

1993

# The food distribution system during the siege of Leningrad : 1941 to 1944

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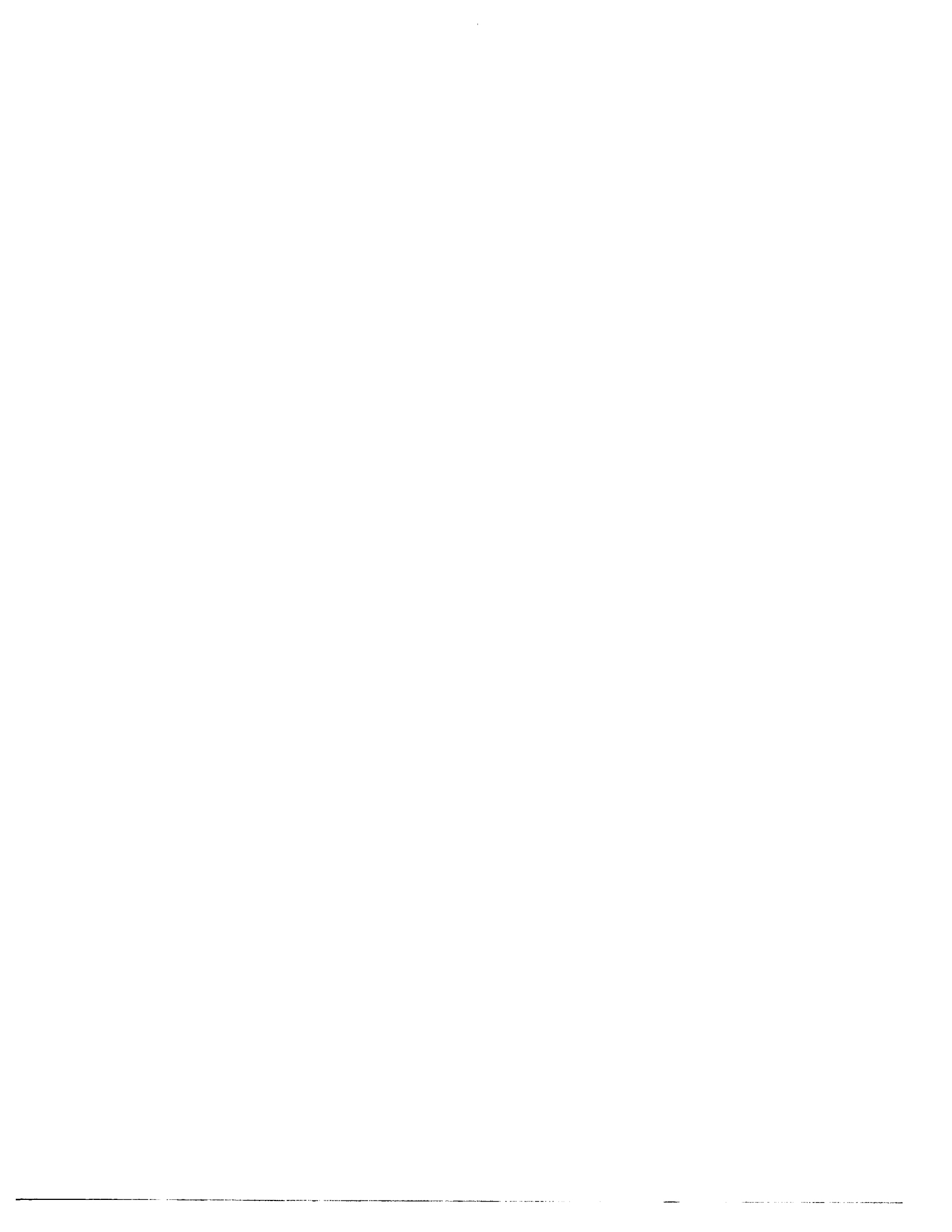
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San Jose State University, 1993

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THE FOOD DISTRIBUTION SYSTEM  
DURING THE SIEGE OF LENINGRAD  
1941 TO 1944

A Thesis  
Presented To  
The Faculty of the Department of History  
San Jose State University

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts

by  
Stephanie P. Steiner  
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## ABSTRACT

### THE FOOD DISTRIBUTION SYSTEM DURING THE SIEGE OF LENINGRAD 1941 TO 1944

by Stephanie P. Steiner

In August 1941, the German and Finnish armies surrounded the city of Leningrad. The siege lasted until January 1944. One-third of the city's inhabitants died of starvation during the siege, though the death rates decreased after the first winter.

This thesis investigates the evolution of the food distribution network to and within Leningrad during the siege. Using memoirs, interviews, diaries, and secondary sources, it reconstructs the food distribution and transportation systems. It outlines the reasons for each change in these systems and the impact of those changes on the food rations within the city.

The results of this research indicate that the implementation of the system for transporting food to Leningrad in 1941 suffered from a lack of attention to detail, but became more efficient over time. Dmitri Pavlov, Food Commissioner for the city, is lauded for his foresight and the effectiveness of his intra-city distribution network.

To my mother,  
for giving me a lifelong love of learning

and

To my husband, Cord,  
for his love, patience, and understanding



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CHAPTER ONE  
DEVELOPMENT OF THE GERMAN MILITARY STRATEGY  
TO BESIEGE LENINGRAD

On 23 August 1939, Germany and the Soviet Union signed the Nazi-Soviet Non-Aggression Pact in Moscow. This appearance of friendship between the ideologically-opposed German Fascists and Soviet Communists shocked other world leaders--but it was not friendship. The Nazi-Soviet Pact foreshadowed the 1941 German-Finnish attack on the Soviet Union and the massive destruction of the eastern third of the Soviet state. The Soviets eventually defeated the Germans in this "Great Patriotic War," but not before Soviet cities such as Kiev, Stalingrad, and Moscow suffered severe damages and over twenty million Soviet citizens were killed. Leningrad, birthplace of the Great October Socialist Revolution and former capital of Tsarist Russia, endured siege conditions for almost 900 days during this war, and one million of her citizens died of starvation. Why did Leningrad suffer this fate? Hitler originally planned to capture Leningrad, but failed due to overlooked aspects of fighting in the Soviet Union, as well as unanticipated military developments along the 3000-mile-long "Russian Front." Hitler's decision to besiege Leningrad was an unplanned change in his military strategy.

Both Germany and the Soviet Union saw the Nazi-Soviet Pact as a masterful stroke of realpolitik. Joseph Stalin, head of the Soviet state, feared that the Germans might attack his country, and hoped to use the Pact to delay such an attack. Recent events supported this fear: Germany had taken over Czechoslovakia just five months earlier (in March 1939) without provoking any military response from the Western Allies. Hitler's political promise of lebensraum (living space) for the German people was no secret, and Stalin believed that the Fuhrer would continue moving east into the Soviet Union to provide this space. Unfortunately for Stalin, he had recently completed a "purge" of the Red Army, leaving its officer corps weakened and incapable of fighting a major war. He needed time to prepare his armed forces for the expected German attack, and he signed the Nazi-Soviet Pact in an attempt to gain that time. He also used secret portions of the Nazi-Soviet Pact (which divided eastern Europe into German and Soviet spheres of influence) to protect the Soviet Union's western borders through the control of strategic points in the Baltic, Finland, and Bessarabia.<sup>1</sup>

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<sup>1</sup> Peter Matthews, "Hitler's Aims in Russia," Spectator, 4 July 1941, 6; David MacKenzie and Michael W. Curran, A History of Russia and the Soviet Union (Belmont,

Adolf Hitler, Fuhrer of Germany, concluded the treaty for more immediate reasons. First, he did not want to fight a two-front war against four opponents at once (Britain, France, Poland, and the Soviet Union) and used the Pact to remove the Soviet Union from this threatening position. And second, he had a longstanding desire to attack the Soviet Union and wanted to use the Pact to keep the Soviets off their guard.

Hitler's desire to conquer the Soviet Union is well documented. In the 1926 edition of his book Mein Kampf, Chapter 14 outlines a vague plan for removing Russian people from the Soviet Union and settling Germans and other Western Europeans in their place.<sup>2</sup> He even mentioned his intention to defeat Russia to his aides at the Berghof conference on the day before the signing of the Nazi-Soviet Pact.<sup>3</sup> But he also had more practical reasons to remove the Soviet Union from the growing list of Germany's

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CA: Wadsworth Publishing Company, 1987), 733-36. The reader should be aware that controversy still exists over Stalin's motives, and that the interpretation presented here is subject to debate. Presentation of all of the possible interpretations is, however, beyond the scope of this work.

<sup>2</sup> Gerald Reitlinger, The House Built on Sand: The Conflicts of German Policy in Russia, 1939-1945 (New York: The Viking Press, 1960), 9-10.

<sup>3</sup> Alan Clark, Barbarossa: The Russian-German Conflict, 1941-1945 (New York: William Morrow & Company, 1965), 25.

enemies. Specifically, he had the problem of Great Britain.

Hitler had already established a strategy to conquer Great Britain. In early 1939, however, Britain and Russia began to discuss an alliance. Hitler knew that such an alliance would seriously undermine Germany's chances of victory over Britain, and therefore he decided to eliminate the possibility of such an alliance by concluding a Pact with the Soviets.<sup>4</sup> According to Helmuth Greiner, Keeper of the War Diary for the German High Command, he wanted to "deprive England of the last trump card."<sup>5</sup> In the autumn of 1940, he explained his decision to fight the Soviet Union:

. . . Britain's hope lies in Russia and the United States. If Russia drops out of the picture, America, too, is lost for Britain, because the elimination of Russia would greatly increase Japan's power in the Far East. Decision: Russia's destruction must be made a part of this struggle--the sooner Russia is crushed the better.<sup>6</sup>

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<sup>4</sup> George E. Blau, The German Campaign in Russia: Planning and Operations (1940-1942), U. S. Army Publication 104-21 (Washington, DC: Center of Military History, 1988), 1.

<sup>5</sup> Helmuth Greiner, Operation Barbarossa, trans. A. Hall, MS # C-0651, in World War II German Military Studies, ed. Donald S. Detwiler, volume 7 (New York: Garland Publishing, Inc., 1979), 5.

<sup>6</sup> Clark, Barbarossa, 23.



After the Pact had been in effect for about one year, Soviet-German diplomatic relations began to deteriorate openly. German troops seized Rumania's oilfields in October 1940.<sup>7</sup> Soviet diplomats protested that the Germans had violated Article III of the Nazi-Soviet Pact, which called for consultation between the two powers before such actions. German officials retorted that Russia had not consulted Germany before the Russian occupation of Bessarabia, northern Bukovina, and the Baltic states four months earlier. Soviet Foreign Minister Vyacheslav M. Molotov's visit to Berlin on 12-13 November 1940 simply exacerbated this quarrel. In meetings with Hitler and Foreign Minister Joachim von Ribbentrop, Molotov rejected Germany's invitation to join their Three-Power Pact with Germany, Italy, and Japan and to share the future spoils of the British empire. Instead, Molotov hammered the German officials with demands for Soviet control of the Balkans, Finland, and the Dardanelles strait between the Black Sea and the Mediterranean. This infuriated Hitler, and one

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<sup>7</sup> Alexander Werth, Russia at War, 1941-1945 (New York: E. P. Dutton & Company, Inc., 1964), 1060.

month later he issued his strategic directive for an invasion of the Soviet Union.<sup>8</sup>

Directive Number 21, issued on 18 December 1940, outlined the objectives of "Operation Barbarossa." German troops would attack along the entire eastern Soviet border on 15 May 1941. They would advance to a line linking the northern White Sea city of Archangel with the southern city of Astrakhan on the Caspian Sea--to be known as the "AA Line."<sup>9</sup> This line ran east of the major cities of Leningrad, Kiev, Stalingrad, and Moscow, all of which were to be captured during the German advance. As suggested by Generalleutnant Friedrich Paulus, Assistant Chief of Staff, the German army would be divided into three parts: Army Groups North, Center, and South. Army Group North (AGN) would drive through Pskov, Luga, and Gatchina and would

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<sup>8</sup> Werth, Russia at War, 103-9; Earl F. Ziemke, The German Northern Theater of Operations, 1940-1945, Department of the Army Pamphlet Number 20-271 (Washington, DC: Center of Military History, 1959), 117-18; Heinz Guderian, The Interrelationship Between the Eastern and Western Front, MS # T-42, in World War II German Military Studies, ed. Donald S. Detwiler, volume 21 (New York: Garland Publishing, Inc., 1979), 7; Greiner contends that Hitler had no intention of allowing the Soviet Union to join the Three-Power Pact and had already planned the German attack on the Soviet Union. See Greiner, Operation Barbarossa, 36-37.

<sup>9</sup> Clark, Barbarossa, 25; Reitlinger, House Built on Sand, 55-56; Greiner, Operation Barbarossa, 9.

then take Leningrad.<sup>10</sup> The directive indicated that taking Leningrad would be first priority, with no attacks on Moscow until Leningrad was conquered.<sup>11</sup> This priority was set by Hitler alone; the German High Command preferred to take Moscow first.<sup>12</sup> Hitler later changed the date of attack to 22 June 1941 (due to German military involvement in Greece and Yugoslavia), but the other goals remained the same.

By early 1941, Finland had agreed to participate in the upcoming war against the Soviet Union. The unfortunate possessor of a common border with the Soviet Union, Finland had suffered from the recent German-Soviet political

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<sup>10</sup> Blau, German Campaign, 13; Werth, Russia at War, 198-201; Erich von Manstein, Lost Victories, trans. Anthony G. Powell (Novato, CA: Presidio Press, 1982), 178; Greiner, Operation Barbarossa, 79-80.

<sup>11</sup> Blau, German Campaign, 13; Greiner, Operation Barbarossa, 52-56. The Germans had no plans to recruit Soviet citizens who wished to fight against the Stalinist regime. The reason for this was that Hitler believed that Russia and Bolshevism were inextricably linked, and that to ally himself with any Russians--disaffected or not--was to open Germany to the risk of a Bolshevik/Communist revolution. Alexander Dallin, German Rule in Russia, 1941-1945: A Study of Occupation Policies (London: MacMillan & Company, 1957), 44; Greiner, Operation Barbarossa, 98-101.

<sup>12</sup> Lt. Col. de Cosse Brissac, Interrogation of General Halder, interview by Lt. Col. de Cosse Brissac (Neustadt Enclosure, 25 October 1947), MS # B-802, in World War II German Military Studies, ed. Donald S. Detwiler, volume 15 (New York: Garland Publishing, Inc., 1979), 12-13; Von Manstein, Lost Victories, 77.

maneuvering. Finnish anti-Communist sentiment in the late 1920s and 1930s seemed, to the Soviets, to smack of anti-Soviet feeling, and the fact that Germany had assisted Finland during the latter's struggle for independence caused suspicions that the Finns were secretly in league with the Nazis.<sup>13</sup> (Secret diplomacy was a common occurrence in European diplomacy, so such suspicions were not unreasonable). In April 1938, the Soviets tried to pre-empt any latent pro-German sentiments on the part of the Finns. In secret meetings with Finnish officials such as Prime Minister A. K. Cajander and Foreign Minister Rudolf Holsti, Soviet emissary Boris Yartsev outlined the Soviets' fears of a German naval attack through the Gulf of Finland toward Leningrad. He requested that the Soviets be permitted to defend their country by establishing bases on Finnish territory. The Finnish officials refused, reiterating their neutral status. Yartsev's requests then became demands, but the Finns held firm, and Yartsev

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<sup>13</sup> John H. Wuorinen, ed., Finland and World War II, 1939-1944 (New York: The Ronald Press Company, 1948), 38-40, 43. The Finnish Lapua movement, which began in the late 1920s, led to the banning of the Communist Party from Finland; the IKL (Patriotic People's Movement) of the 1930s was anti-Communist but not, as the Soviets feared, pro-Nazi.

returned to the Soviet legation in defeat.<sup>14</sup> In March 1939, the Soviets tried again, this time demanding long-term leases of several Finnish islands in the Gulf of Finland.<sup>15</sup> Rebuffed a second time, the Soviets laid plans for an attack. The "Winter War" lasted from November 1939 to March 1940. The Soviets were victorious. The Karelian isthmus, north of Leningrad, and several Gulf islands became Soviet territory. These losses, combined with the German occupation of Norway, physically isolated Finland and precluded any possibility of aid from the Western allies.<sup>16</sup> Finland became a German ally because that was her only chance of withstanding continuing Soviet threats and, possibly, of regaining her lost territory.<sup>17</sup>

Under Operation Barbarossa, the Finns would attack the Soviet Union "in the Karelian isthmus [and] between Lakes Ladoga and Onega" northeast of Leningrad, and join up with

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<sup>14</sup> Ibid., 44; C. Leonard Lundin, Finland in the Second World War (Bloomington, IN: Indiana University Press, 1957), 42-43.

<sup>15</sup> Wuorinen, Finland and World War II, 46-47; Lundin, Finland in the Second World War, 44.

<sup>16</sup> Greiner, Operation Barbarossa, 12.

<sup>17</sup> Werth, Russia at War, 76; MacKenzie and Curran, A History of Russia, 736; Ziemke, Northern Theater, 114; Felix Gilbert and David Clay Large, The End of the European Era, 1890 to the Present, 4th ed. (New York: W. W. Norton & Company, 1991), 320.

German troops in or near Leningrad (see map, Appendix I).<sup>18</sup> In return for Finland's cooperation, Hitler planned to give the entire Karelian isthmus to Finland after defeating the Soviet Union. This would expand Finland's eastern border to the White Sea, almost doubling her size.<sup>19</sup>

German troops began their attack on the Soviet Union on 22 June 1941. They captured Grodno (in the Belorussian republic) and Vilnius and Kaunas (in the Lithuanian republic) within two days. By 30 June, they reached the Western Dvina River at Dvinsk in the Latvian republic (also known as Daugavpils). Pskov, in the eastern Russian republic near Estonia, fell in early July, as the Germans forced the Soviet 11th Army under General Morozov and the 8th Army under General Sobennikov to retreat from the Baltic states.<sup>20</sup> The Soviet losses were phenomenal:

The greater part of the Russian air force was wiped out in the first few days; the Russians lost thousands of tanks; . . . as many as a million Russian soldiers were taken prisoner in a series of spectacular encirclements during the first fortnight. . . .<sup>21</sup>

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<sup>18</sup> Nikolai Voronkov, 900 Days - The Siege of Leningrad (Moscow: Novosti Press Agency Publishing House, 1982), 14; Ziemke, Northern Theater, 123.

