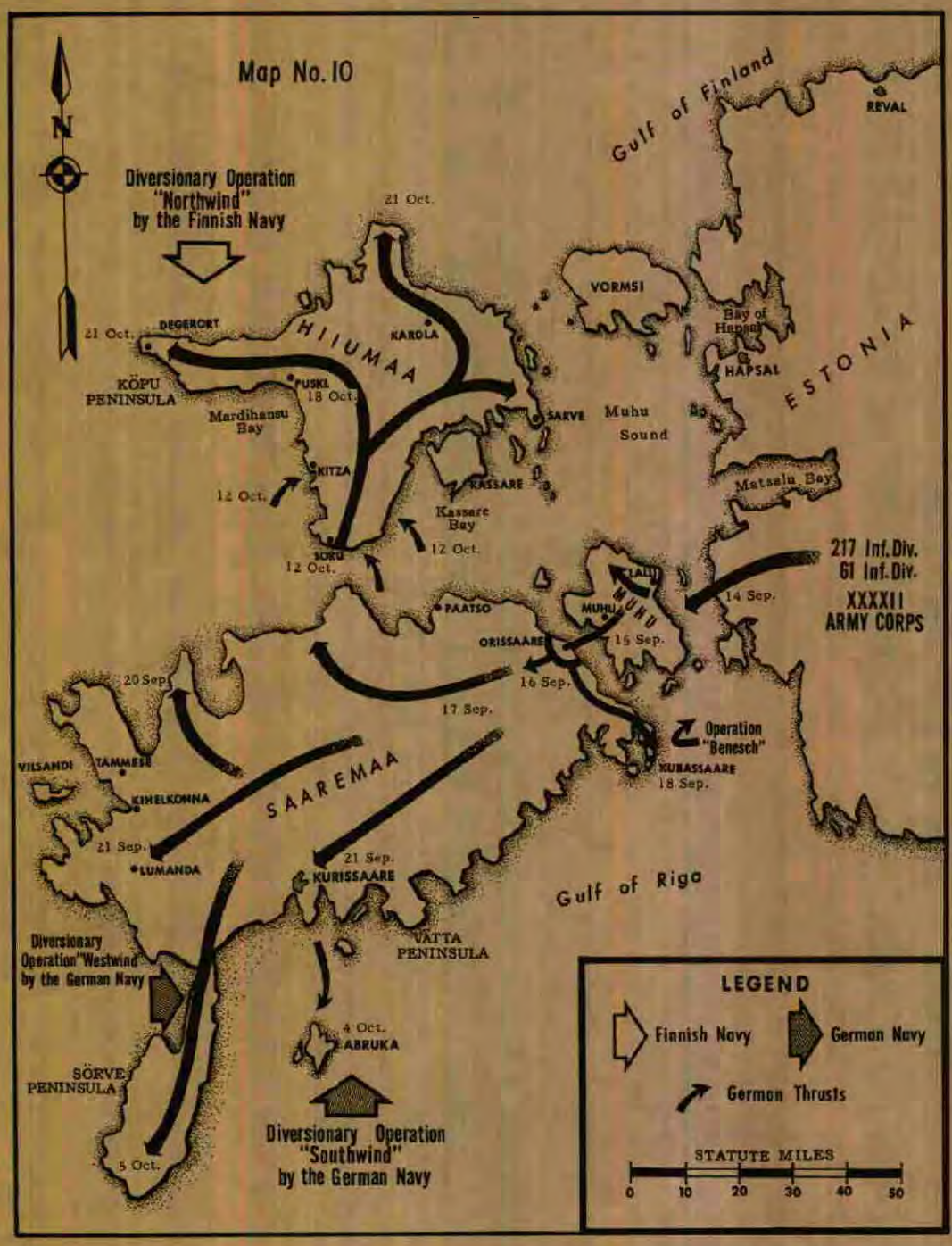


Captured

1. 324,000 Prisoners	3,332 Tanks	1,809 Guns
2. 310,000 "	3,205 "	3,120 "
3. 103,000 "	317 "	1,100 "
4. 84,000 "	144 "	848 "
5. 665,000 "	884 "	3,178 "
6. 107,000 "	212 "	672 "
7. 663,000 "	1,242 "	5,452 "
2,256,000 Prisoners	9,336 Tanks	16,179 Guns



