

The Evolution of The World's image

Instituto Geográfico Nacional
Exhibition hall

April 2017 - April 2018

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Oikoumene: The Evolution of The World's image

The exhibition entitled “Oikoumene: The Evolution of the World’s image” at the Exhibition Hall in IGN, shows a chronological selection of cartographic documents that illustrate the changes taking place about the image of the world, in the course of over 2500 years. This exhibition was inaugurated on April 26th, 2017 and will remain open until April 2018.

Since ancient times, one of the main concerns of the human has been to know how the World is, trying to answer questions like, what form does the Earth take? What are its dimensions? or How it relates with celestial bodies?

Starting from the first geographical references of ancient Greece which considered a flat world, we will go through the idea of a spherical Earth proposed by Aristotle and Eratosthenes, continuing with the T and O world maps and the nautical charts of the Middle Ages, the rediscovery of “Geography” of Ptolemy in the Renaissance, until arriving at the great oceanic explorations that finished delineating the World and how we know it today.

Map library (*Cartoteca*) Catalogue



The exposed maps that are also part of the IGN cartographic funds can be found for viewing in the web browser of the **Map Library Catalogue**, and also through the **QR code** that appears next to each map of the exhibition catalog, or by making click **on the title or on the map image**.

Link to the Map Library Catalogue:

<http://www.ign.es/web/catalogo-cartoteca/>

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1st WALL

The World according to the Idea of Herodotus as far as can be collected from his History

Robert Wilkinson, 1802



Map engraved on copper plate and hand coloured, extracted from the *"Atlas Classic"*, an edition published in London in 1802 by Robert Wilkinson, and titled *"The world according to the Idea of Herodotus"*.

This map was drawn from the description of the world that the writer and geographer Herodotus collected in his magnum opus *"Historiae"*. The map depicts the knowledge of the ancient world in Herodotus time. It is considered an important source by historians for being the first description of the ancient world on a large scale and the first in Greek prose. *IGN cartographic funds.*



Etymologiae (Etimologies)

San Isidoro de Sevilla; Günther Zainer, 1472

Reproduction of a small T and O map from the first printed edition of *"Etymologies"* of St. Isidore of Seville (ca. 625), printed by Günther Zainer in Augsburg.

The map was printed from a small woodcut. In the same way as all T and O maps, it represents a circular *oikoumene* surrounded by the ocean and divided into three continents (Asia, Europe and Africa) assigned respectively to the Noah's sons: Shem, Japheth, and Ham. The reproduction shown is illuminated (coloured) by hand.



Due to the quick application of printing techniques to cartography, it will only take five years from this rudimentary map to the first printed edition of Ptolemy's *"Geographia"* in Bologna (1477), engraved on copper plates (chalcography). *Bayerische StaatsBibliothek.*

Catalan Mapamundi

Anonimous, ca. 1450



In the 14th century the Catalonia-Valencia-Majorca region was a flourishing centre of trade and culture where Arab and Jewish elements blended with Christian culture. Countless maps by this cartographic school have survived including the *Estense World Map*.

It can be considered to be a paradigm of the artist's technique, logical extensions of his vision extending beyond the Mediterranean to the frontiers of the known world. The anonymous artist of the *Estense World Map* combined details from literature of certain regions of the world with empirical facts about the Mediterranean area, the zone he knew best. As a result,

details from the tales of Marco Polo, known centuries before, can be seen in the descriptive outline of China, with details about the recent Portuguese explorations of Cape Verde, circumnavigated for the first time in 1444 by Dias too. Religion is also present in this map, not only due to the circular shape but also because of the drawing of Paradise, depicted in eastern Africa and not in Asia as was usual. *IGN cartographic funds.*



The Osma Beatus Map

Beato de Liébana; monjes Pedro y Martino, 1086



Reproduction of the world map included in Beatus of Burgo de Osma.

Maps known as "beatus" (for Beatus of Liébana) represent the world following the T and O world map model by St. Isidor of Seville, including the reference that the saint made to the possible existence of the antipodes and the southern continent.

Beatus of Liébana was a monk of the convent of Santo Toribio de Liébana (Cantabria), author of the manuscripts "Commentary on the Apocalypse" (*"Commentarium in Apocalypsin"*) in 776 a. D. From that first manuscript, successive copies were made. There are 14 extant beatus which include the mapamundi. *IGN cartographic funds.*

Mapamundi: the Catalan Atlas

Abraham Cresques, 1375



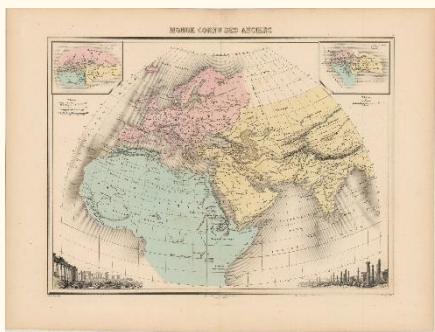
Facsimile of the Catalan Atlas whose original is preserved in the National Library of France. It is the most outstanding work of medieval nautical cartography and of the Majorcan school. It was produced by the Hebrew cartographer Abraham Cresques and his son Jafuda by order of the king of Aragon Pedro IV to give the future king Carlos V of France. It consists of twelve coloured leaves of great richness. In four of them there is detailed information on cosmography and navigation, including a perpetual calendar built for 1375. It covers from the Atlantic archipelagos, Canary and possibly Azores islands and the African coast, to the island of Japan. Also, it includes a wind rose, being the first appearance of a rose in medieval nautical cartography.

