



A Photographic Record of the Now-Lost Kuntsmann IV portolan map of the world.

The *Kunstmann IV* planisphere was completed in Seville around 1519, and can be considered, in all propriety, “the” map of Magellan. Historical testimonies, combined with the content of the map itself, indicate that it was commissioned by Magellan himself from cartographers Pedro and Jorge Reinel, and played a leading role in his arguments to Charles I of Spain. It depicts the known world in the style of a nautical chart, with the prominently displayed *Tordesillas* Line dividing the Earth into two halves: the eastern hemisphere assigned to Portugal, and the western hemisphere to Spain. For the first time on a nautical chart, the Equator is graduated into one-degree longitude increments. About 183 degrees are included to the east of the *Tordesillas* meridian (which crosses Brazil at the longitude of the Amazon estuary), and 183 degrees to the west. At first glance, one might mistakenly attribute this graduation to some sort of development in navigation methods, taking it as a sign that mariners were now able to determine and make use of longitudes. In fact, this graphical innovation had the sole purpose of showing that the Moluccas were located in the Spanish hemisphere, at about 175 degrees west of the *Tordesillas* Line. The configuration of the Moluccan archipelago in this planisphere is identical to that of the c. 1517 chart attributed to Pedro Reinel, but very different from that of the *Miller Atlas* (#329.1). The apparent longitude of the Spice Islands is the same as that of Portuguese cartography at the time, which rules out the hypothesis that Magellan had set out to deliberately deceive the Spanish Crown.

This is the only known large-format photograph of the now lost *Kuntsmann IV*, the Jorge Reinel world map of 1519, one of the great early world maps to show the New World. The *Kunstmann IV* world map, probably made by Jorge Reinel in about 1519, borrows a number of traditional legends from nautical [*portolan*] charts, but supplements them with new legends in the New World and on the southwestern coast of Africa.

Gregory C. McIntosh states that the redrawn map detail illustrated by Justin Winsor and labeled “*The Pacific, 1518*” is from the map commonly known as *Kunstmann IV*. The *Kunstmann IV* was, for a time in the 19th century, stored at the Military Library (Haupt-Konservatorium der Armee Bibliothek) in Munich prior to its move to the Bavarian State Library (Bayerische Staatsbibliothek). The State Library building was

heavily damaged in World War II, and the map was lost in the destruction. Winsor indicates J.G. Kohl as his source for the map but he does not specifically cite him; Kohl's book, *Die beiden ältesten General-Karten von Amerika*, published in Weimar, describes two *Ribeiro* maps, also located in Weimar. In his description of "*The Pacific, 1518*," Winsor seems to have confused the *Kunstmann IV* map, then in Munich, with a *Ribeiro* map in Weimar (#346) and, thus, created a non-existent map of the Pacific Ocean at the equally non-existent "Military Library in Weimar." In a footnote, Winsor relates this fictitious *Weimar Military Library* map of the Pacific Ocean to a map of the Pacific Ocean in the *Propaganda Fide* collection in Rome described by Raymond Thomassy in 1852. The map described by Thomassy is a chart in a manuscript atlas by Battista Agnese prepared sometime after 1536 and apparently has nothing to do with the *Kunstmann IV* map, except that it depicts the same general area, i.e., the Pacific Ocean. The nonexistent *Weimar Military Library* map was noted by Josiah Marvel in 1988 as either a duplicate of *Kunstmann IV*, that is, a bibliographical ghost map, or an actual map probably lost in WWII, which, in a sense, it was as well because it is a duplicate of the *Kunstmann IV*, actually lost in World War II.

From the description and redrawn map published in 1892 by Konrad Kretschmer, we can identify his "*Munich-Portuguese of c. 1526*" as the previously mentioned *Kunstmann IV*. In calling it a *Munich-Portuguese map*, instead of the more common name of *Kunstmann IV*, and estimating its year as c. 1526, Kretschmer inadvertently created a ghost map seemingly appearing to be distinct from the *Kunstmann IV*.

