

Winter conditions in Northern European Countries

A brief overview of newspaper reports may give us some information about what it meant for Northern Europe to be thrown back in the Little Ice Age.

South-eastern England: At Kew Observatory, January 1940 was the coldest month since 1791, with the highest percentage of frost days. Greenwich figure was also the lowest recorded during the past one hundred years. In the close vicinity of London, the river Thames had frozen for the first time since 1814 (Neue Zürcher Zeitung, the 29th of January 1940).

The Netherlands: As early as the 6th of January 1940, drift ice in the East of Scheldt was so severe that Ameland was temporarily cut off from the mainland. Freezing conditions went on. By mid-February, hundreds of persons abandoned their homes because of the threat of crushing ice packs boiling up from ice-locked canals, rivers and seas. In mid-February, Amsterdam Weather Bureaus reported the lowest temperature ever recorded in the Netherlands: 11.2 degrees below zero Fahrenheit (-24°C). Water transportation in the Netherlands was completely paralysed. Canals were covered with thick ice for more than six weeks, while traffic on the Rhine and Waal had already stopped in early January.

Denmark: Even before the end of 1939, snowstorms swept Denmark. In mid-January 1940, Copenhagen registered -26°C (-15°F) and there was no sign that the cold wave would come to an end very soon. Heavy snowstorms blocked or slowed down the traffic in many parts of Denmark. "It is Denmark's worst winter since 1860", the New York Times reported in February 1940.

Sweden: On the 21st of February 1940, the New York Times reported: "In Sweden all cold records were broken in the last twenty-four hours, the coldest since 1805". Analysing the data base recordings for those four months i.e. December 1939–March 1940, the winter 1939/40 proved to be the coldest since 1880/81.

Finland: On the 24th of December 1939, James Aldridge's report (extract from NYT, the 25th of December 1939) was saying: "The cold numbs the brain in this Arctic hell, snow sweeps over the darkened wastes, the winds howl and the temperature is 30 degrees below zero Fahrenheit (minus 34.4°C). Here the Russians and Finns are battling in blinding snowstorms for possession of ice-covered forests... I reached the spot just after the battle ended. It was the most horrible sight I had ever seen. As if the men had been suddenly turned to wax, there were two or three thousand Russians and a few Finns, all frozen in fighting attitudes. Some were locked together, their bayonets within each other's bodies; some were frozen in half-standing positions; some were crouching with their arms crooked, holding the hand grenades they were throwing; some were lying with

their rifles shouldered, their legs apart... Their fear was registered on the frozen faces. Their bodies were like statues of men throwing all their muscles and strength into some work, but their faces recorded something between bewilderment and horror.”

The Baltic Countries: Already in December 1939, in the Eastern parts of the Baltic countries (at the Russian West border), the temperatures fell to -17°C (between the 24th and the 25th of December), and below -20°C one day later, extending to the Baltic coast and recording -14°C in Klaipeda and -17°C in Gdynia (Bight) on the 27th of December¹. The harshest cold wave in years reached the Baltic countries by mid-January 1940, with temperatures of 40 degrees below zero Fahrenheit. In mid-February 1940, more than 10,000 persons were still suffering from severe frostbite in Estonia, Latvia and Lithuania. At least five persons froze to death in these three Baltic countries, where temperatures reached 54 degrees below zero Fahrenheit (-47.7°C) for the first time in 160 years and where the Baltic Sea froze over.

In Central Europe, in countries like **Hungary** or **Romania**, a very severe snowstorm paralysed shipping in the Black Sea and the lower Danube River even before Christmas 1939. On the coast, temperatures dropped to 15°C below zero. Snow also fell all over Bulgaria on the 21st-22nd of December, this way starting a new cold weather episode (down to -16°C). Temperatures of -20°C were recorded in Northern Bulgaria. During the remaining days of 1939, ice blocked the Danube and prevented German supplies from getting through. Railway traffic was expected to be hampered by snow, too. On the 30th of December 1939, The New York Times reported: “Cold winds have been recently blowing westward from Russia.”