In addition, the map shows the coasts, regions and towns, as well as the best knowledge in astrology, cosmography, medicine, geography and customs of the different cultures of the known world in a graphic and scientific way. *IGN cartographic funds.*



World known by the ancients

J. Migeon; A.Bixet; L.Smith, 1892



World map titled "*Monde connu des anciens*" (World known by the ancients) included in the 1889 edition of the work "*Nouvel atlas illustré. Géographie universelle comprenant géographie, l'histoire, l'administration, la statistique, etc. Scientifique, industriel et commercial*", by Desbuissons.

Europe, part of Africa and Asia are shown in this map with a grid of meridians and parallels. Continents have different colours each one. Hydrography represents the main network with the name of the most important rivers. In the upper left corner, there is a world map according to Herodotus (c. 450 BC.), in the upper right corner, there is the world according to Eratosthenes, (c. 220 BC.). Illustrations of the ruins of Palmyre and Persepolis are shown in the lower corners. *IGN cartographic funds.*



2nd WALL

[Claudius Ptolomaeus Cosmographia, Jacobus Angelus interpres](#)

Claudio Ptolomeo, Francesco di Antonio del Chierico, ca. 1450



Copy of a map contained in a manuscript of the "*Geographia*" of Ptolemy made in Florence about 1450-1460, from the latin translation of Jacobus Angelus and coloured by Francesco di Antonio del Chierico. This particular map does not belong to the original manuscript codex, but was added by its owner, along with others between 1508 and 1512.

In this depiction of the Ptolemaic *oikoumene*, the "third projection" of Ptolemy is used. It consists of a perspective view of the globe on which the polar circles, the tropics, the equator and the band of the zodiac are represented. On the terrestrial sphere the world known by Ptolemy is shown, which extends 180° in length as described in his "*Geographia*". **National Library of France.**



[World Map](#)

Henricus Martellus Germanus, 1489

Reproduction of the original map owned by the British Library, contained in the work "*Insularium Illustratum*". This is an *isolario* or catalog of islands from which five manuscript copies are preserved in the world.

The world map of Martellus is the first map that represents the African continent with its current configuration, from the very recent information provided by the Portuguese Bartolomé Diaz, who had just rounded the Cape of Good Hope in 1488. Diaz's discoveries dismantled the Ptolemaic point of view that the Indian Ocean was a large lake enclosed between Africa and Asia. The map also expands Ptolemy's *oikoumene* to the north, representing Scandinavia, and to the east showing the Far East Asia and the coasts of *Cathay* (current China) according to the stories of the travels of Marco Polo. Other unexpected aspects could be the exaggerated southern latitude of the Cape of Good Hope (45 degrees) compared to that known by the Portuguese (35 degrees), or the representation of a huge and phantom peninsula in South-east Asia, called "The Dragon's Tail". **British Library**

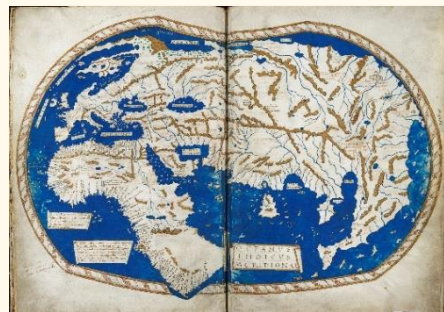


Chart of Juan de la Cosa

Juan de la Cosa, 1500



Manuscript made on parchment in two sheets. Its importance lies in the fact that it is the first cartographic representation that is preserved in which the American continent appears. The discoveries made by Columbus, in his three voyages of 1492, 1493 and 1498, as well as those of Ojeda, Vespucci, Juan de la Cosa, Vicente Yáñez Pinzón, and Cabot, can be appreciated. The coast

of North America is very imprecise, missing the peninsulas of Florida and Yucatán, the Gulf of Mexico and Central America. The insularity of Cuba stands out, as proven by the author in 1499. From South America, it shows the coast from Cape de la Vela to San Agustín and a part of present-day Brazil. The coasts of Europe and the Mediterranean are drawn according to the portolan charts of that time. The outline of Africa is drawn according to the latest Portuguese discoveries of Vasco de Gama (1497-1499). Asia is very imprecisely outlined according to the Ptolemaic theories, the travels of Marco Polo and other travelers. *Museo Naval, Madrid. MNM 257.*



Cantino Planisphere

Anonymous



The Cantino planisphere is the earliest surviving map showing Portuguese geographic discoveries in the east and west, at the beginning of the 16th century. It is named after Alberto Cantino, an agent for the Duke of Ferrara, who commissioned an unknown cartographer in Lisbon to

make a chart with all the secret information of the *Casa de Indias*, and after he successfully smuggled it from Portugal to Italy in 1502. Cantino's name appears in an inscription on the back of the map. The map is particularly notable for portraying a fragmentary record of the Brazilian coast and for depicting the African coast of the Atlantic and Indian Oceans with a remarkable accuracy and detail. It was valuable in the commercial relations of Italy with Portugal because it showed detailed and up-to-date strategic information in a time when geographic knowledge of the world was growing at a fast pace.

