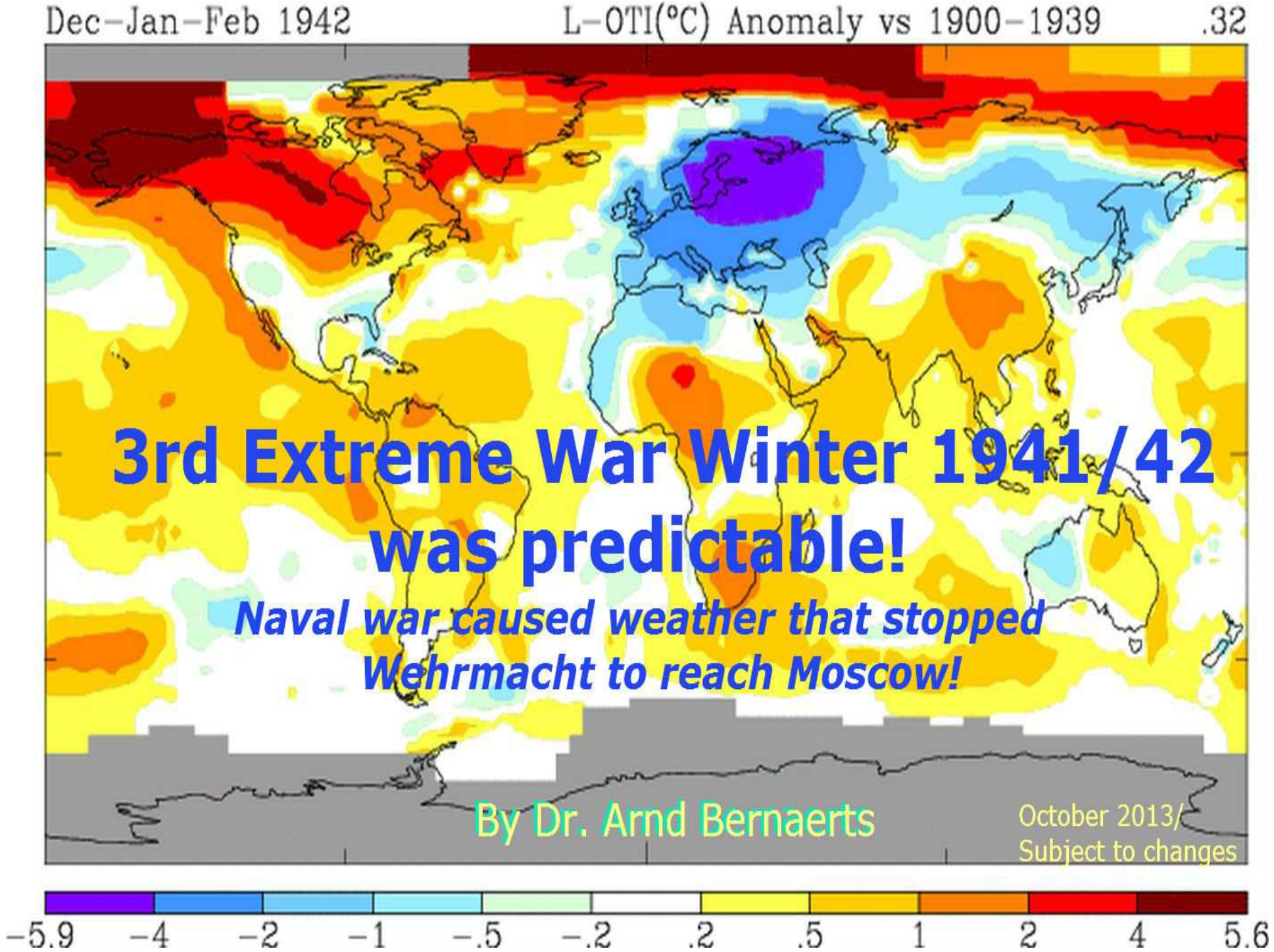

Dec-Jan-Feb 1942
L-OTI(°C) Anomaly vs 1900-1939
.32
3rd Extreme War Winter 1941/42 was predictable!
Naval war caused weather that stopped Wehrmacht to reach Moscow!
By Dr. Arnd Bernaerts
October 2013/
Subject to changes
-5.9
-4
-2
-1
-.5
-.2
.2
.5
1
2
4
5.6

Cold, snow and ice stopp Hitler‘s drive to smash the Red Army by „Blitzkrieg“, as early as 5th December 1941!

NAZIS GIVE UP IDEA OF MOSCOW IN 1941

Winter Forces Abandonment of Big Drives in North Till Spring, Berlin Says

By The Associated Press.

BERLIN, Dec. 8—Winter has stopped the Germans short of Moscow and the capture of the Soviet capital is not expected this year, a military spokesman declared tonight.

[A surprise Russian attack on

The New York Times
9. December 1941

PREDICTABLE?

A thorough analysis of previous two war winters indicate a clear answer:

YES!

German adviser regarded a third harsh winter in row the least of possible options, because it never happened since records were taken!

A grand miscalculation was the result !

What caused the forecasting failure?

- **Since times unremembered, meteorology granted to the influence of oceans on weather and climate too little attention!**
- **Therefor it did not cross their minds that naval warfare caused extreme winter 1939/40 and 1940/41**

THESIS

Without execution of naval warfare, the weather conditions would have been much milder in fall/winter of 1941/42!

Assault on Russia started on 22. June 1941

An all-time campaigne rolled eastward, together with naval war in the Baltic !

German Kriegsmarine mobilized a hundred warships, including 10 large minelaying vessels, 28 torpedo boats and 2-3 dozen minesweepers. Air support was provided by Luftwaffe.

About figures **per 22. June 1941**

Soviet Baltic Fleet consisted of six large war ships, 21 destroyers, 65 submarines, mine-layers 6, 48 torpedo boats and 700 aircraft.

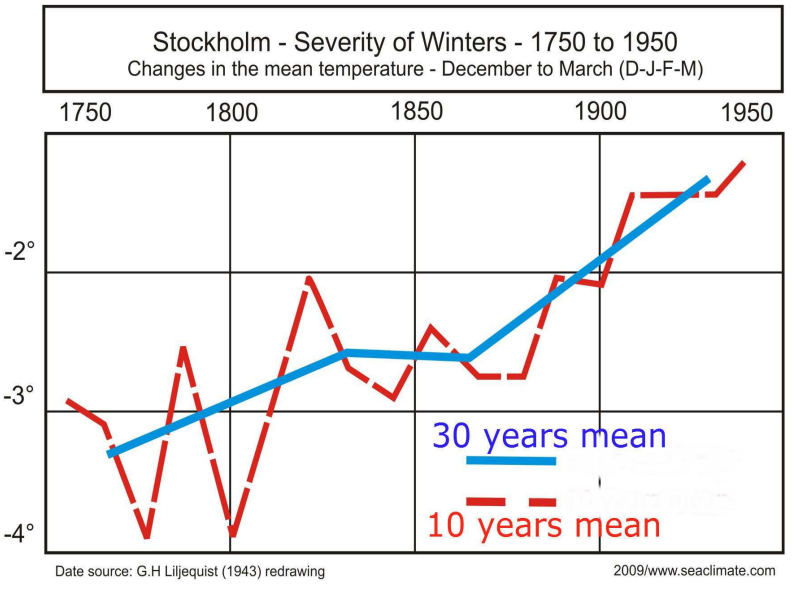
Fighting in the Baltic generated severest winter since 1757!