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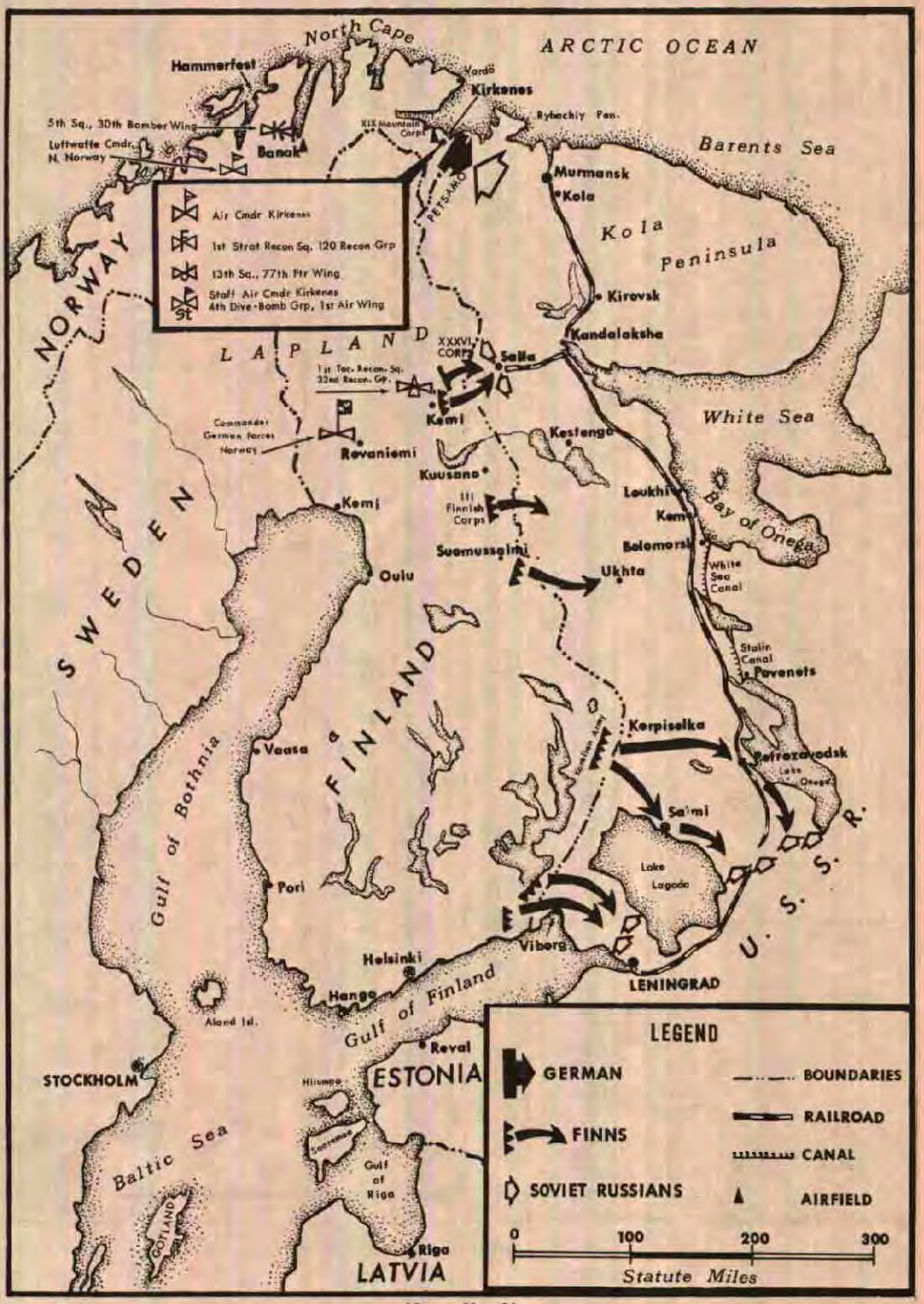