The map represents for the first time the line established by the Treaty of Tordesillas, according to which all the territories that were to the West of the line were considered property of Spain, and all the territory to the East was assigned to Portugal.



The Cantino planisphere is the earliest extant nautical chart where places (in Africa and parts of Brazil and India) are depicted according to their astronomically latitudes. The original map is kept in the Estense de Modena Library. *IGN cartographic funds.*

3rd WALL

[Universalis Cosmographia](#)

Martin Waldseemüller, 1507

Reproduction of the first map in which the name "America" appears, coined in honor to Amerigo Vespucci, to whom Waldseemüller mistakenly attributed the discovery of the New World. Although years later and in later works he removed the word "America", possibly in recognition of his mistake, and renamed the American continent as "*Terra Incognita*", the name was perpetuated until the present day due to the enormous success and diffusion of the map.



It is also the first map showing America clearly separated from Asia by a mass of oceanic water (something apparently inexplicable before the official discovery of the Pacific Ocean by Nuñez de Balboa in 1513 and the circumnavigation of Magellan-Elcano in 1522).



The only existing copy of this mural map, consisting of twelve woodcut prints, is preserved in the US Library of Congress. It was discovered in 1901 in the castle of Wolfegg (Germany). [US Library of Congress](#)

[World gore map](#)

Martin Waldseemüller, 1507



Reproduction of the gore map that was published together with the mural map "*Universalis Cosmographia*" and the treaty of geography "*Cosmographiae Introductio*", all works by Martin Waldseemüller. Of the five copies currently known, this is the one belonging to the Ludwig - Maximilian University in Munich.

It is the first printed gore map, from which a simple globe of about 12 cm in diameter could be constructed. This map shows the American continent separated from Asia by an oceanic mass, something apparently unknown before the discovery of the Pacific Ocean (Nuñez de Balboa, 1513) and the first circumnavigation of the world (Magellan - Elcano, 1522). Printed from woodcuts. [Ludwig Maximilians Universität München](#).



Map of the known world

Juan Vespucio, 1526



Facsimile of a decorated copy of the *Padrón Real* made in parchment by Juan Vespucio, nephew of the famous Amerigo Vesputio, who gave his name to the New World.

The *Padrón Real* is a universal and official map, kept in secret, representing the

entire known world. A continuous representation updated with the data that the navigators brought from their exploration trips. The lands and islands belonging to the Crown of Castile should be visible, especially the new coastlines discovered. This model should serve as the pattern for the rest of the charts built in Seville, under the economic laws for those who did the opposite.



Its realization and maintenance was carried out in Seville by the *Casa de la Contratación de Indias*.

In the upper part of the map, the coat of arms of Charles V stands out, in the form of a double-headed Eagle, which crowns America. *IGN cartographic funds.*

Veteris Orbis Climata ex Strabone



Christophorus Cellarius, 1731

Map that includes, on cartography of the time (18th c.), the extension of the world described by Strabo in century I BC, with the names of places used by the Greek geographer.

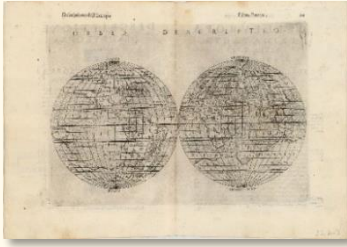
On the map are represented the *climata* or equidistant zones of geographical latitude, delimited by the parallels established by Strabo in his "*Geographia*". On the right side of each *clima*, the length of the longest day (in hours of sunlight) on the summer solstice is labeled, a typical form of expressing latitude in antiquity.

Allegorical representations of the winds are also shown in the form of winged heads blowing, with the name given by the Greeks to each of them labeled on the blast. This map belongs to the work "*Notitia Orbis Antiqui*", an atlas of ancient geography produced by Cellarius. *IGN cartographic funds.*



Orbis Descriptio

Girolamo Ruscelli; Giuseppe Rosaccio, 1599



World map issued in 1599 by Rosaccio from previous editions published in Ruscelli's *"La Geographia di Claudio Tolomeo"*. The original map of Ruscelli (1561) is the first double-hemisphere world map included in an atlas. Engraved on copper and published in Venice, this edition features the Great Southern Continent, including La *Tierra de Fuego* south of the Magellan Strait. This image of the World will be valid until the discovery of Cape Horn in 1616. It is interesting to observe the land bridge between America and Asia named *"Terra Incognita"* where the Bering Strait should be. *IGN cartographic funds.*



Nova Orbis Tabula in Lucem Edita

Frederik de Wit, 1722



Double hemisphere map with two polar projections above and below the hemispheres. In the rest of the continental masses it is noticed the ignorance that had of its interior. The information about its orography and hydrographic network is very limited. The mountain ranges are symbolized by the perspective technique and only the large rivers and lakes are listed. The coastline is represented by a thin horizontal strip, still missing part of the Pacific coast of North America and Australia. The map includes the itinerary of the journey of the French embassy, headed by Alexandre Chevalier de Chaumont, who was sent to Asia by King Louis XIV. It includes illustrations of classical scenes in each corner of the map representing the four seasons as well as the signs of the Zodiac. *IGN cartographic funds.*



