Combat operations of the German armed forces on the Northern sea route during the Great Patriotic War

To cite this article: E P Guriev 2020 IOP Conf. Ser.: Earth Environ. Sci. 434 012001

View the article online for updates and enhancements.
Combat operations of the German armed forces on the Northern sea route during the Great Patriotic War

E P Guriev
Saint Petersburg State University of Architecture and Civil Engineering, Saint Petersburg, Russia
gieier@yandex.ru

Abstract. The paper is devoted to the combat actions of the German navy and aviation in the Arctic during the Great Patriotic War of 1941-1945 on the Northern sea route. The Northern sea route is the most important sea communication of Russia in the Arctic. It connects the European part of the country with the Far East by the shortest route, and therefore has a special strategic importance for the cargo shipping logistics. This route passes through the seas of the Arctic Ocean and, despite the complexity of navigation in the Arctic seas, is the only communication that provides supply to the Polar Regions and cities of Siberia in the absence of railways and roads. No less important is its military and strategic importance, as the Northern sea route allows for inter-theater maneuver between the Northern and Pacific fleets. At the same time, due to its vast length and uninhabitability of the nearby territories, the Northern sea route is very vulnerable militarily, which can be used by a potential enemy of Russia in case of international relations aggravation in the Arctic. The violation of this route inflicts a heavy blow to the logistics of Maritime transport in the North. The main attention is paid to the creation by the Germans of military bases and weather stations network in the Soviet sector of the Arctic, to the organization and composition of these bases. The paper also analyzed the organization of the meteorological service of the German Navy operation "Wunderland" ("Wonderland") and mine-laying off at the coast of New Land, the causes of the German fleet failure on the Northern sea route.

1. Introduction
The Northern sea route is the most important sea communication of Russia in the Arctic. It connects the European part of the country with the Far East by the shortest route, and therefore has a special strategic importance for the cargo shipping logistics. This route passes through the seas of the Arctic Ocean and, despite the complexity of navigation in the Arctic seas, is the only communication that provides supply to the polar regions and cities of Siberia in the absence of railways and roads. No less important is its military and strategic importance, as the Northern sea route allows for inter-theater maneuver between the Northern and Pacific fleets. At the same time, due to its vast length and to the uninhabitability of the nearby territories, the Northern sea route is very vulnerable militarily, which can be used by a potential enemy of Russia in case of international relations aggravation in the Arctic. The violation of this route inflicts a heavy blow to the logistics of Maritime transport in the North [1].

The second world war of 1939-1945 gives a unique experience of combat operations in the Arctic, with naval and air forces, used by the armies of Germany, Great Britain and the Soviet Union in this military theater. The main task given by the German high command to its Navy and air force in the North was to disrupt the sea communications connecting the USSR with the allies in the anti-Hitler
coalition, as well as Soviet ports connecting the Barents and White seas with the ports of the Far East [2]. The purpose of these operations was to disrupt the logistics of cargo transportation in the Arctic. Although the Germans’ main attention was paid to the fight against the Northern allied convoys, in the Eastern sector of the Arctic, on the Northern sea route, there was no less intense fighting, the experience of which remains relevant today as well.

2. Main Body
The main forces of the German fleet and aircraft in the Arctic military theater were concentrated on the territory of Norway, occupied by Wehrmacht in April 1940. In summer of 1941, after the beginning of the Great Patriotic War against the USSR [3, 4, 5, 6], the so-called Scandinavian bridgehead, acquired special strategic importance, as it allowed the German armed forces to fight not only in the North Atlantic, but also in the Arctic, thus, the entire transport network of the USSR was within reach of the German navy and air force in Northern Norway. On the territory of Norway there were a sufficient number of ports suitable for large ships’ stay, which had a developed infrastructure. The most important of them were Warde, Kirkenes, Tromso and Narvik. For example, Tromso was located in the Northern part of Norway on an island of the same name, on a communication line running skerry from Narvik to the north. Tromso served as the main naval base in Northern Norway, it was the headquarters of the Defense commander of the Northern coast of the country.