The map detail illustrated by Stokes is, again, the *Kunstmann IV*. As we have seen, the *Kunstmann IV* has also been known by the alternative name *Munich-Portuguese*. Stokes labels it with both names as "*The Munich-Portuguese Map c. 1520 (Kunstmann, No. IV)*." William P. Cumming apparently ignored this second identifying name, referring to the map as "*Munich-Portuguese*."

The original Reinel map was held in the Armeebibliothek Munich until 1945 when it was stolen or destroyed. In 1843, it was reproduced as a hand-drawn facsimile that is now held by the Bibliothèque nationale de France (BnF). Other than this photograph, that manuscript map is the only other extant large version of the original Reinel. The original map was also photographed by Armando Cortesão before 1935 and the result appears in his 6-volume catalog of early Portuguese charts and maps *Portugaliae Monumenta Cartografica*. The photo was produced by Edward Luther Stevenson sometime around the end of the 19th century or the first decade of the 20th century.

Edward Luther Stevenson was among the most important scholars of early cartography active at the end of the 19th century and the first half of the 20th. He was responsible for numerous cartobibliographic books, including the first translation of Ptolemy to English, as well as a series of impressive facsimile maps produced while he was at the Hispanic Society of New York. Dr. Stevenson viewed facsimiles as integral to the study of early cartography, and he committed himself to building an unparalleled collection of photographs of early maps and globes. Much of his collection was donated to Yale University after his death, but the present item comes from a large collection of photos, manuscripts, and related material that were part of Stevenson's library, but were not donated to Yale. It is truly an impressive collection and many of the items, though reproductions, have serious antiquarian merit.

The reproduction by Otto Progel shown below is a copy of an anonymous, undated universal chart. The original has been attributed to the Portuguese cartographers Jorge Reinel and his father, Pedro Reinel, around 1519, when both were working for Spain at the House of Trade (*Casa de Contratación*).

The original chart, known as *Kuntsmann IV*, was lost in a bombing during World War II, in 1945. Its contents are only preserved thanks to a hand-painted copy by the German artist Otto Progel (1836), kept at the National Library (Bibliothèque Nationale) in France. The *Kuntsmann IV* offers a summary of geographical discoveries up to just before Magellan and Elcano's 1519-20 voyage. Some believe it could be the map mentioned by the Portuguese ambassador to Spain, Sebastián Alvares, in his letter to King Manuel I of Portugal. According to him, it was used as a template for all the nautical charts that Diogo Ribeiro (#346) made for the expedition. It includes the line set by the *Treaty of Tordesillas*, running from the North to South Pole. It also shows the whole Pacific Ocean, marked with the curious inscription, *SEA SEEN BY THE CASTILIANS*, in reference to Vasco Núñez de Balboa's sighting in 1513.

It is the first time that the Maluku (formerly the Moluccas or Spice) Islands appear charted in territory belonging to Spain, under the *Treaty of Tordesillas*. The accompanying text explains that cloves are native to these islands.

This chart was the first to stake territorial claims using a cartographic feature that would be repeated on all planispheres produced by the Spanish House of Trade, differentiating them from Portuguese versions. Ships bearing flags from one of the two countries are shown in disputed regions, as a way to assert ownership.

This map provides some insight into how large Magellan and his men imagined the Earth to be while navigating on their voyage. The estimated size of the Pacific is particularly interesting, suggesting the Earth's circumference was 13% smaller than it really is.



Modern facsimile of the Kuntsmann IV by German artist Otto Progel (1836)

Location: Bibliothèque nationale de France, Rés. Ge AA 564

References:

The legends are transcribed and translated into Portuguese by Armando Cortesão, *Cartografia e cartógrafos portugueses dos séculos XV e XVI* (Lisbon, 1935), vol. I, pp. 272-78, (includes a reproduction of the original map in vol. II, plate 5). There is a good discussion of the map and a color reproduction of Progel's copy in Ivan Kupcik, *Münchener Portolankarten: 'Kunstmann I-XIII' und zehn weitere Portolankarten = Munich Portolan Charts: 'Kunstmann I-XIII' and Ten Further Portolan Charts* (Munich, 2000), pp. 41-8.

