

Introduction

1. THE ERA BEFORE COLUMBUS

Pre-Norse voyages

The human race arrived on the American continent about 25,000 years ago, although estimates vary widely. These first discoverers crossed on foot over the land bridge that then linked the continents of Asia and America but today is the Bering Strait. Over the following millennia they gradually spread southwards to populate the entire continent. These native people developed very regional cultures. Some, such as those of the Aztec tribes in Mexico and the Inca in Peru, became very sophisticated. The arrival of the Europeans with their superior technical advances, greed for land, and most influentially their diseases, proved a turning point in their evolution. More native American Indians would die of smallpox, measles and other diseases, than directly at the hand of the invaders.

Prior to Christopher Columbus' first voyage to the American continent in 1492, there were many other Europeans who ventured into the Atlantic Ocean. Some of these are only known by legend, many are apocryphal. Their lasting effect can often be seen in cartographic form, such as the map by Nicolo Zeno published in Venice, 1558 (see entry 26). One of the earliest legends is that of St. Brendan of Ardfert (A.D. c.484—c.577), the Bishop of Clonfert in Ireland. Following the collapse of the Roman Empire, there was a period of great expansion of Celtic Christianity. It extended from Ireland north and east, and by the beginning of the seventh century Scotland, the Orkney Islands and the Shetlands had been reached. From there the missionaries crossed 200 miles of ocean to the Faeroe Islands, and another 300 miles took them to Iceland in the late eighth century. They had, however, left by the time of the arrival of the Norsemen, who found some of their relics. From about the year 900 St. Brendan's reputation as a voyager into the Atlantic Ocean grew into crediting him with, amongst other exploits, having visited the Canary Islands. About 1000 the *Navigatio Sancti Brendani* was written which related his explorations to the western limits of the known world. The descriptions contained within of the natives (Eskimos?), wildlife (the walrus?) and various physical features lead us to believe that they had possibly fled Iceland for the west coast of Greenland, where the Norsemen were also to find remnants. Early maps often illustrate the island of St. Brendan in the North Atlantic (plate I). St. Brendan's voyages are not given much credence, and there is no evidence that leads us to believe that they reached the shores of America.

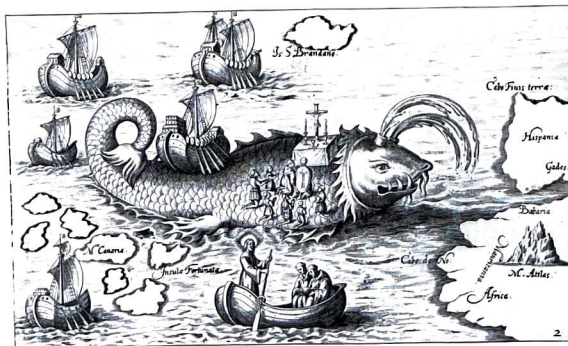


PLATE I. This illustration in Plautius's *Nova typis transacta navigatio ...* (Venice, 1621) illustrates St. Brendan taking mass on the back of a sea monster.

In numerous printed maps covering south-west North America can be found the fabled Seven Cities. It is claimed that upon the invasion of Portugal by the Moors in the eighth century, seven bishops and their followers fled to the far west across the ocean and founded Seven Cities. When the Spanish began exploring to the north of New Spain and heard of the pueblos, the Seven Cities were applied to the region. Another such tale, of late medieval Welsh poets, portrayed one Madoc (Madog ab Owain Gwynedd) as a sea wanderer. During the time of Queen Elizabeth, John Dee and Richard Hakluyt exploited him to enhance English claims to North America. From the late fourteenth century some of these legends began to appear on sea charts (usually referred to as portolans). Often a large island appears in the Atlantic called Antilia, and the Seven Cities are shown as an archipelago.

The Norse voyages

It is largely accepted by authorities today that the first landfall of the Europeans on the American mainland was not by Columbus in 1492, but some five centuries earlier by the Vikings. These Norse people were largely from the coastal fjord regions of Norway and were fiercely independent. Fleeing the stricter order imposed on the country in the late ninth century, they invaded the British Isles in the hope of a new home. Unsuccessful, they reached Iceland in 870 and formed a flourishing and substantial colony. They developed culturally, too, leaving sagas and chronicles of history. Two of these written around the thirteenth century, the *Saga of the Greenlanders* and the later *Saga of Eirik the Red*, tell of the discovery of America. The relatively sparse landscape of Iceland encouraged the search for new pastures in Greenland. In about 981 Eirik the Red established the sea route round the southern cape to the then green pastured fjord region of the south-west coast. At the time the climate was milder than it is today. He spent three years exploring the region and returned to Iceland to organise a colonising fleet. Returning in around 985 he established two settlements, one at Julianehåb, and later another one to the north-west at Godthåb. Numbering as many as 5000 settlers they both thrived by trading in the local produce; furs, hides and the rich fishing waters of the region.