Stockholm's coldest winters since 1757

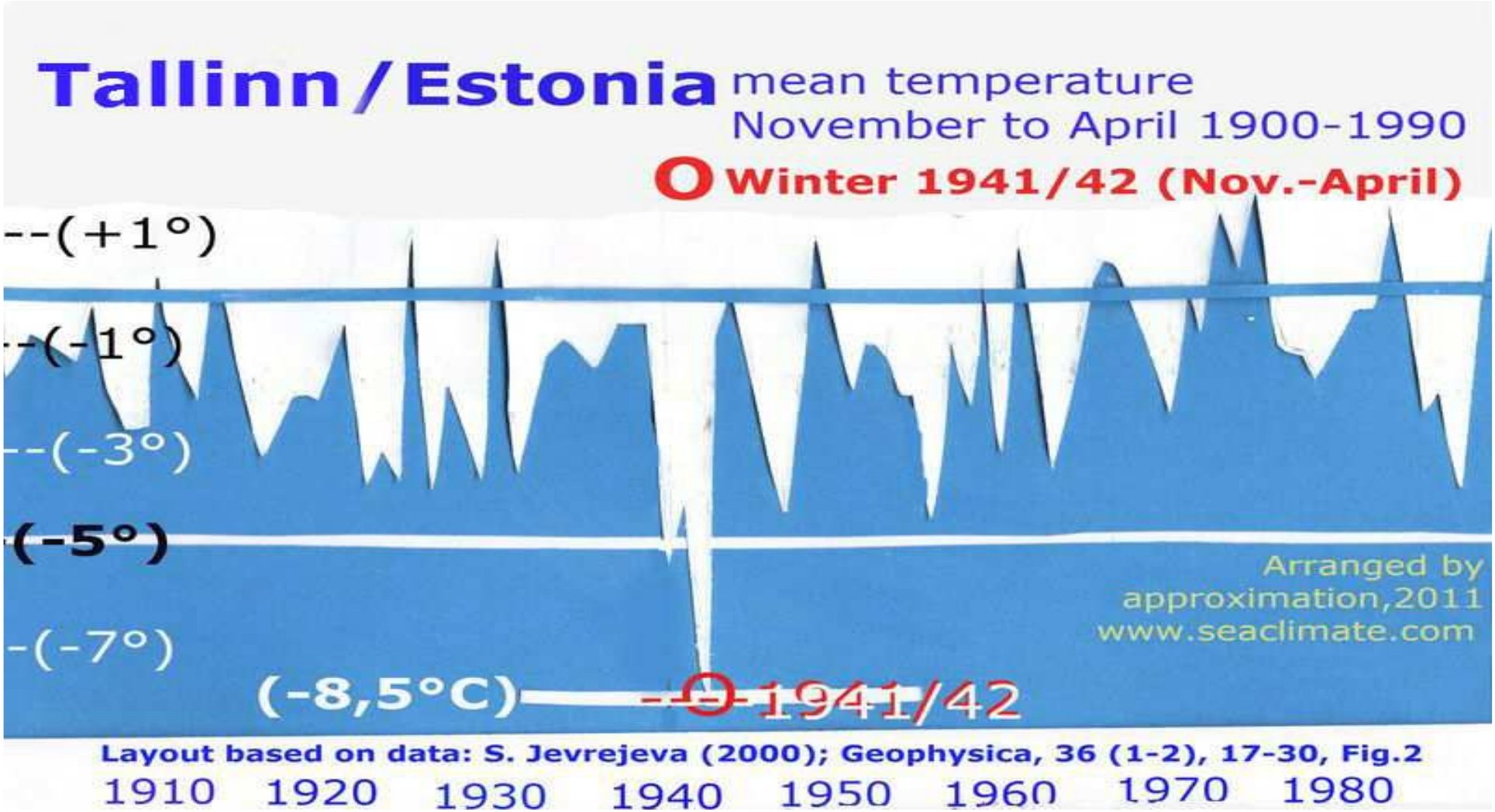
Rank No	Mean temp. of Dec. – March	Mean temp. of the three coldest months	Sum of negative monthly means temp.
1	1788/89, -8.0°	1941/42, -9.2°	1788/89, -31.9°
2	1808/09, -7.6°	1788/89, -9.1°	1808/09, -30.5°
3	1941/42, -7.5°	1808/09, -8.7°	1941/42, -30.5°

Data source: G. Liljequist, Stockholm Winters (1942) Arranged by: www.seaclimate.com/2005

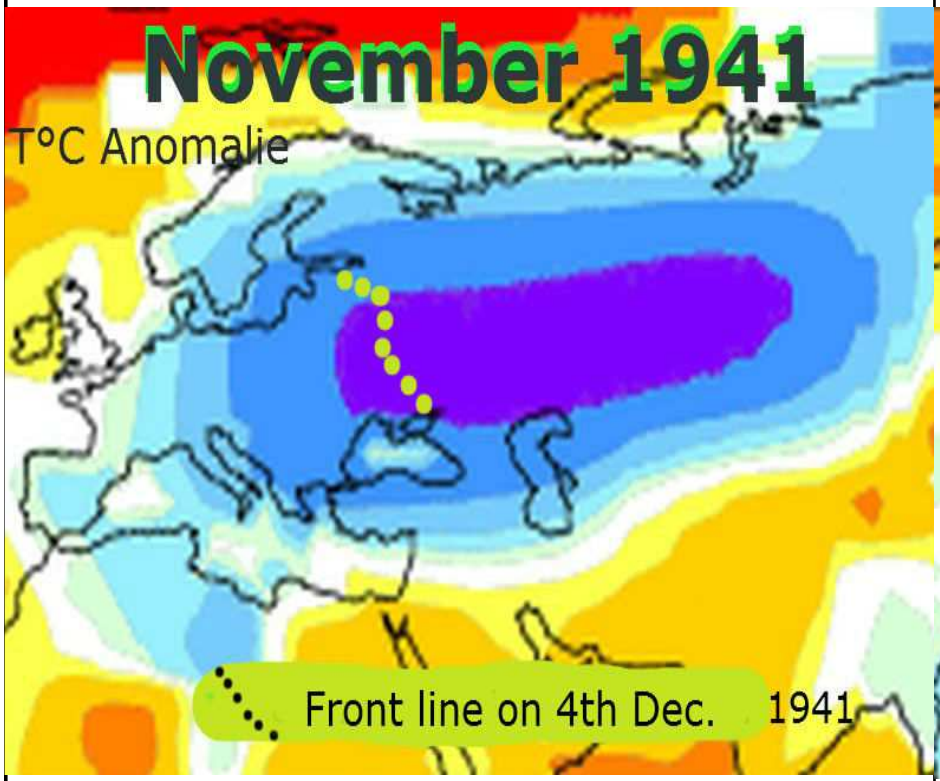
Example: Stockholm

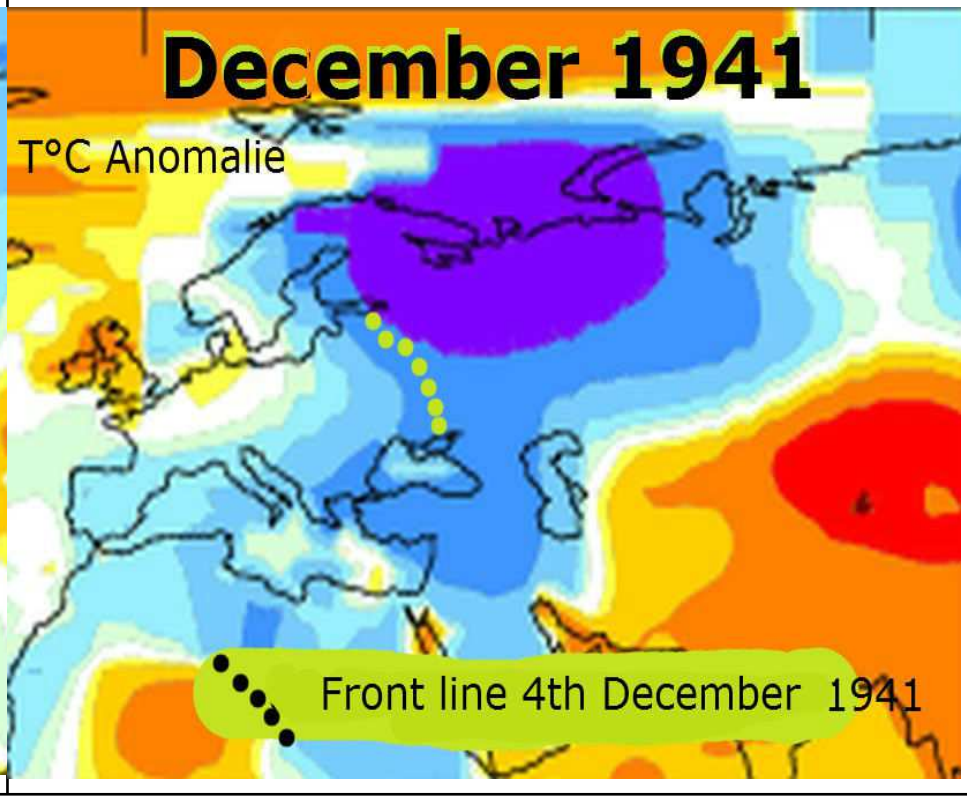


Extreme temperature deviations need to be explained!



