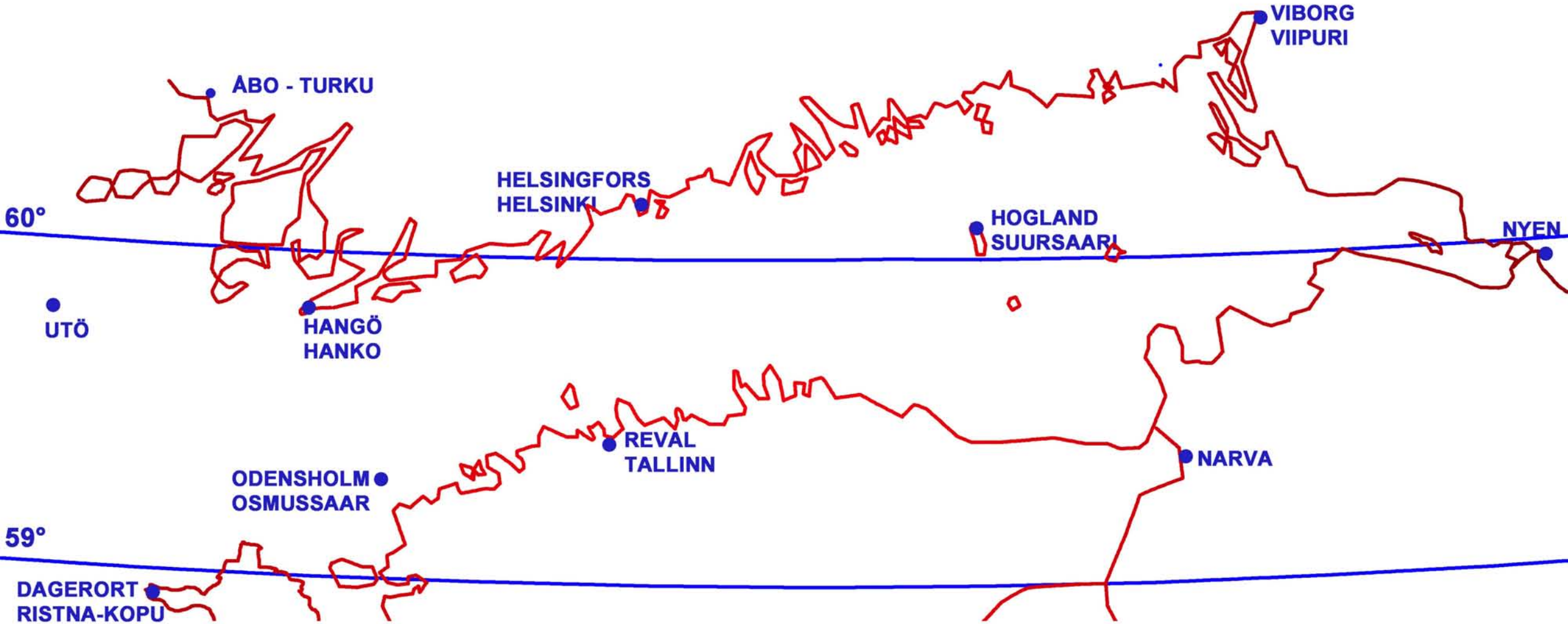
The Gulf of Finland in Maps and Sea Charts, 1539–1788

by Jan Strang (www.strang.fi)

The new map to which the old maps are compared

You will see a series of slides depicting old maps, which are placed on this "new map" to show their geodetic quality. Places important for the seafarers of the 17th century are marked.



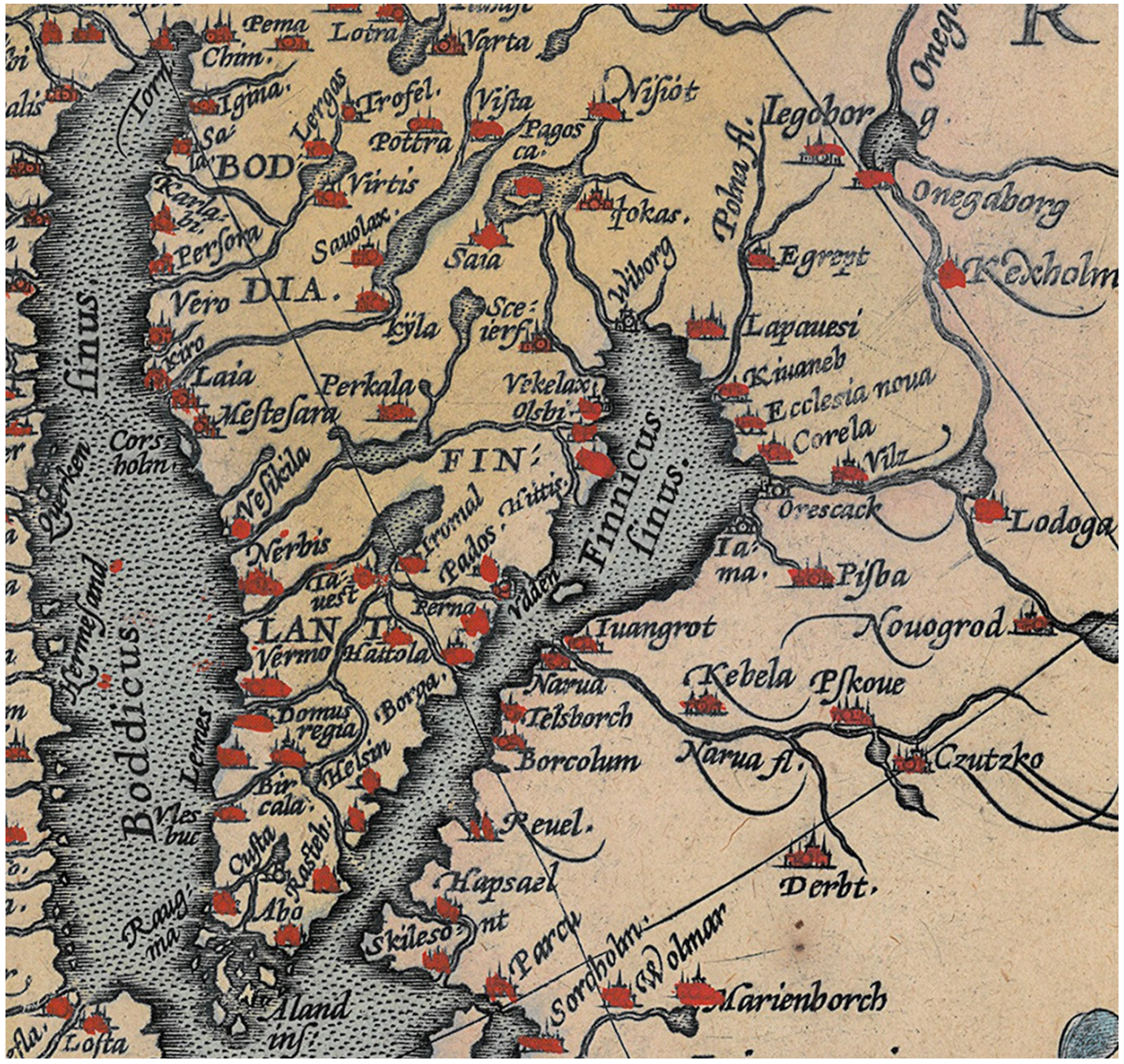
Olaus Magnus
Carta Marina from 1539

A Swedish clergyman in exile who never had been in in the region, sat in Danzig and draw the first map depicting the Gulf of Finland.