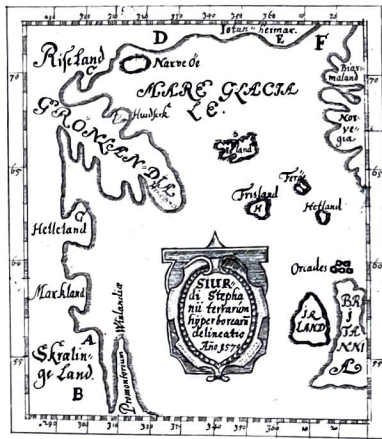


PLATE II. This map of the Norse Voyages of the North Atlantic was originally drawn by Sigurdur Stefánsson about 1590. This copy was made by the Icelandic bishop Thorur Þorláksson in 1668.

The first saga referred to above details the earliest recorded discovery of America by a European. In the year 985 Bjarni Herjólfsson, whilst crossing to Greenland, was blown off course in a storm and sighted land to the south. The voyage is recorded in detail and tells of the following five days' sailing during which he sights land twice more. The same saga records fifteen years later the voyage of Leif Eiríksson, a son of Eirik the Red. Sailing in Herjólfsson's ship and using the same route but in reverse, he left his home in Julianehåb to explore the new lands. He sighted Baffin Island and named it *Helluland* (land of flat rocks), and called his second landfall *Markland* (forest land, or Labrador). Two days later he wintered in a sound between a headland and an island and called it *Vinland* (wine land). Noting the length of the shortest day, the saga tells us that this location was probably south of the St. Lawrence River. He returned to Greenland with vines and timber (plate II). His brother, Thorvald, was the next to visit, remaining two winters in the same site. A number of voyages occurred in the following years, the majority were to collect timber and other supplies. Over the centuries the climate deteriorated, and the Greenland colonies died out as the sea lanes

became disrupted. The last record of the colonies appears to be in the second decade of the fifteenth century. Knowledge of these voyages did not permeate south to the cartographic centres of the Mediterranean. It is believed therefore, that Columbus was not aware of them. In the 1960s excavations at L'Anse aux Meadows on the northern tip of Newfoundland located remains of a Norse presence. Evidence of the smelting of bog iron, the repairing of ships and timber exports were found.

Pre-Columbian cartography

Medieval cartography, particularly that produced in England, portrayed the world as a globe with the Christian capital of Jerusalem at its centre. One of the most famous of these *Mappae Mundi* resides in Hereford Cathedral, England, and dates from c.1275. Their most likely use was for pilgrims travelling between England and the Holy Land. The first book of maps widely distributed in Europe accompanied the classical work *Geography* of Claudius Ptolemaeus (c. A.D. 90—168) from Alexandria, Egypt. It was formed largely of tables of longitude and latitude for thousands of places around the known world. These naturally were fraught with errors as longitude, in particular, could only be calculated from transmitted knowledge of travel times as no scientific method of measurement had been invented. The Byzantine monk Maximos Planudes (c.1260—1310) discovered a manuscript of the work and was one of the first to recognise its importance. From the information within he drew a series of maps. During the ensuing years a number of duplicates were made. It is believed that he was not alone in having maps drawn from it, there were seemingly other qualified cartographers in Constantinople (Istanbul, Turkey) capable of utilising the tables. However, it is known that the Arab world possessed at least one example of the book with maps in the tenth century. The flowering of the Renaissance in Italy brought about a desire for ancient Greek and Egyptian literature. It was not until about 1400 that one of these 'atlases' reached Italy from Constantinople. Some of these survive today. The first printed version of the atlas came from the press of Domenico de Lapis in Bologna, 1477. Others followed in Rome, 1478, Florence, 1482, and Ulm, 1482 (plate III). Through the medium of these printed maps knowledge of the world was disseminated throughout Europe. Their inaccuracies were soon noticed and in a number of later editions supplemental *Tabula Moderna* were added to the work.