<sup>19</sup> Dallin, German Rule in Russia, 50.

<sup>20</sup> Ibid., 61; Kirill Afanasyevich Meretskov, City Invincible (Moscow: Progress Publishers, 1970), 15.

<sup>21</sup> Werth, Russia at War, 131.

The Germans moved 400 miles into the Soviet Union within the first week.

The initial overwhelming success of the German attack has given rise to a controversy among historians: was the German attack a complete surprise to the Soviet leadership? Many facts point to an affirmative answer. For instance, the Soviet leaders moved troops nearer to the western border in May 1941, but these troops were not at full strength nor were they fully mobilized.<sup>22</sup> After the Germans attacked, many high Soviet military officials (such as General Dmitri G. Pavlov of the Western Special Military District) responded to reports of attacks by accusing the Soviet troops of cowardice and panic in the face of "provocations" and tricks. Officials even ordered attacks by armies that had already been destroyed by the Germans.<sup>23</sup> Troops occasionally protested such ludicrous orders but never questioned them (this was probably due to the military purges which had eliminated between 20,000 and

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<sup>22</sup> Ibid., 140.

<sup>23</sup> Ibid., 154-57; Barton Whaley, Codeword BARBAROSSA (Cambridge, Mass.: The MIT Press, 1973), 203.

35,000 active army officers suspected of disloyalty).<sup>24</sup> Lastly and most telling, Stalin's first radio address of the war did not occur until 3 July, eleven days after the German attack; it was rumored that he had had a nervous breakdown when told of the attack.<sup>25</sup>

Despite the above evidence, the German attack was not necessarily a surprise. The Soviet troops' lack of action could be due to their inefficient communications protocol, which required officers to remain inactive until orders were transmitted from Stalin himself. Also, not all of the Red Army officers had been trained on the wireless communication system, and they had to rely on aides or slower forms of communication.<sup>26</sup> The lack of fully-equipped troops, mentioned above, could be due to the condition of the railroads in the western frontier areas; the Soviet Union had acquired much of this area since 1939, so they had had limited time to make improvements. In 1941, the rail lines in this area remained at one-fourth to one-third the capacity of those on the German side of the border; this meant that the Soviets could not supply their

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<sup>24</sup> James F. Dunnigan, ed., The Russian Front: Germany's War in the East, 1941-1945 (London: Arms and Armour Press, 1978), 80.

<sup>25</sup> Whaley, Codeword BARBAROSSA, 218-19.

<sup>26</sup> Werth, Russia at War, 138.



troops as quickly or easily as could the Germans.<sup>27</sup> Even Erich von Manstein, commander of Germany's 56th Panzer Corps and a participant in the initial attack, judged by the reactions of the Soviets that

while those of the enemy in the frontline areas were in no way surprised by our attack, the Soviet military command had probably not been expecting it--or not for a while, anyway--and for that reason never got as far as committing its powerful reserves in any co-ordinated form.<sup>28</sup>

Also among the evidence against the "surprise" explanation is the fact that the Soviet leaders received numerous warnings about the impending German attack.<sup>29</sup> In Codeword BARBAROSSA, Barton Whaley gives many instances of such warnings, including:

- A Soviet military attache acquired a copy of Hitler's Directive Number 21 (Operation Barbarossa) in December 1940, seven days after it was released;
- German Luftwaffe reconnaissance flights over Soviet territory began 27 March 1941, and Soviet officials protested the flights three times;
- Heavy construction began along Germany's eastern frontier (actually POW camps for

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<sup>27</sup> Ibid., 141.

<sup>28</sup> Lost Victories, 181.

<sup>29</sup> Harrison E. Salisbury, The 900 Days: The Siege of Leningrad (Evanston, IL: Harper & Row, 1969; reprint, New York: Da Capo Press, 1985), 101 (page references are to reprint edition).

prisoners from the upcoming Soviet campaign);

- German Ambassador Count Friedrich von der Schulenburg warned Soviet Ambassador Vladimir G. Dekanozov of the impending attack, but Dekanozov thought it was a bluff and refused to forward the warning to his superiors;
- German embassy staff in Moscow received evacuation orders on 9 June 1941, and the NKGB (Soviet Secret Police) intercepted the order on 11 June (eleven days before the attack).<sup>30</sup>

In 1940 and 1941 many Soviet actions betrayed their knowledge, or at least suspicion, of the coming attack. Soviet leaders had criticized the performance of the Red Army in the Finnish War because of the high Soviet casualties; therefore, in April 1940, the Supreme Soviet approve the expenditure of 57 million rubles for improvement of military defenses--they obviously expected to need those defenses in the near future.<sup>31</sup> Soviet officials in general regarded the Nazi-Soviet Pact as "insurance. . .in view of the growing menace" of Germany,<sup>32</sup> and as a way of buying peace for several years.<sup>33</sup> The most convincing evidence, however, is the ukaz (edict) issued by

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<sup>30</sup> Whaley, Codeword BARBAROSSA, 24-34, 76, 109.

<sup>31</sup> Werth, Russia at War, 80.

<sup>32</sup> Ibid., 121.

<sup>33</sup> Whaley, Codeword BARBAROSSA, 226.

the Presidium of the Supreme Soviet on 26 June 1940--six months before Hitler issued his Barbarossa Directive. This ukaz put the Soviet Union's industries on a war footing, requiring eight-hour workdays and six-day workweeks, and tying industrial workers to their place of employment (which assured that such workers could not be relocated apart from their factory or office).<sup>34</sup>

Although the actions of the Soviet military upon attack betrayed their unreadiness, it is impossible to conclude that the attack was a complete surprise. Soviet actions, and their receipt of numerous warnings, preclude any conclusion of complete surprise, yet the overwhelming initial success of the German attack does point to a lack of Soviet military readiness. It is likely that the Soviet leaders (i.e., Stalin and some of his generals) expected the attack to occur much later, probably in 1942, and planned to alert the troops shortly before they expected the attack to occur.

Finland declared war on the Soviet Union on 25 June, after Soviet air attacks on southern Finland.<sup>35</sup> On 28

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<sup>34</sup> Werth, Russia at War, 90.

<sup>35</sup> Ziemke, Northern Theater, 136; Eino Luukkanen, Fighter Over Finland; The Memoirs of a Fighter Pilot, trans. Mauno A. Salo (London: Macdonald & Company, 1963),

June, Minsk fell to the Nazis; Riga followed on 1 July as Army Group North began their advance toward Leningrad. By 15 July, the Finns had reached the northern shores of Lake Ladoga. Meanwhile, the Germans took Smolensk on 16 July and Tallinn on 25 July, though Tallinn's defenders kept five divisions of Nazis engaged until 28 August. Soviet troops also slowed the Germans at the Luga River, which the Germans reached on 14 July but did not clear of Soviet defenders until 21 August.

During August 1941, the Germans moved dangerously close to Leningrad. They took Novgorod on 15 August and Kingisepp (seventy miles southwest of Leningrad) five days later (see map, Appendix II). The Finns also moved closer, reaching Viborg--which they had lost in 1940--on 20 August. The Soviet troops successfully defended Kolpino, but lost Tosno on 28 August, and saw the last railroad link between Leningrad and the rest of the Soviet Union severed when the Germans took Mga on 30 August. At this point, the German and Finnish troops had Leningrad almost completely surrounded--her only connection to the rest of the Soviet Union was across Lake Ladoga to the east.<sup>36</sup>

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86.

<sup>36</sup> For a military discussion of these battles from the Soviet perspective, see Meretskov, City Invincible, 20-25.

Despite the overwhelming advances of the German and Finnish armies in July and August, their successful conquest of Leningrad became more and more unlikely. As they approached the city, they began to encounter increasingly stubborn resistance from the Soviet defenders. The Luga battles in particular illustrated the tenacity of the Soviets--they held that line for over a month, finally withdrawing on 21 August to avoid being surrounded.<sup>37</sup> Luga also provided an example of a German lack of adaptability: according to the battle plans, two Panzer tank divisions (led by commanders von Manstein and Reinhardt) would simultaneously cross the Luga and drive toward Leningrad. Reinhardt succeeded in crossing the river, but Manstein's troops were pinned down by Soviet defenders. Rather than instruct Reinhardt to push toward Leningrad on his own, German High Command demanded that he wait for Manstein--which he did, for a month.<sup>38</sup> This insistence on sticking to their original plans contributed to the slowing of the German attack on Leningrad.

The actions of the Finns during August and September also lessened the possibilities of a successful drive on

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<sup>37</sup> Blau, German Campaign, 65; Clark, Barbarossa, 114-18; Werth, Russia at War, 304.

<sup>38</sup> Dunnigan, The Russian Front, 26.

Leningrad. These reluctant allies of the Germans reached their pre-Winter-War border on 2 September, and refused to attack past that line. As the Finnish Marshal Carl Gustaf von Mannerheim explained to German Generaloberst Wilhelm Keitel in late August, the Finns would go no further than this border because

with sixteen percent of its population devoted exclusively to military duties Finland was having serious difficulty in maintaining its economy. Moreover, the casualty rate was markedly higher than it had been in the Winter War.<sup>39</sup>

In his memoirs, Mannerheim also explains that he feared the consequences of a Finnish attack on Leningrad:

One of the earliest and strongest Soviet arguments against the existence of an independent Finland was that . . . Leningrad would thereby be threatened. [Mannerheim] therefore believed that Finland should not take any action which might lend substance to that argument, which could be revived by the Russians after the war.<sup>40</sup>

Eventually, under heavy pressure from the German High Command, Mannerheim agreed to advance to the Svir river east of Lake Ladoga. His Army of the Karelia occupied the entire length of the Svir river between Lakes Ladoga and Onega by mid-September, then went on the defensive.<sup>41</sup>

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<sup>39</sup> Ziemke, Northern Theater, 196.

<sup>40</sup> Ibid., 197.

<sup>41</sup> Ibid., 198-99; see also Luukkanen, Fighter Over Finland, 100-110.

Tactical matters also endangered the success of the attack on Leningrad. Army Group Center, driving toward Moscow, was supposed to reinforce Army Group North, but the divisions that were earmarked for such reinforcement were engaged in the battle for Smolensk at the time that they were requested for reinforcement.<sup>42</sup> Another tactical error involved the required concentration of German forces around Leningrad. German High Command had overlooked the need for extra troops to join up with the Finns east of Lake Ladoga, and Army Group North was left with too few troops to effect the linkup. The Germans and Finns continued to fight with ill-coordinated battle plans.<sup>43</sup>

On 1 August 1941, New York Times correspondents in Berlin began to hear rumors of a possible siege on Leningrad.<sup>44</sup> On 12 August, a supplement to the German High Command's Directive Number 34 seemed to confirm these rumors: it instructed Army Group Center to go on the defensive until Leningrad was encircled, then to resume the drive toward Moscow. This was the first time that a German

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<sup>42</sup> Charles V. P. von Luttichau, Guerilla and Counterguerilla Warfare in Russia During World War II (Washington, DC: Office of the Chief of Military History, Department of the Army, 1963), 22.

<sup>43</sup> Blau, German Campaign, 75.

<sup>44</sup> "Speculation About Leningrad," New York Times, 1 August 1941, 3(1).

directive mentioned encirclement, rather than direct attacks on the city.<sup>45</sup> By early September, other Western correspondents began analyzing the German actions around Leningrad and also concluded that a siege was likely.<sup>46</sup> And on 6 September, Hitler issued Directive Number 35, which instructed Army Group North to return several armored troops and air divisions to Army Group Center in preparation for an assault on Moscow. This implied that the conquest of Moscow had taken priority over the increasingly unlikely conquest of Leningrad. Army Group North quickly attacked toward Leningrad and took the Duderhof Heights, six miles from the city, before returning the divisions; after they were returned, the Leningrad operation became a holding action rather than an assault.<sup>47</sup>

Most historians agree that it was in September 1941 that Hitler actually made his decision to besiege

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<sup>45</sup> Blau, German Campaign, 64; Clark, Barbarossa, 110.

<sup>46</sup> Strategicus, "The Assault on Leningrad," Spectator, 5 September 1941, 229; "Berlin Reticent on War in East," New York Times, 11 September 1941, 2(2); "Unyielding Defence of Leningrad; Germans on Starvation Tactics," Times (London), 2 September 1941, 4.

<sup>47</sup> Blau, German Campaign, 75-77; Clark, Barbarossa, 122-25. Clark argues that Army Group North could not have taken Leningrad even with these extra forces, since they were not trained for the street fighting that would be required in the city.



Leningrad.<sup>48</sup> He gave several reasons for this decision, such as his desire to attack Moscow (which required that Army Group North transfer several divisions to Army Group Center) and his fear that Leningrad's defenders had already mined the city.<sup>49</sup> He also cited the German Army's inability to feed Leningrad's millions of inhabitants. The fact is, however, that Army Group North was in an impossible situation. The battles at Tallinn and the Luga River had slowed the German advance. This, coupled with the delayed start of Operation Barbarossa, meant that any assault on Leningrad would have to be launched during the treacherously muddy Russian autumn or the even more treacherous and bitterly cold Russian winter.<sup>50</sup> Army Group

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<sup>48</sup> Richard Bidlack, Workers at War: Factory Workers and Labor Policy in the Siege of Leningrad, Number 902 of The Carl Beck Papers in Russian and East European Studies (Pittsburgh: University of Pittsburgh Center for Russian and East European Studies, 1991), 12; Blau, German Campaign, 73; Clark, Barbarossa, 120; Dallin, German Rule in Russia, 77; Dunnigan, The Russian Front, 26; Leon Goure, Soviet Administrative Controls During the Siege of Leningrad (Santa Monica, CA: The RAND Corporation, 1958), 11-12.

<sup>49</sup> Kiev had recently been taken by German troops after being mined by the Soviet defenders, and many major explosions occurred shortly after the Germans occupied the city. Understandably, the German High Command wished to avoid a similar situation in Leningrad. Trial of German Major War Criminals (London, 1947), 15:306-7, quoted in Werth, Russia at War, 307-8.

<sup>50</sup> Guderian stresses the importance of the delayed start of Barbarossa. Interrelationship, 11-14.

Center had not responded to Army Group North's requests for reinforcements. The German High Command also did not provide the necessary troops for a link-up with the Finns; this left a gap in the line of attacking armies, allowing Leningrad's officials access to Lake Ladoga and the rest of the Soviet Union. By September, Hitler's troops were no longer in a position to launch an assault on Leningrad. The decision to besiege the city was an unplanned response to the military situation of the autumn of 1941.

## CHAPTER TWO

### TRANSPORTING FOOD TO LENINGRAD, JUNE 1941 TO JANUARY 1942

The siege became a reality for Leningrad when Mga railroad station fell to the Germans on 30 August 1941.<sup>1</sup> It would last for almost nine hundred days. During the most critical period, from October 1941 to January 1942, approximately three thousand Leningraders died of starvation every day.<sup>2</sup> Where was their food? The food that they so desperately needed was available in eastern Russia and other Soviet republics, but after the fall of Mga, there was no land connection between Leningrad and the rest of the country. Lake Ladoga was the only connection, but it did not have the docks and equipment necessary to

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<sup>1</sup> Alan Wykes, The Siege of Leningrad: Epic of Survival (New York: Ballantine Books, 1972), 66.

<sup>2</sup> Salisbury, The 900 Days, 436; Werth, Russia at War, 332-34. The population of Leningrad at the beginning of the siege was just over three million. Approximately one million died of starvation during the "hungry winter" of 1941-42, although historians disagree on the exact number. Salisbury's own citation of three thousand daily deaths is based on "incomplete data compiled at Smolny in January [1942] which provided an estimate of 3,000 to 4,000 daily deaths." For a discussion and analysis of the number of deaths, see Salisbury, The 900 Days, 513-17, citing S. P. Knyazev, M. P. Streshninskii, I. M. Frantishev, N. P. Sheverdalkin, and Yu. N. Yablochkin, Na Zashchite Nevskoi Tverdyni (Leningrad: 1965), 267, and Anatoly Darov, Blokada (New York: 1964), 145.

transfer large quantities of food to Leningrad. Even after the Soviet government began to install such equipment, inefficiency and shortsighted policies wasted or delayed many of the food shipments that could have saved the city. Stalin's regrettable lack of action during the first weeks of the war caused some of the problems, but officials in charge of food transportation simply overlooked important details, with tragic consequences. Despite their good intentions, the mistakes made by these officials caused a significant percentage of the starvation deaths in Leningrad during the "hungry winter" of 1941-42.

Eight days after the initial German attack on the Soviet Union, Stalin created a State Defense Committee to oversee the country during the war. Essentially a junta, this committee had power over all aspects of Soviet life, both military and civilian.<sup>3</sup> The State Defense Committee would become important to Leningrad during the siege because it held the authority to make life or death decisions regarding the transportation of food into the city. A similar group (the Leningrad Defense Committee) was formed in Leningrad by Party Chairman Andrei Zhdanov; this committee claimed responsibility for the distribution

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<sup>3</sup> Salisbury, The 900 Days, 140.

of food within the city, as well as various defense responsibilities.<sup>4</sup>

The Moscow-Leningrad rail line ran through Mga, and by capturing that city, the Germans cut off the last land route to the Russian "mainland" (as Leningraders began to call the rest of the country). They stranded Leningrad with a population of 2,544,000 and a one-month supply of food.<sup>5</sup> Having anticipated this catastrophe, the State Defense Committee acted quickly to aid the besieged city, passing a motion "On The Transportation of Goods for Leningrad" on the day of Mga's capture. This measure established shipping routes across Lake Ladoga and provided for the transportation of food and other necessary items.<sup>6</sup> For the next two and one-half months, the Soviet central government shipped supplies from the mainland to the Volkhov Railroad Station, up the Volkhov River and across Lake Ladoga to the primitive port of Osinovets (which, at the beginning of the siege, lacked even a usable harbor).

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<sup>4</sup> Ibid., 146. Zhdanov was also Chairman of the Party's Leningrad Oblast' (province) Committee, and later the head of the Military Council of the Leningrad Front.

<sup>5</sup> Dmitri Pavlov, Leningrad 1941: The Blockade (Chicago: University of Chicago Press, 1965), 48-49.