Map No. II

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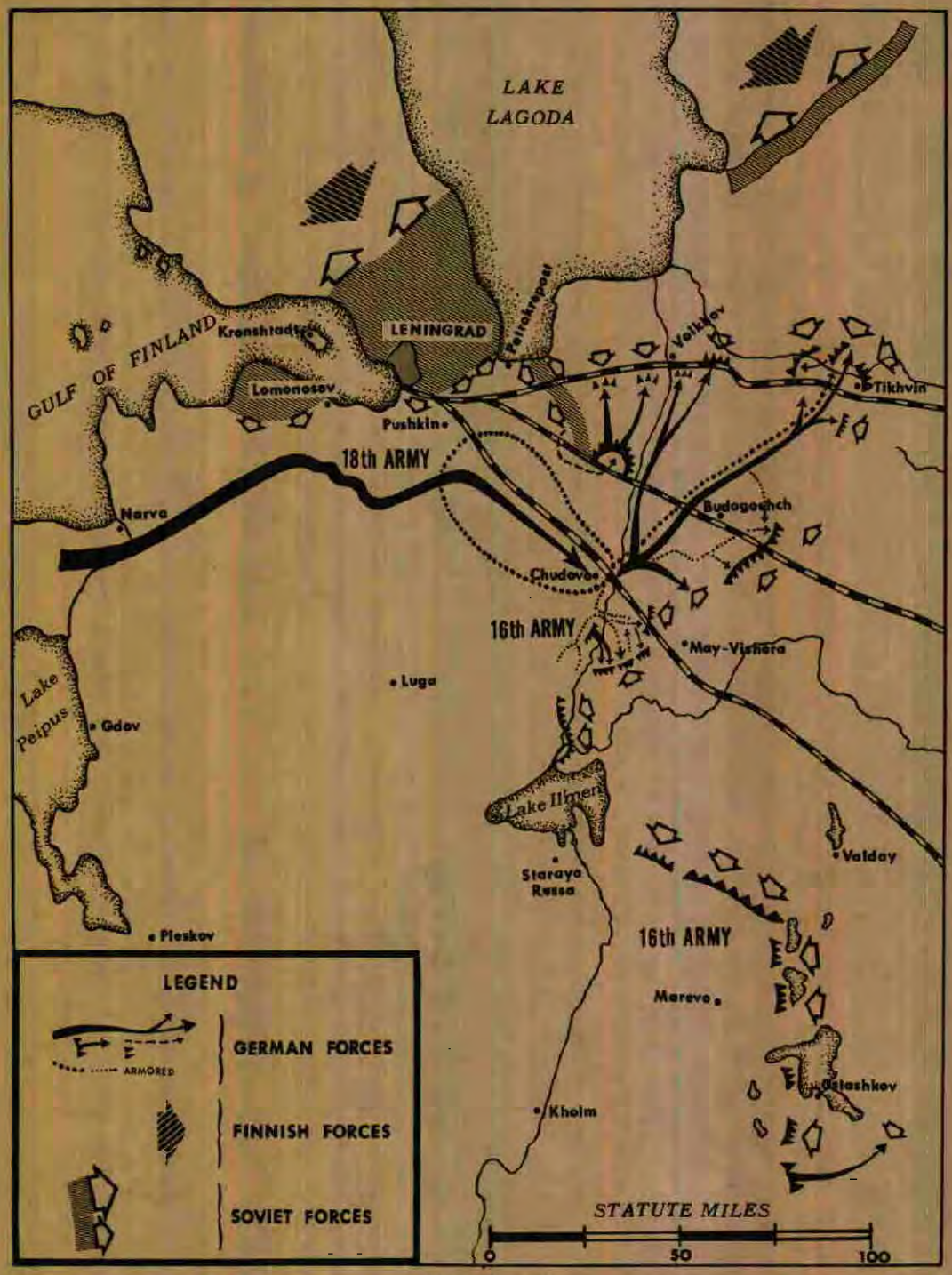
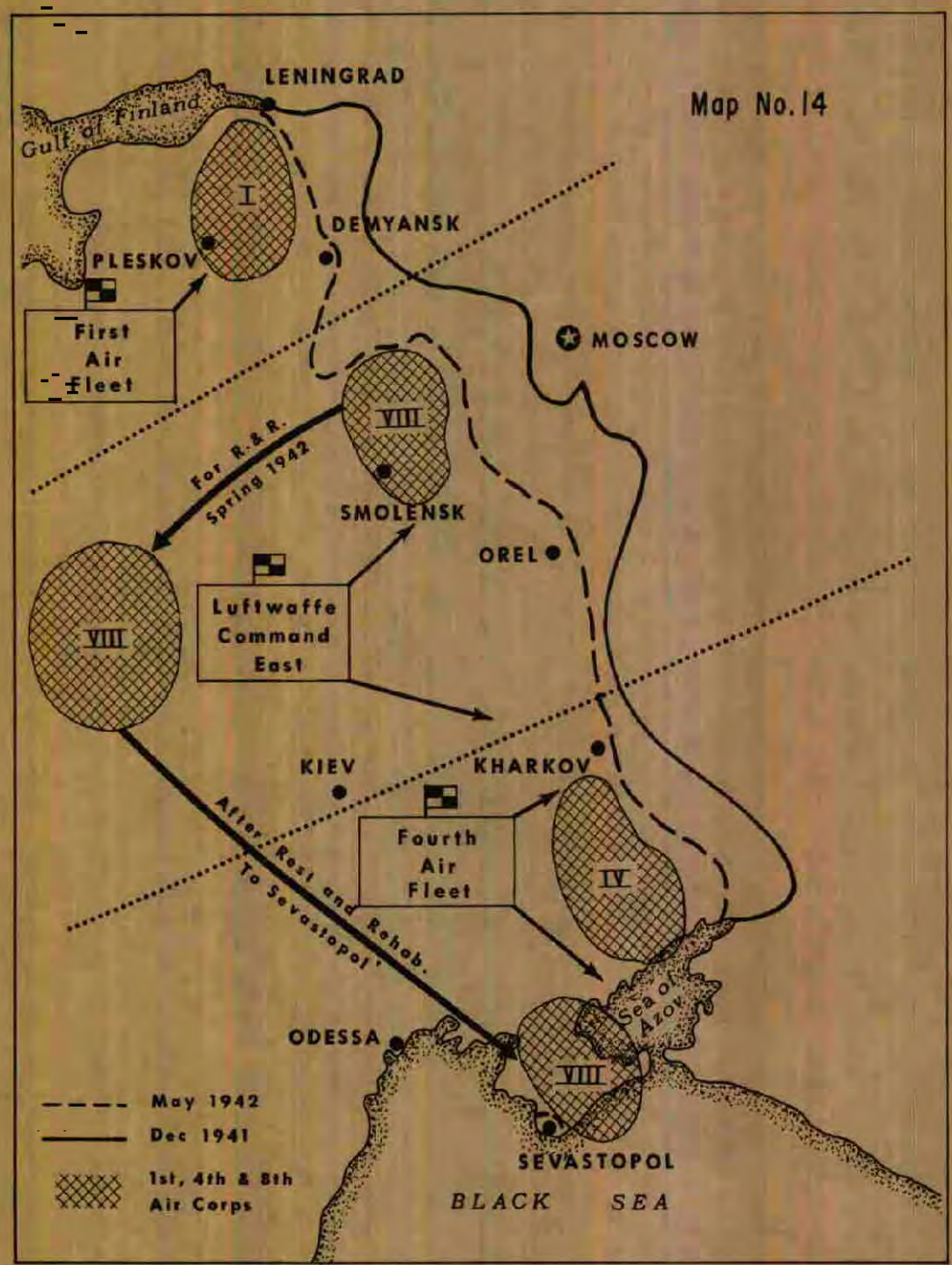