Very early and severe winter conditions stopped German advances in early December 1941.

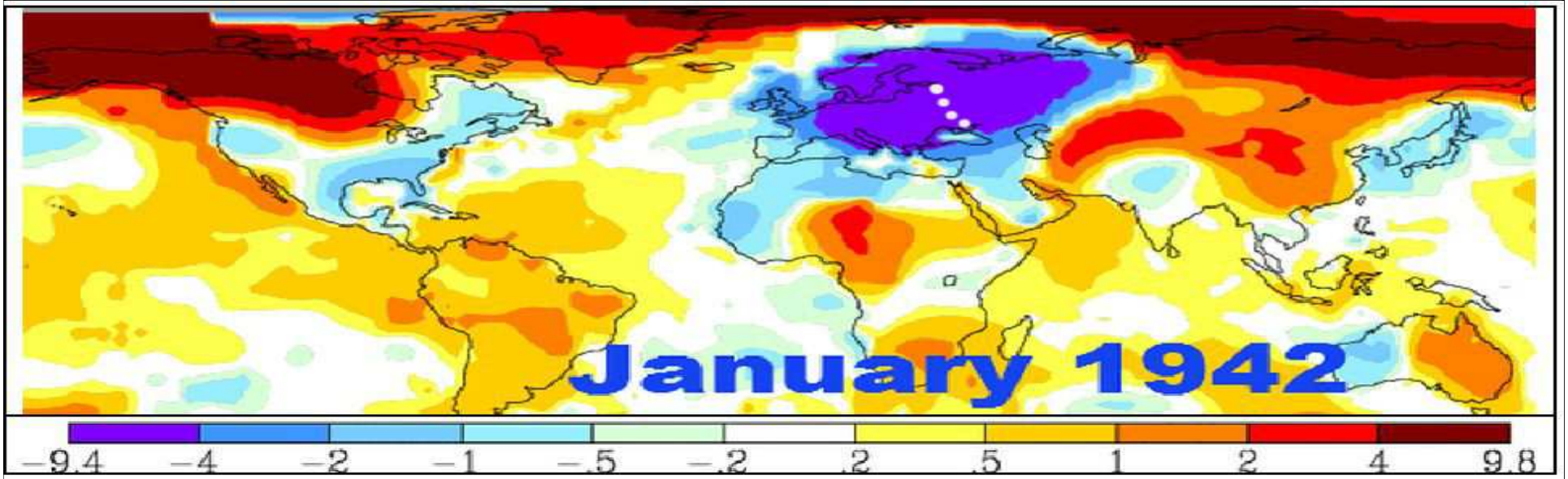




The New York Time brought the news on December 9th 1941:

"Nazis give up idea of Moscow in 1941. Winter forces abandoning big drives in the north until spring, Berlin says"

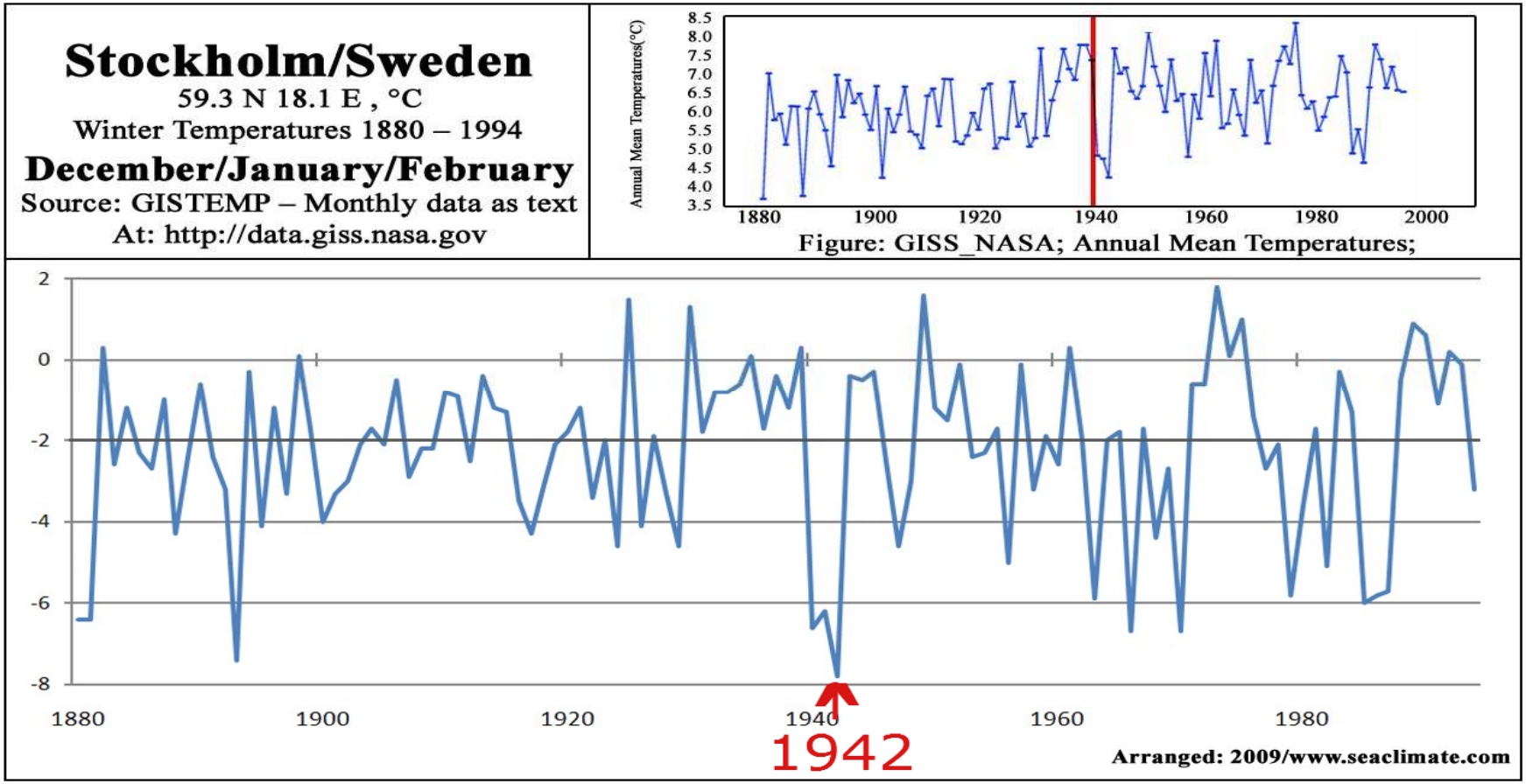
The entire world is hot! But the Balic region shivers!



Gösta Liljequist wrote the official Swedish sea ice report for winter 1941/42 (*Liljequist*, 1942). He expressed his amazement about the winter 1941/42 as follows:

After the two hard winters of 1939/40 and 1940/41 and the difficulties they generated for the shipping and the fuel supply for the country, one has awaited and expected that the winter of 1941/42 was expected to return to predominantly mild conditions. Instead this winter became one of the toughest, if not the severest of all winters during the last 200 years.

Stockholm‘s winter conditions (Dec/Jan/Feb) 1941/42



A stirred and shaken Baltic Sea lost to early to much heat, to ensure a mild winter!

__Presumably many million explosions above and below the sea surface have never been counted.

___Total losses for the Baltic Fleet were 120 naval and 90 non-military vessels.

__The Reichsmarine lost about 50 ships and about 15 cargo ships (some to German mines).

__The Baltic countries lost 100 merchant vessels, most of them sailing under the Russian flag.

__Sweden and Finland lost about 15 naval vessels.

What other cause could explain the unique temperature deviation across the Baltic region?