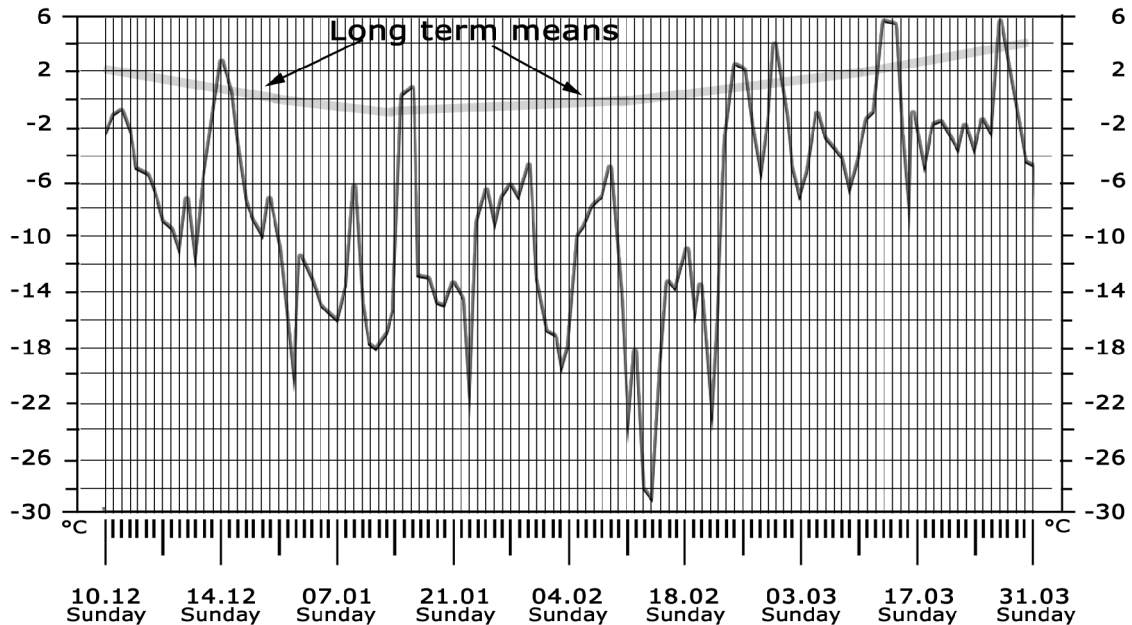
In January 1940, weather throughout Eastern Europe was unpredictable: very cold, very snowy and possibly the coldest in fifty or even more years.

In mid-January 1940, temperatures dropped at 40 degrees below zero Fahrenheit in Romania, while Bulgaria was reported to be suffering under the worst cold people could remember.

February 1940 was by no means better. It was reported that all records of cold weather in Europe were broken during that month and just when people were hoping that the worst was over, another cold wave hit the entire continent. Budapest endured the harshest cold weather in sixty years: 28 degrees below zero Fahrenheit (-33°C).

Extended areas of **Germany**, particularly those close to the North and Baltic Seas, experienced the coldest winter in more than 100 years. The centre of the cold wave expanded from Amsterdam, via Bremen, Hamburg, Berlin to Königsberg (Kaliningrad). In the Helgoland Bight and Southern Baltic Sea, naval activities were at their peak: starting with a 10 days battle from sea to shore, and from shore to sea, in Gdansk area in early September, and continuing with the laying of many dozens of mine fields along the German coast. A detailed description will be provided later.

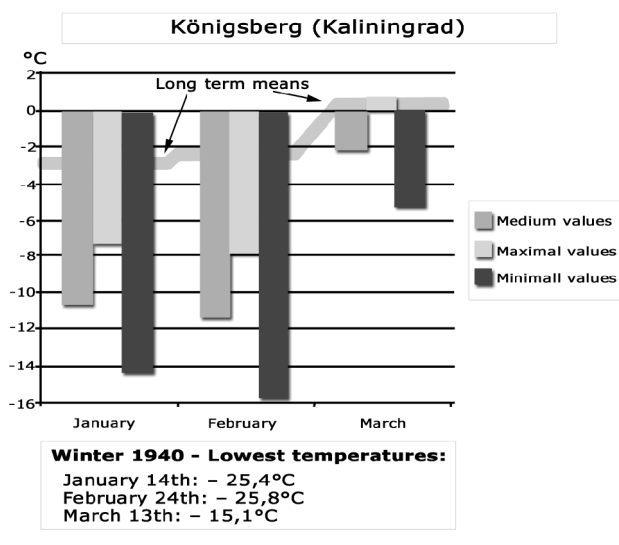
Hamburg/Germany - Winter 1939/40



Hamburg, a port city on the Elbe River, close to North and Baltic Seas, experienced record weather conditions despite its usually maritime climate, with winter temperature averages just above zero degrees Celsius. Instead of that, average temperature was below minus 12°C for almost two months (the 1st of January–the 20th of February). The Elbe was under ice. When unusual freezing started in December 1939, a big headline of a Hamburger newspaper was saying: “The Elbe will never be frozen over, since 1874/75 icebreaker would keep the shipping fairway open”. After a while, nature

proved that assertion wrong. The German navy encountered many difficulties. Many naval vessels were stuck in the middle of the floating ice.

For Berlin, Dresden and Halle this was the coldest winter in 110 years, and the summary of the daily data between November 1939 and March 1940 proves it beyond any doubt. After 1829/30, no other winters have been as cold as winter 1939/40 was. The coldest months of January in Berlin since recording started, in 1719, are: 1823, 1838, and 1940.



At the most eastern end of the southern region of the Baltic Sea, former Königsberg (later Kaliningrad), whose usually winter temperatures were of an average of -2°C , had to cope with the following average temperatures, as shown in the graph.

Summary: The evidence of the extraordinary winter conditions is overwhelming. It is further possible to clearly demonstrate that the entire Northern Europe, from Helsinki to Sofia and to London, fell prey to arctic conditions, while in a number of cities, like London, Amsterdam, Hamburg, Berlin, Dresden and Kaliningrad (Königsberg), there were registered record low temperatures, which were not experienced in more than a century before. As we have offered an overview of the impact and the characteristics of winter 1939/40, our next step is to explain and establish how this could happen. After all, global and regional weather is based on physics and nothing happens without a cause.

ⁱ German daily weather charts of 'Seewarte'.