World Nautical Chart

Gerard van Keulen, 1709

This is the chart No. 84 of the *"Zee Atlas"*, composed of 180 nautical charts. It includes all known lands and oceans of the Earth. Australia is shown with the name *Hollandia Nova* (name given by the Dutch navigator Abel Tasman). This continent still appears partially outlined and mistakenly united to New Guinea due to the ignorance of the Strait of Torres, which was discovered by the Spaniards in 1606 and maintained



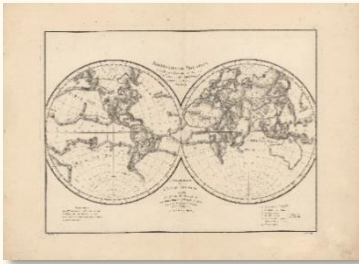
like state secret until the taking of Havana by the English in 1762. California is represented as an island (a cartographic error reproduced during 17th century). The prime meridian is situated in Madeira. The Equator line and the Tropics are highlighted in red colour. *IGN cartographic funds.*



4th WALL

World physical map

S. Pallas, A. Mongez, Mentelle, 1779



This is a highly unusual 1779 map of the world exhibiting a very peculiar physical topography that reveals mountain ranges both on land and under the sea. The curious undersea mountain ranges displayed here was drawn by Abbe Mongez to illustrate the geographical theories of Peter Simon Pallas, a German polymath living in Russia, who speculated that mountain ranges originated from a series of intra terrestrial explosions (volcanoes), many of which are noted on the map

as asterisks. Aside from Pallas's unusual marine topography, this map follows many of the speculative cartographic conventions of the late 18th century. These include the presence of a large inland sea in the western part of North America, several navigable channels in Canada, and a mountain range in the Nile River, in Africa. Van Diemen's Land or Tasmania is attached to the mainland of Australia.



This double-hemisphere world map was first drawn by Abbe Mongez, then engraved by Ambrose Tardieu for being included in Mentelle's *"Atlas Universelle"* (1779). *IGN cartographic funds.*

Chart of the world on Mercator's projection

Hermann Berghaus, 1871

World map lithograph in Mercator Projection. In this a chart, predominant ocean currents and routes of more than fifty major ocean-going steam shipping companies like "P & O" and "Cunard". Around the edges are inserted details of ports including Honolulu and the various routes to cross Central America before the construction of the Panama Canal.



In spite of being published in Gotha (Germany), this is

a map printed and mainly intended to the British market, with the purpose of showing the sailing routes, terrestrial, aerial and underwater international routes, showing some of the features of continental plate, ocean currents and the most important explorations in deep sea. Land is coloured to differentiate between deserts, tundras, meadows and crops. *IGN cartographic funds.*



Ocean Floors and Land Relief



Marie Tharpe; Bruce Heezen, 1976

This is the first scientific map of the entire ocean floor. Marie Tharpe traced the map from data collected by Bruce Heezen aboard the Navy Observatory ship "Vema", since women at that time were still excluded from work aboard US Navy ships. This work revealed the existence of the Mesoatlantic ridge and revolutionized the scientific understanding of continental drift. She was

awarded the Hubbard medal in 1978. *David Rumsey historical map collection.*



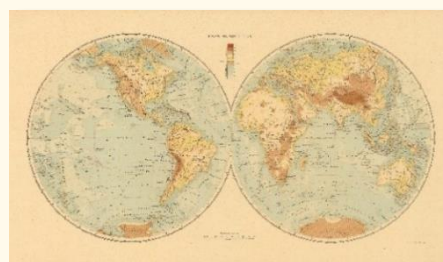
World physical map

Instituto Geográfico y Catastral, 1950

Scale 1:60.000.000. This world map produced by Instituto Geográfico, was made in the 50s.

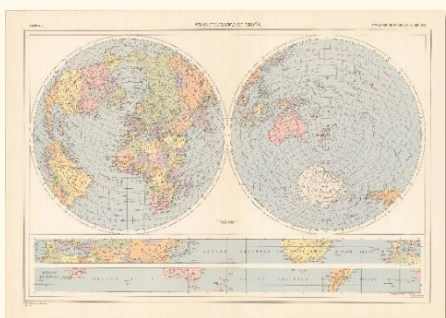


The map shows the height and depth in meters from the sea level with hypsometric tints. *IGN cartographic funds.*



The Situation of Spain in the World

Instituto Geográfico y Catastral, 1965



In this wall map (which includes four maps) two topics are presented concerning the situation of Spain in the World: the distances from Madrid and the determination of points located in areas of similar latitude to those of Spain.

For the first topic the Earth is divided into two hemispheres, with poles in Madrid and at the diametrically opposite point.

For the second one, two map fragments are shown in Mercator Projection, representing the areas between latitudes 25° and 46° in the Northern Hemisphere and the Southern Hemisphere.

As a curious fact: the "antipode" point of Madrid is located in the town of Weber, in the North Island of New Zealand. *IGN cartographic funds.*



Earthrise

William Anders, December 24th, 1968



First picture of the Earth seen as a planet from space.