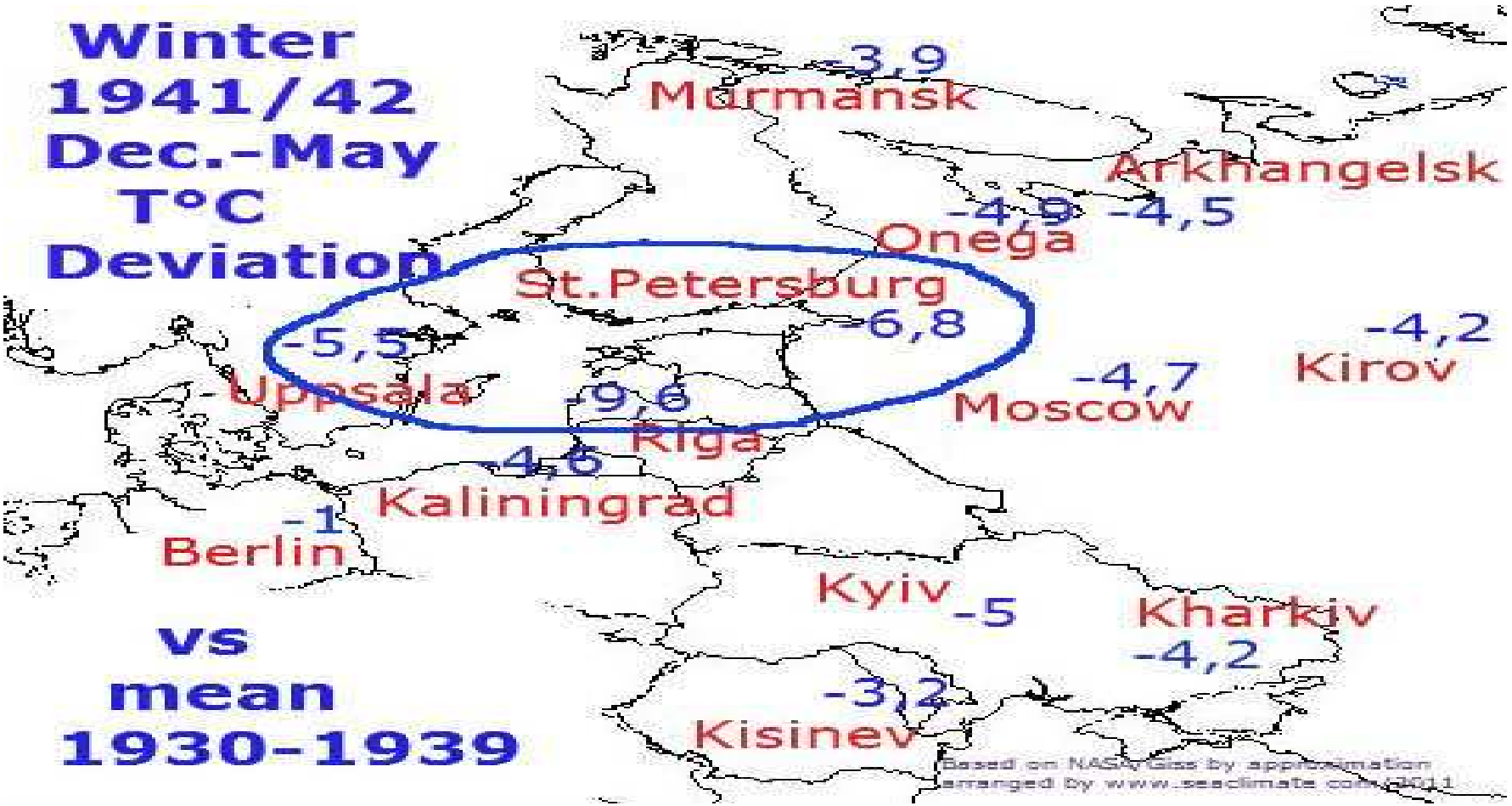
Here: 1st Quarter 1939 vs. 1942

Haparanda/Sweden Gulf of Bothnia/65,8°N, 24,1°E		**Helsinki/Finland** Gulf of Finland/60°N, 25°E	
T°C difference of the 1st Quarter 1939 vs 1942		T°C difference of the 1st Quarter 1939 vs 1942	
Hasparanda	**- 9,3°C**	**Helsinki**	**-10,4°C**
Vardo 70,4°N, 31,1°E;	-3,6°	Sodonkyla 67,4°N, 26,6°E	-9°
Andenes 69,3°N, 12,6°E;	-2,4°	Murmansk 69°N, 33°E	-5,3°

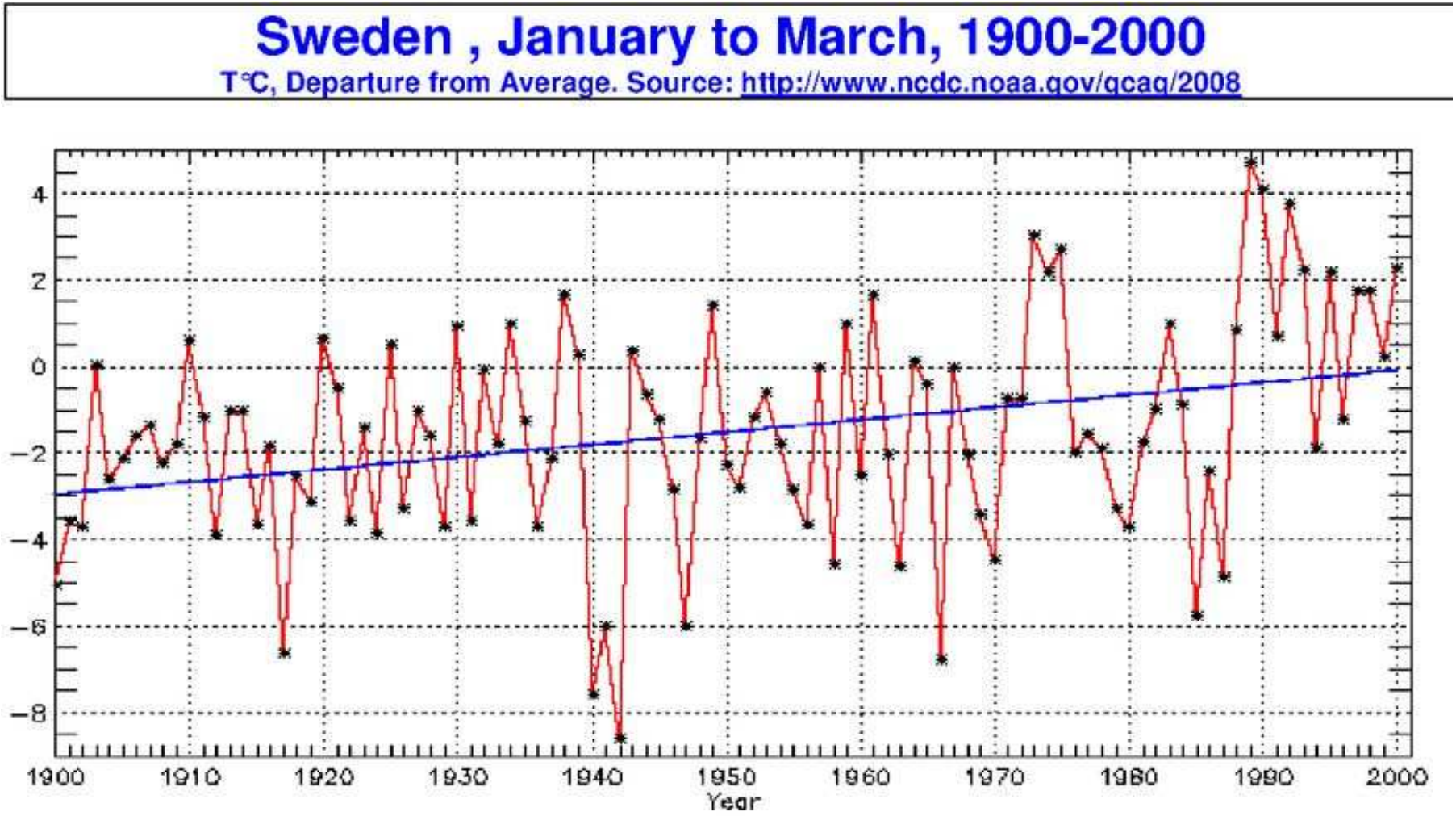
Copenhagen/Denmark Kattegat/Skagerrak 55,7°N, 12,6°E		**Vilnius/Lithuania** Inland/ 300km/ Baltic Sea, 54,6°N, 25,1°E	
T°C difference of the 1st Quarter 1939 vs 1942		T°C difference of the 1st Quarter 1939 vs 1942	
Copenhagen	**-5,6°C**	**Vilnius**	**-6,9°C**
Utsir Fry 59,3°, 4,9°E	-3,4°	Kostroma 57,7°N, 40,8°E	-6,8°
De Bilt 52,1°N, 5,2°E	-4,3°	Kirov 58,5°N, 49,3°E	-4,1°