<sup>6</sup> Voronkov, 900 Days, 38; "Leningrad's Problems," Times (London), 22 August 1941, 4.

Supplies were then conveyed to Leningrad via the dilapidated Irinovsk rail line (see map, Appendix III).

After the fall of Mga, Zhdanov and the Leningrad Defense Committee moved quickly to approve the construction of a harbor at Osinovets. Construction began on 9 September 1941, just ten days after the fall of the Mga Station.<sup>7</sup> The harbor opened for business on 12 September, and the first barges left the Volkhov Station for Osinovets on that same day.<sup>8</sup> Their route, however, lay within ten kilometers of the German lines,<sup>9</sup> and the boats and barges were often attacked by German fighter planes and long-range artillery. Such dangers meant that the crossing usually took over twelve hours, as captains maneuvered their barges to escape enemy fire. Because of this slow pace, boats and barges brought only eight days' supply of food across the lake in the first month.<sup>10</sup>

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<sup>7</sup> Werth, Russia at War, 318.

<sup>8</sup> Pavlov, Leningrad 1941, 97.

<sup>9</sup> Meretskov, City Invincible, 49.

<sup>10</sup> Pavlov, Leningrad 1941, 102. The version of Pavlov's book consulted here is a translation of the second (1961) edition of the original Russian work. The use of this edition avoids the historiographical problems inherent in editions published after the 22nd Party Congress of 1961 (when encouragement was given to works that discredited Stalinists such as Zhdanov). Harrison E. Salisbury's introduction to the translation of the second edition notes that it contains praise for several officials--not Zhdanov

In early October, storms began to disrupt the shipping of food across the lake. Rations were lowered, due to the ever-decreasing shipments of food into the city; in October, the average ration was 300 grams (approximately three-quarters of a loaf) of bread per day, with only a few other foodstuffs available (see table, Figure 1).<sup>11</sup> On 8 November, German panzer units struggled through mud and swamps to capture Tikhvin, a key railroad station.<sup>12</sup> This further disrupted the flow of food and other goods to the eastern shore of the lake. And on 15 November, shipments across Lake Ladoga ceased altogether; the water had begun to freeze. The State Defense Committee quickly organized a food airlift across the lake; its operations began on 16 November.<sup>13</sup> Unfortunately for Leningrad, the Soviet counter-offensive at Moscow was at its height, and the Red Army could not spare many planes for the airlift. Also, of the sixty-four planes that were assigned to the route, a

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--that was not in the original 1958 edition. However, he also carefully states that the data on food supply in the second edition is unchanged from the first.

<sup>11</sup> Salisbury, The 900 Days, 367.

<sup>12</sup> Effects of Climate on Combat in European Russia, U. S. Army Publication Number 20-291, in World War II German Military Studies, ed. Donald S. Detwiler, Volume 17 (New York: Garland Publishing, Inc., 1979), 39.

<sup>13</sup> Ibid., 412.

FIGURE 1

DAILY BREAD RATIONS (IN GRAMS)

Date	Factory Workers	Office Workers	Dependents/ Children
18 July 1941	800	600	400
02 Sept 1941	600	400	300
12 Sept 1941	500	300	250
01 Oct 1941	400	200	200
13 Nov 1941	300	150	125
20 Nov 1941	250	125	125
25 Dec 1941	350	200	200
24 Jan 1942	400	300	250
11 Feb 1942	500	400	300
22 Mar 1942	600	500	400

Author's note: one pound equals 454 grams.

Source: Richard Bidlack, Workers at War: Factory Workers and Labor Policy in the Siege of Leningrad, The Carl Beck Papers in Russian and East European Studies, no. 902 (Pittsburgh: University of Pittsburgh Center for Russian and East European Studies, 1991), 44.



maximum of only twenty-two were operable at any one time, due to a lack of maintenance. In order to increase their maneuverability (to avoid German fighter planes) the airlift planes lessened their loads; they delivered an average of fifty tons per plane to the city each day, though each plane had a daily quota of 200 tons.<sup>14</sup>

The Red Army needed all of its fighter planes to engage the Germans in Moscow, so it was logical that none were spared to protect the airlift planes. The decrease in the loads on the planes was the only practical solution. It was ludicrous, however, for two-thirds of the transport aircraft to have been idle because of a lack of maintenance. A slight decrease in the number of planes assigned to transport food (with the remainder rotating through routine maintenance) could have resulted in more operable transport aircraft, and a greater supply of food in Leningrad.

Tikhvin, the rail station captured on 8 November, lay eighty kilometers east of Volkhov.<sup>15</sup> Its capture cut off Soviet access to the Volkhov station which had heretofore been the terminus of the supply route to Leningrad. Supply

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<sup>14</sup> Ibid.

<sup>15</sup> Ibid., 113.

trains now stopped at Zaborye Station, eighty kilometers further east of Tikhvin (see map, Appendix IV). Faced with this new catastrophe, food officials in Leningrad gradually reduced the rations of bread, meat, fats, and sugars to well below subsistence levels, due to the almost complete lack of food. By 20 November, factory workers received only 250 grams of bread daily; everyone else received a meager 125 grams--one-quarter of a loaf.<sup>16</sup> (Although rations were established for all types of food, a very poor-quality bread was the only food actually available after mid-November).

The station of Zaborye was separated from Lake Ladoga by rugged forests, with no roads bigger than a logging track. Immediately after the fall of Tikhvin, Zhdanov and Leningrad Food Commissioner Dmitri Pavlov recruited peasants, farmers, and Red Army rear troops to build a new supply route from Zaborye Station to the lake.<sup>17</sup> This makeshift road-building corps completed the Zaborye Road--over 200 kilometers through the forest--on 6 December 1941.<sup>18</sup> That same day, officials dispatched the first food supply trucks along the new road. The trip to the eastern

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<sup>16</sup> Pavlov, Leningrad 1941, 147-49.

<sup>17</sup> Salisbury, The 900 Days, 409; Wykes, Epic, 96-97.

<sup>18</sup> Pavlov, Leningrad 1941, 115.

shore of the lake took them six days. Within the first three days, 350 food trucks had been buried in snowbanks, and almost ninety had run off the road.<sup>19</sup> The trucks traveled a maximum of thirty-two kilometers per day, due to the poor maintenance of the road and the vehicles,<sup>20</sup> and transported only 600 tons of supplies per day, though Leningrad needed daily deliveries of 1000 tons of food in order to meet the bread rations.<sup>21</sup>

The corps of rear troops, peasants and farmers accomplished a remarkable feat in building this 200-kilometer road in less than one month. The officials responsible for operating the road, however, did not perform their jobs nearly as well. For instance, they apparently did not anticipate that snowdrifts would become a problem on the road. Pavlov revealed that there was little snow-removal equipment on the road, even though it opened in December in a region close to the Arctic Circle.<sup>22</sup> Nor did the officials consider the high probability of trucks running off the narrow, rough, and completely unfamiliar track. Two transport units lost the

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<sup>19</sup> Salisbury, The 900 Days, 413.

<sup>20</sup> Wykes, Epic, 100.

<sup>21</sup> Werth, Russia at War, 330.

<sup>22</sup> Pavlov, Leningrad 1941, 151.

majority of their vehicles when they ran off the shoulders of the road.<sup>23</sup> Lastly and most importantly, the officials did not provide mechanics to rescue the trucks that became stuck or to repair those that inevitably broke down on the long, rough road: at one time, over one-third of the trucks on the road were inoperable.<sup>24</sup> These oversights were not caused by an excusable lack of knowledge of the future, but were due to an anxious rush to get the trucks on the road, with no thought given to the probability that their precious cargo might not make it to Leningrad.

The Zaborye Road could not have saved Leningrad, but it could have made her agony less acute. The roughness and length of this dirt road restricted the speed of the trucks and caused many mechanical breakdowns that could not be avoided. However, if officials had provided a system to repair trucks, mark roads, and remove snowdrifts, more trucks would have completed their life-saving journeys.

Harrison Salisbury, a noted authority on the siege, stated that 3500 trucks were assigned to the Zaborye Road route, and that 1004 of them were lost to snowdrifts,

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<sup>23</sup> Salisbury, The 900 Days, 413.

<sup>24</sup> Ibid.

poorly marked roads, and inadequate maintenance.<sup>25</sup> If officials had removed fifty of those 3500 trucks (fifty is an arbitrary number) from their transport duty, and instead had assigned those fifty trucks and drivers to clear snow, mark roads, and repair vehicles, they could have prevented the loss of the 1004 transport trucks. In that situation, 3450 trucks would have been actively transporting food to Leningrad, with a greatly increased probability of actually reaching their destination. Assuming that 3396 trucks (3500 assigned, minus 1004 inoperable) had transported 600 tons per day on the road (as previously mentioned), then 3450 trucks could have transported 610 tons per day.<sup>26</sup> Since the ration in December was 250 grams for factory workers and 125 grams for all other civilians,<sup>27</sup> this 10-ton increment would have provided one day's rations for 36,320 factory workers, or 72,640 dependents (or one week's rations for 5200 factory workers), who would not otherwise have eaten; or an increase of four grams per day for the

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<sup>25</sup> Ibid. Salisbury gives no specific source for these figures, but they are likely based on the works of Meretskov and Pavlov, as well as Russian documents archived at Smolny (the same source for his figures on daily deaths during the hungry winter).

<sup>26</sup> If 3396 trucks together carried 600 tons, then 3450 trucks could together carry 610 tons ( $600/3396 = 610/3450$ ).

<sup>27</sup> Pavlov, Leningrad 1941, 118.

entire city (a four percent increase).<sup>28</sup> This meager difference would not have saved the entire population, or even a large percentage of it, but it could probably have saved thousands of people from death by starvation. Had the food distribution officials thought about maintaining the Zaborye Road, they could have saved thousands of lives.

Problems with the "Ice Road" on Lake Ladoga compounded those of the Zaborye Road. On 20 November, when the ice on the lake appeared thick enough to support their weight, several horse-drawn carts crossed the lake with a cargo of flour. Officials had not provided food for the horses, however, and many of them died on the journey across the lake. Their drivers butchered them and sent them on to Leningrad as food.<sup>29</sup> On 23 November, the first trucks crossed the ice. Military Automobile Highway Number 101, also known as the Ice Road, was open.<sup>30</sup> Leningraders called it the Road of Life.

Forty trucks sank during the first seven days of the Ice Road's operation, and the rest managed to deliver only 674 tons of flour to Leningrad--enough for 1.3 days.<sup>31</sup>

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<sup>28</sup> One pound equals 454 grams; one ton equals 2000 pounds.

<sup>29</sup> Werth, Russia at War, 329.

<sup>30</sup> Salisbury, The 900 Days, 412.

<sup>31</sup> Pavlov, Leningrad 1941, 137.

Anxious officials, however, kept sending trucks across the lake. Tons of flour sank to the bottom of the lake as the ice gave way under the heavy trucks. That flour, sent from eastern and central Russia, could have been delivered to Leningrad if officials had ordered lighter loads and more trips per truck. Unfortunately, their concern for the city overrode their common sense, and consequently thousands of Leningraders went hungry as their food sank in the lake.

On 9 December, Soviet troops recaptured Tikhvin from the Germans, opening a shorter, 190-kilometer truck route to Leningrad.<sup>32</sup> However, problems with the Ice Road and the rail link between Osinovets and Leningrad prevented any increase in rations until 25 December.

Though the ice finally became solid in mid-December, and trucks began to carry heavier loads and make more trips (delivering 700 to 800 tons of food per day<sup>33</sup>), the Ice Road was still performing below its potential. Drivers were not responsible for their own trucks and therefore did not maintain them well. A repair service did exist, but was controlled by a Soviet bureaucracy and often took days to complete simple repairs.<sup>34</sup> The road was not maintained

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<sup>32</sup> Ibid., 139.

<sup>33</sup> Ibid., 147.

<sup>34</sup> Ibid., 145.

well, either, and trucks were often delayed by snowdrifts and bomb craters in the middle of the road. The Ice Road was operational, but food distribution officials were ignoring the necessity of its maintenance. Deliveries decreased, and by Christmas Leningrad's warehouses held only nine days' worth of flour.<sup>35</sup> People dropped dead in the streets from starvation, or quietly froze to death in their flats, burning their furniture for warmth or trading it for bread on the black market. Leningrad was desperate.

Zhdanov solved the problems of the Ice Road in late December and early January. He divided the road into sectors, with a maintenance crew assigned to each. Drivers were assigned responsibility for the maintenance of their vehicles. Zhdanov even assigned standard loads and established a bonus system.<sup>36</sup> By January, the Ice Road was well-run and well-maintained, with "first-aid stations, traffic control points, repair depots, snow-clearing detachments, [and] bridge-layers (to put wooden crossings over weak points or crevasses)."<sup>37</sup> Maintenance personnel established six routes across the ice, and deliveries rose to 1500 tons of food per day.

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<sup>35</sup> Ibid., 147.

<sup>36</sup> Ibid., 146.

<sup>37</sup> Salisbury, The 900 Days, 414.



These improvements of the Ice Road enabled Pavlov to raise the daily ration of bread on 24 January 1942, to 400 grams for factory workers, 300 grams for office workers, and 250 grams for dependents and children.<sup>38</sup> This raise ended the worst period of the siege, and the survivors slowly began to recover from their near-starvation. In December and early January, three thousand Leningraders died of starvation every day. If Zhdanov had implemented his improvements of the Ice Road in mid-December, when the ice was first able to support fully-loaded trucks, the higher ration could have been introduced around 24 December, instead of 24 January. At three thousand persons per day, this early intervention could have saved up to ninety thousand lives.

On 9 December 1941, Soviet troops liberated Tikhvin. The Army repaired and rebuilt all of the damaged railroad bridges between Zaborye and Voibokalo Station within one week (see map, Appendix V).<sup>39</sup> Food distribution officials quickly developed a new trucking route from Voibokalo to Lednevo and Kabona on the eastern shore of the lake; this route was 140 kilometers shorter than the Zaborye Road and

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<sup>38</sup> Pavlov, Leningrad 1941, 149.

<sup>39</sup> Wykes, Epic, 116; Werth, Russia at War, 330.

was therefore easier to travel and to maintain.<sup>40</sup> The Zaborye Road was officially closed on 25 December 1941, after only nineteen days of use.

By January 1942 the route to and across the ice was operating efficiently, but problems still existed along the Irinovsk railroad line between Leningrad and Osinovets (on the western shore of the lake). Before the war, only one train per day had run on those tracks<sup>41</sup>; since the fall of Mga, the line needed to handle a daily load of six to seven trains in each direction.<sup>42</sup> The engines that transported food and other supplies to Leningrad required wood and water, both of which were scarce. The train engineers gathered their own wood--often green and wet--and water--often frozen.<sup>43</sup> Trains stood idle while the engineers gathered these supplies, and the green wood did not burn well, causing more delays. Food distribution officials did not address these problems (first encountered in September 1941) until January 1942, when the track averaged less than one train per day due to a lack of wood, water, and maintenance.

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<sup>40</sup> Pavlov, Leningrad 1941, 139.

<sup>41</sup> Ibid., 155; Salisbury, The 900 Days, 421.

<sup>42</sup> Pavlov, Leningrad 1941, 156.

<sup>43</sup> Werth, Russia at War, 332.

With the recent improvements to the ice road, the Irinovsk Railroad had become the bottleneck of the entire food distribution system.<sup>44</sup> By 20 January, Leningrad's warehouses held only 3.7 days' worth of flour; 1.8 days' worth was en route to Leningrad on the Irinovsk Railroad, 4.5 days' worth was waiting at Lake Ladoga Station for transport on the railroad to Leningrad, and 11 days' worth was at Voibokalo waiting to be trucked across the ice road.<sup>45</sup> At that time Zhdanov ordered the formation of woodcutting teams for the Irinovsk Railroad and provided for an extra 125 grams of bread daily for railroad workers. He also replaced the director of the railroad.<sup>46</sup> Shipments of food on the Irinovsk Railroad increased immediately, though the amount was negligible at first.<sup>47</sup>

Zhdanov lacked foresight in his control of the Irinovsk Railroad. If he had taken steps to solve the line's problems just two or three weeks earlier than he did, the Irinovsk would never have become the bottleneck of the food supply network and the main reason for the lack of

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<sup>44</sup> Salisbury, The 900 Days, 421-22.

<sup>45</sup> Pavlov, Leningrad 1941, 159-60.

<sup>46</sup> Salisbury speculates that Zhdanov had the railroad director shot as a lesson to the other railroad workers. See Salisbury, The 900 Days, 421.

<sup>47</sup> Salisbury, The 900 Days, 421.

food in Leningrad. Pavlov stated that by the beginning of January 1942, the trucks on the Ice Road carried enough food to fill six to seven trains per day.<sup>48</sup> The Irinovsk Railroad was the only obstacle that kept that food from reaching Leningrad. Before mid-January, however, Zhdanov was preoccupied with solving the problems of the Ice Road, and did not assign the task of improving the Irinovsk Railroad to anyone else.

Had Zhdanov (or any other official) solved the problems of the Irinovsk Railroad earlier, Leningrad's bread rations could have returned to tolerable levels at least one month earlier than they did, saving thousands of lives.<sup>49</sup> At the beginning of January 1942, factory workers in Leningrad received a daily ration of 350 grams of bread, while all other civilians received only 200 grams (see Figure 1). By this time, no other food was available for distribution, and frequent shortages (due to the inefficiencies in the supply system, primarily the Irinovsk Railroad) meant that even these meager rations were sometimes not distributed.<sup>50</sup> People could not survive on

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<sup>48</sup> Pavlov, Leningrad 1941, 156.

<sup>49</sup> Ibid., 147.

<sup>50</sup> Elena Skrjabina, Siege and Survival: The Odyssey of a Leningrader (Carbondale, IL: Southern Illinois University Press, 1971), 59.

this amount of food; thousands died every day. On 11 February 1942, when most of the supply problems had been solved, food officials raised the daily bread ration to 500 grams for factory workers, 400 grams for office workers, and 300 grams for dependents and children.<sup>51</sup> While not bountiful, this was enough to live on: the death rate declined after this date. If the problems of the Irinovsk Railroad had been solved in late December or early January, food officials could have raised the rations to a higher level in January, and the death rate would have declined then rather than in February, saving many lives.