It is based on what the author had heard from others. It had a lot of data, but about half the information was incorrect. For example of the place names about 1/3 are correct, 1/3 misplaced and 1/3 non existent.

However it was the best of its time for at least about 60 years

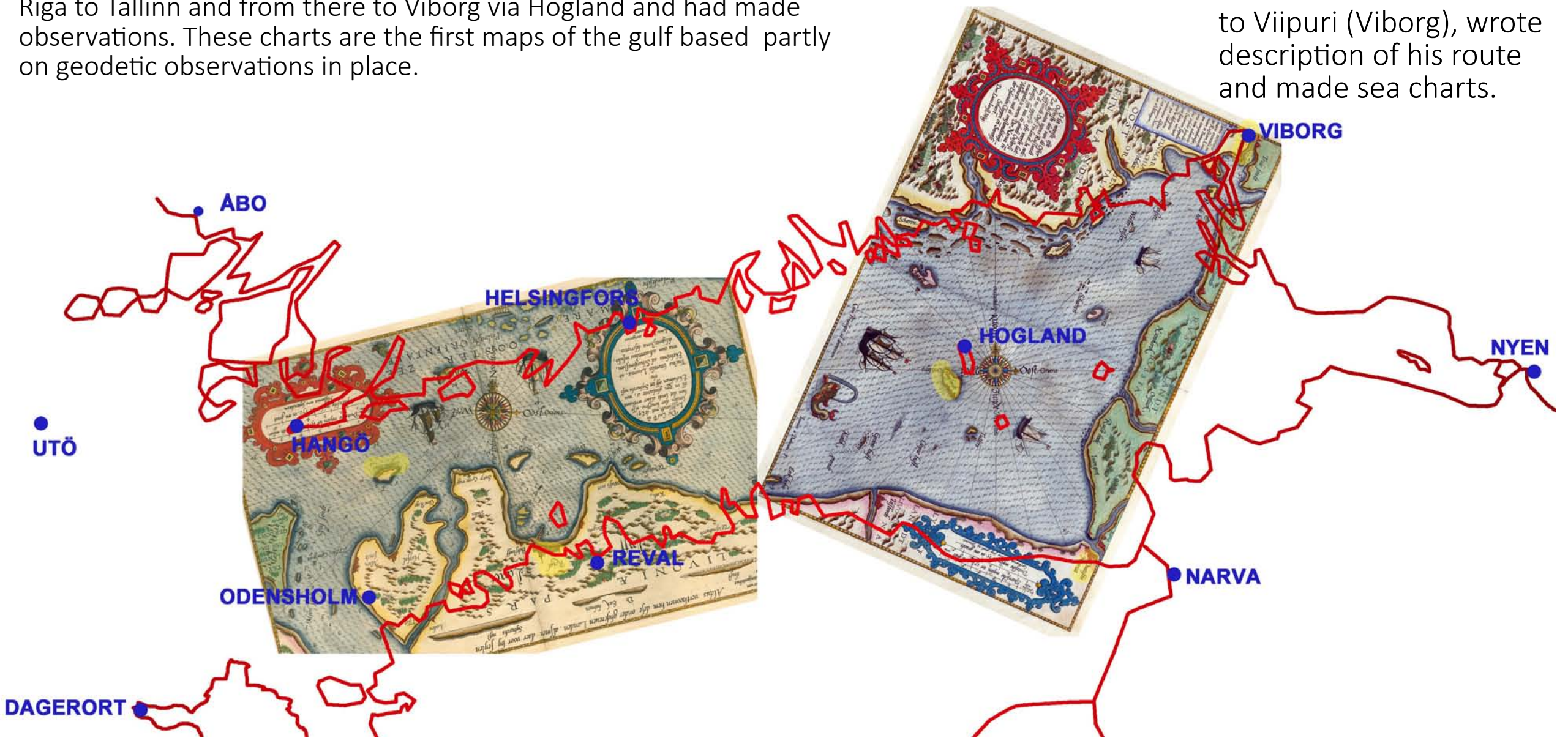
Two Dutch maps from about 1570 based on Olaus Magnus map. Gulf of Finland according to Ortelius & De Jode



Lucas Waghenaer

In the World's first sea atlas from 1585 by Lucas Waghenaer, there were two sea charts of Gulf of Finland. One depicting the southern coast around the city of Tallinn and another of the eastern end of the gulf with the towns Viborg and Narva. Waghenaer had sailed from Riga to Tallinn and from there to Viborg via Hogland and had made observations. These charts are the first maps of the gulf based partly on geodetic observations in place.

A Dutch skipper who sailed to Tallin and further to Viipuri (Viborg), wrote description of his route and made sea charts.