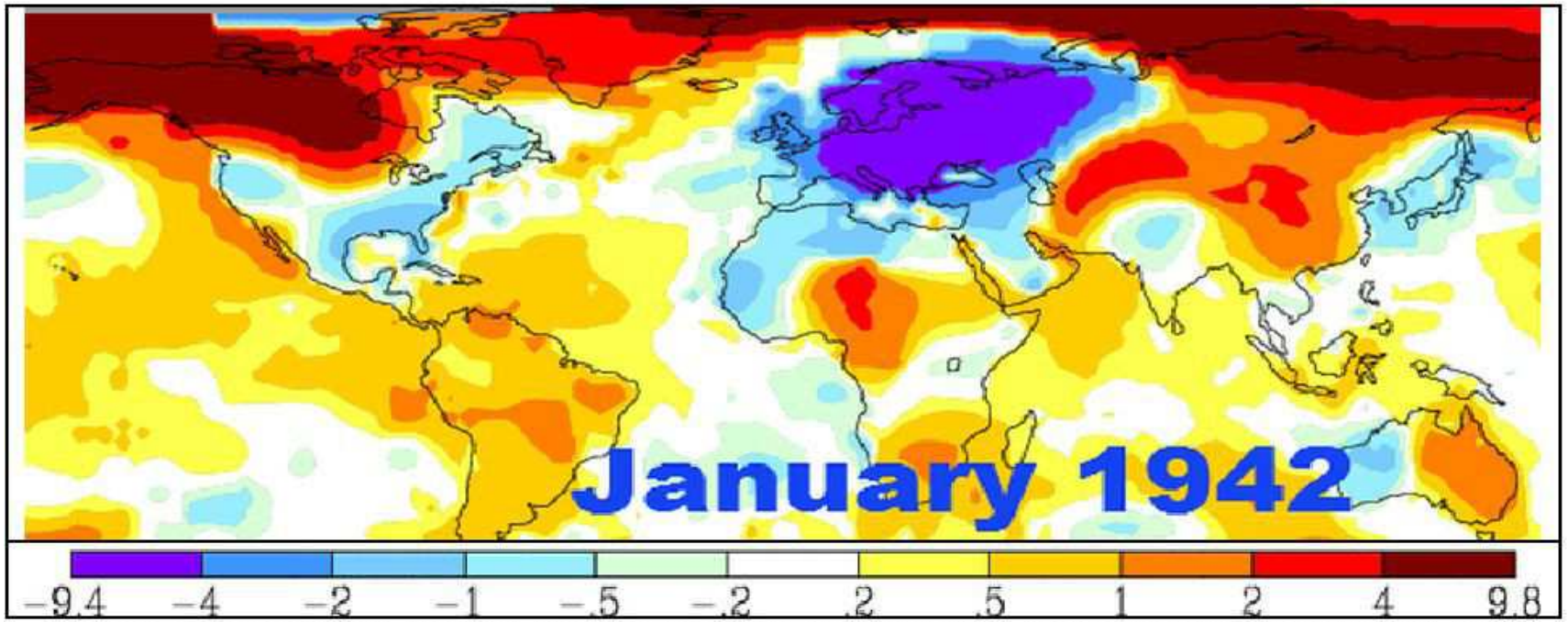
Arranged/approximation by: www.saeclimate.com/2011

Deviation across the Baltic region
HERE: December to May 1941/42 vs. 1930-1939

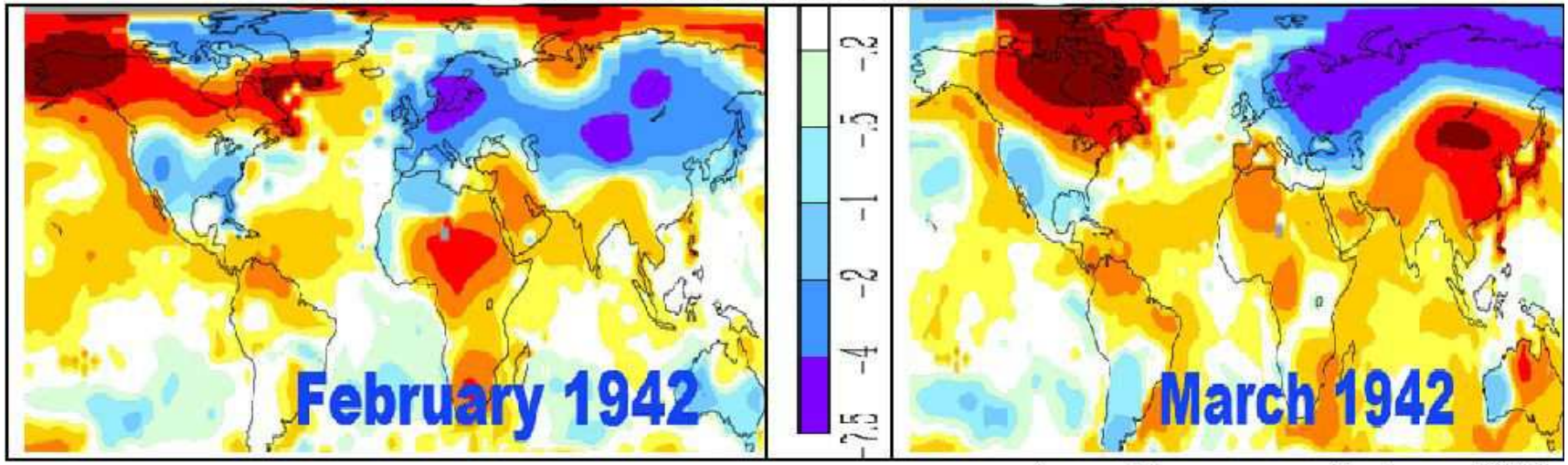


Deviation across the Baltic region
Here: Sweden January, February & March 1942





Low temperature in the Baltic region during the 3rd war winter 1941/42 make it to the most severe winter on record !



Arranged by: www. seaclimate.com /2011

Swedish meteorlogist Gösta Liljequist wrote (1942):

The winter 1941/42 was colder than the winter 1939/40 and 1940/41. At Stockholm it was one of the coldest winters since 1756 when regular temperature observation were started. If we graduate the severity of a winter according to the value of the mean temperature of the three coldest months of the winter half year, 1941/42 is found to be the coldest since 1756; .....

Stockholm's coldest winters since 1757			
Rank No	Mean temp. of Dec. – March	**Mean temp. of the three coldest months**	Sum of negative monthly means temp.
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Data source: G. Lilijequist, Stockholm Winters (1942)			Arranged by: www.seaclimate.com/2005

The impact of the Baltic on weather prevented Germany from reaching Moscow!
Red Army strikes back!

Strength of the opposing forces on the Soviet Western border.

Status: 22 June 1941	Germany and allies	Soviet Union	Ratio
Divisions	**166**	**190**	**1 : 1.1**
Personnel	**4,306,800**	**3,289,851**	**1.3 : 1**
Guns and mortars	**42,601**	**59,787**	**1 : 1.4**
Tanks (incl assault guns)	**4,171**	**15,687**	**1 : 3.8**
Aircraft	**4,389**	**11, 537**	**1 : 2.6**

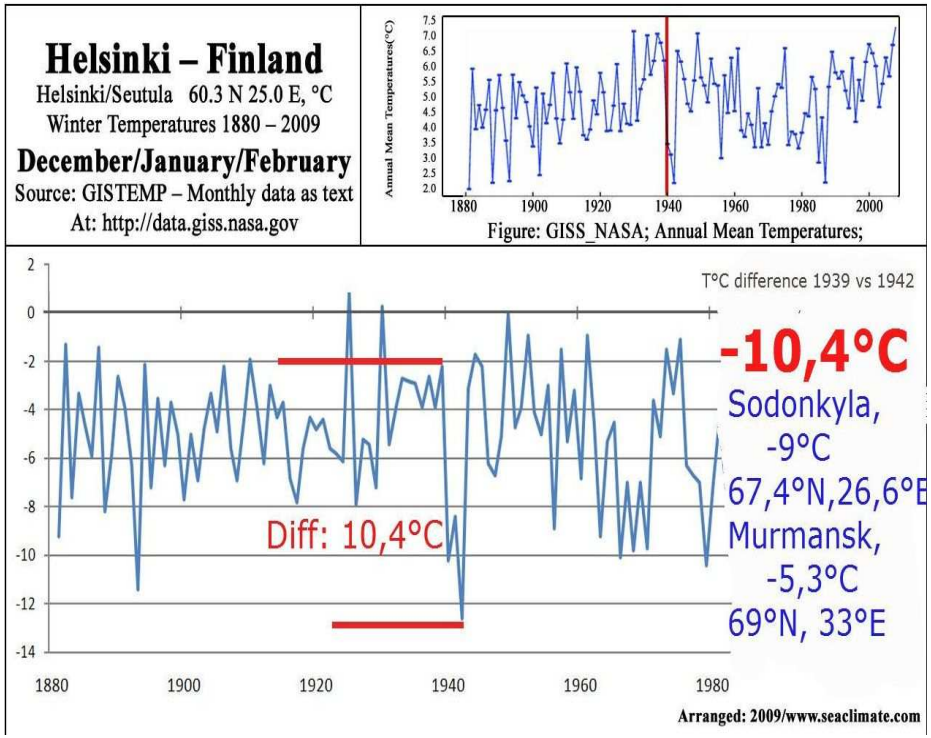
Source: Mikhail Meltyukhov "Stalin's Missed Chance" table 47, reference at http://en.wikipedia.org/wiki/Operation_Barbarossa Footnote 72 //download: March 25, 2011