Leningrad's food distribution officials overlooked many problems when they established distribution routes during the siege. They set up new routes and frantically sent trucks along them without considering the tragic consequences in the event that they did not reach their destination. Officials did eventually solve all of the problems but could have anticipated them before they occurred. This disinclination to foresee obvious problems was most likely due to an anxious desire to send food to Leningrad as quickly as possible; a calm and reasonable assessment of the dangers would have ensured that that food

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<sup>51</sup> Pavlov, Leningrad 1941, 79.

reached the city. In Leningrad, an ounce of prevention in the beginning months of the siege would have been worth well over a pound of cure, but by the time the problems were solved thousands of Leningraders were beyond curing: they were dead. Whatever the reasons for their inefficiency, if officials had organized and operated the food distribution system in a more practical and less haphazard manner, fewer Leningraders would have died during the siege.

## CHAPTER THREE

### THE DISTRIBUTION SYSTEM WITHIN THE CITY OF LENINGRAD

Conditions within Leningrad were unbelievably harsh during the hungry winter. Interruptions in the food supply and problems with the transportation system, discussed above, caused many deaths. But of a pre-war population of approximately three million, approximately two million Leningraders survived, due substantially to the efforts of one man--Dmitri Pavlov. As Food Commissioner for Leningrad since September 1941, he established a strict system for distributing food to the city's inhabitants during the siege. Considering the lack of sufficient food reserves and the difficulties caused by the siege and the typically harsh winter, Pavlov's system distributed food efficiently and equitably among the inhabitants of Leningrad during the hungry winter of 1941-1942.

When Hitler's armies attacked the Soviet Union on 22 June 1941, Stalin's lack of action had a direct effect on Leningrad. A run on the city's food stores began on the first day of the attack, but city officials could get no instructions from the paralyzed government in Moscow, and therefore made no attempt to control the food reserves or to restrict food purchases. Stalin finally recovered and

instituted national food rationing on 18 July 1941. This rationing was based on policies created in 1930 and 1935 in response to food shortages caused by the creation of collective farms.<sup>1</sup> The Soviet people actually had been without food rationing for less than one year and so accepted this new decree with almost no comment.<sup>2</sup> Housing administrators and factory directors quickly compiled lists of residents and workers, and ration cards were issued by raion (city district) rationing bureaus according to these lists.<sup>3</sup> These bureaus, apparently re-established from previous rationing periods, issued approximately 2.5 million ration cards in July 1941; that number rose to 2.7 million in August, due to an influx of refugees from the Baltic area, and fell to approximately 2.5 million in September, as evacuations slightly lowered the population.<sup>4</sup>

Rationed items included "bread, flour, cereals, pasta, butter, margarine, vegetable oil, meat and fish, sugar and confectionery," but the amounts issued were generous and

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<sup>1</sup> Bidlack, Workers at War, 4.

<sup>2</sup> I. Alexander Abramzon, interview by author, 19 October 1992, San Jose, CA, tape recording.

<sup>3</sup> Ales' Adamovich and Daniil Granin, A Book of the Blockade, trans. Hilda Perham (Moscow: Raduga Publishers, 1983), 244-45; Salisbury, The 900 Days, 451.

<sup>4</sup> Harrison E. Salisbury, foreword to Pavlov, Leningrad 1941, xiv.



caused no hunger or hardship.<sup>5</sup> Taking bread as an example, factory workers received a ration of 800 grams per day, office workers received 600 grams per day, and dependents and children received 400 grams per day. The average daily consumption of bread for all inhabitants in 1940 was 531 grams; thus the majority of the population received more bread on rations than they would normally consume.<sup>6</sup>

The existing (i.e., peacetime) food administration system in Leningrad was centralized, in that local food supply officials took no action without orders from their agency's central Moscow office. It was also decentralized, in that there was no overall food administration agency for the city of Leningrad. Ten different agencies (such as the Agency for Administration of the Sugar Industry) controlled the food supplies within Leningrad.<sup>7</sup> As late as September 1941, many of these agencies continued to issue food according to peacetime procedures, having received no instructions to the contrary from their Moscow offices. According to Harrison Salisbury, peacetime procedures such

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<sup>5</sup> John Barber and Mark Harrison, The Soviet Home Front, 1941-1945: A Social and Economic History of the USSR in World War II (London: Longman Group UK Limited, 1991), 80.

<sup>6</sup> Salisbury, The 900 Days, 205, 292.

<sup>7</sup> Pavlov, Leningrad 1941, 51; Salisbury, foreword to Leningrad 1941, xx.

as the issuance of supplemental rations "wasted" 2500 tons of sugar and 600 tons of fat during this period.<sup>8</sup> Other peacetime procedures included the storage of fats in both the Ministry of Trade warehouses and military supply warehouses (and unequal issuance of rations from those supplies), and visual estimations of the weight of beef cattle (which led to miscalculations regarding the amount of meat available in the city).<sup>9</sup> This system caused much confusion as to the type and amount of food being distributed. Due to the use of peacetime policies, Leningraders could still buy and consume food without ration cards. Hospitals and children's homes distributed food to patients and children without requiring ration cards, though these persons also received such cards and used them to purchase food elsewhere. Many office workers received factory workers' rations, due to confusion over worker classification. And government agencies issued over seventy thousand "special coupons" for one-time food purchases without ration cards.<sup>10</sup> Leningraders could also

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<sup>8</sup> Salisbury, foreword to Leningrad 1941, xx.

<sup>9</sup> Pavlov, Leningrad 1941, 51.

<sup>10</sup> Ibid., 51, 70.

shop at non-rationed food shops known as "commercial stores," and eat at non-rationed restaurants.<sup>11</sup>

The totalitarian Soviet system, however, provided a sound basis for consolidation of wartime control in besieged Leningrad. The Soviet citizens were accustomed to strict governmental control and did not question new--or rather renewed--policies such as rationing and strict curfews.<sup>12</sup> Thus, when Food Commissioner Pavlov arrived in Leningrad on 10 September 1941 with orders from the State Defense Committee in Moscow, he had no difficulty in solidifying his control over the food reserves and distribution system, as citizens and government officials obeyed his orders without question.

Dmitri Pavlov was thirty-six years old when he arrived in Leningrad. A 1936 graduate of the All-Union Academy of Foreign Trade, Pavlov had spent his entire career in the field of food production and supply.<sup>13</sup> Immediately before his arrival in Leningrad, he was Commissar of Trade for the Russian Federated Republic and an official of the Main

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<sup>11</sup> Salisbury, The 900 Days, 205.

<sup>12</sup> Goure, Administrative Controls, 32; "Leningrad Ruled By Six," New York Times, 4 September 1941, p. 6.

<sup>13</sup> Wykes, Epic, 65; Salisbury, foreword to Leningrad 1941, xxiii.

Administration of Food Supplies of the State Defense Committee.<sup>14</sup> His experience with the problems of food supply, and the authority that he held as an official of the State Defense Committee, would prove valuable during his term of duty in Leningrad.

When Pavlov arrived on 10 September, Leningrad was in dire straits. Evacuations from Leningrad had begun on 29 June, but were unorganized, and many children had been evacuated into the path of the German armies. Because of this catastrophe, by August many parents refused to let their children leave the city.<sup>15</sup> Other citizens refused to leave because they underestimated the strength of the German army (within months, many of these people had died of starvation).<sup>16</sup> On 30 August, the German army captured Mga, a crucial rail station on the Moscow-Leningrad line, located approximately thirty kilometers from Leningrad (see map, Appendix VI).<sup>17</sup> This capture ended all attempts at evacuation. Leningrad's population had been lowered by

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<sup>14</sup> Salisbury, The 900 Days, 294.

<sup>15</sup> Skrjabina, Siege and Survival, 17.

<sup>16</sup> Dora Jedelman, interview by author, 12 October 1992, Mountain View, CA, tape recording. Jedelman's father remained in Leningrad for this reason, and died of starvation on 25 December 1941.

<sup>17</sup> Wykes, Epic, 66.

only 626,000, leaving over 2.5 million people trapped in the city.<sup>18</sup>

Other German forces bombarded the city from captured locations less than thirty kilometers away. (The closest German troops were approximately ten kilometers southwest of the city, on the Gulf of Finland; the furthest of the besieging troops were at Schlüsselburg, almost forty kilometers due east on Lake Ladoga<sup>19</sup>). Two days before Pavlov's arrival, German shells struck the city's main food storage location--the Badayev warehouses. Tons of grain, sugar, meat, lard and butter were destroyed as the warehouses burned to the ground. "The odor of burning ham and charred sugar" awoke the fears of the populace, and many survivors cite the burning of Badayev as the beginning of severe food shortages in the city.<sup>20</sup> On the day of Pavlov's arrival, German bombs leveled the Red Star creamery, destroying many tons of butter. This event

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<sup>18</sup> Mark Harrison, Soviet Planning in Peace and War 1938-1945 (Cambridge: Cambridge University Press, 1985), 69.

<sup>19</sup> Pavlov, Leningrad 1941, 17.

<sup>20</sup> Skrjabina, Siege and Survival, 27; Abramzon, interview; Gregory Brevdo, interview by author, 27 October 1992, San Jose, CA, tape recording; Jedelman, interview. Pavlov argues that the Badayev fires were not such a major catastrophe, but Salisbury disagrees with his assessment; see Pavlov, Leningrad 1941, 56-57; Salisbury, foreword to Leningrad 1941, xxi; Salisbury, The 900 Days, 289-95.

reinforced the people's fears of starvation and set the stage for Pavlov's arrival.<sup>21</sup>

Pavlov's first action as Food Commissioner of Leningrad was to disperse the city's flour supplies from the two main milling combines--the Lenin and the Kirov--to various locations in the city. This action, taken within two days of Pavlov's arrival, calmed the people and lowered the chances of another disaster like the burning of Badayev. He closed all of the non-rationed commercial stores and ended all sales of food without ration cards.<sup>22</sup> He began an intensive search for food supplies within the city and requisitioned ten thousand tons of potatoes and vegetables from private fields and gardens in the suburban raions of Leningrad.<sup>23</sup>

Within ten days, Pavlov had located the following food reserves: 35 days' supply of grains, 30 days' supply of cereals, 33 days' supply of meats (including livestock), 45 days' supply of butter and fats, and 60 days' supply of sugar.<sup>24</sup> Based on these reserves, and a vague State Defense Committee order to conserve food supplies, Pavlov

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<sup>21</sup> Salisbury, The 900 Days, 297.

<sup>22</sup> Ibid., 295.

<sup>23</sup> Salisbury, Unknown War, 93.

<sup>24</sup> Pavlov, Leningrad 1941, 49.

decreased the food rations on 12 September. Factory workers now received 500 grams of bread per day, office workers and children received 300 grams, and dependents received 250 grams.<sup>25</sup> Other foods were also rationed, but bread was the most consistently available foodstuff and quickly became the staple of the Leningrad diet.

Leningrad's City Soviet had not developed plans for the distribution of food and consumer goods in the event of war, so Pavlov had to adapt the city's peacetime system to a war footing. He quickly enlisted the help of Ivan Andreyenko, deputy chairman of the city Soviet and director of the city's trade department, for communication of rationing information. Andreyenko made all such rationing announcements, by wireless radio and occasionally by newspaper, throughout the siege.<sup>26</sup> N. A. Smirnov, director of the Bakery Trust, also worked closely with Pavlov to ensure the efficient operation of bread factories and delivery routes.<sup>27</sup> In general, Party officials in Leningrad were "high-ranking, strong leaders who were capable of a certain amount of independent decision-making

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<sup>25</sup> Ibid., 53.

<sup>26</sup> Adamovich and Granin, Book of Blockade, 123.

<sup>27</sup> Pavlov, Leningrad 1941, 61.

and who were prepared to exercise their controls."<sup>28</sup> These characteristics, and Pavlov's authority as the supreme commander of food policy in Leningrad, allowed city officials to enact Pavlov's food distribution policies in Leningrad with minimal interference from Moscow. Thus Pavlov had complete control over the distribution system during the siege.

Pavlov's distribution system was based entirely upon ration cards. These small identification cards listed the owner's name, identification number, and occupational status. They were printed in city printshops under strict Party supervision. The size and color of the cards changed each month; printshops received information as to the next month's configuration on the day before they began the printing. According to printshop worker Evgeni Trenke, the shops produced the new ration cards under armed guard within a six-day period at the end of each month and distributed the finished cards to the appropriate raion rationing bureaus within one day. The rationing bureaus then had one to two days to distribute the cards to building managers and factory directors. This timing was

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<sup>28</sup> Goure, Administrative Controls, 25-26.



strictly enforced, and was intended to prevent forgeries of the cards.<sup>29</sup>

Workers received their monthly ration cards from the director of their factory or workplace; building managers issued cards to all children and non-working adults. The amount of food that an individual could receive with a ration card depended on that person's work status: factory and other "heavy" workers received the highest ration, office workers received the next highest, and children and other "dependents" (including university students) received the lowest ration.<sup>30</sup> Infants received 50 grams (3.5 ounces) of soybean milk, a scarce commodity issued daily from pediatric clinics--a severe hardship considering that a nutritional diet for a child includes approximately one thousand grams of milk per day.<sup>31</sup> And beginning in September, hospital patients and residents of children's homes were required to surrender their ration cards, since they received non-rationed food at those institutions.

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<sup>29</sup> Adamovich and Granin, Book of Blockade, 88, 106; Salisbury, The 900 Days, 369.

<sup>30</sup> Jedelman, interview.

<sup>31</sup> Ibid.; Elena Kochina, Blockade Diary, trans. Samuel C. Ramer (Ann Arbor, MI: Ardis Publishers, 1990), 43; League of Nations, Wartime Rationing and Consumption (Geneva: League of Nations, 1942), 33.

As the rationing rules became more strict and ration amounts fell below pre-war consumption levels, rationing-related crime rose. People forged ration cards and used them in addition to their legitimate cards, in order to get more food. Others applied for cards more than once, on the chance that the duplication would not be noticed. By October 1941, these crimes were increasing, and Pavlov took a drastic step: he decreed that all ration cards had to be re-registered between 12 and 18 October, and that cards not re-registered by 18 October would be considered invalid. Three thousand Party members appeared in house-managers' and factory directors' offices and checked the ration cards of all residents and employees against their identification documents. If the cards matched the documents, the Party workers stamped the cards as re-registered. In this manner, over 88,000 forged ration cards were confiscated and an unknown number were not presented for re-registration.<sup>32</sup> By confiscating forged ration cards and tightening ration card security, Pavlov saved valuable tons of food. They would be needed in the long winter ahead.

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<sup>32</sup> Pavlov, Leningrad 1941, 70-72; Salisbury, The 900 Days, 369. No documentation was found regarding the punishments administered to persons who presented forged cards for re-registration.

After the capture of Mga, most of the food entering Leningrad came via Lake Ladoga and the Irinovsk Railroad (see map, Appendix VI).<sup>33</sup> From the railroad station, trucks carried the foodstuffs--mostly bread ingredients--to warehouses throughout the city.<sup>34</sup> Each day, trucks and (in the wintertime) sledges delivered the various ingredients to large bakeries (approximately one per raion) where the bread was baked according to Pavlov's decrees. Each bakery's delivery manager coordinated the delivery of this bread to food stores throughout his respective raion; it was delivered before the opening of the stores at 6:00 A.M. each day.<sup>35</sup> People received their bread rations by taking their ration card to any food store in the city. Clerks checked the validity of the ration card, issued the appropriate amount of bread, clipped the corresponding coupons from the card, and recorded the identification number of the card (to avoid issuing duplicate rations).<sup>36</sup>

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<sup>33</sup> For a discussion of food supply lines across Lake Ladoga, see Pavlov, Leningrad 1941, 96-109, 136-67; and Salisbury, The 900 Days, 407-22 and 497-505.

<sup>34</sup> Nikolai Kislitsyn and Vassily Zubakov, Leningrad Does Not Surrender (Moscow: Progress Publishers, 1989), 114.

<sup>35</sup> Pavlov, Leningrad 1941, 127.

<sup>36</sup> *Ibid.*, 72; Jedelman, interview. Jedelman was once denied the soymilk ration for her child because a forged card, bearing her identification number, had already been used to claim her ration.

At the end of each day, clerks counted the number of coupons that they had clipped and reported the numbers to their superiors for planning purposes.<sup>37</sup> (Workers could avoid this process by eating at their factory "canteen," where waiters clipped the appropriate coupons from their ration cards).

Food stores sold bread daily. Bread rations could be bought one day in advance, but not one day late.<sup>38</sup> Other foodstuffs were issued three times per month and could be purchased only on the first, eleventh, and twenty-first of each month. City Trade Director Ivan Andreyenko announced (by wireless radio and/or newspaper) the amount of each ten-day ration at the beginning of each ten-day period. Meat, fats, and sugar all fell into this category.<sup>39</sup>

This entire system was centralized under Pavlov's control. All bakeries, warehouses, and food stores were run by Party organizations, which operated under Pavlov's orders. A centralized dispatcher group, composed of Party managers and located at the city office of the State Grain Purchasing Administration, coordinated the transportation

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<sup>37</sup> Pavlov, Leningrad 1941, 60.

<sup>38</sup> Ibid., 74.

<sup>39</sup> Barber and Harrison, Soviet Home Front, 81.

of all foodstuffs within the city.<sup>40</sup> Workers within the food distribution system were chosen from a pool of people "singled out by the production collectives [and] by Party, Soviet, and trade-union organizations" as loyal and hard-working employees.<sup>41</sup> Loyal members of Komsomol (Youth Communist League) provided security for the distribution network. These young people supervised the provisions "from their deliveries to the city to their handing out to the population," and helped solve many problems within the system, such as hauling water to a bakery when the water pipes froze.<sup>42</sup>

The German army captured the railroad station at Tikhvin on 8 November 1941 (see map, Appendix IV). After this date, the amount of food entering Leningrad became a mere trickle, as Soviet officials had to build a road from Zaborye (east of Tikhvin) to Lake Ladoga.<sup>43</sup> When the lake froze in late November, a road was built across its surface, and trucks hauled food across the ice to the

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<sup>40</sup> Pavlov, Leningrad 1941, 59.

<sup>41</sup> Ibid., 80.

<sup>42</sup> Kislitsyn and Zubakov, Leningrad Does Not Surrender, 108.

<sup>43</sup> For further discussion of supply lines before and after the fall of Tikhvin, see Pavlov, Leningrad 1941, 96-109, 136-67; and Salisbury, The 900 Days, 407-22, 497-505.