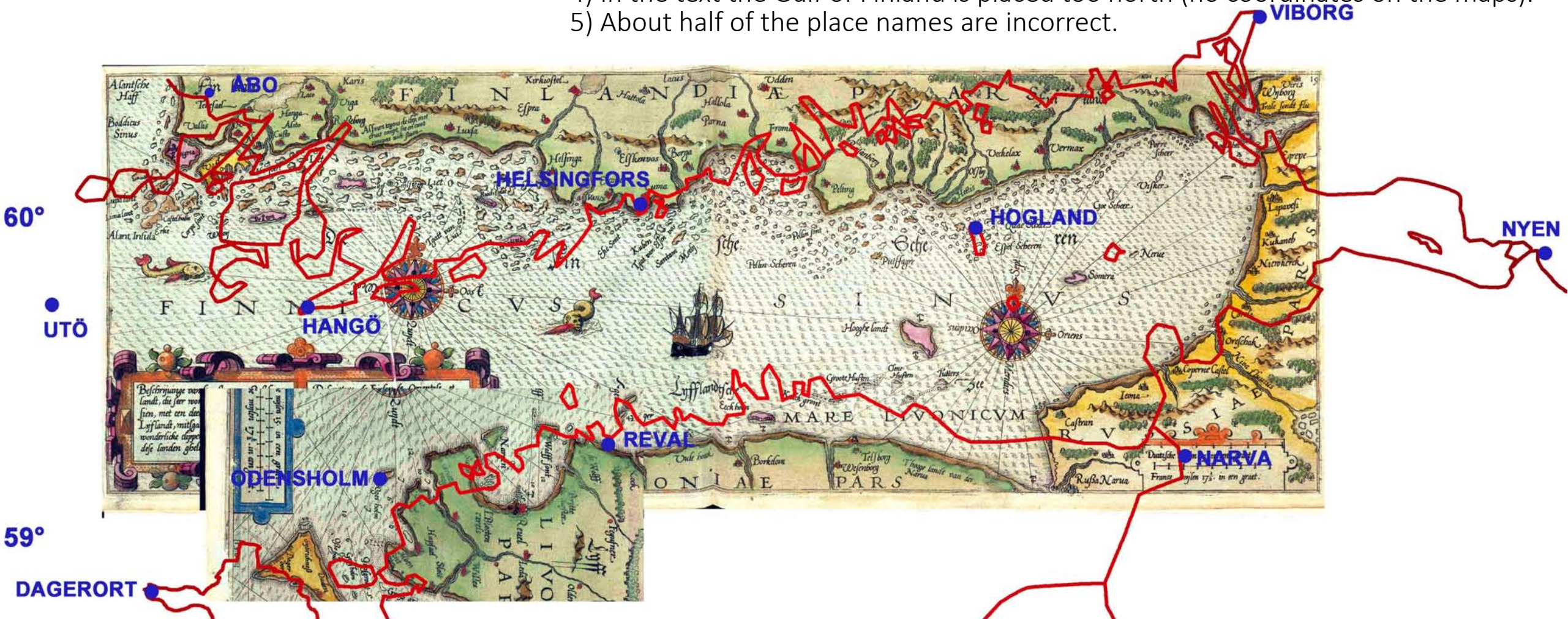


Lucas Waghenaer Gulf of Finland, 1592

In 1592 Waghenaer published an atlas named "Tresor" in which the Gulf of Finland is depicted in two sea charts. Below the charts have been put together to show the whole of the gulf. The best product of its time.

Here follows a summary of problems in Waghenaer's charts:

1) The eastern end of the gulf (the Neva Bay, 100 km long) is not there at all.
2) In front of the Finnish coast there is a mess of arbitrary sprinkled unnamed islands (Finsche Scharen). The Hangö head is not present at all.
3) The size of the Bay of Tallinn is exaggerated .
4) In the text the Gulf of Finland is placed too north (no coordinates on the maps).
5) About half of the place names are incorrect.



Helsinki-Elsenvos

Wagheaer's nomenclature is largely based on not so good information from Olaus Magnus or on oral information probably from Dutch sailors who neither where good in remembering nor pronouncing the local names. So Helsinki, which at that time was known with its Swedish name Helsingfors became "Elsenvos". Other names in this category in Finland are "Luxsa" and "Tgatt van Luis", which I guess are both based on the name of the parish Lohja-Lojo.

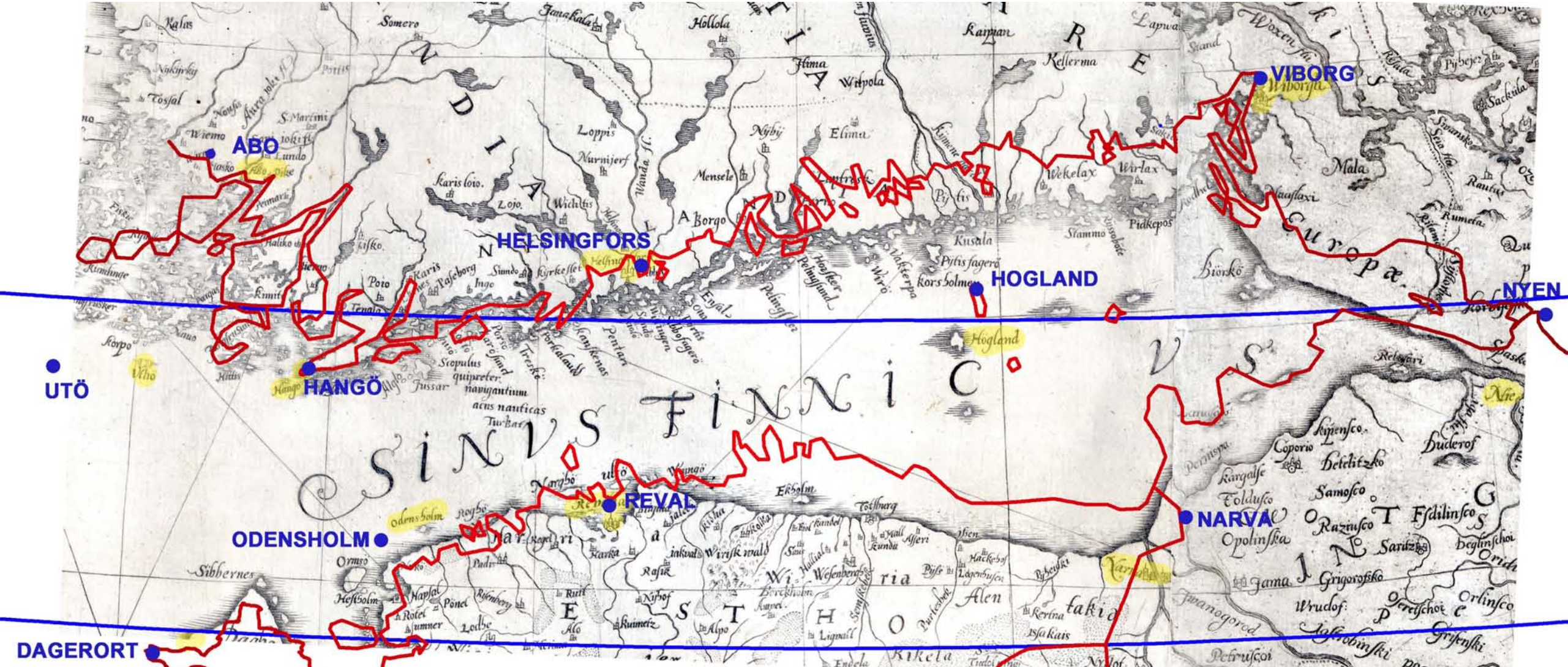
W. Blaeu 1623, copy of Waghenaer's chart

In 1623 Willem Blaeu published a sea chart that was a copy of Waghenaer 1592 charts. The main difference cartographically is the direction of the gulf. The gulf has been turned a bit clockwise.

Anders Bure
Orbis Arctoi 1626

In 1623 A. Bure, a Swedish learned man, produced his celebrated map of Norden "Orbis Arctoi" The map depicted the Gulf of Finland in a way that in quality was not surpassed in 125 years.