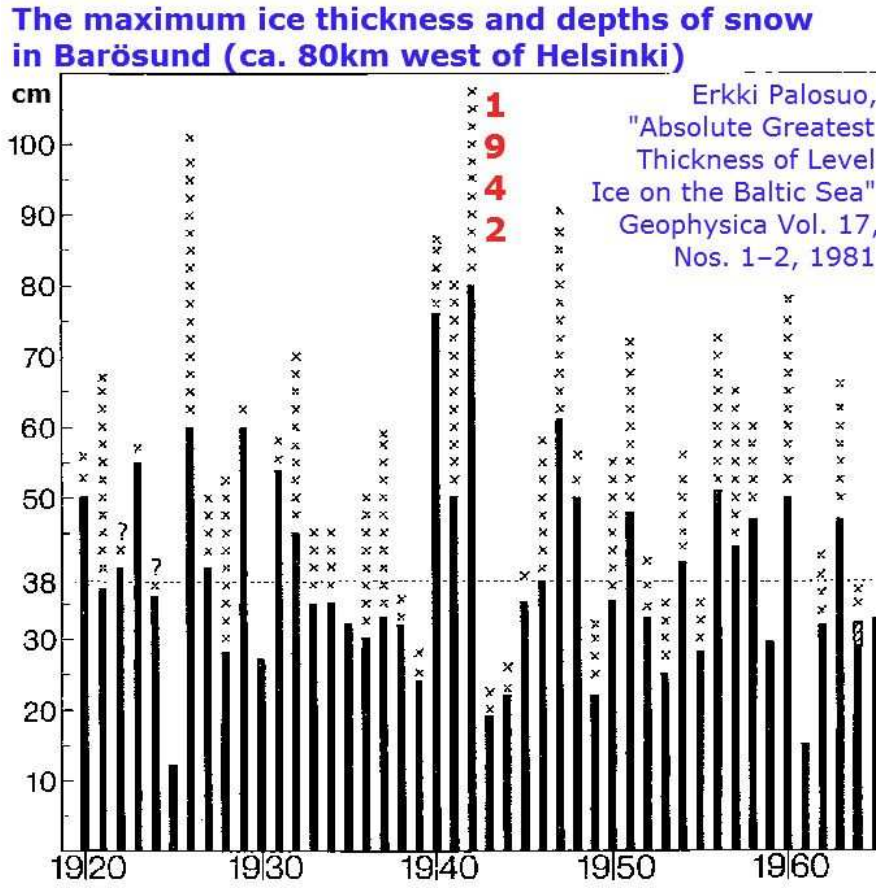
Table by: http://en.wikipedia.org/wiki/Operation_Barbarossa // Creative Commons Attribution-ShareAlike License

Operation *Barbarossa* was the largest military operation in history in both manpower and casualties. Regions covered by the operation became the site of some of the largest battles, deadliest atrocities, highest casualties, and most horrific conditions for Soviets and Germans alike—all of which influenced the course of both World War II and 20th-century history. (source: wikipedia)

By the end of 1941, the invasion had cost the German Army the lives of 174,000 men, plus another 600,000 wounded and 36,000 missing. The material loss amounted to 758 bomber planes, 568 fighter planes and 767 other types of airplanes. The loss of tanks, guns and vehicles was immense. In contrast, the losses suffered by the Russians were often considerably higher, as they were irreversible: 3,000,000 dead persons, plus 1 to 3 million wounded and sick.

Naval war had a decisive impact on Baltic sea water condition, which influenced regional air temperature!





The harsh condition at HELSINKI and elsewhere across Europe are caused by fighting in the marine environment with unimaginable intensity for several months, as shown by a military statement from Finland on 7th December 1941.

That Finland was actively involved in this mission is illustrated in the 'Finnish communiqué' issued on December 7, 1941 (Extract from NYT, December 8, 1941):

***Sea:* Between Seivasto and Ino our coastal guns engaged in battle with an enemy fleet unit headed towards Kronstadt. An enemy battery at Yhinmaki participated. One enemy destroyer was hit. A snowstorm interrupted the battle.**

Karelian Isthmus: The enemy was active. Our artillery and trench mortars scored direct hits.

Svir River Front: Our own artillery scored hits on artillery stations and trenches.

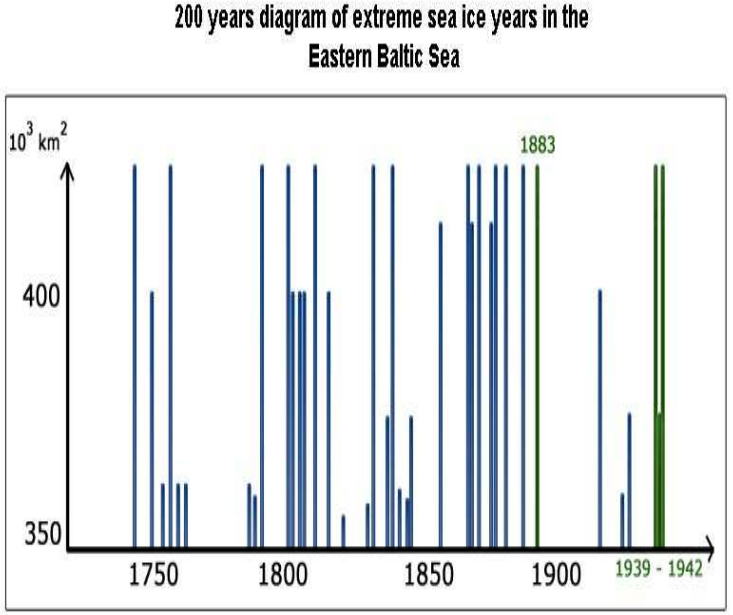
East Front: In the north enemy attacks were repulsed. In the south, after fierce fighting, our troops captured the town of Karhumaeki.

Air: Our own air forces bombed military targets.

Baltic sea ice development since November 1941 is worth a detailed investigation as there are several indications toward an influence of naval warfare.