Map No. 12



LIST OF CHARTS

ORGANIZATION OF THE HIGHER COMMANDS OF THE

LUFTWAFFE

22 June 1941

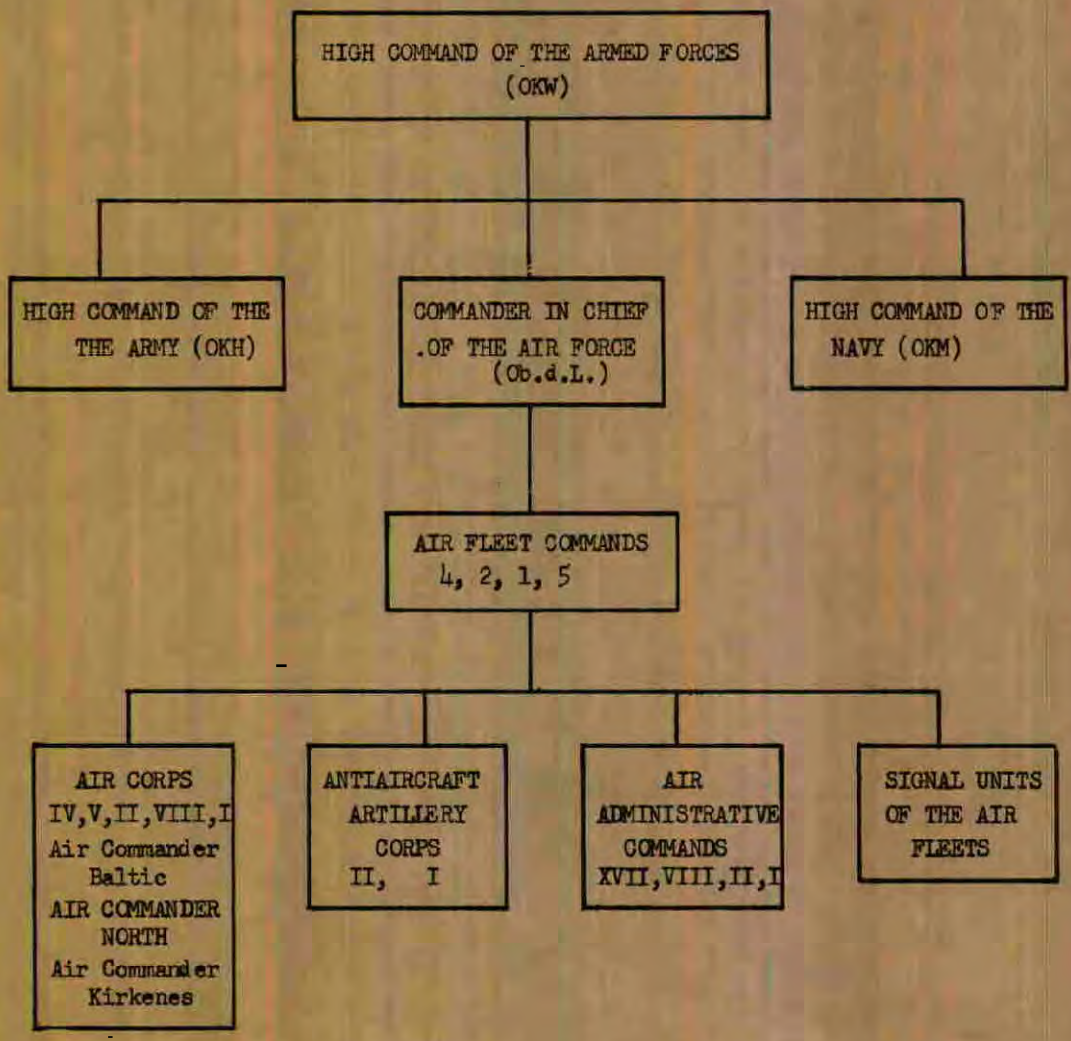