The photograph of the Earth rising over the moon horizon was taken by astronaut William Anders during the Apollo 8 mission, while the spacecraft was entering in its 3th lunar orbit on Christmas Eve.

Apollo 8 was the first manned mission ever to leave Earth orbit and to orbit around the moon. Only six months later (on July 21th, 1969), the first humans landed on the Moon from Apollo 11 spacecraft.

Earthrise is considered one of the most famous and influential photographs in history, as well as a key in the birth of global environmental movement. [NASA](#).



1st DISPLAY CASE

[Claudii Ptolemaei Geographicae enarrationis libri octo Bilibaldo Pirckeymhero interprete](#)

Laurentius Phrisius (Laurent Fries), 1522 (1525)



In 1522 Laurent Fries published in Strasbourg an edition of Ptolemy's "Geography" in which all of the maps were reduced versions of Waldseemüller's 1513 edition.

This atlas is the 2nd edition of Fries "Geographia" (1525) and it was printed from woodblocks. This edition includes 50 maps. It is remarkable that it is the first "Geographia" edition that includes the name 'America'. But also, it is the third time that 'America is

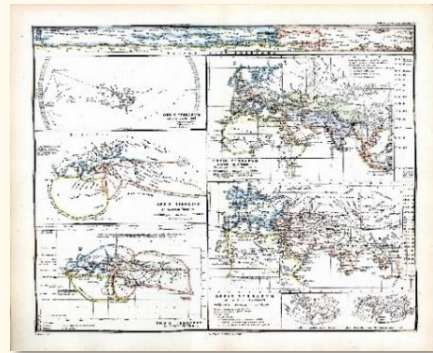
written' in a printed map after Waldseemüller's (1507) and Apian's (1520). Since Elcano did not return to Europe from his circumnavigation of the World until September 1522, the map of the New World (Terra Nova) does not incorporate this new information yet. Some of the maps are hand colored and have manuscript annotations. *IGN cartographic funds.*



[Atlas Antiquus: Zwölf Karten zur Alten Geschichte](#)

Heinrich Kiepert

The geographer Heinrich Kiepert (1818-1899) is considered one of the most important cartographers of the second half of the 19th century. Kiepert became interested in the historical geography of the classical world in his student days at the University of Berlin, where he worked with Carl Ritter (1779-1859). Ritter and Kiepert produced "*Topographisch-historischer Atlas von den Hellas hellenischen Colonien in 24 Blättern*" (1840-1846), one of the earliest modern atlases of the ancient Greek world. It was followed by several additional compilations of maps of the classical world. He was also responsible for some of the first detailed ethnic maps of Germany, Austria-Hungary and the Balkan Peninsula. In the course of the years he compiled



maps of much of the rest of the world, as well as cartographic materials for schools. He was director of the *Geographisches Institut* (Weimar) between 1845 and 1852 and professor at the University of Berlin. *IGN cartographic funds.*

[Parergon, sive Veteris Geographiae Aliquot Tabulae](#)

Abraham Ortelius, 1603

The "Parergon" maps began appearing as supplements within the main Ortelius' work "Theatrum Orbis Terrarum" in 1579 with 3 maps. During the following years, more maps were completed and the "Parergon" became an atlas in its own right. The maps cover both classic and biblical themes, including the pilgrimages of Odysseus, Abraham, and Paul the Apostle. For this work, as in "Theatrum", Ortelius drew the originals which were later engraved by Jan Wierix.



It contains 39 historical maps with coordinates and oriented with the cardinal points in the margins. The meridian used is unspecified. In addition, it includes the "*Nomenclator Ptolemaicus*": an alphabetical list with the place names listed in Ptolemy's "Geography". The binding is made of leather. *IGN cartographic funds*.

[Liber Chronicarum](#)

Hartmann Schedel, 1493

Reproduction of *Liber Chronicarum* (Book of Chronicles) preserved in the Monastery of Santa María de Vid (Burgos). Also known as The Nuremberg Chronicle, is an illustrated biblical paraphrase and world history that follows the story of human history related in the Bible since the Creation until 1492. It follows the Genesis and the scheme proposed by St. Isidor of Seville. It is one of the most notorious incunabulum. The publisher and printer was Anton Koberger, who became the most succesful publisher in Germany between 1470 and 1513.

Michael Wolgemut, Albert Durer's teacher, provided the unprecedented 1800 woodcut illustrations, with biblical or secular topics, family trees, portraits, pictures, maps and sights of 89 cities.

This world map contained in the *Liber Chronicarum* is based on Ptolemy idea. In the corners appear the tree sons of Noah sustaining the world, and in the margin there are monstrous creatures.

2nd DISPLAY CASE

[Tabula II. Europae, Hispaniam ac Lusitaniam](#)

Claudio Ptolomeo; Gerardus Mercator, 1578 (1698)



Ptolemaic map of the Iberian Peninsula. Mercator originally published this map in his 1579 edition of Ptolemy's Geography. Re-issued again in 1584, 1605, 1618, 1695, 1698, 1704 and 1730.

The prime meridian is that of the "Fortunate Islands" (Canary Islands), as in the rest of Ptolemaic maps. The sea is adorned with a ship and a pair of sea monsters, one of whom looks like a dog with fur and floppy ears.