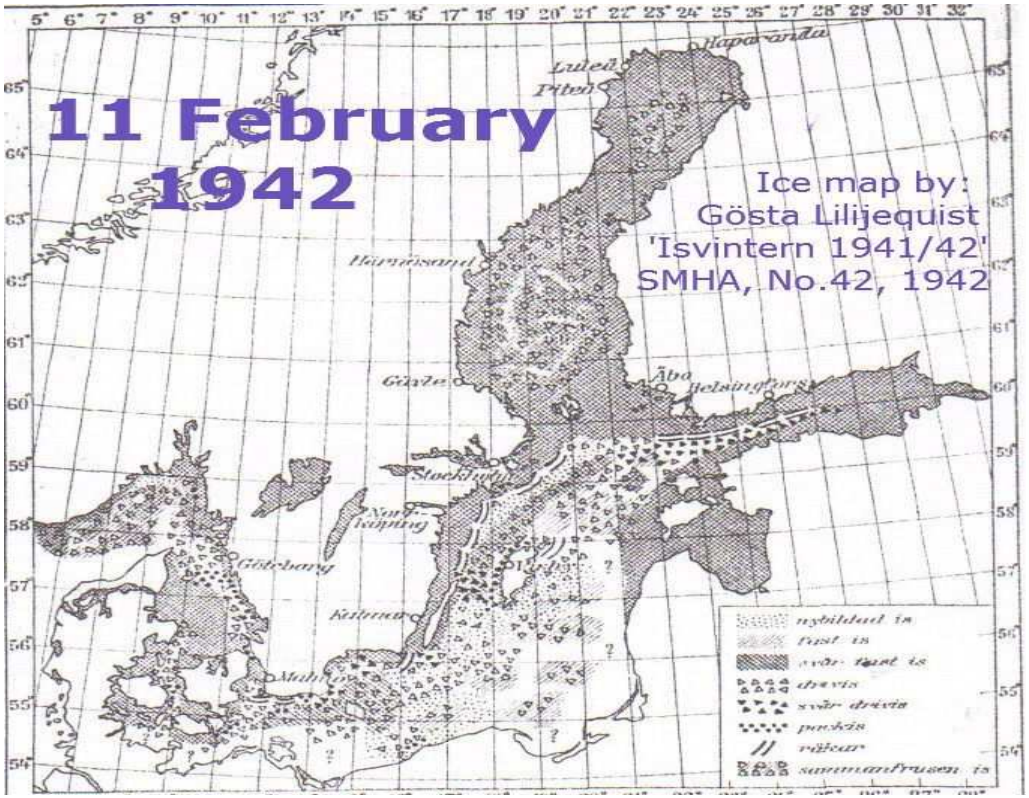
__Despite low temperatures in late 1941, sea ice remained moderate until end of January 1940, but

__by about 11th February 1942 the entire Baltic was ice covered for only the second time after 1883.



Before 1850 the Little Ice Age reign, over 200 years observation the maximum ice established until 1883 only ca. a dozen times, followed by six decades with modest condition, and suddenly when WWII commenced the most severe ice cover over a three years period ever observed established. Why? Only naval activities can have done it! Or what else?

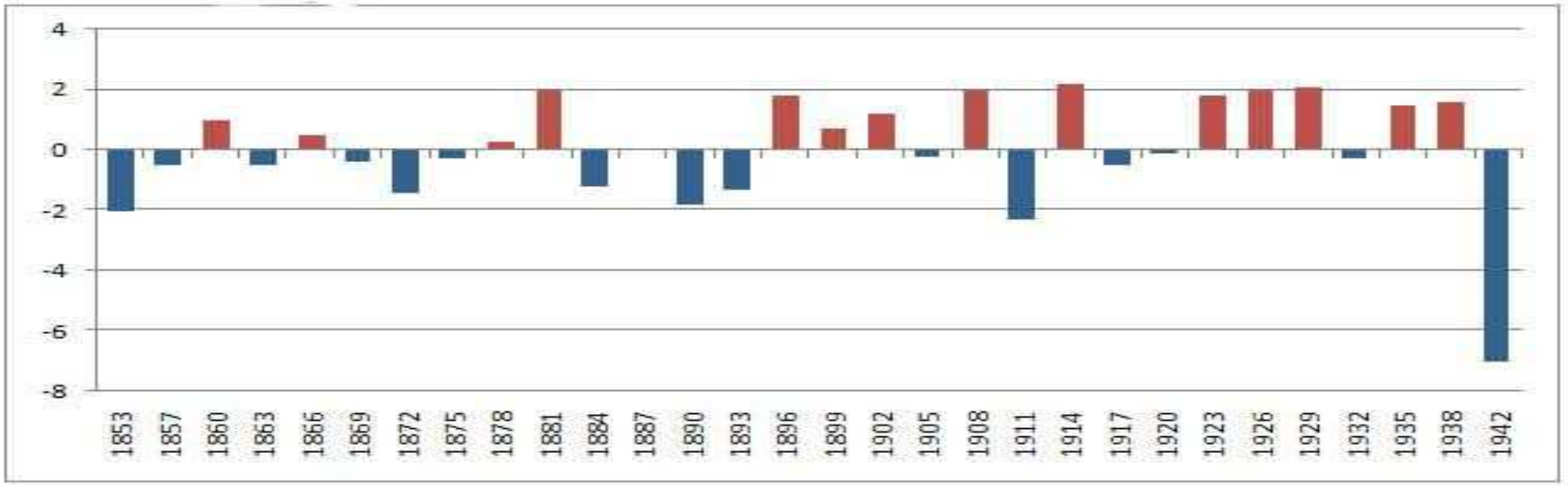
Data info source: Finnish Marine Research, No.254, 1988



Already 1944 Groismayr expressed his estonishment about the first three war winters! Scientifically quite curious, but very impressive!

Königsberg – Kaliningrad (Eastern Baltic Sea Region)

Winter temperature deviation 1853-1942 in 3years intervals, as prepared by F.B. Groisssmayr, 1944, in: Z.f.a.Meteorologie

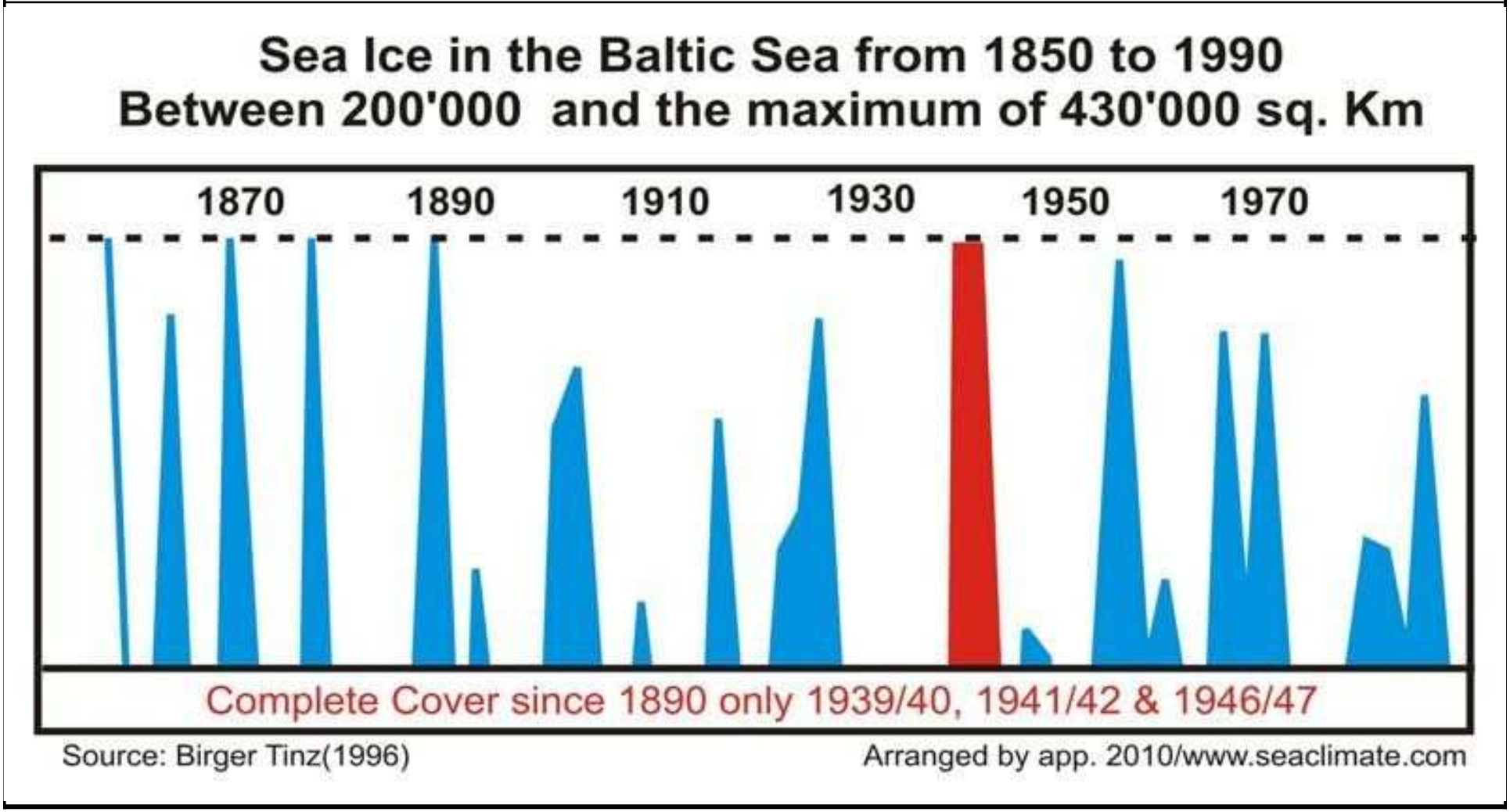


Groissmayr's idea to present the data in 3 years interval since 1853 (e.g. 1853-1855) until 1940-1942 is a bit naïve, though still a demonstration that something extraordinary has happened in Northeast Europe during the first three war winters.