Chart No. 1

COMMAND RELATIONSHIPS IN THE EAST 22 JUNE 1941

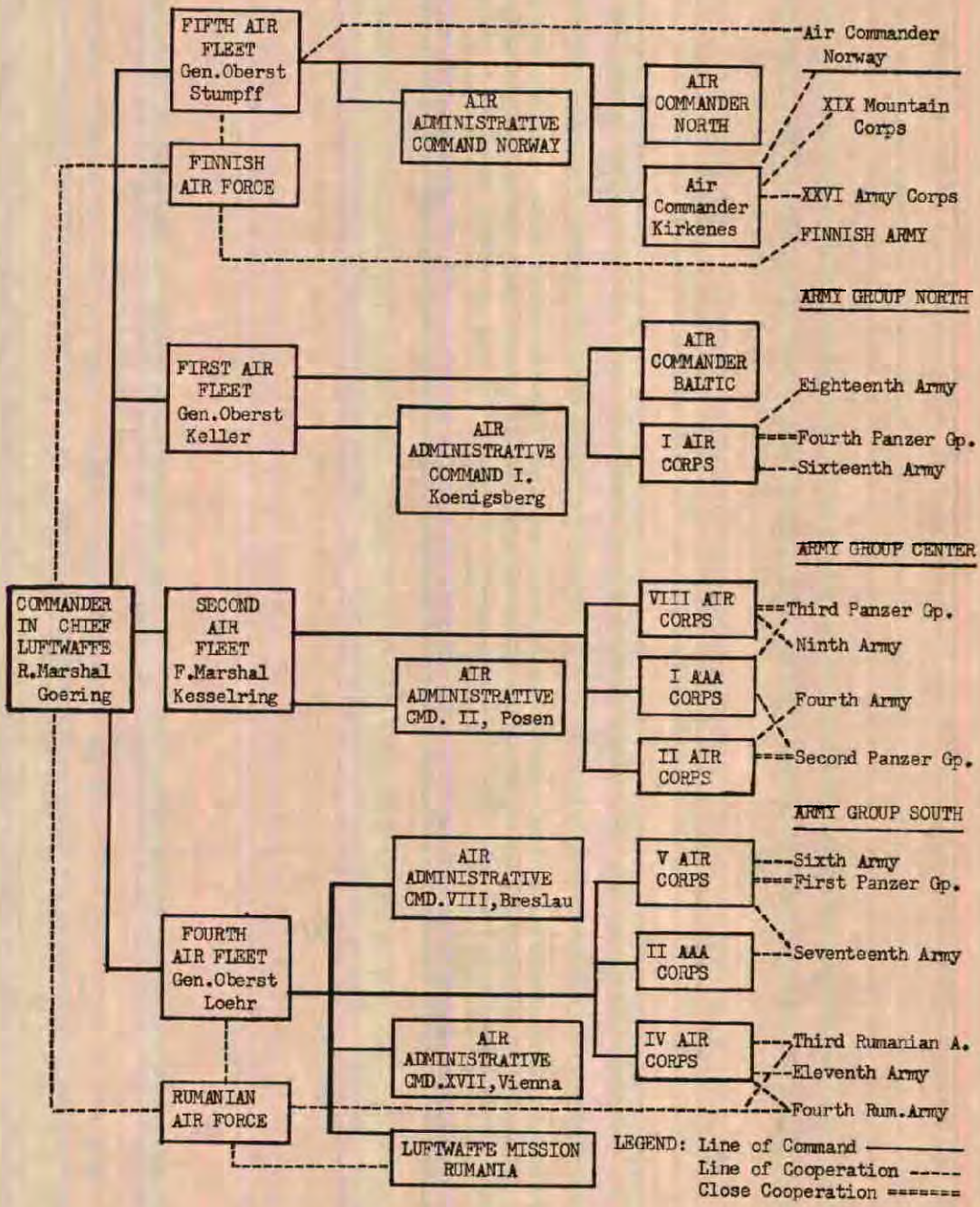
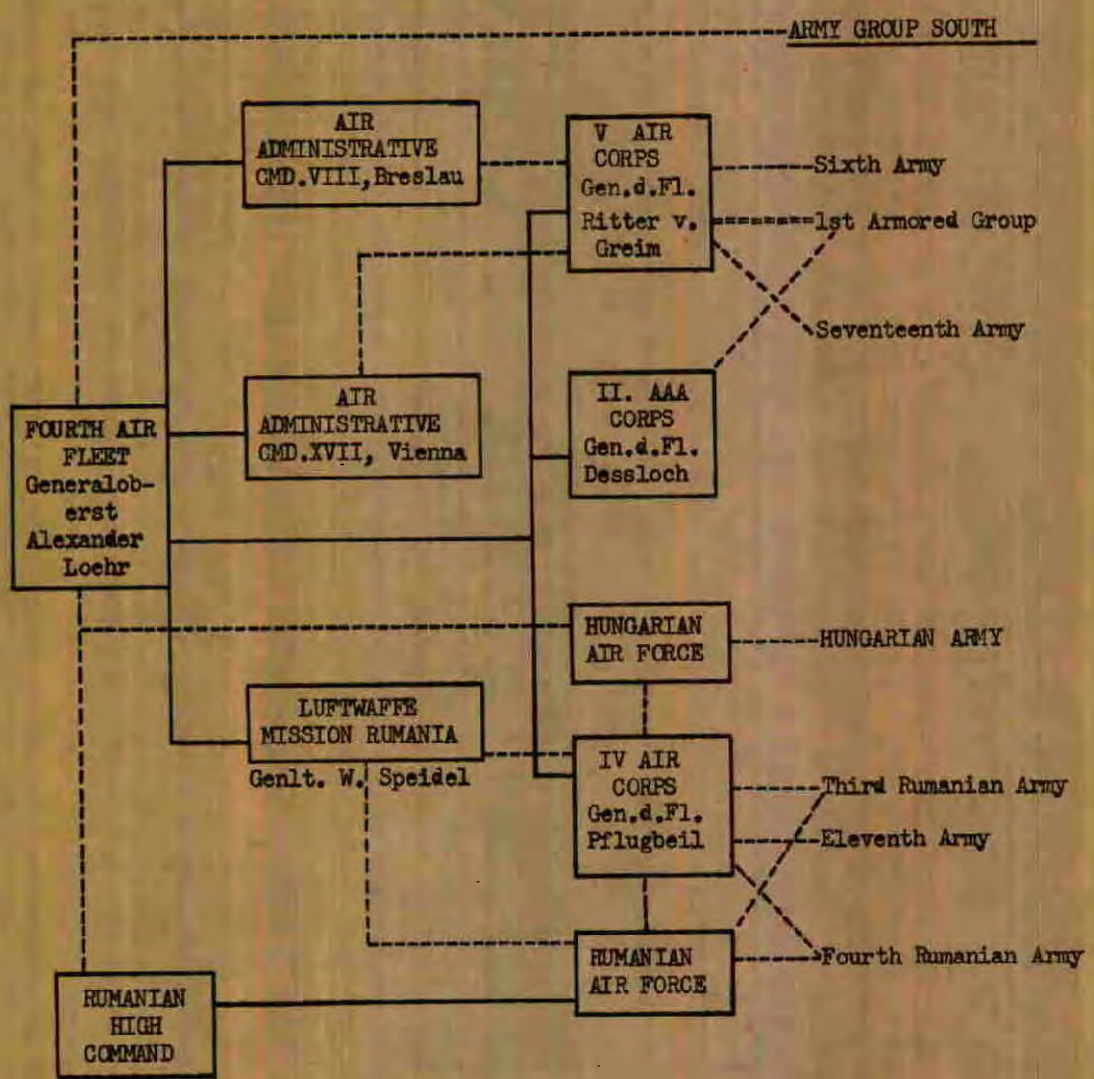