Irinovsk Railroad, which transported the food to the city. This system kept the food supply network operating, but the amount of food brought into Leningrad was not enough to meet the city's requirements, and Leningraders began to starve.

The welfare of Leningrad's citizens during the first winter of the siege can be tracked by the changing ingredients of the rationed bread. Before the war, bread typically consisted of approximately 87% flour (usually rye flour). By September 1941, the bread was composed of 52% rye flour, 30% oats, 8% barley, and 5% each of soy bean and malt. (The oats came from supplies of livestock feed; the malt was confiscated from breweries). In October, some of these reserves began to run low, and substitutions were made. The bread then consisted of 63% rye flour, 12% malt flour, 8% oat flour, 4% each of flax cake, bran, and soya flour, and 5% flour made from moldy grain (recovered from sunken ships in Lake Ladoga).<sup>44</sup> Bakeries also added water to the bread, to increase its weight; this necessitated a switch in October from traditional "round loaves" to "tin loaves" (baked in loaf pans).<sup>45</sup> During November, Pavlov

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<sup>44</sup> Pavlov, Leningrad 1941, 58-60.

<sup>45</sup> Adamovich and Granin, Book of Blockade, 107-08.

organized searches for any substances that could be used as bread ingredients. Over 18,000 tons were found, including

cotton, hemp, cocoa, flax seed cake, barley and rye bran, flour-mill dust, [wood] cellulose, sprouted grain, rice hulls, corn shoots, cellulose sweepings, bran chaff, and the powder that was beaten out of flour sacks.<sup>46</sup>

Many of these items had no nutritional value at all, but November's bread rations included all of them, as well as cottonseed oil cake, formerly used as fuel for ships' furnaces but found to be non-poisonous after high-temperature baking.<sup>47</sup> No other ingredients were available. The bread created from these ingredients was a "greyish substance" that fell apart in one's hands; "a rancid, lumpy substance that went under the name of bread."<sup>48</sup> It was, however, almost the only food available.

Beginning in November, transportation and supply problems frequently disrupted the distribution of meats and other foods that were not issued daily. Officials began to issue substitutions for unavailable rationed foods. For instance, instead of one kilogram of meat, a Leningrader

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<sup>46</sup> Pavlov, Leningrad 1941, 64.

<sup>47</sup> Salisbury, The 900 Days, 370.

<sup>48</sup> Adamovich and Granin, Book of Blockade, 358; Abramzon, interview; Meretskov, City Invincible, 46.

received 170 grams of powdered eggs, 3 kilograms of meat gelatin, or 750 grams of canned meat. Sugar was often replaced by boiled candy made of burnt sugar from the Badayev warehouse fires. Butter was not distributed at all in December, and only sporadically in January 1942 (see table, Figure 2).<sup>49</sup> All of these interruptions, but particularly those that affected the supply of fats, contributed to a general decline in health during this time. A League of Nations publication describes fats as "the most concentrated source of energy," and researchers have found that

a drastic decline in the consumption of fat has a serious effect on health [similar to the effect of anorexia], and a deficiency of fat in the diet gives rise to a sense of 'hidden hunger'.<sup>50</sup>

In November and December 1941, many Leningraders experienced this hidden hunger, and death from starvation became a real possibility.

As the food situation worsened, Pavlov gradually lowered the ration amounts in order to stretch the food reserves for as long as possible. By December 1941,

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<sup>49</sup> Pavlov, Leningrad 1941, 75.

<sup>50</sup> League of Nations, Wartime Rationing, 32.



FIGURE 2  
 DISTRIBUTION OF FATS RATION IN JANUARY 1942  
 (in grams)

Category	Monthly Ration	1st 10 Days	2nd 10 Days	3rd 10 Days
Factory Workers	600	----	350	----
Office Workers	250	----	150	----
Dependents	200	----	100	----

Source: Dmitri Pavlov, Leningrad 1941; The Blockade trans. John Clinton Adams (Chicago: University of Chicago Press, 1965), 76.

factory workers received only 250 grams (a half-pound) of poor-quality bread each day; office workers and dependents received 125 grams, approximately equal to two slices (see table, Figure 1).<sup>51</sup> There was not enough food to ensure survival, but Pavlov strove to distribute existing food supplies fairly among the population. He tightened rationing rules--for instance, beginning in December 1941, citizens were required to buy their rationed bread at specific stores, and distribution centers sent bread to the stores according to the population of the area.<sup>52</sup> (Workers continued to receive their rations at their place of employment). This made distribution much less complicated. The central dispatching group transported bread ingredients constantly between warehouses and bakeries, in order to keep the bread composition the same in all districts of the city; "in view of the size of the ration, a difference in quality would have provoked justified indignation" among the people.<sup>53</sup> Armed guards accompanied delivery trucks to prevent thefts.<sup>54</sup> And, in a particularly brutal but necessary move, Pavlov decreed that lost ration cards would

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<sup>51</sup> Ibid., 118.

<sup>52</sup> Ibid., 78; Werth, Russia at War, 332.

<sup>53</sup> Pavlov, Leningrad 1941, 59.

<sup>54</sup> Abramzon, interview; Kochina, Diary, 59.

no longer be replaced, due to skyrocketing numbers of fraudulent loss reports.<sup>55</sup> Unlucky citizens who lost their cards were condemned to starvation by this decree, but it halted the issuance of multiple rations and saved many tons of food for holders of legitimate ration cards.

Shortages of fuel and electricity exacerbated the starvation conditions. Streetcars stopped running due to a lack of electricity and were quickly frozen into place by the harsh Leningrad winter. This lack of transportation restricted people's movements to areas within walking distance. Pavlov apparently requisitioned most of the available fuel in the city, for trucks continued to make food deliveries throughout the winter of 1941-42.<sup>56</sup> This fact alone probably saved thousands of lives. If the trucks had not had fuel, food deliveries would have been interrupted, and the weakened people of the city would not have had the strength to walk any further for their food.

The harsh winter and lack of electricity meant that water pipes froze throughout the city. In order to get water, people had to walk to the Neva River and dig through

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<sup>55</sup> Salisbury, The 900 Days, 451. In only the first two weeks of December, citizens filed 24,000 loss reports.

<sup>56</sup> Abramzon, interview; Skrjabina, Siege and Survival, 40. Many survivors recorded deliveries by hand-pulled sleds; these were apparently used when trucks or fuel were not available.

the ice, then fill a bucket with water and carry it back to their home. This was strenuous work for starving people, so Pavlov arranged for water main access points to be opened in the streets. People used these holes in the street for their water supply throughout December 1941 and most of January 1942.<sup>57</sup> People began to burn books and furniture in old-fashioned stoves called "burzhuikas," and used these stoves in (usually fruitless) attempts to heat their homes. Some also used the stoves to warm their bread rations before eating them. Pavlov and other city officials authorized the demolition of hundreds of wooden houses in order to provide fuel for these makeshift heaters.<sup>58</sup> In these ways, food distribution officials did everything in their power to alleviate the shortages of water and heat within Leningrad and to assist Leningraders in their struggle to survive.

In November, Pavlov began to search for alternative food sources within the city. Alexei Bezzubov, head of chemical technology at the Vitamin Institute, experimented with pine needles to create an edible substance which would provide vitamin C and prevent scurvy. He developed a

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<sup>57</sup> Jedelman, interview; Skrjabina, Siege and Survival, 40.

<sup>58</sup> Adamovich and Granin, Book of Blockade, 111.

liquid "pine needle infusion" (apparently used as a beverage) which was distributed to hospitals and workers' canteens; packaged pine needles and recipes were sent to food stores for purchase with ration cards.<sup>59</sup> Workers collected "Badayev earth"--dirt from the area around the Badayev warehouses containing charred, melted sugar from the September fire--and processed it into boiled candy, which was issued as a sugar ration.<sup>60</sup> Pavlov even confiscated 5000 tons of oats from military warehouses to add to the bread. The oats had been intended to feed military horses; these horses were instead fed a "horse-food substitute made of compressed-cottonseed cake, peat shavings, flour dust, bone meal and salt".<sup>61</sup> The horses did not like it, but people stole it from them and ate it as pancakes.<sup>62</sup>

The most successful alternative food source was wood cellulose, a substance used to make paper. Vasily Sharkov, a professor of Technical Sciences in the Vyborg district of Leningrad, developed an edible form of cellulose in early November at the Stepan Razin Brewery. By the end of the

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<sup>59</sup> Ibid., 40-41.

<sup>60</sup> Ibid., 41.

<sup>61</sup> Salisbury, The 900 Days, 369.

<sup>62</sup> Abramzon, interview.

month, cellulose comprised ten percent of all rationed bread.<sup>63</sup> Sharkov also developed "yeast milk" from the wood cellulose; this was made into soup and served in hospitals and workers' canteens.

Despite these desperate attempts to create food, people began to die of starvation and cold. The winter of 1941-42 was unusually severe--the Baltic Sea itself was frozen over "for several months."<sup>64</sup> Men died first, probably due to their percentage of body fat, which is lower in males than in females. Women and children, however, quickly followed them to the grave. District registry offices tracked these deaths (one office registered 450 deaths per day in mid-December) but had to stop tracking by 27 December 1941 because of the overwhelming workload.<sup>65</sup> Due to the lack of transportation and the physical weakness of the survivors, many dead bodies were not taken to cemeteries for weeks or months,

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<sup>63</sup> Pavlov, Leningrad 1941, 62-63; Salisbury, Unknown War, 95. Neither Pavlov nor Salisbury mentioned Sharkov's background, or the institute or university for which he worked. The method for transforming wood cellulose into an edible substance is also not described.

<sup>64</sup> Military Improvisations During the Russian Campaign, U. S. Army Publication Number 20-201, in World War II German Military Studies, ed. Donald S. Detwiler, volume 17 (New York: Garland Publishing, Inc., 1979), 63.

<sup>65</sup> Adamovich and Granin, Book of Blockade, 65-66; Kochina, Diary, 64.

but remained in their frozen beds or in heaps on the streets where they died, while friends and relatives struggled for life around them. Olga Berggolts, a Leningrad poet who survived the siege, described this ordeal:

There are three of us in the room, but two  
No longer breathe. They are dead.  
I understand it all,  
But why do I break the bread  
In three pieces?<sup>66</sup>

In January 1942, over three thousand Leningraders died of starvation and cold every day.<sup>67</sup>

Not surprisingly, people began to look for ways to make their food last longer. Dora Jedelman, a young wife and mother during the siege, told of looking for stores that sold stale, rather than fresh, bread. (On rare occasions, stores had leftover bread, which they sold the next day. This was the bread that Jedelman wanted). She preferred stale bread for two reasons. It contained less water than fresh bread and consequently the portions were somewhat larger in size (though equal in weight). It also did not taste as good as the fresh bread, and she found it

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<sup>66</sup> Olga Berggolts, quoted in Salisbury, The 900 Days, 391.

<sup>67</sup> Ibid., 436.

easier to make the ration last all day, rather than eating it all at once.<sup>68</sup>

People also searched for alternative sources of food. They ate their pets or the rats in their basements and attics, or sold them to friends as food.<sup>69</sup> Leather and furniture glue became food items. A black market for food developed in the vicinity of the Haymarket (previously a peasants' food market). There one could buy bread, stolen ration cards, and meat--possibly human--at outrageous prices.<sup>70</sup> (One small loaf of bread cost 600 rubles in December 1941; a very good secretary earned about 250 rubles per month<sup>71</sup>). Most Leningraders could not afford to shop on the black market, however, and ate whatever they could find to keep from starving to death. People ate everything

from the hempseed in bird food, to the canaries themselves, and blackbirds, and parrots. People scraped flour paste off the wallpaper, extracted it from book bindings, boiled down driving belts, ate cats, dogs, crows, used all kinds of industrial oil or grease, used drying oil, medicines, spices, vaseline, glycerine, all kinds of waste from vegetable raw material. The list

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<sup>68</sup> Jedelman, interview.

<sup>69</sup> Brevdo, interview.

<sup>70</sup> Salisbury, The 900 Days, 474.

<sup>71</sup> Ibid., 440; Skrjabina, Siege and Survival, 16, note 1.



is long, surprising by the ingenuity, even the cunning resourcefulness with which people investigated the edibility of everything around them.<sup>72</sup>

But despite this ingenuity, and the efforts of Dmitri Pavlov, people continued to die.

As the desperation increased, so did the crime. After (and sometimes before) the registry offices stopped recording deaths, many citizens used the ration cards of dead friends and relatives or registered for ration cards under the names of those deceased persons. Children stole bread as it was issued at the food stores and wolfed it down in front of its intended recipient, who now faced at least one full day without food. People changed the numbers of their identification documents and used them to purchase additional rations. House managers took bribes in return for claiming that vacant apartments were occupied, and issuing ration cards to the purported inhabitants of those apartments.<sup>73</sup> The penalty for any food-related crime was death, but the crimes continued, for some people feared protracted starvation more than they feared the relatively quick death of execution.

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<sup>72</sup> Adamovich and Granin, Book of Blockade, 47.

<sup>73</sup> Barber and Harrison, Soviet Home Front, 89; Jedelman, interview; Salisbury, The 900 Days, 303.

Crimes also occurred within the distribution network, although many of these criminals were exposed by the Komsomol security system. These young people "carried out sudden raids on every link in food distribution, and repeatedly uncovered irregularities."<sup>74</sup> One printshop worker was found with one hundred ration cards and was tried and executed. Security personnel searched warehouse workers each evening as they left work, but warehouse directors sometimes allowed favorite workers to leave with only cursory searches, so that they could take out food; these breaches were rarely discovered.<sup>75</sup> Although these crimes appeared to be fairly common--Leningradskaya Pravda listed at least one such crime in each issue--it is likely that supply workers were simply watched more closely than other citizens and that the percentage of criminals among them was no higher than in the rest of the population.

The most desperate criminals turned to what Leningraders called "a new kind of crime": murder for food, or, in its most extreme form, cannibalism. "Roving gangs of murderers" stalked the streets, attacking solitary

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<sup>74</sup> Salisbury, The 900 Days, 450.

<sup>75</sup> Skrjabina, Siege and Survival, 42.

pedestrians or stealing bread from trucks.<sup>76</sup> Children were killed for their ration cards--or as many suspected, for their flesh. The existence of cannibalism during the siege has not been verified by any Party official or historian, but most survivors believe that it did exist. They found dead bodies with fleshy parts, such as thighs, removed<sup>77</sup>; they saw human bones in trash cans<sup>78</sup>; they were shown human lungs supposedly confiscated from black marketeers.<sup>79</sup> And at the black market, they saw fresh meat (presumably human) for sale when meat rations were not available.<sup>80</sup>

These crimes were most common in December 1941, when food rations were at their lowest. On 9 December, Soviet troops liberated Tikhvin and immediately began to rebuild the railroad tracks and bridges between Tikhvin and Mga. Anticipating an imminent increase in the supply of food to Leningrad, Pavlov raised the bread rations on 25 December 1941. Factory workers received 350 grams per day (up from 250 grams), and all others received 200 grams (up from 125

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<sup>76</sup> Salisbury, The 900 Days, 447.

<sup>77</sup> Ibid., 479; Brevdo, interview; Barber and Harrison, Soviet Home Front, 90.

<sup>78</sup> Jedelman, interview.

<sup>79</sup> Abramzon, interview.

<sup>80</sup> Skrjabina, Siege and Survival, 38; Barber and Harrison, Soviet Home Front, 90.

grams).<sup>81</sup> At the time of this increase, Leningrad had only nine days' worth of flour in the city, and no additional supplies had yet reached the city. The increase was therefore a great gamble, but it paid off as the food supply did indeed increase. (By 24 January 1942, Pavlov was able to increase factory workers' rations to 400 grams and raised other rations accordingly.<sup>82</sup> See Table, Figure 1). These increases caused a significant drop in the death rate after January 1942, and allowed approximately two million people to survive the siege.

The food distribution system that Dmitri Pavlov developed during the siege of Leningrad was an efficient and highly centralized method for distributing food fairly to almost three million people. Ration cards were produced and issued in a timely and secure fashion, and loyal Komsomol members ensured that ration card fraud and food crimes were kept to a minimum. Food distribution throughout the city continued even during the harshest period of the winter, due to Pavlov's foresighted rationing of fuel and establishment of a centralized dispatching center. Although food crimes did occur, criminals who were

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<sup>81</sup> Pavlov, Leningrad 1941, 147.

<sup>82</sup> Ibid., 149, 160.

caught suffered the death penalty, and knowledge of this penalty kept such crime to a reasonably low level, given the circumstances.

As Food Commissioner for Leningrad, Pavlov had to adapt to the situation at hand. Leningrad had minimal food reserves and a food supply that dwindled to a mere trickle in December 1941. But Pavlov rose to the challenge and distributed the existing food supplies fairly and consistently. He lowered the rations when it was necessary to do so but raised them again at the first available opportunity. Although many people died of starvation, many more lived solely because of the rations that they received. The ultimate measure of Pavlov's distribution system is the fact that the inhabitants of Leningrad received their bread rations every day throughout the harsh siege winter of 1941-42.

Harrison Salisbury, the leading authority on the siege, described Pavlov as

a direct, honest, vigorous man who saw from the moment of his arrival in Leningrad that only spartan measures, applied with an iron hand, offered a chance for the city's survival.<sup>83</sup>

This is an uncharacteristic description of a Soviet official, but Dmitri Pavlov was an anomaly among Soviet

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<sup>83</sup> Salisbury, The 900 Days, 294.

officials: honestly concerned for the lives of the people and determined to use his authority to their benefit. His success in keeping two-thirds of the Leningrad population alive through the "hungry winter" can be partially attributed to this concern and determination. In addition, although Pavlov himself admitted that the rations should have been lowered even further during the early period of the siege<sup>84</sup>, he did benefit from a certain amount of blind luck. He based his September ration cuts on a suspicion--later proven--that the blockade would last for several more months; these cuts conserved food that would be sorely needed in the months ahead. Similarly, his ration increase in December was truly a "gamble,"<sup>85</sup> as it took Leningrad's daily consumption rate above the rate of food supply; he was lucky that the Ice Road deliveries improved as rapidly as he had guessed that they would.