This map features a schematic representation of relief, main cities, administrative division of Roman time, distribution of the Iberian peoples and the main rivers. Place names in Latin, labeled in italics and roman type. *IGN cartographic funds.*



[Hispaniae Veteris Descriptio](#)

Abraham Ortelius, 1586

Map representing the Iberian Peninsula, the Balearic Islands and the North African coast. The map is dedicated by the author to the Spanish theologian Benito Arias Montano, who recommended him to Felipe II and contributed to his appointment as "Geographer of His Majesty", a title given personally by the Duke of Alba on May 20, 1573.



The map is oriented with the cardinal points in the margins, and its prime meridian is in the island of El Hierro. *IGN cartographic funds.*



[Tabula Moderna et Nova Hispaniae](#)

Claudio Ptolomeo; Martin Waldseemüller, 1513



Woodcut map showing the Iberian Peninsula, the Balearic Islands and the north coast of Africa. It is based on the first printed modern map of Spain included in the Ptolemy's Geography published in Ulm in 1482. It belongs to the edition of the "*Geographia*" made by Waldseemüller and published in Strasbourg in 1513. It is one of the twenty new maps added to his atlas in this edition.

The title itself indicates that it is a "modern tabula" or "*tabula nova*", an updated map incorporating new data that differ from the original Ptolemy, added in order to show the two versions of a map without denying Ptolemy's authority.

The map features a striking error: it locates the Azores Islands NW of Galicia identifying them presumably with the *Cassiterides* (tin) Islands described by Ptolemy.

IGN cartographic funds.



[Tabula Secunda Europe](#)

Claudio Ptolomeo; Martin Waldseemüller, 1513

Nice example of Martin Waldseemüller's map of the Iberian Peninsula from the 1513 edition of Ptolemy's "*Geographia*". He intended this atlas as a new edition of Ptolemy's "*Geographia*", but added 20 modern maps which were not based upon the tradition of Ptolemy. The new information included the American continent recently discovered.

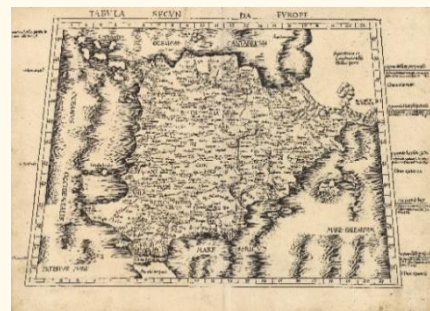
Printed from woodblock. Trapezoidal frame, graduated in latitude and longitude, with labeling on the outside right of the frame with the different



"*climata*" (according to the concept of the ancient Greeks, that is, latitude strips). The prime meridian is located in the

Fortunate Islands (Canary Islands). Cities symbolized by circles. Hydrography with the most important rivers.

IGN cartographic funds.



3rd DISPLAY CASE

Chart of the North Atlantic Ocean with the defeats that followed Columbus until his landing to the first islands that discovered in the New World

M. Moreno; M. C. Maré; R. Esteve, 1825

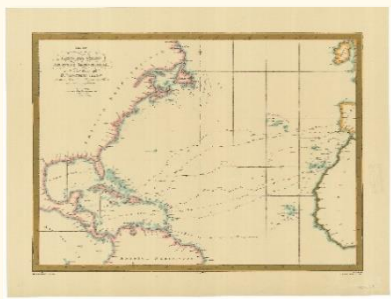


Chart of the Atlantic Ocean that shows the four voyages accomplished by Columbus: the first from 1492 to 1493, the second from 1493 to 1496, the third in 1498 and the fourth from 1502 to 1504.

On the first voyage (on 3rd August 1492), Christopher Columbus along with Martín and Vicente Pinzón brothers and 120 men, left the Port of Palos behind with two caravels (*La Niña* and *La Pinta*) and a ship (*La Santa María*).

They sailed to the Canary Islands and from there they went west. The expedition arrived at the island baptized like *San Salvador*, located in the archipelago of *Las Lucayas* or Bahamas on 12th October 1492. Then they reached present-day Cuba, and the island that today is Haiti and the Dominican Republic, baptized as *La Española*. Columbus was convinced he had arrived in the East Indies.



IGN cartographic funds.

Orbis Typus Universalis iuxta Hydrographorum Traditionem Exactissime Depicta

Laurentius Phrisius (Laurent Fries), 1522 (1535)

World map first included in Fries edition of Ptolemy's Geography" (1522). The map showed here belongs to the third edition, published in Lyon in 1535 by Melchor and Gaspar Trechsel brothers, and edited by Miguel Servet. This edition can be distinguished from other editions (1522, 1525 and 1541) because of the band in the upper part with the text "*Tabu Totius Orbis*".