Light surface forces, including destroyers, were based at Tromso. The port was the point of formation and departure of convoys going further to the North and North-East of Norway. Located in the Strait of Tromsund, the port had 3 harbors and 2 raids with depths from 9 to 15 m. The raids could place ships of large displacement (up to 16,000 tons). In the Tromsø area there was a hydro-airport [7]. Narvik was located at the Eastern end of the Ufut fjord, which was a continuation of the West fjord. From the sea, the approaches to Narvik were covered by groups of islands. There are about 40 miles from the entrance to the Ufut fjord to Narvik. The port itself was in the depth of the bay with depths up to 30 m. The length of the mooring line was up to 2000 m, the depth at the walls was from 6 to 9 m. Approaches to the port were protected by coastal batteries. Repair capabilities of the port were limited [8].

One of the most important tasks that the German navy and air force solved in the Arctic was weather exploration, as the weather in Europe is formed there. Prompt and accurate weather data were particularly important for planning and conduct of naval operations, so the weather service organization in the German armed forces was given great importance. One of the methods of conducting meteorological exploration was aerial reconnaissance. Specially trained “Junkers Ju-88” and “Heinkel He-111” weather scouts regularly took off from Norwegian airfields. They flew northwest to the island of Jan Mayen and Spitsbergen, and after Germany attacked the Soviet Union, they began to fly to the northeast, to the areas of Novaya Zemlya and the island of Vaigach. The aircrafts flew at different altitudes from 100 to 3000 m, the range was up to 3000 km, the purpose was to explore the weather and ice conditions in the North Atlantic and the Barents seas [9].

Specially equipped fishing trawlers were also sent to the sea for meteorological and ice observations. So, for example, at the beginning of 1941 the fishing trawler "Sachsen" carried out meteorological observations near the island of Jan-Mayen for 3 months. Weather reports from trawlers were regularly reported to headquarters in Tromsø. The organizer of such observations was a prominent forecaster Dr. R. Holzapfel. Along with trawlers, submarines were sent to collect information about the weather. They conducted weather reconnaissance at sea, and they were strictly forbidden to attack enemy ships. All they had to do was to go on the air at regular intervals, and transmit coded weather data as quickly as possible, so as not to be swayed.

Since the beginning of the war, German meteorologists boosted work on the creation of "weather machines". Two types of such stations were developed. Marine "machines" were installed in the sea at anchor and gave information about the temperature and pressure of the air. The battery charge of such stations was enough for 2 months. Ground automatic stations transmitted more information about the direction and speed of the wind and could operate at air temperatures up to -40 degrees C, the power of their electric batteries was enough for 9 months. The stations transmitters were automatically switched
on 3-4 times a day at a certain time. The ground stations were delivered by the planes and ships they were installed on the archipelago of Spitsbergen, the Islands of Jan Mayen, Medvezhiy and in the Novaya Zemlya [10].

The vagaries of automation and the risk in conducting air and sea intelligence was great. Weather ships died, automatic radio stations failed, aircraft flights did not make up for regular observations, so it was decided to organize permanent weather stations on the deserted shores of remote Arctic islands and archipelagos. In the summer of 1941, the head of the German meteorological service, Admiral F. Conrad, developed a plan for the organization of secret German meteorology. Its idea was to land their own weather squads in the most remote and most synoptically important regions of the Arctic. In these areas it was possible to conduct meteorological observations all year round, and in case such a detachment was bearing, then in the conditions of the polar night there was no access either by sea or by air, while during the ice melting period such a detachment could be evacuated, and in the autumn another group could be delivered to the same point.

Not much is known about the secret meteorological points of the German Navy in the Arctic: 10 such points are known: "Bud", "Blossom", "Hazel", "Crusader", "Espadron", "Wooden eye", "Cellist", "Edelweiss-1", "Edelweiss-2", "Arctic wolf" and "Treasure Hunter" [11].

The most complete information is available about one such weather station - "Treasure Hunter". In the summer and autumn of 1942, a meteogroup consisting of 10 people landed on the land of Alexandra, Franz Josef archipelago: sailors, meteorologists, radio operators and mountain rangers. It was equipped with exceptionally accurate maps.