A weaker man, or one less inclined to take risks, would have collapsed under the pressure of life-or-death decisions involving almost three million people. Pavlov possessed an admirable strength of will which, coupled with his concern for the people and with the vagaries of fortune, allowed him to create and enforce a viable,

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<sup>84</sup> Ibid., 296.

<sup>85</sup> Ibid., 416.

efficient, and equitable food distribution system. Despite German shelling, freezing weather, and overwhelmingly insufficient food supplies, Pavlov managed to save two million Leningraders from an otherwise certain death by starvation.

## CHAPTER FOUR

### ADAPTATION OF THE DISTRIBUTION SYSTEM, JANUARY 1942 TO JANUARY 1944

By January 1942, the system for transporting food to Leningrad was well established. From that time until the siege was finally lifted (in January 1944), the Soviet food supply officials repeatedly adapted their distribution system to the changing military conditions, increasing the shipments of food to the city as often as possible. Their efforts ensured that the "hungry winter" of 1941-42 would not be repeated.

Leningrad's defenders consisted of three Red Army groups: those north of the city facing the Finns, in the Karelian Front; those in the immediate vicinity of the city, known as the Leningrad Front; and those east of the German lines in the area of Voibokalo, known as the Volkhov Front. The Finns, increasingly reluctant to pursue the Germans' war, had barely budged from their positions since reaching the Svir river east of Lake Ladoga in mid-September. After the Germans withdrew from Tikhvin on 9 December, "operations ceased all along the Finnish front, and [Finnish Marshal] Mannerheim began releasing the older



age groups in the Army."<sup>1</sup> The Karelian Front remained quiet through the spring of 1942, and the Soviet commanders concentrated more and more on the ever-threatening Germans.

In late December 1941, the troops of the Leningrad Front recaptured Krasny Bor (southeast of Leningrad) from the Germans. On 13 January 1942, the troops of the Volkhov Front joined this offensive with an attack on Chudovo, while the 54th Army of the Leningrad Front moved simultaneously toward Tosno. Thus the Soviet troops began their "long and stubborn struggle" to lift the siege.<sup>2</sup> In response to the initial success of this Soviet counter-attack and the recent increases in food deliveries to Leningrad, Dmitri Pavlov raised the bread rations in the city on 24 January. From their lowest point of 250 grams per day (one-half pound) for factory workers and 125 grams per day (one-quarter pound) for all other Leningraders, Pavlov now increased the rations to 400 grams for factory workers, 300 grams for office workers, and 250 grams for

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<sup>1</sup> Ziemke, Northern Theater, 201-02. Marshall Mannerheim had actually served as a soldier in the Imperial Russian Army, then fought for the Finns in their War for Freedom. Waldemar Erfurth, Warfare in the Far North, U. S. Army Publication Number 20-292, in World War II German Military Studies, ed. Donald S. Detwiler, volume 17 (New York: Garland Publishing, Inc., 1979), 18.

<sup>2</sup> Meretskov, City Invincible, 52-53.

children and dependents (non-working adults).<sup>3</sup> Up to three thousand people had died each day under the lowest rations; with the new increase, the death rate slowly began to drop.

As the Soviet troops continued their counteroffensive, city and military officials considered how to further improve the food transportation route (since inhabitants still suffered from hunger on their low rations, though they were no longer starving). In late January, the Front Military Council recommended that a railroad spur line be built from Voibokalo to Kabona, on the eastern shore of Lake Ladoga. The People's Commissariat of Ways of Communication completed this line on 10 February 1942.<sup>4</sup> This improvement of the supply route meant that trucks traversing the Ice Road would now travel only thirty kilometers each way (from Kabona to Osinovets), saving valuable fuel and increasing the number of daily trips-- and the amount of food delivered to Leningrad.

From February to May 1942, the military front around Leningrad remained fairly stable. The Soviet counter-offensive experienced limited success but did hold the Germans to their existing positions; in this they were

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<sup>3</sup> Pavlov, Leningrad 1941, 160; Werth, Russia at War, 332.

<sup>4</sup> Pavlov, Leningrad 1941, 163; Werth, Russia at War, 331-32.

assisted by the extreme cold, which caused up to eight hundred frostbite casualties per day in some unprepared German divisions.<sup>5</sup> The new supply route operated fairly smoothly during this period (despite occasional German shelling), and areas of the Soviet Union not under German threat began to send aid to Leningrad. For example, a trainload of "gifts" from the Republic of Kirghizia in central Asia arrived in Leningrad on 7 April 1942.<sup>6</sup> The city of Yaroslavl (east of Moscow) sent thirty-three railroad cars of grape-sugar and 240 tons of cheese; the Saratov Region (just north of the Caucasus) sent 12,000 tons of flour and 760 tons of meat, and other foods arrived from the republics of Uzbekistan, Tadjikistan and Kazakhstan, and the cities of Kuibyshev and Gorky.<sup>7</sup> Leningrad even received 225 cartloads of food from Soviet partisans who had been living behind enemy lines throughout the winter.<sup>8</sup> By the time the Ice Road closed on 24 April (due to melting ice), the city's warehouses held enough

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<sup>5</sup> Military Improvisations, 23.

<sup>6</sup> "Train to Leningrad Pierces Blockade," New York Times, 8 April 1942, 8.

<sup>7</sup> Voronkov, 900 Days, 52-53.

<sup>8</sup> Meretskov, City Invincible, 55.

flour for 58 days, cereals for 57 days, meat and fish for 140 days, sugar for 90 days and fats for 123 days.<sup>9</sup>

A visitor to Leningrad in early 1942 reported that blocks-long queues for bread rations, so common in December and January, no longer existed; there appeared to be "adequate supplies for the entire population" (though short queues were still common). A black market was still operating, but people were no longer trading possessions for food as they had in previous months, and some were actually trading bread for concert tickets.<sup>10</sup>

But despite the new atmosphere of plenty, people had been weakened by their ordeal during the hungry winter, and many were still close to death. To assist them in recovery, the Leningrad City Soviet opened a network of "intensified nutrition" centers, where those suffering the after-effects of hunger could receive extra rations which supplied twice the calories of the usual rations.<sup>11</sup> Authorities posted lists of edible wild plants, such as

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<sup>9</sup> Salisbury, The 900 Days, 513; Voronkov, 900 Days, 55.

<sup>10</sup> A. A. Fadeyev, Leningrad in the Days of the Blockade, trans. R. D. Charques (London: Hutchinson & Company, 1946), 19, 101.

<sup>11</sup> Ibid., 19; Vera Inber, Leningrad Diary, trans. Serge M. Wolff and Rachel Grieve (New York: St Martin's Press, 1971), 86-87; Kislitsyn and Zubakov, Leningrad Does Not Surrender, 135; Werth, Russia at War, 333.

young nettles, dandelions, and sorrel, so that citizens could gather food from their courtyards.<sup>12</sup> City officials established 633 auxiliary farms (podsobnyie khoziaistva) by allotting 0.02 hectares (240 square yards) of land to various factories and offices; they also organized fifteen hundred gardening associations and provided them with seeds for growing carrots, potatoes, and turnips.<sup>13</sup> Gardens appeared in parks and public squares such as the Summer Gardens, Saint Isaac's Cathedral Square, and Mars Field, and over one hundred thousand residents planted their own kitchen gardens.<sup>14</sup> The hungry winter was definitely over.

Zhdanov and the State Defense Committee in Moscow agreed that not only should more food be brought into Leningrad, but also that evacuations from Leningrad should be increased. A smaller population within the city would require fewer shipments of food, and this decreased need for food would lower the risk of deaths due to starvation in the next winter. Beginning in January 1942, trucks and barges that delivered food to Osinovets carried evacuees on

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<sup>12</sup> Salisbury, The 900 Days, 535.

<sup>13</sup> Adamovich and Granin, Book of Blockade, 55; Werth, Russia at War, 761.

<sup>14</sup> Fadeyev, Days of the Blockade, 100; Kislitsyn and Zubakov, Leningrad Does Not Surrender, 136; Voronkov, 900 Days, 55.

their return trips. Priority was given to women, children, the elderly, and the ill. By April, over five hundred thousand Leningraders had evacuated the city, leaving a population of 1.1 million.<sup>15</sup>

At Zhdanov's request, the State Defense Committee in Moscow ordered the laying of a fuel pipeline across the bottom of Lake Ladoga. Built in just fifty days, the pipeline extended thirty-five kilometers, and delivered its first oil in mid-June.<sup>16</sup> This pipeline ensured that Leningrad would not suffer from a lack of fuel in the coming winter, as it had in the previous one.

As the Ice Road melted, the State Defense Committee sent Alexei Kosygin to oversee the establishment of shipping lanes across the lake.<sup>17</sup> Working with the commander of the Ladoga Flotilla, Captain V. S. Cherokov, Kosygin rebuilt the port facilities at Osinovets, built new barges, and requisitioned ships from the North-Western Steamship Line. He established two shipping routes: Kabona to Osinovets (twenty-nine kilometers), and Novaya

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<sup>15</sup> Werth, Russia at War, 332-34.

<sup>16</sup> Meretskov, City Invincible, 61; Kislitsyn and Zubakov, Leningrad Does Not Surrender, 153; Voronkov, 900 Days, 58.

<sup>17</sup> Kosygin later served as a member of the Politburo in the late 1940s and early 1950s, and as a deputy of the Supreme Soviet in 1957.

Ladoga to Osinovets (150 kilometers).<sup>18</sup> Between 24 April and 25 November 1942, these two routes brought "703,300 tons of freight, including 350,000 tons of food" into Leningrad.<sup>19</sup>

In April 1942, the Red Army attempted to break the military stalemate around Leningrad by replacing the commanders of the Leningrad and Volkhov fronts. Lieutenant General Leonid Govorov became the new commander of the Leningrad Front and immediately changed its tactics. Artillery within the city had previously been used only for defense (i.e., they fired only when fired upon); under Govorov, these weapons began to be used offensively. He made this offensive possible by requisitioning two airborne observation units from Moscow and increasing Leningrad's shell quotas.<sup>20</sup> (Govorov is often credited with beginning the turnaround of the battle for Leningrad). On the Volkhov Front, General Khozin (until recently, the commander of the Leningrad Front) replaced General

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<sup>18</sup> Kislitsyn and Zubakov, Leningrad Does Not Surrender, 90, 152; V. Y. Neigoldberg, Istoriya SSSR 3 (March 1965): 102, quoted in Salisbury, The 900 Days, 526-27.

<sup>19</sup> Neigoldberg, Istoriya SSSR, 102.

<sup>20</sup> Salisbury, The 900 Days, 525-26; Voronkov, 900 Days, 68-69.

Meretskov, who was transferred to the Western Front near the Ukraine. Khozin, however, retained his new Volkhov command for only six weeks. During this time, Lieutenant General Andrei A. Vlasov and his Second Shock Army (all of whom reported to Khozin) were surrounded and captured by German troops; they later fought sporadically against the Soviets.<sup>21</sup> Khozin was blamed for this fiasco of the infamous "Vlasov Army" and relieved of his command on 8 June. The State Defense Committee returned Meretskov to his original command of the Volkhov Front.<sup>22</sup>

Despite this shake-up of the military command structure, the German-Soviet stalemate continued through June. By then, the signs from the German Army were becoming ominous for the Soviets. Bombing raids on the Ladoga shipping routes became more frequent: five thousand sorties were reported during the spring and summer.<sup>23</sup>

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<sup>21</sup> Vlasov offered to fight with German troops to "liberate Russia from the Bolshevik regime," but Hitler was only interested in a purely German conquest and refused to use Vlasov and his troops until the last weeks of the war. Burkhart Mueller-Hillebrand, Germany and Her Allies in World War II: A Record of Axis Collaboration Problems, in World War II German Military Studies, ed. Donald S. Detwiler, volume 20 (New York: Garland Publishing, Inc., 1979), 86-87.

<sup>22</sup> Salisbury, The 900 Days, 529-32.

<sup>23</sup> Pavlov, Leningrad 1941, 165; "Partisan Raids" Times (London), 30 May 1942, 4.



Also, the Germans began a summer offensive in the southern Soviet Union in late June. Originally called Operation Siegfried, then Operation Blau, this offensive's main goal was the German occupation of the oil reserves of the Soviet Caucasus region.<sup>24</sup> The Leningrad Military Council feared that this offensive would be expanded to include the northern region, and the reorganization of some German command structures around Leningrad (such as the promotion of Colonel General Georg von Kuechler, Commander of the Leningrad Front) exacerbated those fears.<sup>25</sup>

In preparation for this expected battle for Leningrad, Zhdanov and the Military Council announced on 6 July that additional evacuations would take place. They planned to turn Leningrad into a military city, with no "superfluous people."<sup>26</sup> Over 449,000 people left the city between May and November. By the end of the evacuations, Leningrad's population was only 650,000, most of whom were able-bodied men.<sup>27</sup>

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<sup>24</sup> Blau, German Campaign, 123-24, 143.

<sup>25</sup> "General Kuechler Promoted," New York Times, 1 July 42, 11.

<sup>26</sup> Inber, Leningrad Diary, 92; Kislitsyn and Zubakov, Leningrad Does Not Surrender, 139; Salisbury, The 900 Days, 533.

<sup>27</sup> Meretskov, City Invincible, 62; Werth, Russia at War, 332-34.

The fears of the Military Council were realized in mid-July. After Sebastopol fell to the Germans (on 3 July), Hitler sent Manstein's 11th Army from the Crimea to Leningrad to prepare for a new attack. By the end of July, twenty-one new German infantry divisions, one new tank division and one other new infantry brigade were positioned near Leningrad.<sup>28</sup> In response to this buildup, several high Soviet officials held a meeting near Tikhvin on 21 August. At this meeting, General Meretskov, General Govorov, Admiral Tributs of the Baltic Fleet, and Zhdanov (in his capacity as head of the Military Council of the Leningrad Front) planned the "Sinyavino Operation." This operation encompassed a series of assaults on German positions, with the intent of pre-empting their planned attack. On 27 August, the 8th Army of the Volkhov Front captured the Sinyavino Heights south of Lake Ladoga (see map, Appendix II). On 26 September, they reached the Neva at the town of Dubrovka. The Germans soon forced them into full retreat, however, and the Red Army gave up all of its gained ground by 6 October. But despite the lack of territorial gains, the Sinyavino Operation was a success, as the Soviets destroyed many German Army reserves and kept the Germans from beginning their planned drive on

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<sup>28</sup> Salisbury, The 900 Days, 538.

Leningrad.<sup>29</sup> Unbeknownst to the Soviets, they had also foiled a planned Finnish offensive on the city, codenamed Nordlight. By the time the Soviet offensive ended in October, the autumn rains had begun, and the Finnish attack was postponed indefinitely.<sup>30</sup>

The State Defense Committee took advantage of this Red Army offensive, and the subsequent lack of enemy attention to Lake Ladoga, to lay an electrical cable across the bottom of the lake. This cable would assist the recently-laid fuel pipe in providing power to Leningrad. The electrical cable ran from the Volkhov Power Station, which had recently undergone repairs for German shelling damage, to Osinovets and thence to Leningrad. It was completed on 23 September.<sup>31</sup> Realizing what the Soviets had accomplished, the German Army planned a retaliation as soon as they had beaten back the Sinyavino Operation. On 22 October, they launched an attack on the island of Sukho (in Lake Ladoga) in an attempt to cut the Soviet supply lines for food, fuel, and power. Using barges escorted by cutters and airplanes, they assaulted the island at night,

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<sup>29</sup> Blau, German Campaign, 175; Meretskov, City Invincible, 56-60; Salisbury, The 900 Days, 540-41.

<sup>30</sup> Ziemke, Northern Theater, 234-35.

<sup>31</sup> Kislitsyn and Zubakov, Leningrad Does Not Surrender, 153; Voronkov, 900 Days, 58.

but were forced back in only seven hours. The Soviets destroyed sixteen German boats and kept their supply lines safe.<sup>32</sup>

The increased efficiency of the food supply system during the year and the reduced population of Leningrad combined to give the city a very favorable position at the end of 1942. In November, the city's warehouses held fifty thousand tons of flour, seventeen thousand tons of grain, and fourteen thousand tons of cereals, not to mention meats, fish, and fats.<sup>33</sup> This was enough food for over four months--more than enough to see Leningrad through another winter. Thanks to the efforts of the Red Army and the Leningrad officials, the second winter of the siege would be nothing like the first.

After the cessation of Operation Sinyavino in October 1942, the Soviet troops on the Leningrad and Volkhov Fronts were only twelve kilometers apart in the area of Schlüsselburg, at the junction of Lake Ladoga and the Neva

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<sup>32</sup> "Axis Landing Effort at Ladoga Isle Fails," New York Times, 26 October 1942, 6; Meretskov, City Invincible, 61.

<sup>33</sup> Bidlack, Workers at War, 28; Kislitsyn and Zubakov, Leningrad Does Not Surrender, 152; Voronkov, 900 Days, 61.

River (see map, Appendix VI).<sup>34</sup> Red Army officials knew that the recent concentration of German forces in southern Russia at Stalingrad would prevent them from quickly reinforcing their troops at Leningrad,<sup>35</sup> so the timing seemed right for another counter-offensive. They launched Operation Iskra (Spark) on 12 January 1943. Their objective was to join the forces of the Leningrad and Volkhov Fronts near Schlusselfburg and open a land corridor between Leningrad and the rest of the Soviet Union. With the help of the guns of the Baltic Fleet, Marshalls Grigory Zhukov and Klementi Voroshilov captured Schlusselfburg on 17 January; Soviet troops also recaptured Maryino, Moskovskaya Dubrovka, and Sinyavino Station, though the Germans succeeded in holding the strategic Sinyavino Heights (see map, Appendix VI).<sup>36</sup> The Leningrad and Volkhov armies met on 18 January near Workers' Settlement Number 1, outside of

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<sup>34</sup> Voronkov, 900 Days, 60, 65.

<sup>35</sup> Battles Hitler Lost and the Soviet Marshalls Who Won Them (New York: Richardson & Steirman, 1986), 11.

<sup>36</sup> Kislitsyn and Zubakov, Leningrad Does Not Surrender, 187; Meretskov, City Invincible, 72; "New Russian Gains Made From North," New York Times, 16 January 1943, 2; "Soviet Gains Grow," New York Times, 19 January 1943, 1.

Schlusselfurg.<sup>37</sup> The Red Army had broken the land blockade.