PLATE III. An example of Ptolemaic cartography, this map of the world appears in the first woodcut edition printed in Ulm, 1482.

The beginning of the great age of European discovery

One event that contributed to the rediscovery of America was the fall of Constantinople to the Ottoman Turks in 1453. This drastically reduced the flow of trade with Asia along the silk road and encouraged the search for a sea route. The Portuguese and the Spanish were to play an important part here because they had Atlantic coastlines giving them easy access to the expected route. The most organised explorations were at the hand of Dom Enrique of Portugal (1394—1460), named Henry the Navigator by a nineteenth-century biographer. His part in the conquest of Ceuta, Morocco, resulted in his knighthood and other titles. This success enabled him to settle in Sagres as the Governor of the Algarve, and he surrounded himself with scientists and cosmographers. He began the first organised programme of geographical exploration utilising the recent advances in both mapmaking and, particularly, shipbuilding. Two distinct areas of exploration evolved, westward, into the Atlantic Ocean and southwards along the west coast of Africa. The goals were to locate the sources of the gold arising from the African continent, the legendary Christian kingdom of Prester John, and a route to the Indies. The first success was the rediscovery of the Madeira Islands in 1419, followed by the earliest sighting of the Azores in 1427. It was not until Enrique's fifteenth attempt in 1434 that a voyage passed the southern known limit of the African coast at latitude 26° north. In the ensuing years he advanced to Cape Verde at 15° north by 1445, the Cape Verde Islands in 1456, and by the last of his voyages 8° north. This represented some 1500 miles of coastline, a remarkable achievement. These voyages were the precursor of the great age of European discovery. They continued after his death in 1460, particularly under the impetus of King João II after he came to the throne in 1481. They reached the Congo in 1484, and eventually under Bartolomeo Dias rounded the southern cape of Africa in 1487. Dias' voyage is recorded in the manuscript map of Henricus Martellus drawn not long after his return in 1489. However, within a few short years Europe's attention was drawn to the newly discovered lands in the west and it was not until Vasco da Gama in 1498 that the route was extended to Calicut, India.

2. COLUMBUS AND THE FIRST MAPS TO ILLUSTRATE THE NEW WORLD 1492—1511

Columbus

The most famous explorer of the new world Cristoforo Columbo (Columbus) was born in Genoa, Italy, in 1451. Taking to the sea at an early age, he accompanied a convoy of merchants in 1476 to Lisbon and England. Attacked by a French war fleet, they were scattered along the southern coast of Portugal. Taking refuge in Lagos, Columbus made his way to Lisbon where he settled amongst the Genoese community which included his younger brother, the mapmaker Bartolomeo. In Portugal Columbus improved his cartographic and navigational knowledge, and made several voyages, including one to the Gold Coast of Africa. However, it is his supposed voyage to Iceland during this period that has attracted so much contention. His son, Ferdinand, claimed to have seen amongst his father's papers a reference to a voyage to Iceland said to have been undertaken in February 1477. The time of year mentioned would make it improbable, and the other evidence given is similarly full of errors.

By the early 1480s he became obsessed with the notion that it was feasible to reach the Orient by striking out boldly across the Atlantic. At the time every educated person believed the world was round, and no land mass was known to be between Europe and Asia. Columbus was not the first to conceive of such an idea, but it had always been rejected on the basis of viability. The dominant conception of the world at the time was that of Ptolemy. This revealed that the distance westwards

from the west coast of Europe to Asia was some 10,000 miles. Ptolemy did, in fact, underestimate the size of the earth by a quarter. Even with the advances in shipbuilding technology no vessel had been built that could withstand such a voyage. However, Columbus, after reading other Greek and Arab authorities, believed that the distance was smaller than Ptolemy indicated. Coupled with the account of Marco Polo which indicated that the rich island of Cipangu (Japan) lay some 1500 miles off the coast of Asia, Columbus believed that the distance between the Canary Islands and Japan was just 2400 miles. This was well within the capabilities of the vessels of the day. In 1484 Columbus presented his plan to King João II of Portugal, who after consultation with experts rejected it. Angry, Columbus left to present his plan to the king's rival in Spain.