AB2008

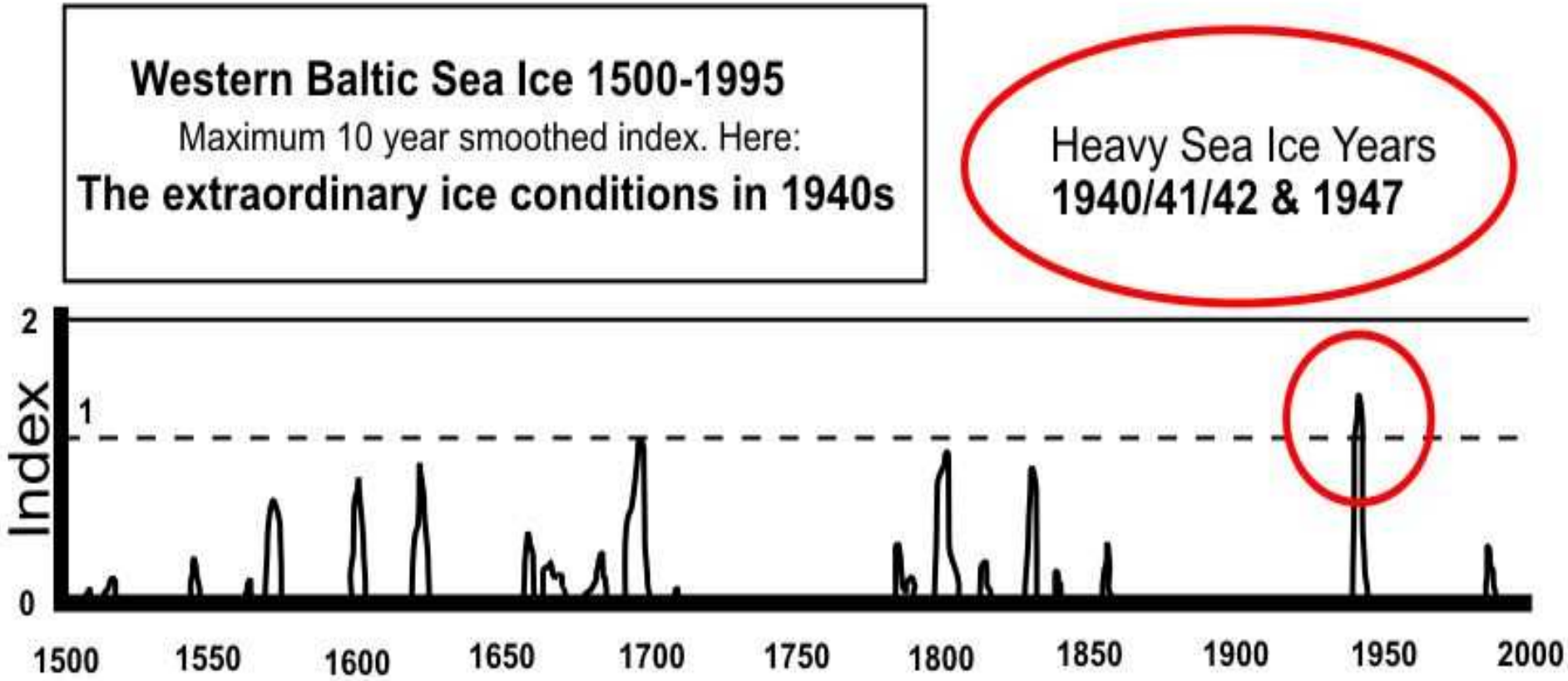
What is the use of statistics on climate, if science is not able and willing to analyse the most dramatic, if not completely incredible deviation from average:

EXAMPLE 1 – Baltic ice cover over 150 years!



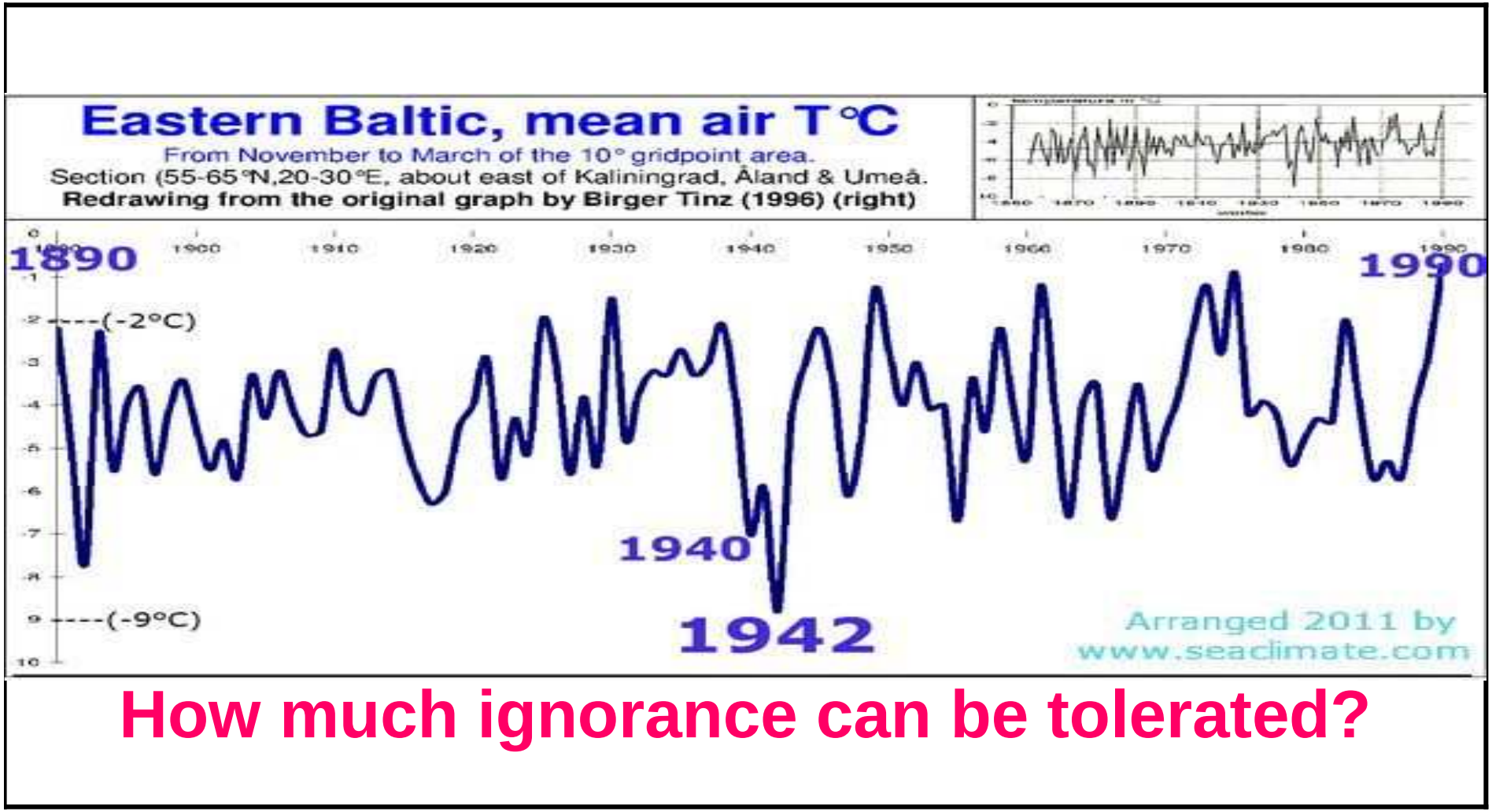
EXAMPLE 2

Western Baltic ice cover over 500 years!



The Western Baltic Sea has never seen a sea ice cover as during the 1940s particularly during the first three WWII winters that can be regarded as circumstantial evidence that naval war contributed.
Data info source: Koslowski & Glaser, Cl. Change, 1999/41, p.175. Ab2008

Science also keeps silent about EXAMPLE 3, presenting data available from seven decades!



How much ignorance can be tolerated?