Operation Iskra created the "Schlusselfurg Gap," a land corridor five to seven miles wide connecting Leningrad with the rest of the Soviet Union.<sup>38</sup> Immediately after securing this corridor, Soviet officials began to build a thirty-three-kilometer-long branch railroad line through the gap to connect the Irinovsk Railroad with the line from Volkhov and Voibokalo (see maps, Appendices VI and VII). They completed the work within eighteen days, and the first train to traverse this route arrived in Leningrad on 7 February 1943 carrying food, fuel, weapons, and ammunition.<sup>39</sup> Unfortunately, the Schlusselfurg Gap was too narrow to make more than a small impact on the food supply situation in Leningrad. German troops, stationed only five hundred yards away, constantly shelled the new railroad. They succeeded in cutting the line and stopping rail traffic twelve hundred times in the next eleven months, although the line still managed to deliver 4.5 million tons

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<sup>37</sup> Meretskov, City Invincible, 70-71.

<sup>38</sup> Ibid., 71-72; Werth, Russia at War, 631.

<sup>39</sup> Battles Hitler Lost, 11; Kislitsyn and Zubakov, Leningrad Does Not Surrender, 191; Werth, Russia at War, 333.

of freight to Leningrad in 1943 alone.<sup>40</sup> Because of these difficulties with the new rail route, the Ice Road (which had resumed operations in mid-December 1942) remained the primary route for food deliveries.

The joining of the two Soviet armies had a surprisingly small impact on Soviet military operations. Although the armies could now make combined and coordinated attacks, the tenacity of the German defense kept them from making any significant gains. For instance, the Soviets attacked Krasny Bor on 10 February and eventually recaptured that town, but suffered the loss of over eleven thousand men. The Germans had created a "hedgehog" defense, "strong defensive positions which accepted penetration past them but which would be held at considerable cost to any attacker."<sup>41</sup> Operation Iskra opened a narrow land corridor, but did not significantly alter the military situation. The Germans and Soviets once again found themselves at a stalemate.

The success of this Soviet offensive was, however, the last straw for the Finns. Having reached their own goal

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<sup>40</sup> Salisbury, The 900 Days, 551.

<sup>41</sup> Dunnigan, The Russian Front, 32-33, 44. This defense measure was improvised by German soldiers during the first weeks of Operation Barbarossa, when their rapid advance often trapped Soviet units behind the German front lines. See Military Improvisations, 22-23.

(the pre-Winter-War Soviet-Finnish border) in September 1941, and having remained in the war since then only under severe pressure from the Germans, the Finns now lost all confidence in their German allies. Shortly after the Soviet breakthrough at Schlüsselburg, Mannerheim requested that the Germans return all five of the Finnish battalions that had been lent to them.<sup>42</sup> The Germans promptly returned four of them, then proceeded to exclude the unreliable Finns from their future offensive plans. On 9 February, Finnish Prime Minister Ryti informed the Finnish Parliament that "Germany could no longer win" the war.<sup>43</sup> Too weak to break her alliance with Germany, the Finns compromised by simply remaining as inactive as possible through the remainder of the war.

In Leningrad, the reliability and military security of the Ice Road and the new railroad system soon justified additional increases in food rations. On 22 February 1943, Dmitri Pavlov once again raised the rations for all categories of citizens. The new rules gave Leningraders the same rations as the rest of the Soviet Union. These rations included 700 grams of bread ("a loaf and a half") for workers in heavy industry, 600 grams for other

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<sup>42</sup> Ziemke, Northern Theater, 242.

<sup>43</sup> *Ibid.*, 243.



industrial workers, 500 grams for office employees, and 400 grams for dependents and children.<sup>44</sup> Pavlov also expanded the number of distribution points for rations within the city and established supply stations for workers at various industrial factories and offices. City officials re-established the gardens and auxiliary farms of the previous year, and by autumn these had produced over 130 tons of vegetables.<sup>45</sup> By June, visiting correspondents noted that there were no queues at the food distribution points and that the food was always distributed on schedule; they gave "high praise . . . to the city authorities for [their] organization of food distribution."<sup>46</sup>

In early July 1943, German reinforcements began to arrive near Leningrad (sent from southern Russia). By mid-July, nineteen German divisions were positioned around the city in preparation for re-circlement and re-establishment of the land blockade. But once again, the Red Army preempted their planned assault. On 22 July, the 8th Army of the Volkhov Front and the 67th Army of the Leningrad Front

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<sup>44</sup> Salisbury, The 900 Days, 552; "End of Siege Brings Rise in Leningrad Bread Ration," New York Times, 1 March 1943, 4.

<sup>45</sup> Kislitsyn and Zubakov, Leningrad Does Not Surrender, 198-99.

<sup>46</sup> "Leningrad Rebuilding," New York Times, 15 June 1943, 3.

attacked the Sinyavino Heights.<sup>47</sup> This "Mga Operation" did not succeed in retaking those strategic hills but did destroy the German Army's plans for a new blockade. After the Soviet attacks finally ceased on 22 August, the German Army withdrew from the Volkhov River in an effort to shorten their front and more successfully withstand any future Soviet assaults.<sup>48</sup>

Meanwhile, German shelling intensified inside the city. By September the German troops stood only two miles from the famous Kirov Steel Works and shelled that site numerous times. Over eleven thousand shells fell in the city in September; 124 people were killed and 468 wounded in the attacks.<sup>49</sup> However, these numbers compared favorably with the deaths during the winter of 1941-42. Only twenty thousand Leningraders died in 1943, including fifteen hundred deaths from German shells; this was significantly fewer than the three thousand deaths per day during the "hungry winter."<sup>50</sup>

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<sup>47</sup> Salisbury, The 900 Days, 560.

<sup>48</sup> Meretskov, City Invincible, 74-76.

<sup>49</sup> Werth, Russia at War, 336; Salisbury, The 900 Days, 555.

<sup>50</sup> Kislitsyn and Zubakov, Leningrad Does Not Surrender, 199. It is interesting to note that the birth rate in Leningrad in 1943 was zero. See Barber and Harrison, Soviet Home Front, 92.

The Red Army was determined to break the standoff at Leningrad and made a final plan for ending the siege altogether. The Germans had established two defensive zones near Leningrad, five to eight miles apart, each one four to five miles deep. These zones consisted of trenches, bunkers, pillboxes, and anti-tank and anti-infantry obstructions. Near Novgorod, south of Leningrad, they had three zones with a depth of twenty-five to forty miles each. This was the "Northern Wall" that the Soviets needed to breach in order to end the siege.<sup>51</sup> The plan that they created to do that was "Operation Neva II." It called for simultaneous Soviet attacks from the areas of Oranienbaum (a Soviet enclave behind German lines, west of Leningrad), Pulkovo (six miles south of Leningrad), and the Novgorod area (south of Chudovo) (see map, Appendix II). The Soviets hoped to liberate both Leningrad and Novgorod and to push the Germans back behind the Luga River (near Estonia).<sup>52</sup> The German Army had been greatly weakened by their defeat at Stalingrad earlier in the year, and the

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<sup>51</sup> Meretskov, City Invincible, 79.

<sup>52</sup> Dunnigan, The Russian Front, 56; Meretskov, City Invincible, 77-78; Salisbury, The 900 Days, 560; Alexander Werth, "The Spirit That Spurs Russia On," New York Times Magazine, 17 October 1943, 5.

defenders of Leningrad hoped to use that fact to their advantage.

In preparation for this massive assault, Zhdanov requested reinforcements from Stalin. He received 21,600 guns, 600 anti-aircraft weapons, 1500 "Katyusha" rocket guns, 1475 tanks and self-propelled guns, and 1500 planes --more firepower than the Soviets had assembled at the great battle for Stalingrad in January 1943.<sup>53</sup> The Red Army and the Baltic Fleet began preparing for the assault in early November 1943. Beginning on 5 November, ships secretly ferried men, equipment, and ammunition from Leningrad to Oranienbaum. These transfers continued even after the ice froze, without being detected by the Germans. The Soviets smuggled over fifty-two thousand men into the enclave, along with twenty-two hundred trucks and various weapons.<sup>54</sup> By early January, the Soviets were ready.

The Red Army attacked from Oranienbaum and the Novgorod suburbs on 14 January 1944, after enduring several days of constant shelling from the Germans. Under heavy fog, they attacked from Pulkovo on 15 January.<sup>55</sup> The

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<sup>53</sup> Salisbury, The 900 Days, 561.

<sup>54</sup> Ibid., 561.

<sup>55</sup> Inber, Leningrad Diary, 170-78; Salisbury, The 900 Days, 562-63.

Germans were taken by surprise and fell back rapidly. On 19 January, the 2nd Assault Army took Ropsha (southwest of Leningrad); on 20 January, the 59th Army took Novgorod and advanced on Mga, a key railroad station (see map, Appendix II). Gatchina, south of Leningrad, returned to Soviet control on 26 January. The siege officially ended when the Soviets recaptured Mga Station on 27 January, 880 days after it fell to German troops on 30 August 1941.<sup>56</sup> After several days of repairs, the Mga Railroad resumed its normal operations, and the food supply system around Leningrad returned to its pre-war routes.

During the hungry winter, Leningrad city officials created a crude system for bringing food to the city from the rest of the Soviet Union. Their actions after the winter ended showed that they had learned valuable lessons from the tragedy of that winter, especially the need to work closely with military officials. Beginning in January 1942, city and military officials worked together to accomplish the goals of both. The evacuations of 1943 were the result of consultations which determined that a smaller population would reduce civilian deaths while allowing the

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<sup>56</sup> Meretskov, City Invincible, 80-87; Salisbury, The 900 Days, 567.

military to concentrate on strategies for liberation. Similarly, Leningrad Party leader Andrei Zhdanov participated in the planning of the Sinyavino Operation of August 1942. Such cooperation increased the efficiency of the food distribution network while assisting in the liberation of the city. The lessons of the "hungry winter" paved the way for the survival of Leningrad.

## CONCLUSIONS

An effective food supply system during a siege is of utmost importance for the survival of the population of the besieged city. The planners of this system for Leningrad faced a monumental task, for the effectiveness of their system depended, at least in part, on the fickle nature of the weather on a northern lake. In the end, their success was nothing less than a triumph of will and audacity.

To determine the effectiveness of such a system, one must consider what it was possible to do as well as what was actually accomplished. During the hungry winter of 1941-42, Dmitri Pavlov did everything that could be done to ensure that bread was distributed on a daily basis to every Leningrader. His system was effective and efficient. Conversely, the officials responsible for designing and implementing the various networks for bringing food to the city were less effective. It is true, and must be considered, that they could not predict the course of the war and therefore could not choose the optimum routes for their network. However, as chapter two described in detail, their implementation of various routes overlooked such necessities--accessible and possible necessities--

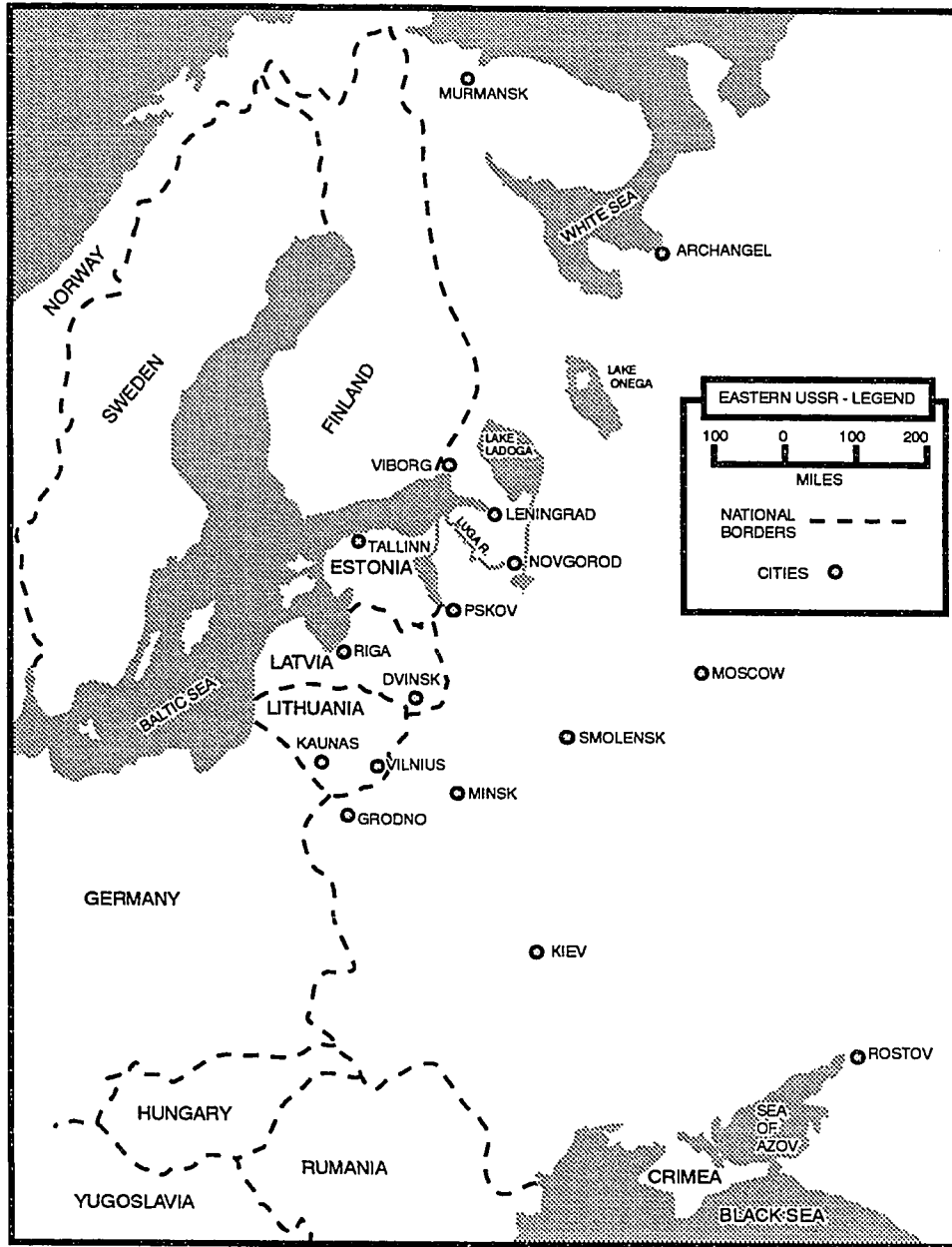
as maintenance for trucks and trains, and snow-clearing operations for Arctic roads.

After the spring of 1942, the military front became more or less stable, and the food supply network consequently also became stable. The planners and other officials benefitted from this stability as well as from their experience during the hungry winter. Coordination was established between the military commanders and food supply officials, lending a slightly greater degree of predictability to the food supply situation. And just as importantly, officials began to plan ahead as much as possible given the relative uncertainty of military situations. New railroad lines were planned in advance of implementation and maintenance provided for. Planned evacuations from the city relieved some of the considerable stress on the system and ensured that the hungry winter would not be repeated.

Overall, the food supply network was an effective vehicle for the delivery of lifesaving food to the people of Leningrad. Dmitri Pavlov was its high point; the Zaborye Road was its low point. But its final measure lies in the fact that two out of three Leningraders survived the siege.



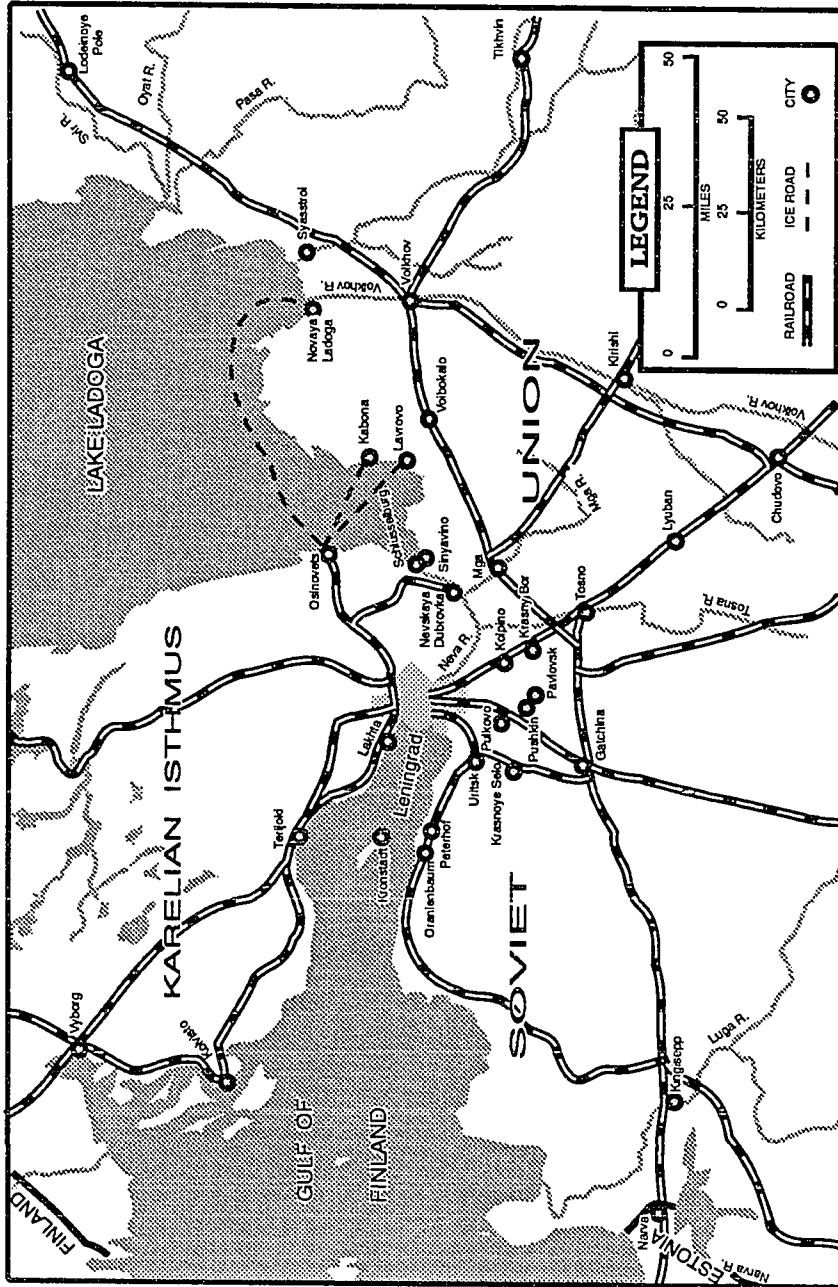
APPENDIX I



Sources: Salisbury, The 900 Days, xvi-xvii; Whaley, Codeword BARBAROSSA, xi.

