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**Author:** Anonymous Portuguese

**Date:** 1501-02

**Country:** Portugal

**Country:** Portugal

**Call number:** BNF, CPL GE B-1120 (RES) [Copy by O. Progel]

**Dimensions:** 117 x 87 cm

Thought to have been destroyed in Germany during the Second World War, the *Kunstmann III* was a precious example of early 16<sup>th</sup> century nautical cartography. Thanks to two surviving photographs of this work and a manuscript facsimile made by Otto Progel in 1836, preserved in the Bibliothèque nationale de France, we are nonetheless able to evaluate the geographical and stylistic features of the chart. The designation *Kunstmann III*, by which this chart is commonly known, refers to its identifier in a facsimile atlas published by German cleric Friedrich Kunstmann in 1859, which included several important Portuguese charts of the time. The *Kunstmann III* depicts the Mediterranean, the Black Sea, and the Atlantic Ocean, from Scandinavia, Greenland, and Newfoundland in the north, to the coast of Brazil and the tip of Africa in the south. The absence of the Caribbean Sea and the coast of North America, which had figured into the 1500 planisphere of Juan de la Cosa (#305), can be explained either by the cartographer lacking the relevant information, or by the possibility that the chart was to be used only by Portuguese pilots, whose navigation concentrated on other areas. The *Kunstmann III* chart was an historically invaluable map that showed the result of early European exploration of the New World and of the African coast in the south Atlantic. It is likely that its construction started before the *Cantino* planisphere (1502, #306), making it the earliest known Portuguese representation of the southwestern coast of Africa. The *Kunstmann III* is probably also the earliest known nautical chart showing the locations of places as determined by astronomical observations.

This puzzling chart owes its designation to being the third in an atlas of facsimiles published by Friedrich Kunstmann in 1859. Unfortunately, as is sometimes the case in the history of cartography, this delightful chart has almost certainly been destroyed, having disappeared from the archives of the Bayerischen Armeebibliothek during World War II. Luckily, present-day researchers and map enthusiasts have at their disposal a photograph of the original (published in four sheets, in 1903, by Edward L. Stevenson, originals also lost) and a magnificent colored copy made by Otto Progel in 1836.

It has been argued that the *Kunstmann III* was made in several stages between 1501 and sometime after 1505. It integrates long-held geographical knowledge with the data from expeditions occurring in the early 16<sup>th</sup> century. The drawing of the Mediterranean and the coasts of Europe derive from earlier cartographical knowledge, also depicted in many *portolan* [nautical] charts. In contrast, recent studies show that the places on the west coast of Africa, in the northern hemisphere, were situated by means of astronomical readings of the latitude, a method not used in the construction of contemporary charts of the Mediterranean. Notwithstanding, the examination of the southwestern African coast indicates that the representation was not based on astronomical readings of the latitude but made using dead reckoning information collected from Portuguese exploration occurring before 1501.

The chart shows the results of the ill-fated voyages of the Corte Real brothers, Gaspar and Miguel, to Greenland and Newfoundland. The chart's image of Greenland derives from Gaspar Corte Real's first journey that took place in 1500. Later, in October 1501, after his second expedition, Gaspar's ship was lost in Newfoundland. In the following year, Miguel set off to rescue his brother, but likewise became lost, never returning to Portugal. In both cases, other ships participating in the expeditions returned

home with new geographical information about the explored regions. Another source for the geographical content of the *Kunstmann III* was the Coelho-Vespucci voyage of 1501–1502, during which the mariners explored South America, reaching what is now Rio de Janeiro on New Year's Day of 1502. This expedition was the source for the data of the Brazilian coastline presented in the chart.

Using Stevenson's photographic record and Progel's copy, we may see that the *Kunstmann III* covered Europe, West Africa, the Mediterranean, the Black Sea and the Atlantic with Newfoundland, Greenland, and the Brazilian coast. The chart has a latitude scale drawn in the western Atlantic Ocean in the Northern Hemisphere, starting at the Equinoctial, and going up to 68 degrees north in Greenland. This seemed a sign that the incorporation of latitudes did not extend south of the Equinoctial, which has been confirmed by recent research.

The *Kunstmann III* shows no flags and depicts a few inland features, such as important rivers, mountain ranges, Bohemia, and Mount Sinai. There are also representations of eastern European cities and of Cairo, albeit poorly rendered. Progel's colored copy shows a dark blue Arctic Ocean and an unmistakable Red Sea. The wind roses are drawn in a transitional style, with two different designs that are very similar to those found in other charts, such as the *Dijon* chart. The place-names on the chart show at least four different handwriting styles.

Despite the previous studies of this beautiful chart, there are several mysteries remaining for future generations of researchers to unveil, such as the reason for the erased compass rose over the coastline of Brazil, and the identity of the enigmatic androgynous figure holding the scale of leagues over the Equinoctial.

Sometime between 1503 and 1511, an unknown Portuguese cartographer drew the map, now known by a photographic plate number assigned by F. Kunstmann, one of the first modern scholars to study it. The map is unsigned and undated.

According to James Enterline this map's depiction of the western part of the North Atlantic is a very good contemporary survey of the Gulf of St. Lawrence and adjoining coasts, even showing signs of hearsay knowledge of the Great Lakes. This survey is difficult to attribute to the Corte Reals, but on the other hand all subsequent Portuguese in the area were simple fishermen, who neither wanted to nor could have gone on a mapping expedition along the coast. However, Williamson has shown that there may have been Anglo-French cooperation during that era, and it is known that several English exploratory voyages were sent out at that time. The most likely one to have produced this map would seem to be that of Sebastian Cabot. After being stopped by the ice, he could have rescued the voyage from uselessness by surveying southward along the coast, according to some reports below 40° latitude. He is likely to have produced an accurate map as a result.