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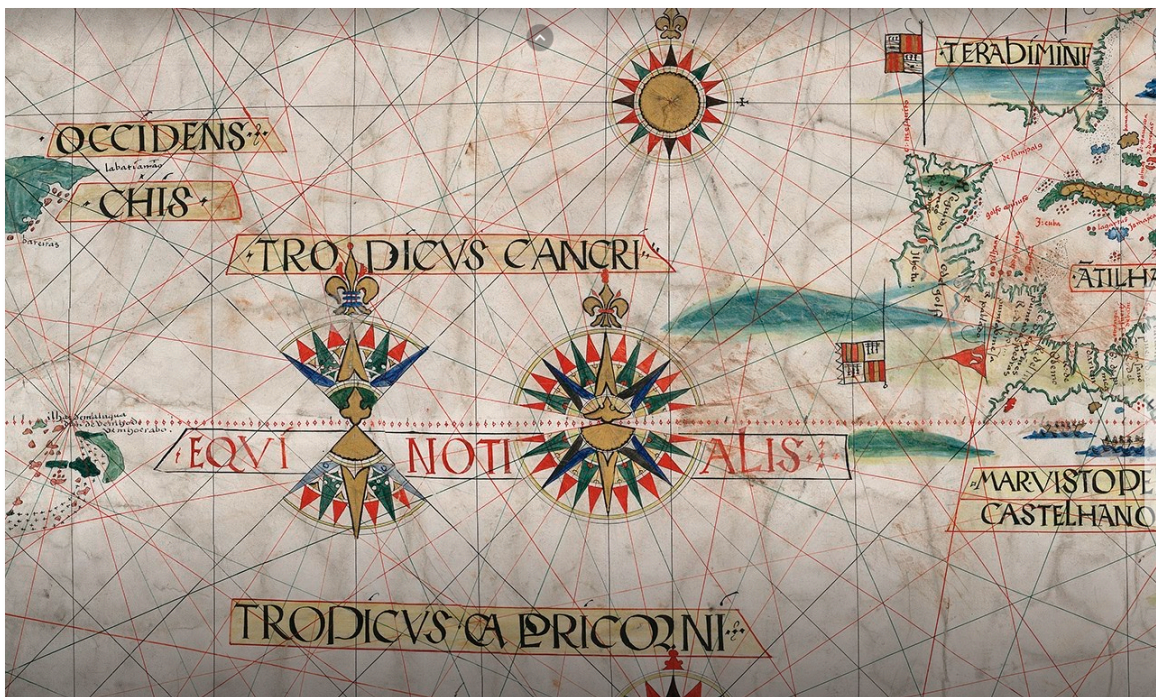
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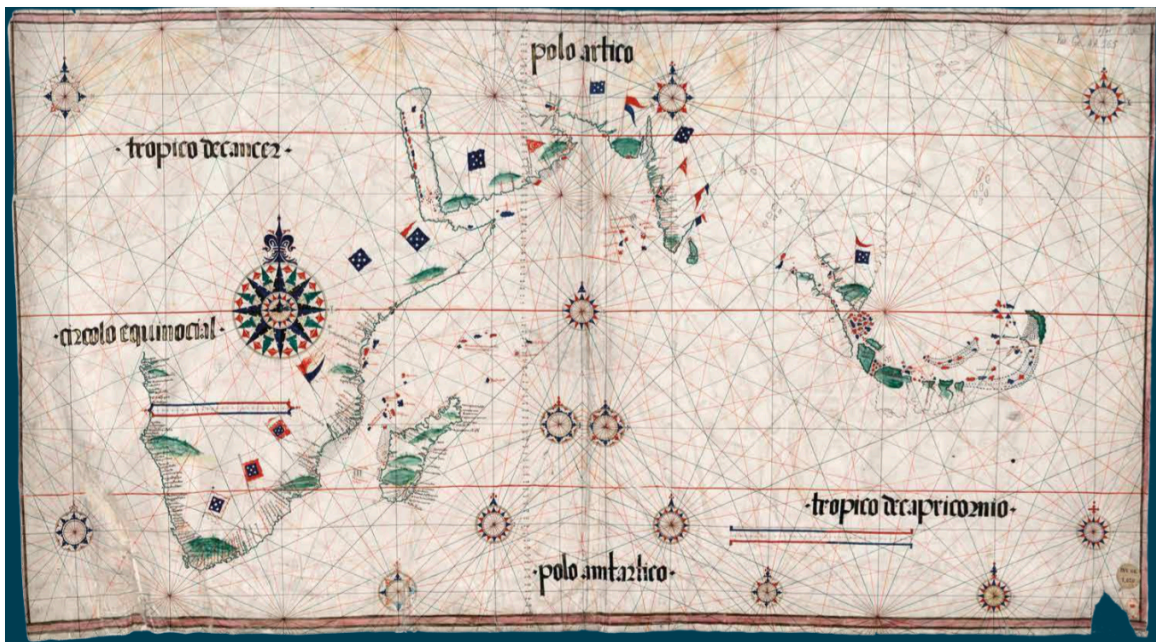
Stokes, Isaac Newton Phelps, *The Iconography of Manhattan Island, 1498-1909*, 6 vols. (New York: Robert H. Dodd, 1915-1928).