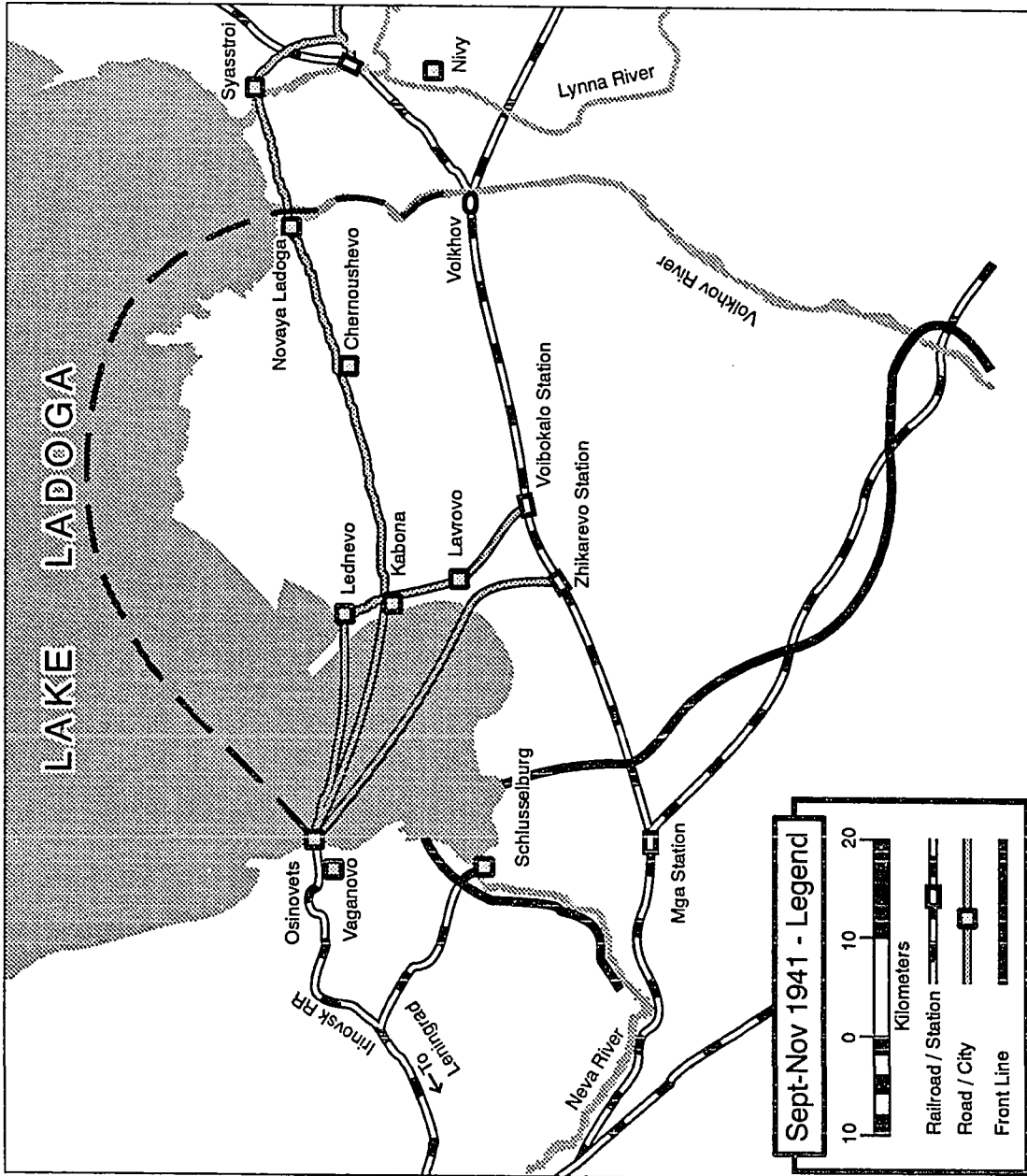
APPENDIX II

LENINGRAD AND ENVIRONS



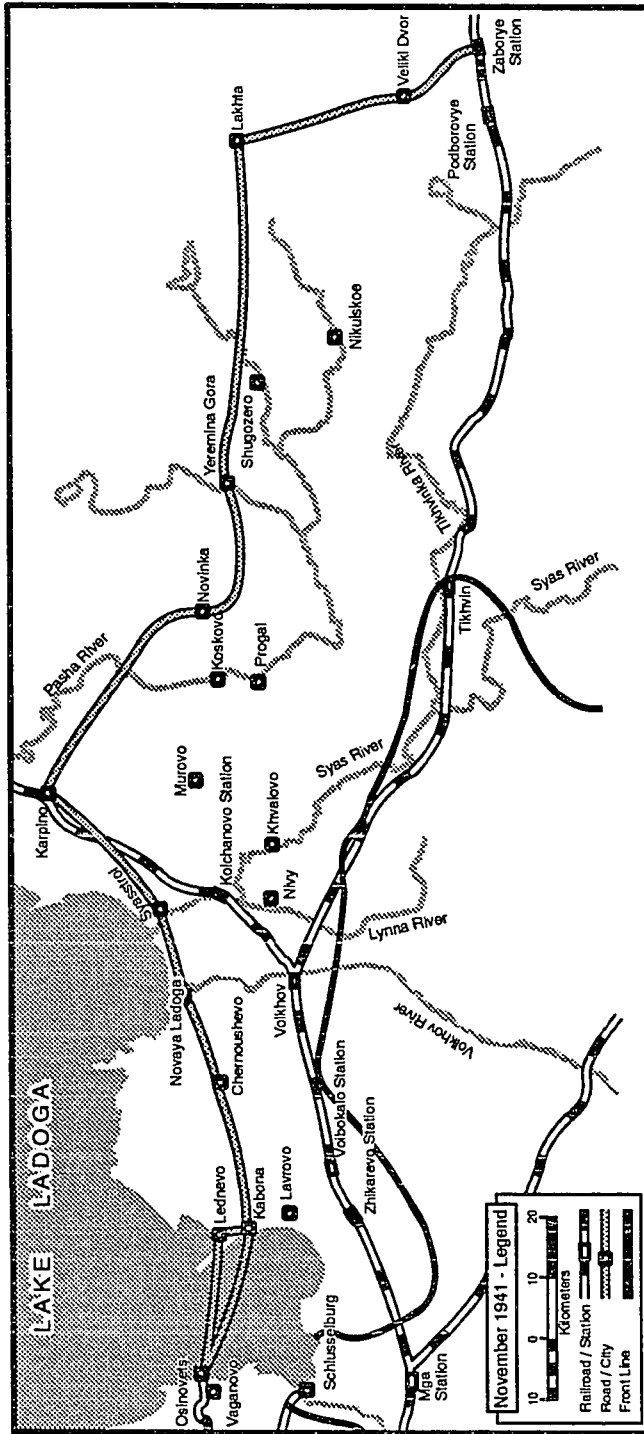
Source: Salisbury, The 900 Days, 96.

APPENDIX III



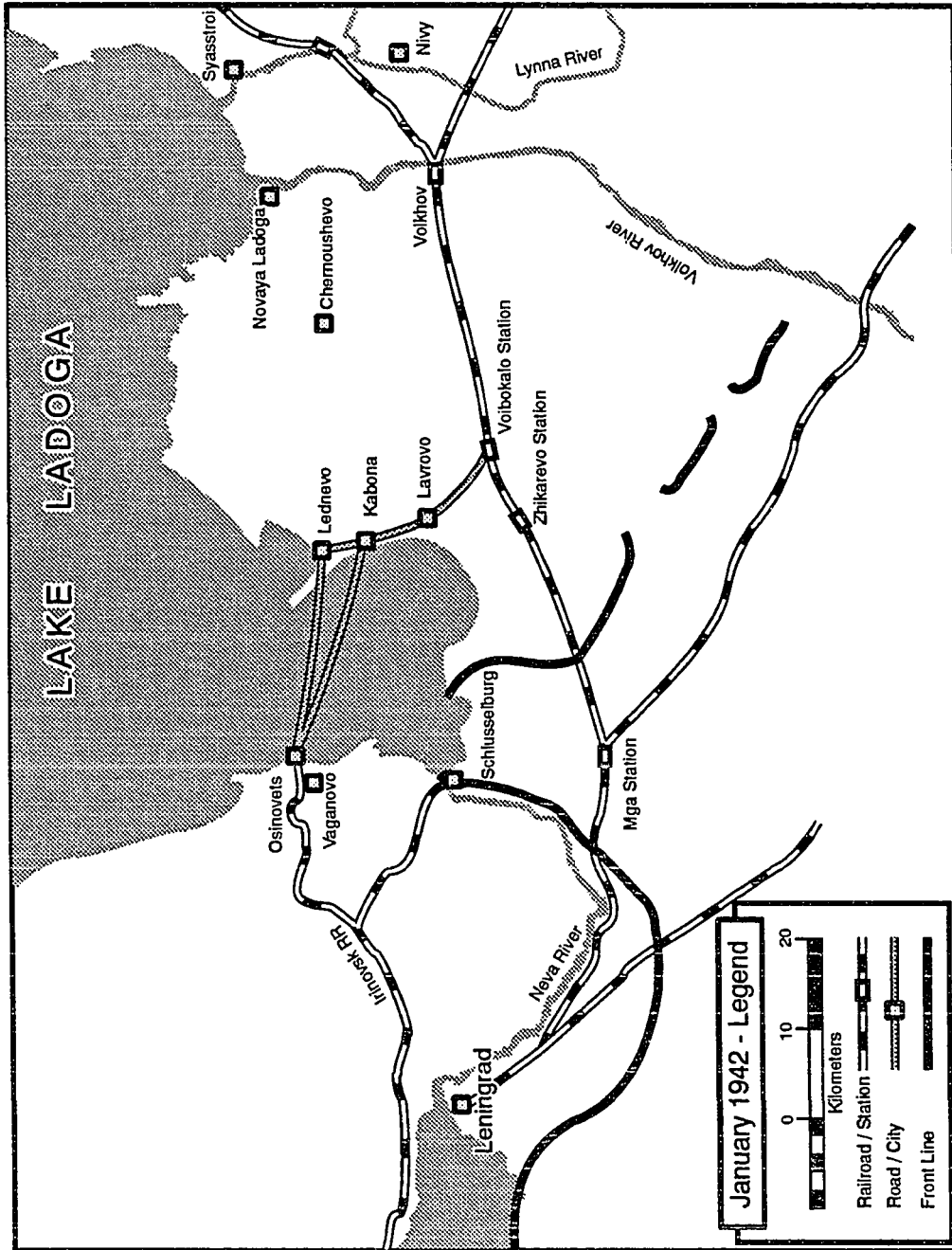
Source: Pavlov, Leningrad 1941, 98.

APPENDIX IV



Source: Pavlov, Leningrad 1941, 116.

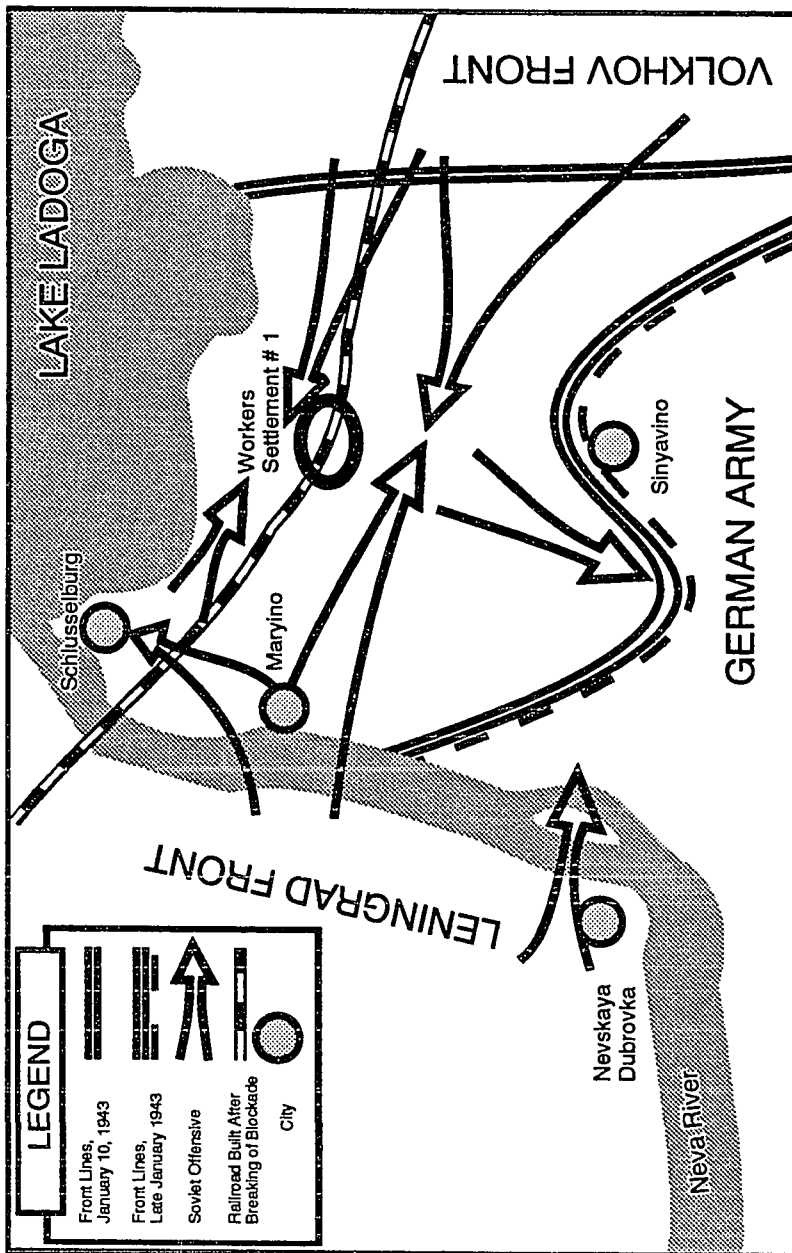
APPENDIX V



Source: Pavlov, Leningrad 1941, 152.

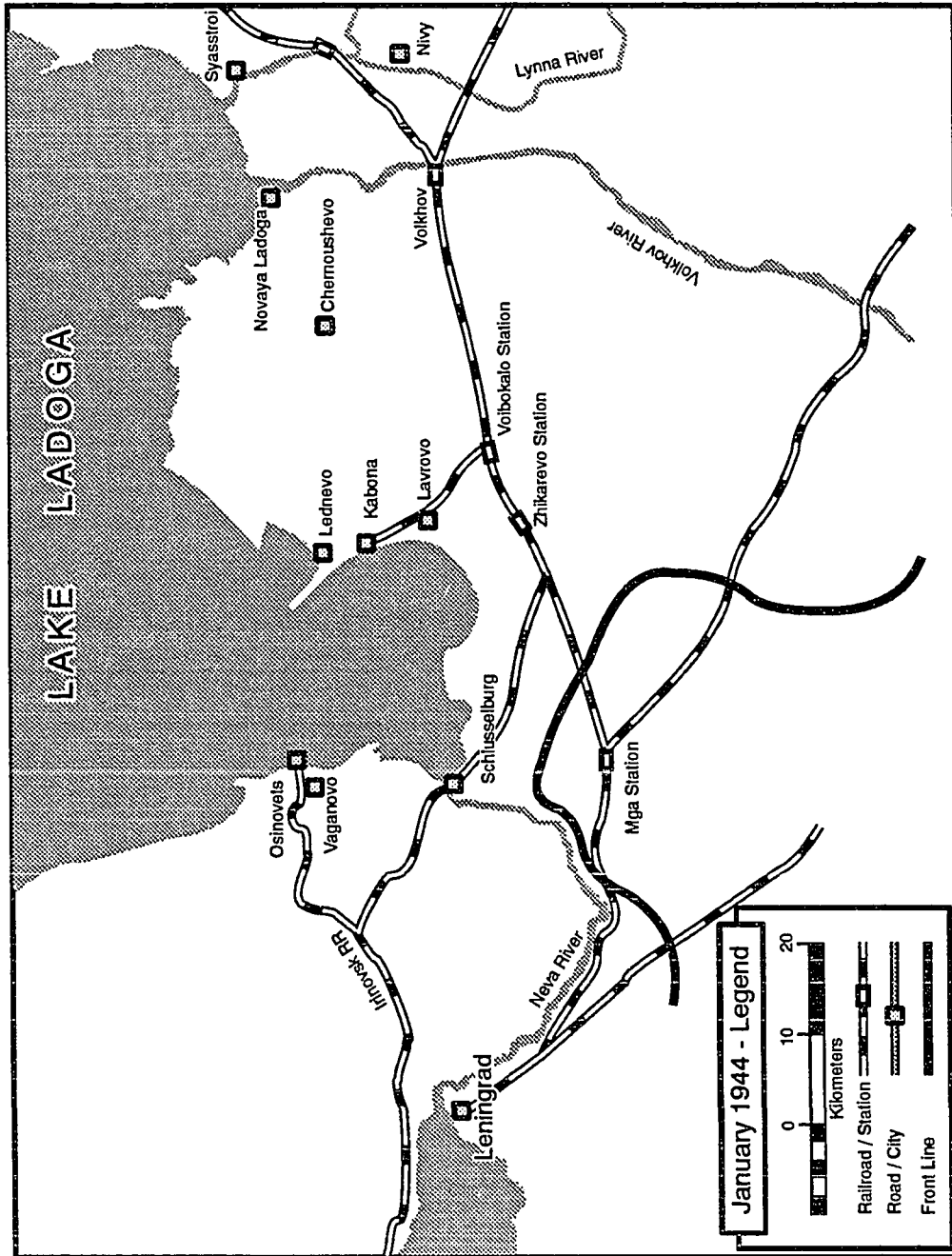
APPENDIX VI

THE BREAKING OF THE BLOCKADE



Source: Battles Hitler Lost, 76.

APPENDIX VII



Source: Pavlov, Leningrad 1941, 172.

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