North of this land is what appears to be a representation of Greenland, which might be a combination of actual contemporary survey and Norse prototype or hearsay. This identification also fits in with the details of Sebastian Cabot's voyage, which actually went to Greenland. In the dark regions north of the Arctic Circle the map shows a highly intriguing feature; circling the pole is a stylized ring of mountains, which presumably was taken from the *Inventio Fortunatae*. The land on which these mountains lie, however, has no precedent. While the left part seems to bear some resemblance to Contarini's land (see #308), this might be accidental, because of its position. The cartographer's primary goal was to show a strait through the ring of mountains between the two continental landmasses. Now, while the North Atlantic has no such strait,

Clavus showed nearly a century before that the Norsemen had information about such a strait elsewhere - the Bering Strait between Alaska and Siberia. Under the one-ocean paradigm's perception of Alaska and the current perception of eastern Asia, the North Atlantic is exactly where that strait should be placed.

This map has other features that seem to tie it to Clavus. First, to the east of the strait where the continental coastline begins to come southward, there appears a string of toponyms that are in fact Clavus' folk-song names from his second map. To the west, on the east coast of what we surmise to be Greenland, there are exactly three named capes (there may be traces of a fourth, erased one). These names are not familiar in Greenland and seem contemporary with the map. However, recall that on Clavus' first map his Greenland had exactly three quantitatively specified coastal points. It is possible that we are here seeing a map derived from the postulated lost third map of Clavus, with its "great Arctic strait and the land beyond."



Nothing is known about the *Kunstmann III*'s anonymous author except that he was Portuguese, as is clearly revealed by the language of the geographical names. Nevertheless, there are a few stylistic elements that set this chart apart from contemporary Portuguese cartography. One of them is the latitude scale, consisting of a simple ink line segmented into one-degree intervals by means of horizontal dashes, a design not found on any other Portuguese chart. Another unusual feature is the enigmatic human figure holding up and pointing at the distance scale, which is graduated in leagues. A recent study by Bruno Almeida has indicated some similarities between the *Kunstmann III* and two other anonymous Portuguese charts from the early sixteenth century, especially with respect to the sequence of geographical names and in the design of the scale of leagues and compass roses.

The production date of the *Kunstmann III*, usually reckoned to be around 1506, was revised in a recent work by Gregory McIntosh and Joaquim Alves Gaspar, which argued (based on the geometry of the coastlines, toponymy, and handwriting) that work on the chart was started in c. 1501. Using data from the voyages of Vasco da Gama and the Corte-Real brothers, the cartographer first set about depicting Europe, Africa, Greenland, and Newfoundland (between 1501 and 1502), and only later finished the coast of Brazil (sometime after 1505). The fact that the African coastline stops at *Rio do Infante* (present-day Great Fish River, South Africa), the end point of Bartolomeu Dias's voyage of 1487- 88, means that the information gathered by later voyages to India, those of Vasco da Gama and Pedro Alvares Cabral, was not used. However, the presence of the place name *G. de santa ellena*, given to St. Helena Bay in South Africa during the voyage of Vasco da Gama, confirms that the chart was drawn after his return to Lisbon in 1499. The hypothesis that the chart was begun earlier than 1506 is further supported by the tan paint used to tint its coastlines, a feature shared with late-15<sup>th</sup> century Portuguese charts. After the *Cantino* planisphere (#306), however, green would rapidly become the preferred color for this purpose.

Analysis of the geometry of the African coast likewise revealed a surprising detail, hitherto overlooked: that the astronomical observations of latitude ordered by King João II around 1485 were already being incorporated into the representation of places north of the Equator. In contrast, the southwest coast is still drafted on the basis of the traditional "point of fantasy" method. It is therefore fitting that the chart's latitude scale only covers the northern hemisphere. This fact has two key implications for the history of nautical cartography: the first is that the *Kunstmann III* chart contains the earliest Portuguese representation of the entire west coast of Africa; the second is that this chart must be considered the oldest latitude chart that has reached our days, dethroning the *Cantino* planisphere.

The names which, for the New World, appear for the first time in this map are the following:

**GREENLAND AND NEWFOUNDLAND.**

Ca de sã paulo	Baxos do medo	Cabo de san anton
C. de Spû scto	Ilha de frey luis	Baya de santa Cyria
C. de mirame et lexame <sup>**</sup>	Rio de rosa	Cabo de concepcion

**BRAZILIAN COAST.**

Sam Roq	[Mon]te pascual	Rio de Ranie <sup>**</sup>
Sta m. dataleya	Rio das ostras	Amgra de Reis
Môte de St. vicente	Cabo frio da Rame	Cabo de paz
Sta m. da Rabeoda <sup>**</sup>	G. de Reds <sup>**</sup>	Rio de Sam Vicente
Cabo de Santo agustinho	Cabo frio	Ilha de goanas <sup>**</sup>
	Rio de cananea.	

The map is preserved in the Geographical Department of the Koniglich Bayer'schen Haupt Conservatorium at Munich.

**References:**

- \*Enterline, James, *Erikson, Eskimos & Columbus*, pp. 248-250.
- \*Gaspar, Joaquim Alves and Sima Krtalic, "A Cartografia de Magalhães. The Cartography of Magellan", pp. 95-97.
- Harris, H., *The Discovery of North America*, pp. 425
- \*Wolff, Hans, *America, Early Maps of the New World*, p. 136.