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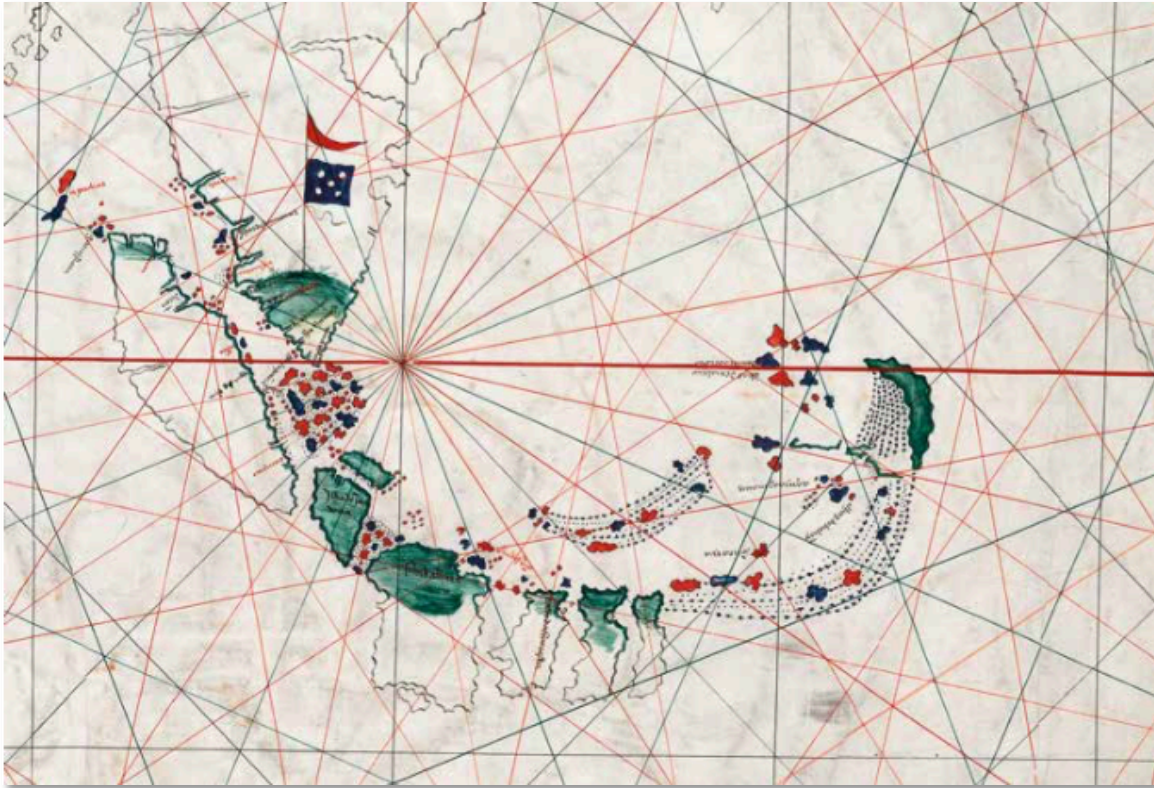
Several factors make this chart a crucial historical document. First, it is one of the oldest known works of nautical cartography in which the representations of the Indian Ocean and Southeast Asia were unambiguously based on information collected by navigators.