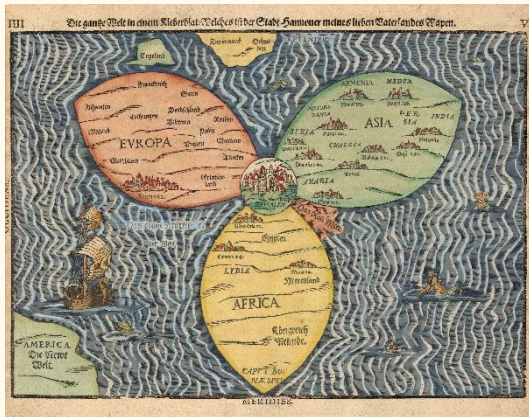


This is the third printed map to include the name 'America', after that of Waldseemüller (1507) and Peter Apian (1520). Since Elcano did not return to Europe from his circumnavigation of the World until September 1522, the map does not incorporate the knowledge acquired yet. Drawn in the manner of nautical charts. Graduated in longitude and latitude, it contains ptolemaic place names and old wind names on the outside of the frame. *IGN cartographic funds.*



The World in a Cloverleaf

Heinrich Bünting, 1587



Two reproductions (in black and white and illuminated) of the symbolic map of the world as a cloverleaf ("*Welt in ein Kleberblatt*"), included from 1587, in the editions of the work "*Itinerarium Sacrae Scripturae*" (first edition in 1581), of the Protestant theologian and pastor Heinrich Bünting (1545-1606). In this itinerary through the places described in the Holy Scriptures, Bünting intends to approximate biblical geography to the reader. The "*Itinerarium Sacrae Scripturae*" had more than 60 editions until the 18th century.

This woodcut is a modification of the scheme of the medieval world map of "T in O", where the world is represented in a tripartite way, with Jerusalem, center of the Church, coinciding with the center of the world. The three leaves of the clover also symbolize the mystery of the Holy Trinity, according to the concept introduced by Saint Patrick (5th century). Due to the lateness of this tripartite representation, America, the "fourth part of the world" appears, although deliberately without any graphic relevance. *IGN cartographic funds.*



Europa prima pars Terrae in forma virginis

Heinrich Bünting, 1587

Symbolic map of the European continent represented as queen and maiden and included, from 1587, in the work "*Itinerarium Sacrae Scripturae*" (first edition in 1581) of Protestant theologian and pastor Heinrich Bünting (1545-1606). The map is based on a very similar one made by Johannes Putsch and printed in Paris in 1537.

The woman symbolizes both the "Queen" Europe, identified with the Christian Church, and the damsel kidnapped by Zeus in the form of a bull in the founding myth of Europe. The representation of Europe as a queen gives it pre-eminence in front of the other two parts of the world of the ancient Greek tradition, Asia and Africa.

Habsburg Spain (*Hispania*) is represented as the head as it would be the hegemonic power that leads the defense of Christian Europe in front of the expansion of the Muslim Ottoman Empire. *IGN cartographic funds.*



Asia secunda pars Terrae in forma Pegasi

Heinrich Bünting, 1587



Symbolic map of Asia represented as Pegasus (winged horse of Greek mythology). This map is included from 1587 in the work "*Itinerarium Sacrae Scripturae*" (first edition in 1581), written by the Protestant theologian Heinrich Bünting (1545-1606). Printed from woodblock.

Bünting explains in the text that, like the mythological hero Bellerophon killed the Chimera with the help of Pegasus, Jesus Christ finished with the devilish dragon: the Devil. This saving action takes place in

Asia, the continent object of the allegory. As in the allegories of the world and Europe, in the form of clover and maiden respectively, regions that are not part of the symbolically represented continent are shown with their usual configuration (in this map of Asia, the parts of Europe and Africa appear with a conventional cartographic profile). *IGN cartographic funds.*



4th DISPLAY CASE

[Typus Orbis Terrarum](#)

Abraham Ortelius, 1586



World map reproduction by Abraham Ortelius included in his book of map «Theatrum Orbis Terrarum». It is considered the first modern world atlas which contained 53 maps. It was the first time that a set of maps, contemporary to the date of publication, was designed, drawn, and engraved with the intention of publishing them in a bound volume. This world map was based on a large 21-sheet world map published by Ortelius' colleague, Gerard Mercator the year before.

The map prematurely showed a southern polar continent since the southern oceans had not yet been explored. The projected southern continent was based on the reports of Magellan sighting Terra del Fuego when he rounded the tip of South America and the accounts of early Dutch discoveries along the Australian coast. *Norman B. Leventhal Map Center at the Boston public Library.*



[Fretum Magellanicum](#)

Gerardus Mercator; Jodocus Hondius; Johannes Janssonius, Petrus Kaerius Caelavit, Amsterdam, 1640



Map engraved on copper plate by the Flemish cartographer Gerardus Mercator (1512-1594), extracted from a 1640 edition of the "Atlas Minor" by Jodocus Hondius (1563-1612), and published in Amsterdam by the Dutchman Johannes Janssonius (1588) -1664).

It shows the archipelago of *Tierra del Fuego*, located in South America southern tip, between Argentina and Chile. It extends to the south and east of the Strait of Magellan and consists of a main island (the large island of Tierra del Fuego) and a great number of small islands. The title appears in the upper right, framed in a cartouche; in the lower left corner, there is another cartouche containing the graphic scales. Cardinal points are marked in the margins. Descriptive text in Dutch.

IGN cartographic funds.



America

Philip Cluver, 1661



Map engraved on copper plate. Extracted from the atlas "*Introductio in universam geographiam*" (edition of 1661), by Polish geographer and historian Philip Cluver (1580-1623).