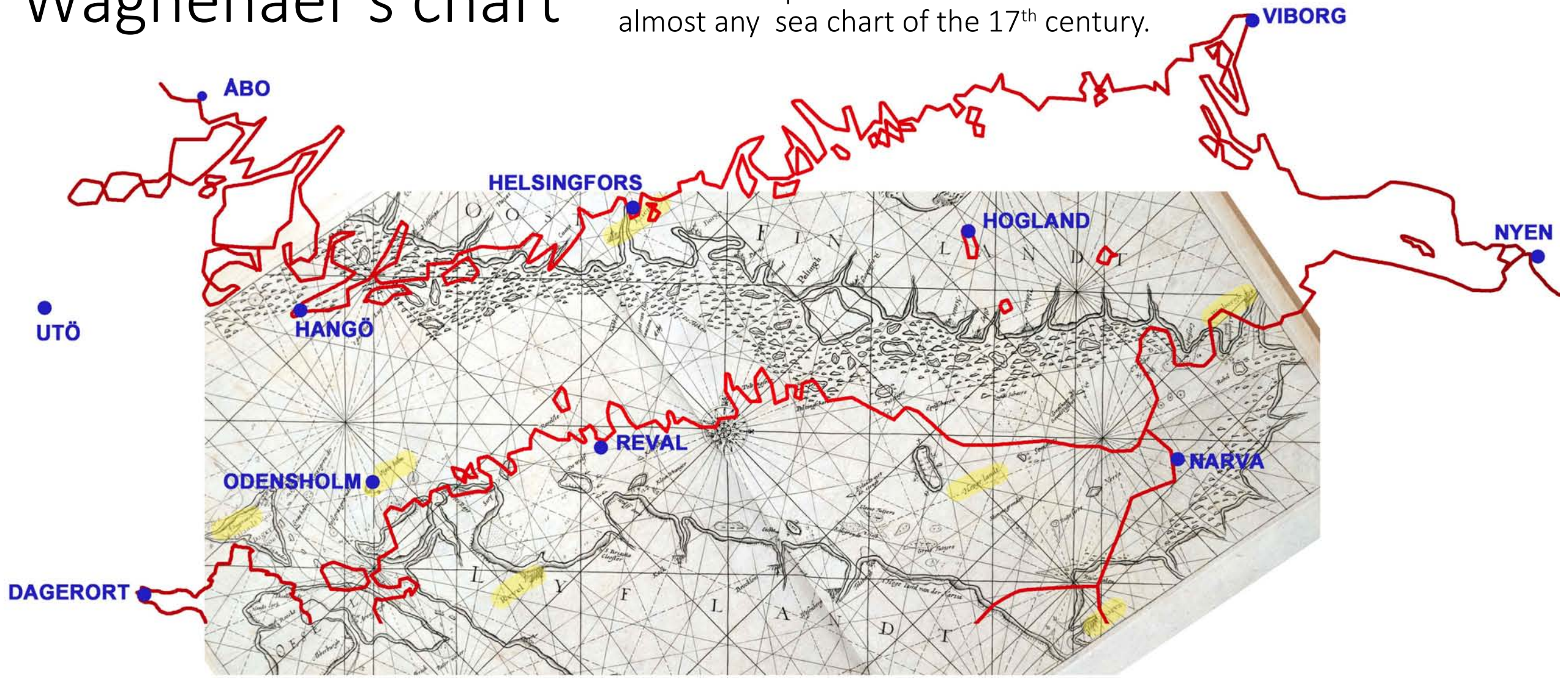
In the map the gulf is placed in the correct latitude, correct form, with correct place names in correct locations. Especially the coast of Finland is good.



J. Colom 1630, copy of Waghenaer's chart

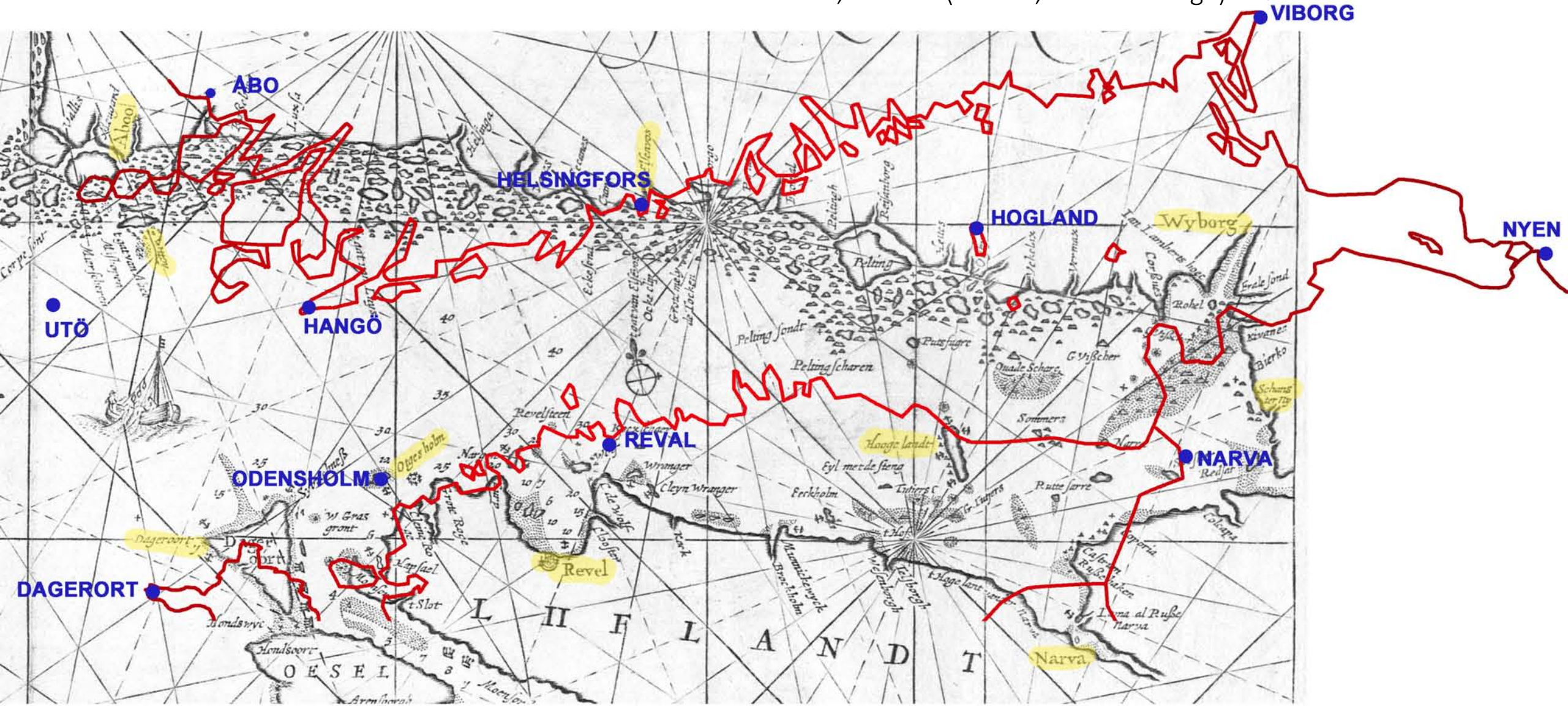
In 1630 Jacob Colom published a sea chart that was a copy of Waghenaer charts. He turned the gulf even more clockwise than Blaeu.

The Bure map had no influence in this or in almost any sea chart of the 17th century.