At the time it was designed, the replacement of the influential Ptolemaic model with data from surveys carried out aboard ships (which had begun with the maritime expansion of the latter half of the 15th century) was still ongoing. In fact, two cartographic paradigms, one Ptolemaic, and the other observation-based, coexist here, making the chart an evocative witness to this transitional process. Secondly, the chart shows, for the first time, the *ilhas de maluco domde a o crabo* [islands of Maluco, where the clove grows] in their correct geographic context and latitude, east of Sumatra and west of what appears to be the island of Halmahera, ousting the fanciful representations of the *Cantino planisphere* (#306) and the anonymous chart of c. 1510 attributed to Jorge Reinel.

The original manuscript chart, which Armando Cortesão and Teixeira da Mota dated to c. 1517 and attributed to cartographer Pedro Reinel, was kept in the Library of the German Army until the Second World War, when it was lost. Its likeness is preserved in two reproductions: a color facsimile made by Otto Progel in 1843, currently in the Bibliothèque nationale de France, and a black-and-white photograph commissioned by Armando Cortesão for his book *Cartografia e Cartografos Portugueses dos Seculos XV e XVI*, published in 1935.

According to José Manuel Garcia, the chart was compiled using geographic data gathered by pilot Luis Botim during an expedition of 1516 from Malacca to the Moluccas, as well as information compiled by the navigator João Coelho, who would have visited the Gulf of Bengal in the same year. All these data would presumably have been brought to Lisbon in 1518. By that date, the *Livro de Francisco Rodrigues* (c. 1513) was already known in Portugal, and contained a representation of the region based on Javanese sources that provided far more detail than this chart. In the *Livro*, the Spice Islands are situated west of Halmahera and given their correct north-south orientation, and are set within the broader context of the Banda Sea, with the islands of Seram, Ambon, Timor, and Flores.

In reality, much of what Reinel has drawn to the east of the Malay Peninsula betrays a dearth of solid data. The islands of Java and Lesser Sunda, which lie to the east, are little more than sketches; Timor is absent; and the arrangement of the Spice Islands is incorrect. These characteristics suggest that the chart was not based on the *Livro de Francisco Rodrigues* or on reports from the 1516 voyages, as Garcia argues, either because Reinel did not have access to these sources, or because the chart was finished before they reached Portugal. This hypothesis is furthered by the chart's hesitant depiction of the Gulf of Bengal, the configuration of which is similar to Ptolemaic representations of the region. It thus seems most likely that Reinel made this chart using only the information collected during the 1511-12 expedition to the Moluccas ordered by Afonso de Albuquerque, which ultimately did not go beyond the islands of Ambon, Seram, and Buru. This interpretation fits with the chart's inclusion of the southern coasts of two sketched-in islands (probably Ambon and Seram) south of the Moluccas, and the conjectural depictions of Halmahera and the Moluccas, which may have relied on oral reports. It is no coincidence that the representation of the Moluccas in the *Kuntsmann IV* planisphere, completed in 1519 and attributed to Pedro and Jorge Reinel, is identical to that of this chart, and that both were preserved in the same German archive. It follows that either the chart was taken to Seville (by Reinel or Magellan) after being drawn, or that it was produced in Seville in preparation for the trip. Later, both charts would have been transported out of Spain by Emperor Charles V.