The station was built thoroughly, insulated dugouts, radio and weather stations were built, motor boats were available, trenches were dug around the premises, machine-guns and mortar nests were installed for conducting a circular defense. All security measures were taken: the buildings were camouflaged, the roofs of the dugouts were painted white. Due to non-compliance with sanitary standards in the spring of 1943, the entire personnel of the station was poisoned with bear meat, and an urgent evacuation was required. From Norway, a plane flew to Alexandra Land to pick up people, but when landing it damaged the landing gear, and only after another plane dropped a wheel for repair, it was possible to evacuate all the personnel. The plight of the weather station can be judged about by the fact that when in 1951 a detachment of geologists landed on the land of Alexandra, they found abandoned weapons, ammunition, weather logs and other documents. In addition, leaving the station, the Germans did not have time to mine the abandoned housing, machinery, warehouses [12]

In addition to solving the problems of providing meteorological data, the German command used the Eastern regions of the Arctic to organize temporary basic points for ship parking and the submarines crews’ rest, temporary bases for refueling and intermediate airfields for reconnaissance aircraft and transport aircraft, delivering fuel for submarines. Using the data obtained during the expedition of 1931 on the airship "Count Zeppelin" and the passage of the raider "Comet" in the summer of 1940, in the Strait of Cambridge (Nagurskiy Bay) a base for the repair of submarines operating in the Kara Sea was organized. Here the Germans could charge the batteries of submarines and receive the latest intelligence data. At the end of 1941, they built a runway and a radio station on Mezhdusharsky island (at the entrance to the Belushya Bay), the same stripes were on the capes of Constantine and Pinegin. From here, German reconnaissance aircraft could control almost the entire basin of the Kara Sea. In addition, these headlands could be enough to easily set up receiving points for delivered food and fuel for submarines using Ice Harbor Bay as a forward or a maneuverable stronghold.

At the end of July 1943 on the North-Eastern shore of the island of Novaya Zemlya a base point for refueling seaplanes-scouts was established (60 km from Desire Cape). For submarines crews’ rest they used utterly deserted seats: Volchiy Gulf on Nordenskiold archipelago, Sporiy Navolok Cape area, Slobodskaya Bay in Yenisei Bay, the Lena river mouth, Vardropper island and the uninhabited district of Minin skerry, where a radio station for the Imperial targeting submarines was established. In the Arctic, in 1944, using secret points and bases, 12 German submarines operated, with 6 of them sent to the Kara Sea and merged into the "Greif" strike group. Some submarines were equipped with special radio reconnaissance equipment and had appropriate specialists in their crews. These boats operated in
the area of the Laptev Sea, and the base for ship parking, radio reconnaissance and the crews’ rest was the base near one of the Danube Islands [13].

In the Eastern sector of the Arctic, on the Northern sea route, the intensity of hostilities was lower than in the Western sector (to the West of Medvezhiy (Bear) island), where Kriegsmarine and Luftwaffe fought against the Northern allied convoys, due to the remoteness of the area from German bases in Norway, difficult weather and ice conditions and less intense movement of Soviet ships on the North sea route. Nevertheless, the German command repeatedly attempted to disrupt this important communication by submarines and surface ships.

The most large-scale operation of the Kriegsmarine in the Eastern sector of the Arctic was operation Wunderland ("Wonderland"), undertaken by the Germans on August 16-29, 1942. The German command was informed that in July-August 1942, a caravan of 6 transports (expedition EON-18) and three destroyers (leader "Baku", destroyers "Reasonable" and "Furious") will be sent from the Far East along the Northern Sea route to strengthen the Northern fleet, accompanied by 2 icebreakers "A. Mikoyan" and "L. Kaganovich". It was planned to attack the caravan in the Kara Sea, as well as to defeat a number of ports in the Soviet Arctic. For this purpose, the heavy cruiser "Admiral Scheer" (commander – capitan-zur-see V. Meendsen-Bolken), 5 submarines and 5 flying reconnaissance boats "Blom-und-Foss BV-138" were allocated [14]. In the context of complex meteorological and ice situation, the cruiser could not detect the moving caravan. On August 25, to the northwest of the Nordenskiold archipelago they noticed an icebreaker ship "A. Sibiryakov" under the command of Lieutenant A. A. Kacharava (armed with two 76-mm and two 45-mm guns). The German cruiser hoisted the American flag at the mast and, upon request from "Sibiryakov" for the name of the ship, called herself the American heavy cruiser "Tuscaloosa" [15]. Refusing to report the data on the presence of convoys and ice conditions to the cruiser, the ship took an unequal battle, and was sunk without lowering the flag; part of the crew was captured.