Teunitz Jacobsz 1644 - model for others

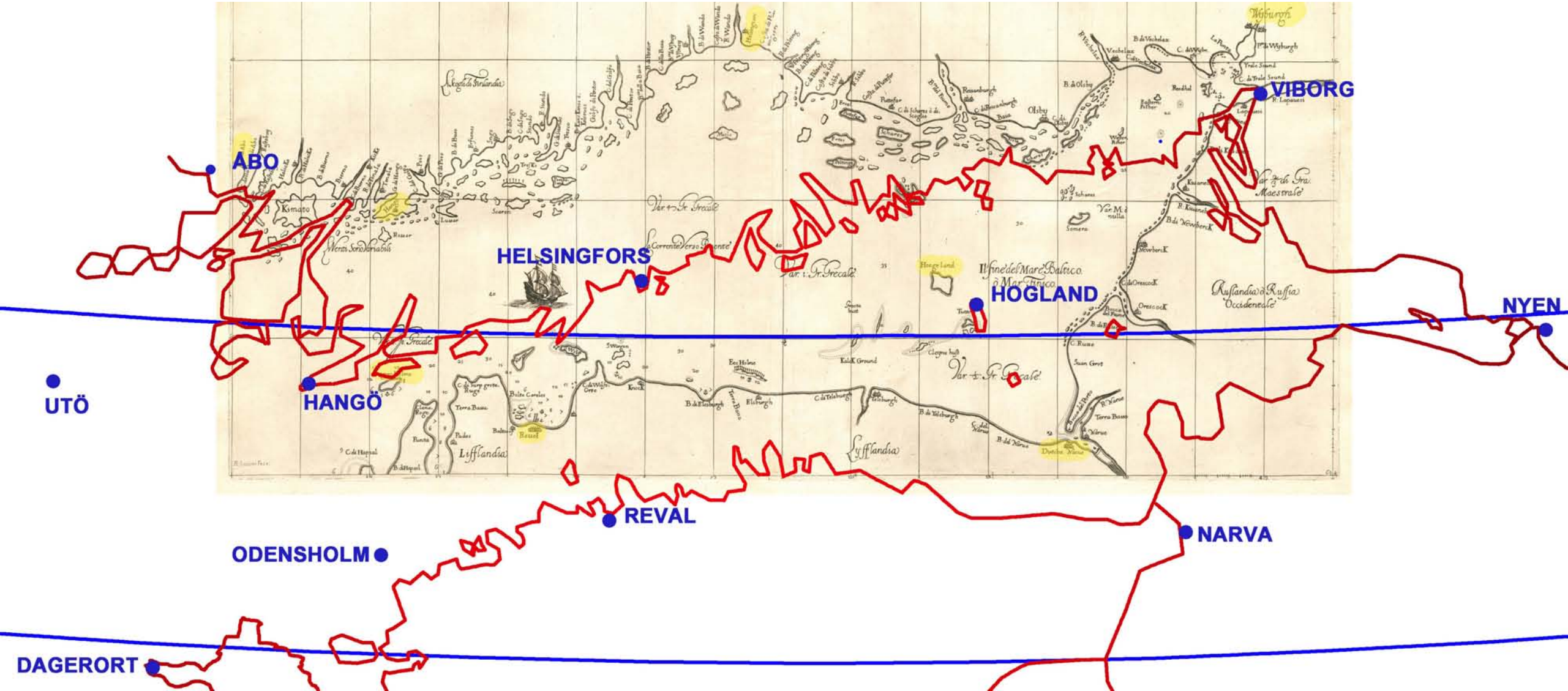
Jocobsz' chart resembles the predecessors charts mentioned above. It is the first sea chart, where the Neva Bay with the fort and town of Nyen are shown. The bay is still very small, but however it is there. This chart was copied by many publishers as: P. Goos 1650, F. de Wit 1654, H. Doncker 1658, J. van Loon 1661, J. van Keulen 1680, J. Robijn 1682, J. Loots 1692, J. Seller (Fischer, Mount & Page) 1670.



Dudley, 1647

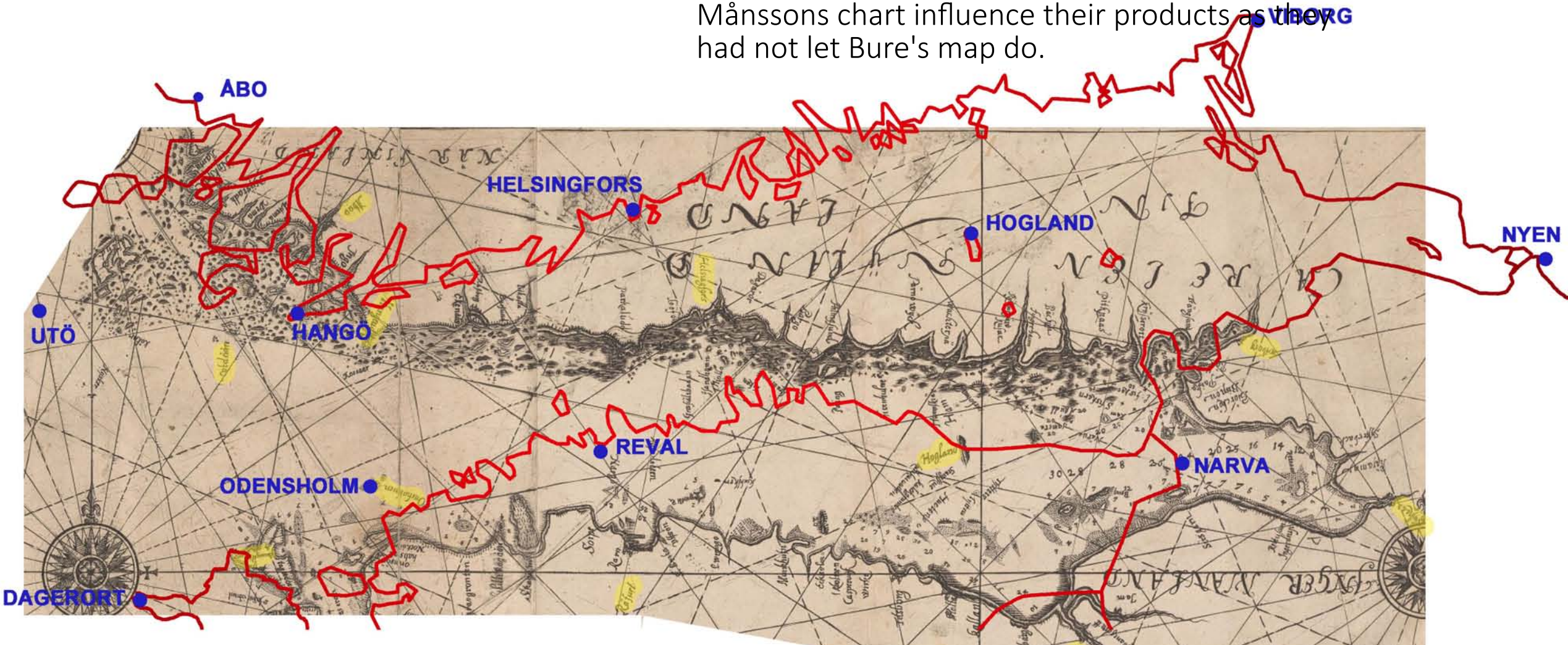
(latitude 60° alligned)

Robert Dudley gives the gulf a new but not better form. His product is the first sea chart with geographical coordinates. The details however are basically from Waghenaer. In the western part of the northern coast some influence of Bure's map can be noticed. The direction of the gulf is better than in the Dutch charts, but the gulf is misplaced half a degree too north.