*Detail of Southeast Asia with the Moluccas on the Equator.
Note the color-coding of the coasts, with some tinted green and others left blank.*

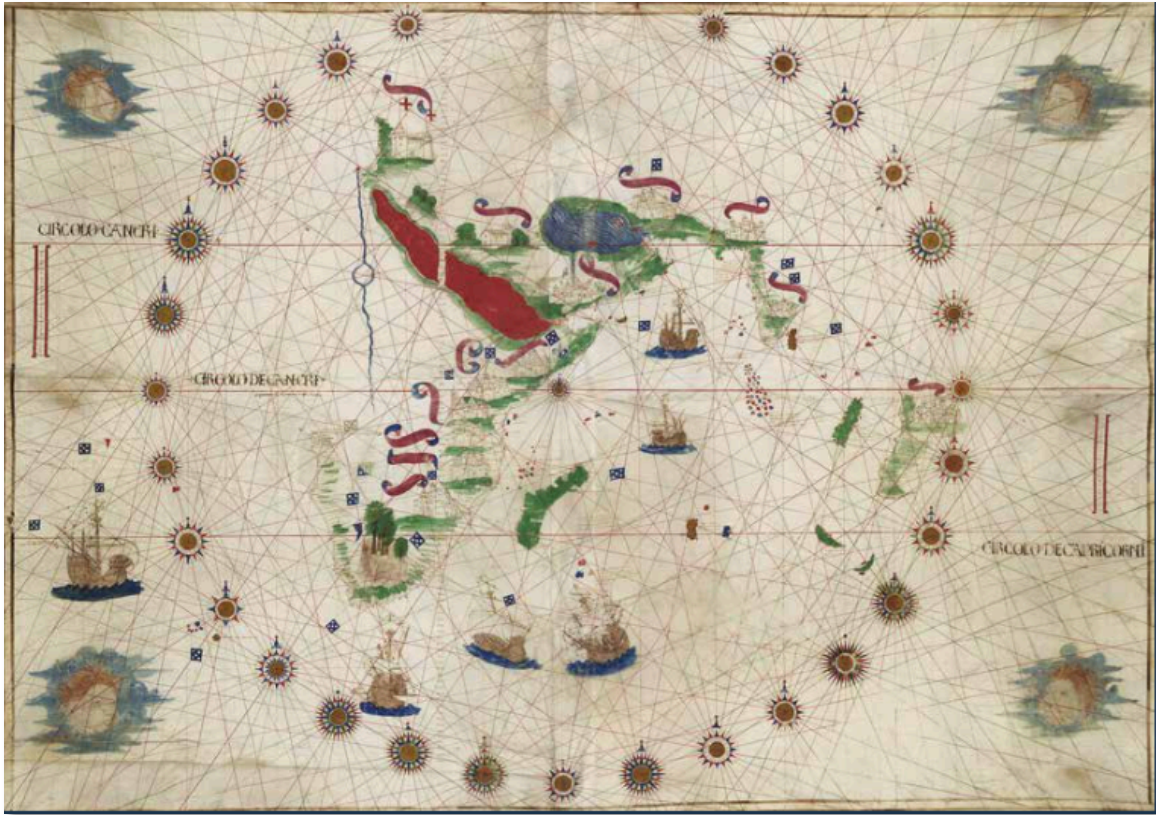


Chart of the Indian Ocean attributed to Jorge Reinel, c. 1510. Ink and color on parchment, 160 x 115 cm. Herzog August Bibliothek, Cod. Guelf. 98 Aug. 2°.