The map shows the American continent with some of the inaccuracies of the time, such as the consideration of California as an island, something that was not corrected until the beginning of the 18th century. In the upper left part you can see a part of the Asian continent and, in the lower part, New Zealand,



among many other islands. *IGN cartographic funds.*

Mapa del mundo

Baptista Homann, 1707

World map engraved in copper plate in double hemisphere. The equator, the ecliptic line and the meridians and parallels are represented. At the top is the title held by two winged characters. Below to the left, representation of the summer solstice, and to the right, the winter.

The northern and southern hemispheres appear centered at the top and bottom representing the constellations, illustrated with mythological characters. The map contains allegorical



representations of the winds in the form of winged heads blowing. Also, the movements of the tides, the erupting Etna volcano and an earthquake, are depicted. At the bottom, there is explanatory text in Latin.

IGN cartographic funds.



Mapamundi, Tab I. Geographia et Astronomía

J.A. Richter; Johann Martin Bernigeroth, 1741



World map engraved on copper plate by L. M. Steinberger (Augsburg) in a double hemisphere. Place names written in Latin. California is represented as an island and the northwestern coast of America is represented as a continuous line from Alaska to Asia. Australia, New Zealand and Tasmania are incomplete. The entire map appears adorned with several numbered figures.

Johann Martín Bernigeroth, a portraitist of his time, made illustrations with themes such as the hemispheres, the planetary system according to Copernicus, the phases of the moon, the four seasons of the year, globes

and characters handling astronomical instruments. The lower part of the map represents natural phenomena such as volcanoes, whirlwinds, earthquakes, etc. The map was included in a book of geography entitled "*Reales staats-zeitungs-und conversations-lexicon*" by Johann Hubner. *IGN cartographic funds.*



World map or General Map of all parts of the World

C. F. Delamarche, R. de Vaugondy, 1803

World map engraved on copper plate. It was published in three versions based on the three legends that appear at the top, which show how the world is divided by religion, skin color and physical features. This version of 1803 was published in Paris, and belongs to the "*Atlas Portatif*" by C.F. Delamarche, successor of the geographer Robert de Vaugondy. It identifies the four major world religions and the recent discoveries of Cook, La Perouse, Vancouver and Mackenzie. Arctic entries are about recent explorations and there is good detail of the Pacific islands. Updates the 1799 version.



Mercator projection and prime meridian referred to the island of El Hierro (Canary Islands) and the meridian of Paris. *IGN cartographic funds.*



GLOBES AND INSTRUMENTS

Erdapfel

Martin Behaim, 1492



This is a facsimile of the "*Erdapfel*". Produced by Martin Behaim from 1490-1492 is the oldest known extant globe.

Martin Behaim refers in one of the legends of the globe that his cartographic sources are Ptolemy, stories of Marco Polo and Mandeville's travels, and explorations sent by John II, the King of Portugal.

The American continent is not included, as Columbus returned to Spain no sooner than March 1493. The globe shows an enlarged Eurasian continent and an empty ocean between Europe and Asia, reducing the navigable distance from Europe to 126° instead of the actual 229°. Columbus had in mind similar miscalculations to those of Behaim,

which was fundamental in his idea to reach the Asian coasts by the western route.

Globe donated for the exhibition by the Map Library of the Universidad Autónoma de Madrid.

Globe

Martin Waldseemüller, 1507

Globe ("*tam in solido...*") constructed from Waldseemüller's gore map, published together with the mural map ("*... quam plano*") "*Universalis Cosmographia*" and with the geographical treaty "*Cosmographiae introductio*".

Although five copies of the map in gores are conserved throughout the world, none of them has survived in the form of a globe, possibly due to its fragility.

Waldseemüller's globe is also the first to show the name "America".

Globe donated for the exhibition by the Map Library of the Universidad Autónoma de Madrid.



Globe

Johannes Schöner, 1523



Reproduction of the globe attributed to the cartographer and globe maker Johannes Schöner. The globe represents the known configuration of the World after the circumnavigation of Magellan and Elcano (1522), with the New World unequivocally separated from Asia, and the Strait of Magellan running between South America and an unexplored southern continent.

The globe appears in the famous double portrait of Jean de Dinteville and Georges de Selve "The Ambassadors", by Hans Holbein the Younger (1533).

Globe donated for the exhibition by the Map Library of the Universidad Autónoma de Madrid.

Globe terrestre

J.Forest, Girard & Barrere, 1927

The exposed terrestrial globe is constructed with paper on decorated metal support. Usually the base was made of ebony wood.

This publishing house produced a large number of globes at different scales and different markets (German, American, Spanish, French and English) mainly during the golden era of the French *Art Deco* period.

In spite of its size (scale 1:40.000.000), it shows a remarkably large amount of geographic information, colonies and protectorates of European powers, capitals, major cities, railroad lines, etc. A distinctive feature of this globe is the outline and direction of ocean currents prominently drawn in blue. *IGN cartographic funds.*



Marine chronometer

Ulysse Nardin, 1910. Switzerland.



Marine chronometers were precision instruments designed for the calculation of geographic longitude in navigation. They measured the difference between the local time (determined by the sextant) and the hour indicated and kept by the clock corresponding to a reference meridian. The variation of the march in one second caused an imprecision in the calculation of the geographic longitude in 464 meters referred to the equator.



IGN cartographic funds.