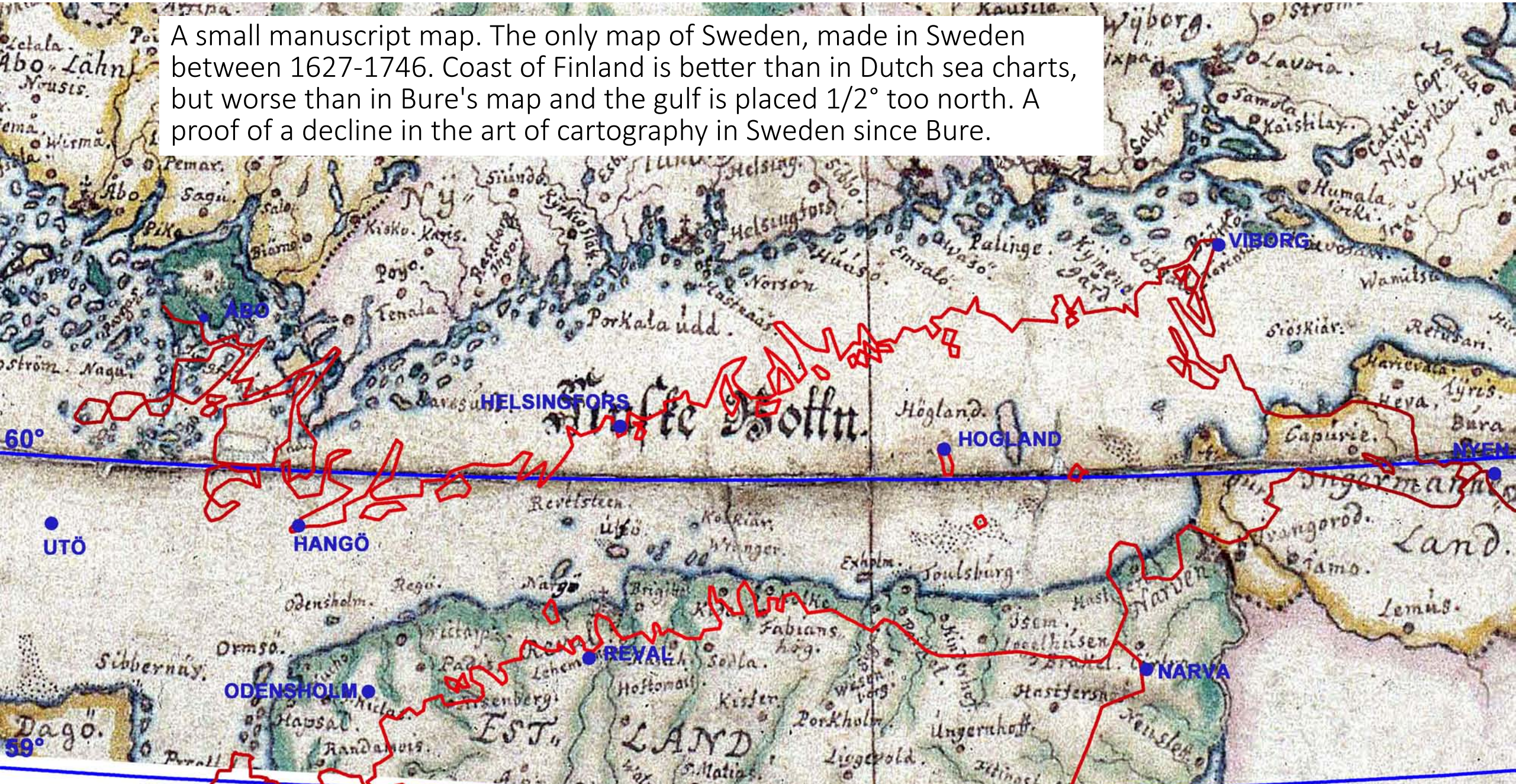
Johan Månsson 1654, first Swedish sea chart

The sea chart of Johan Månsson was by far the best sea chart of its time even though the direction of the gulf has been taken from the Dutch charts and is totally wrong. But the form of the gulf, coast lines and all details, harbours and their names are correct. The bay of Neva is present. However this best of its time sea charts cannot compete with Bure's map. For some reason the Dutch commercial publishers did not let Månssons chart influence their products as they had not let Bure's map do.



Carl Gripenhjelm (manuscript) 1688 (60° aligned)

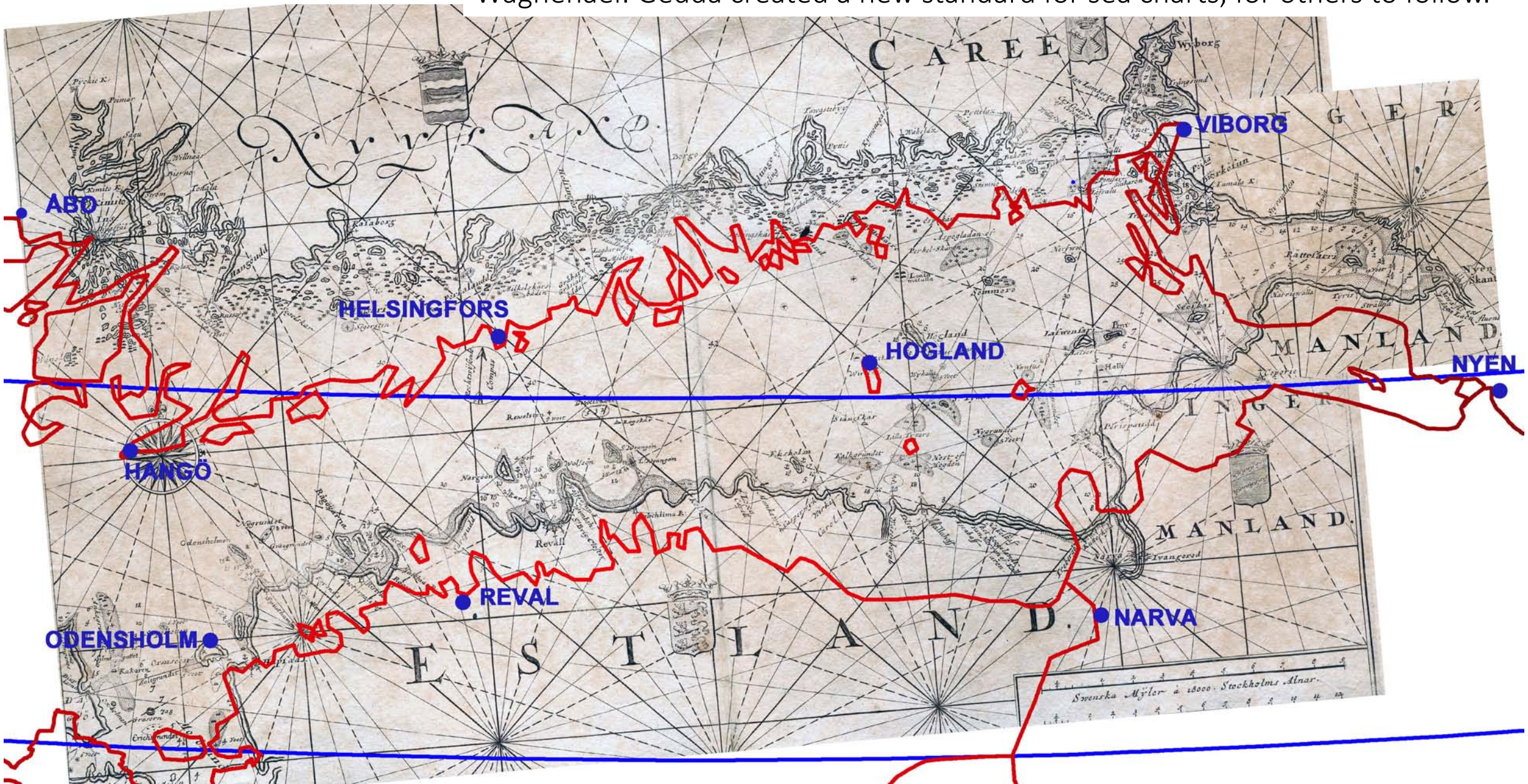
A small manuscript map. The only map of Sweden, made in Sweden between 1627-1746. Coast of Finland is better than in Dutch sea charts, but worse than in Bure's map and the gulf is placed 1/2° too north. A proof of a decline in the art of cartography in Sweden since Bure.