As the element of surprise was lost, the cruiser turned North, and on 25-26 August continued raiding in the Kara sea in the area between Desire Cape and Dixon island, and then headed for the Yenisei mouth to attack the port of Dixon island on the night of 26-27 August. On Dixon, there was a powerful radio station, large reserves of coal; they collected data on the movement of ships, ice conditions and weather. The defeat of Dixon would have disastrous consequences for the Arctic. The cruiser commander decided to suppress the coastal defense of the island, to land troops and bring all the port facilities into disrepair. And although, naturally, the cruiser’s firepower (six 283-mm, eight 152-mm, six 105-mm guns) significantly surpassed modest opportunities of Dixon defenders, after several hits from the Soviet field batteries (two 152-mm guns of 1910/31) and from the patrol ship SKR-19 "S. Dezhnyov" (commander-senior Lieutenant A. S. Gidulyanov), it was forced to withdraw, fearing more dire damage.

Going into the Kara Sea "Admiral Scheer" for the first time broke the radio silence, and reported the sinking of transport and the defeat of the port [16]. After this, the cruiser commander, to prevent the ship detection, made a decision to return to base. In the Barents Sea he was met by German destroyers, and on 29 August he returned to Narvik in their escort.

5 German submarines U-209 (commander — capitan-leutenant G. Brodda), U-601 (commander — capitan-leutenant P.-O. Grau), U-251 (commander — capitan-leutenant G. Timm), U-255 (commander — capitan-leutenant R. Rehe), U-456 (commander — capitan-leutenant M.-M. Teichert), which were to interact with the "Admiral Scheer" and reconnaissance aircrafts also took part in "Wunderland" operation [17].

The operation began on 16 August 1942 when the German ships left Narvik. On 17 August, U-209 attacked a Soviet convoy consisting of three tugs, a non-self-propelled lighter and a barge near the Yugorsky Shar Strait (Novaya Zemlya island) and sank the tugs “Komsolet” and “Komile”, as well as the lighter and the barge, with artillery fire [18]. U-456 submarine sank the Soviet motorboat “Chaika (Seagull)” at Matyushev island on 22 August, [19] and U-601 sank the cargo steamer “Kuibyshev” and the tugboat “Medvezhonok (Bear-kid)” at Desire Cape [20]. On 25 August, U-255 shelled the Soviet weather station at Desire Cape, U-209 shelled the Khodovarikha lighthouse on Russian Zavorot island.
U-601 and U-255 conducted ice reconnaissance, providing action for the heavy cruiser “Admiral Scheer” and BV-138 seaplanes [21]. In early September, the German submarines returned to their bases in Norway, this campaign did not have great success, but revealed great problems in the defense of the North sea route, as a result of which on September 15, 1942, the new earth naval base (commander — captain of the 1st rank A. I. Dianov) was created [22].

Operation, in a whole, proved for Germans unsuccessful because of the cruiser commander’s decision not to risk, a too vast combat action area for one ship and lack of aviation intelligence (2 from 5 aircrafts failed accident).

Another way of fighting in the Eastern sector of the Arctic was mine-barrage operations. From January 1942 to February 1943, German ships conducted 7 mine-barrage operations, during which more than 1070 mines were exposed in the internal waters of the USSR. Minefields were placed in the White Sea and near the Novaya Zemlya coast, at the islands of Kolguev and Kildin, Rybachy Peninsula and Kanin Nos Cape. The heavy cruiser "Admiral Hipper" (commander — captain-zur-see V. Meisel), 12 destroyers, 3 minelayers and other ships took part in it [23]. For example, on 24-29 September 1942, 4 destroyers escorted the heavy cruiser “Admiral Hipper” to the shores of Novaya Zemlya (“Tsaritsa” operation), where mining groups were placed, after which the German squadron searched for enemy convoys in the Barents sea.

In the winter of 1942-1943, mine-laying operations involving the light cruiser “Cologne” were planned but did not take place due to stormy weather [24]. Despite significant staging, mine warfare in the Arctic did not bring tangible results. The only reliable success of mine productions was the damage of "A. Mikoyan" icebreaker on November 26, 1942 which blew up on a mine at Kanin Cape. Presumably, the Soviet submarine K-22 which is considered missing in the area could be undermined by these mines near Desire Cape [25].

3. Conclusion

Analyzing the fighting of the German armed forces in the Arctic on the Northern sea route, the following conclusions can be drawn: 1) the combat operations planning was based on intelligence received in the pre-war period during the Soviet-German joint scientific expeditions; 2) when conducting combat operations, the German navy and air force relied on an extensive network of military bases in Norway and those temporarily established on the Arctic Islands; 3) special attention in the conduct of hostilities was paid to weather forecasts, for which the Germans deployed a network of weather stations in the Arctic, including in the Soviet Arctic territories; 4) the fighting on the Northern sea route was conducted by both surface ships, submarines Kriegsmarine and reconnaissance aircraft though with less intensity than in the Western sector of the Arctic.