Chart No. 2

COMMAND RELATIONSHIPS IN COMBAT ZONE SOUTH

EASTERN FRONT 22 JUNE 1941



Legend: Line of Command _____

Line of Cooperation -------

Line of Close Cooperation =====

Chart No. 3

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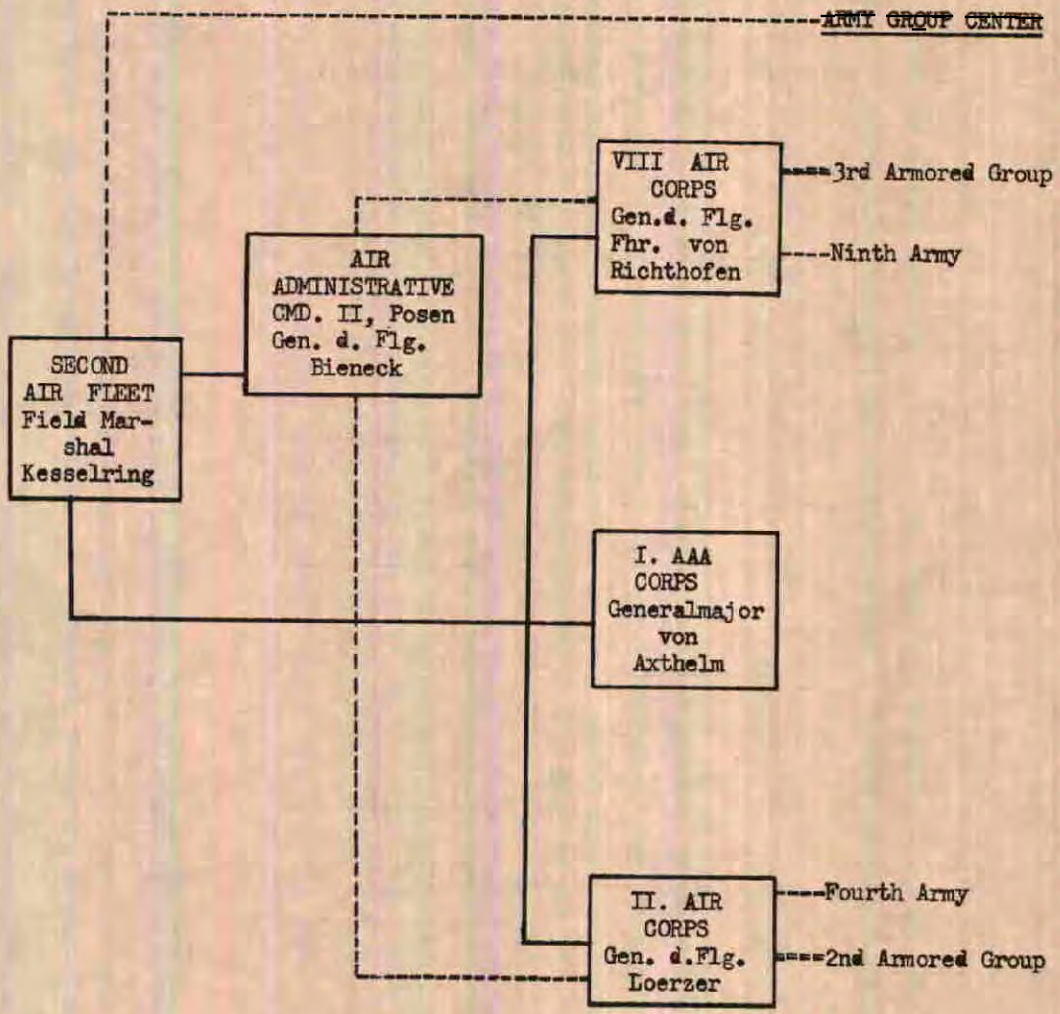
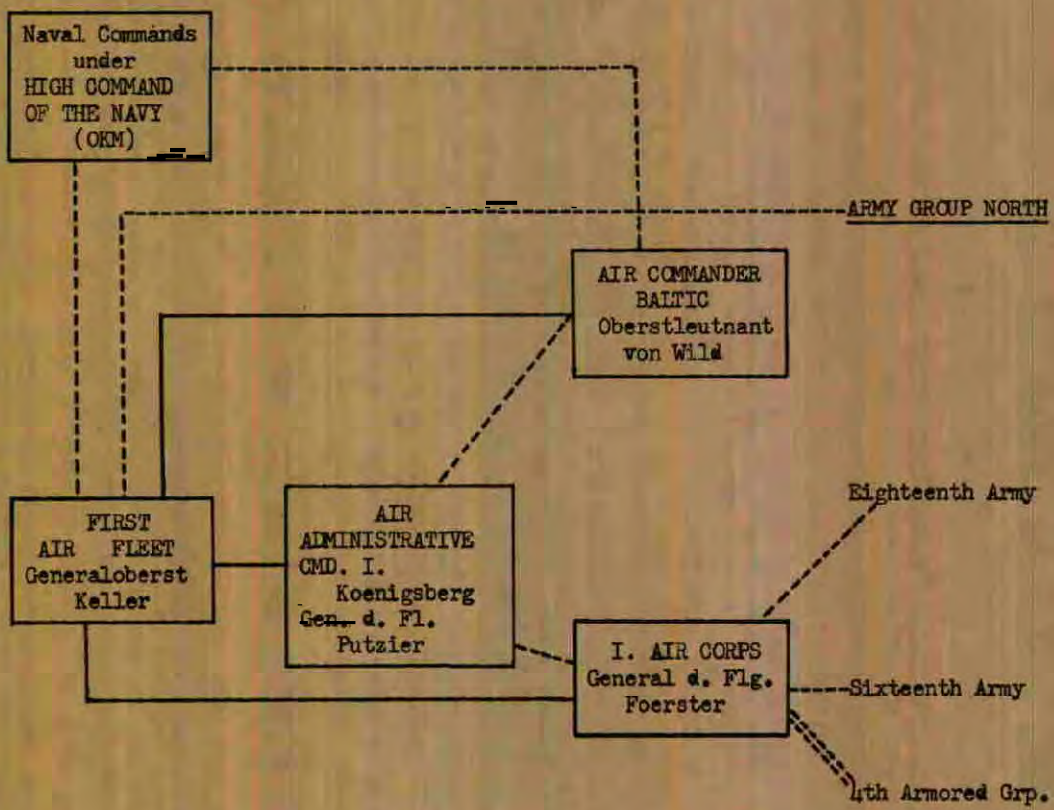
COMMAND RELATIONSHIPS IN COMBAT ZONE CENTER
EASTERN FRONT 22 JUNE 1941