Peter Gedda, 1695

(lat 60 aligned)

Gulf of Finland in the first Swedish sea atlas. Not good, but tremendously better than the earlier sea charts of which all except Månssons's were based on Waghenaer. Gedda created a new standard for sea charts, for others to follow.

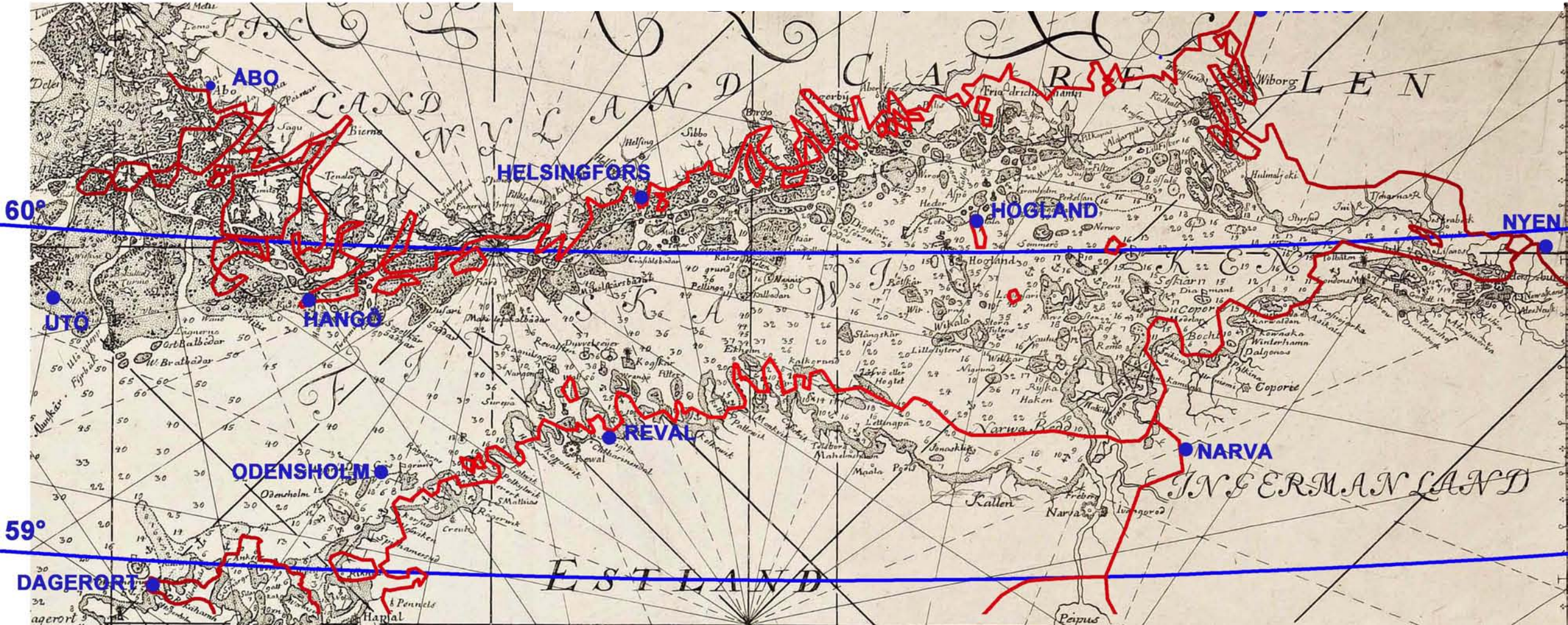


Jonas Hahn, Baltic Sea, 1750

(60° aligned)

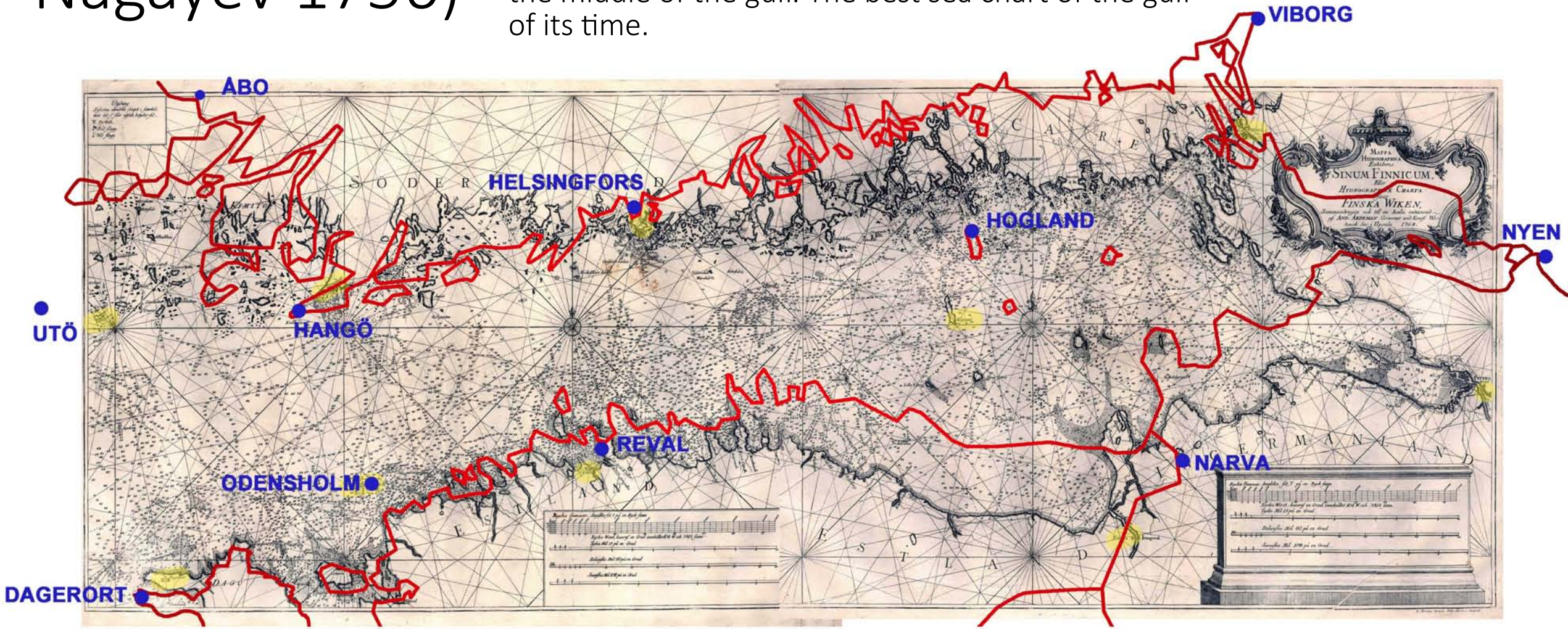
The first sea chart with Gulf of Finland on its correct latitude (determined already 124 years earlier by Bure, but up to this not followed by the authors of sea charts). The first chart where the Finnish archipelago is depicted as it is and with the archipelago fairways (depicted as "channels"). Best sea chart of its time.