In general, German operations in the Eastern sector of the Arctic, although causing some damage to the logistics of Soviet shipping, but due to the complexity and remoteness of the theater from its bases, weak interaction between the armed forces and the lack of allocated forces were not crowned with serious success and could not interrupt communications between the European part of the USSR and the Far East.

References

[1] Travkina E V, Ilyasov R M, Samylovskaya E A and Kudryavtseva R-E A 2019 Northern Sea Route: Formation of Russian Transport Policy in the Arctic IOP Conference Series: Earth and Environmental Science 302(1) 012088
[2] Morison S E 1956 Battle for the Atlantic. September 1939-May 1945. (Moscow: Voenizdat) In 2 vols p 368
[3] Puchenkov A S 2019 Klassicheskaya istoriya biokadnoj e`popei Rossiiskaia Istoria 3 150-153
[4] Samylovskaya E A and Eidemiller K Yu 2019 Bor`ba s prestupnost`yu v partizanskix otryadax v gody’ Velikoj Otechestvennoj vojny’ Voprosy Istoriyi 12(3) 256-257
[5] Kudryavtseva R-E A et al 2019 Sovetskaya i nacistskaya propaganda v period Velikoj Otechestvennoj vojny’ Voprosy Istoriyi 12(3) 191-192
[6] Almazova-Ilyina A B, Kudryavtseva R E A and Anosova N E 2019 Sovetskie sudy` v partizanskix ot ryadax i podpol`e: 1941—1944 gg Voprosy Istorii 12(3) 98
[7] Central naval archive Fund 767 Inventory 2 File 30 p 110
[8] Central naval archive Fund 767 Inventory 2 File 30 p 110
[9] Kanevsky Z M 1976 The forecast price (Leningrad: Gidrometeoizdat) p 22.
[10] Kanevsky Z M 1976 The forecast price (Leningrad: Gidrometeoizdat) p 24.
[11] Ruge F 2002 War at the sea, 1939-1945 (St. Petersburg: Polygon) 266-268
[12] Bulatov V N 1994 German base on Franz Josef Land Northern convoys: research, memories, documents (Moscow: Nauka) 2 47-48
[13] Kovalev S 2000 Secret Kriegsmarine bases in the Soviet sector of the Arctic Marine collection 9 82-84
[14] Kirillov P 1996 “Admiral Scheer” in “Wonderland”, or what happened at Dixon's. Technique - youth 10 30
[15] Kofman V L and Knyazev M B 2012 Hitler's “armored pirates”. Heavy cruisers of the “Deutschland” and “Admiral Hipper” types (Moscow: Yauza, EKSMO) 178-179
[16] Kofman V L and Knyazev M B 2012 Hitler's “armored pirates”. Heavy cruisers of the “Deutschland” and “Admiral Hipper” types (Moscow: Yauza, EKSMO) 180
[17] Sergeev A A 2003 German submarines in the Arctic 1941-1942 (Moscow: Russian publishing house) 198
[18] Sergeev A A 2003 German submarines in the Arctic 1941-1942 (Moscow: Russian publishing house) 200-203
[19] Sergeev A A 2003 German submarines in the Arctic 1941-1942 (Moscow: Russian publishing house) 210
[20] Sergeev A A 2003 German submarines in the Arctic 1941-1942 (Moscow: Russian publishing house) 212-213
[21] Sergeev A A 2003 German submarines in the Arctic 1941-1942 (Moscow: Russian publishing house) 216-217
[22] Sergeev A A 2003 German submarines in the Arctic 1941-1942 (Moscow: Russian publishing house) 260-261
[23] Meister J 1957 Der Seekrieg in den Osteuropäischen Gewässern 1941 – 1945 (München: J.F. Lehmann Verlag) 155-156
[24] Kofman V L 2008 The Princes of Kriegsmarine. Heavy cruisers of the Third Reich (Moscow, Yauza: EKSMO) 79
[25] Granovsky E, Morozov M and Dashyan A 1995 German destroyers in the battle: in 2 parts, Part 2 (Moscow: CheRo) 24