Legend: Line of Command _____
Line of Cooperation -------
Close Cooperation==========

Chart No. 4

COMMAND RELATIONSHIPS IN COMBAT ZONE NORTH
EASTERN FRONT 22 JUNE 1941



Legend: Line of Command ————
Line of Cooperation - - - - - -
Close Cooperation ========

Chart No. 5

COMMAND RELATIONSHIPS IN COMBAT ZONE FAR NORTH

EASTERN FRONT 22 JUNE 1941
(Finnish Area)

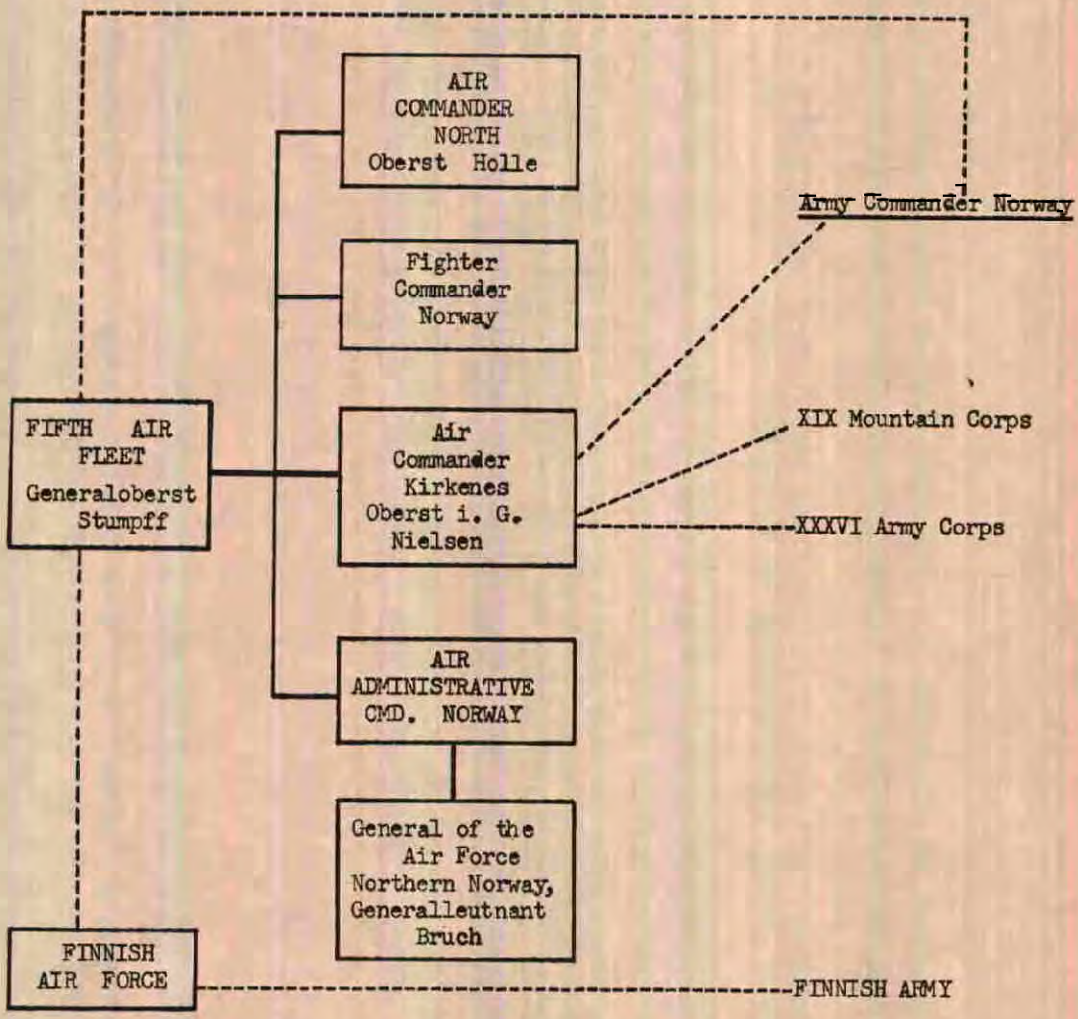
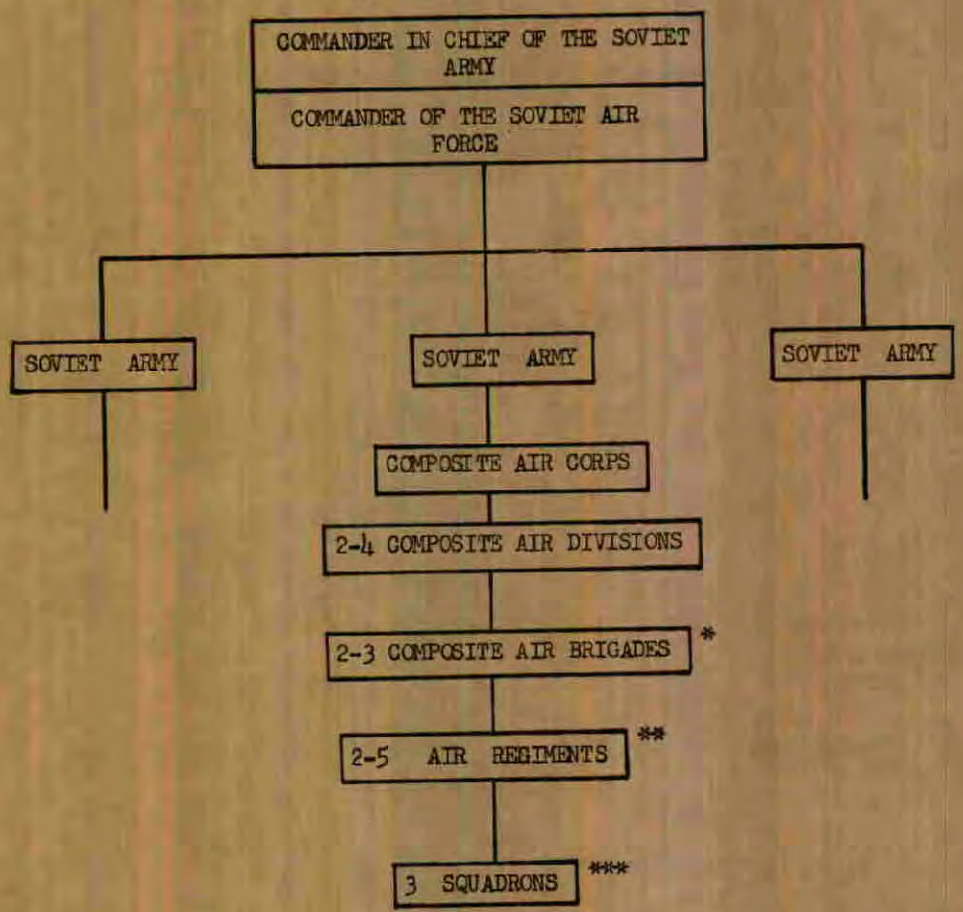


Chart No. 6

ORGANIZATION AND COMMAND RELATIONSHIPS OF

SOVIET AIR FORCES, SPRING 1941



*Formed in accordance with mission and employment

**Composed entirely of units designated as: Reconnaissance, Fighter, Destroyer, Bomber } Regiment

***Each squadron has 27 aircraft

Chart No. 7

ORGANIZATION OF A GERMAN AIR CORPS

LEGEND

Line of Command: ———

Responsibility to make reports to and to keep informed: - - - - -

Chart No. 8

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