The author was a competent hydrographer, who also published a new and extended edition of Månssons pilot book.



Åkerman 1768 (based on Nagayev 1756)

The first Russian sea atlas by Alexei Nagayev from 1756 has numerous good and detailed charts of parts of the Gulf of Finland. They included a tremendous quantity of accurate and useful information for mariners. The atlas had no general chart of the gulf. A general chart summarising Nagayev's information was published in 1768 by the Swedish cartographer Anders Åkerman. The image of the Russian controlled part is very good, but the direction of the gulf is not correct. Observe the dense network of soundings in the middle of the gulf. The best sea chart of the gulf of its time.

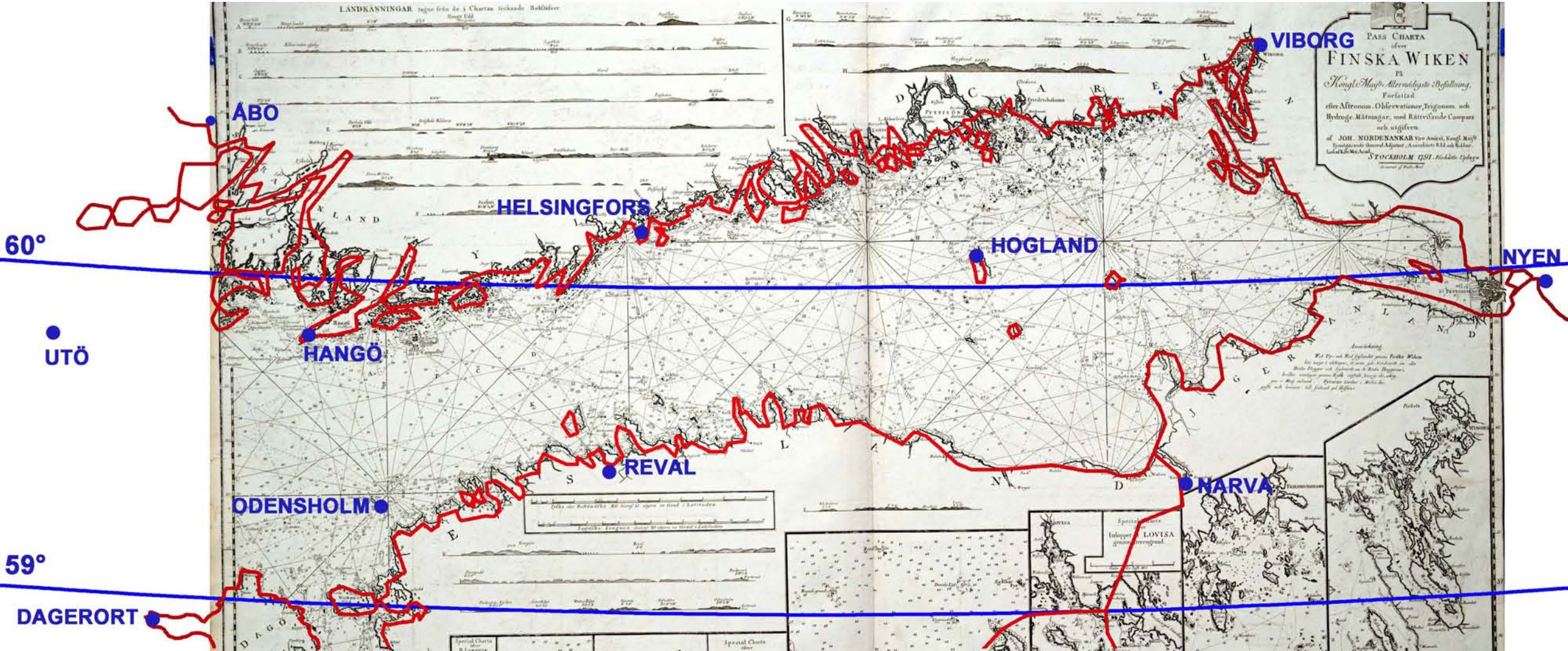


Nordenankar 1788

(lat 60° aligned)

The first sea chart based on science

Both the geodesy and the details are so correct that a new era in the history of sea charts of the gulf of Finland started with this map.




The End
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LADOGA

About the article

This article is based on a still unpublished book with the preliminary title "Sea Charting of Finland". Of the pictures of maps used in this work I express my thanks to the National Library in Helsinki, the Royal Libraries in Stockholm and Copenhagen, the Utrecht University Library and the late professor Heikki A. Reenpää.

End points of the Gulf of Finland

For all maps the town of **Viipuri/Viborg/Vyborg** is considered to be the eastern end of the gulf as it was the best known point for the 17th century mapmakers and skippers in the eastern end of the gulf.

The Gulf of Finland starts at the **Hanko/Hangö Head** (in Finland), but as the early Dutch mapmakers sailed along the southern, Estonian coast and did not even know about the existence of the Hanko peninsula, Hanko head cannot be used for comparisons of such maps. In most cases the island of **Osmussaar/Odensholm** (in Estonia) is considered as the western end of the gulf. But in cases (usually Swedish maps) when the Hanko seems to be well known to the mapmaker, it is considered as the western endpoint.

Placing the maps

1) For maps with geographical coordinates the latitude 60° is first aligned. Then the scale of the map is adjusted so that both the western endpoint (Odensholm or Hangö) and eastern endpoint (Viborg) are in their correct longitudes.

2) For maps without geographical coordinates the western endpoint (Odensholm) is first put in its correct position. Then the scale of the map is adjusted so that the eastern endpoint (Viborg) is its correct longitude.

3) The Waghenaer 1585 charts are placed starting from Viborg.