Columbus arrived in Palos, Spain and eventually received an audience with King Ferdinand and Queen Isabella in 1486. The project again went to a committee which deliberated for some years before similarly rejecting it. Appeals followed but were complicated by Columbus' large demands should he be successful. These were for numerous hereditary titles, including the offices of viceroy and governor of all the lands he should discover, and a tenth of all the profits from them. Further pressure, and the great geographical advances made by their chief rival, Portugal, eventually persuaded the queen to back the voyage. In Palos Columbus obtained three vessels known to every American student, the *Niña*, *Pinta* and the *Santa María*. The first two were Portuguese style caravels, the successful ships that had carried the Portuguese so far in Africa. These were small vessels with broad bows, a high narrow poop, and usually triangular lateen sails which improved their ability to sail against the wind. However, during longer voyages their weakness in open sea had been exposed. The *Santa María* had greater carrying capacity, was heavier and broader in the beam, and was square rigged on main- and foremasts. This type of vessel was called *nao*, and would carry Europeans to America for the next century.

With about ninety men and boys Columbus set sail on 3 August 1492, and shortly after stopped at Las Palmas in the Canary Islands to repair some damage to the *Pinta*. By the time they sighted land on 12 October, the crew of the flagship were near mutiny. The location of the first landfall has been hotly disputed over the years but the current theory has it as San Salvador, or Watling Island, in the Bahamas. Columbus soon realised from the natives (which he naturally called Indians) that he was not near Japan, and continued to the south-west to discover the island of Cuba. On Christmas Eve the *Santa María* foundered

and disappointed that he had not located Japan, Columbus returned to Spain. One manuscript map survives that is ascribed to the hand of Columbus, although there is no evidence to support this. It is a simple outline map of the northern shores of Hispaniola, noting the new town of Natividad (plate IV).

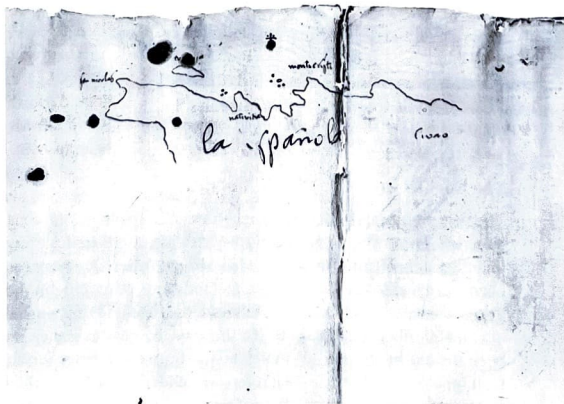


PLATE IV. This sketch map of the north coast of Hispaniola is identified by some as being by the hand of Christopher Columbus himself in 1492-93. If so it is the earliest surviving map of America. From the timbers of the foundered *Santa María* Columbus built the settlement of *natividad*.

During his return voyage the ships were subjected to a storm, and fearing their loss at sea he wrote an account of the voyage and the discovery on parchment. This he placed carefully in a



PLATE V. Although a number of editions appeared of the Columbus letter, only this Basle issue of 1493 bore illustrations. Despite being purely imaginary they are the first of the New World.

wooden cask, and committed it to the sea. On the following day, 15 February 1493, he wrote a letter to Luis de Santangel. On his return he stopped in Santa Maria, in the Azores, and in Lisbon because of the storms. In Lisbon he wrote a second letter to King Ferdinand and Queen Isabella before continuing his journey to Palos, where he arrived on 15 March. At the time the Spanish court was at Barcelona where he sent these two letters, and a third written to Gabriel Sanchez. The letter to Santangel was published in Barcelona sometime in April and is the first printed account of America. On just two folio leaves, it survives in only one known example discovered about 1889. Passing through the hands of J. Maisonneuve of Paris and Bernard Quaritch of London, it was acquired by James Lenox, whose collection now forms part of the New York Public Library. The letter to Sanchez was translated into Latin and published in Rome. There were a number of further editions in the same year. The Basel edition contained eight woodcuts. These are the earliest printed illustrations of the New World (plate V), although they are largely allegorical. Columbus made three further voyages and although he coasted the waters of Central and South America he never beheld North America. He died at Valladolid, Spain, 20 May 1506, still believing that he had been to Asia.

The English voyages to North America

The initial voyages of discovery in America following Columbus were in the West Indies and South America. The mainland of North America was yet to be rediscovered. It is a much discussed possibility that the English from Bristol may have found American shores as early as 1480. There had certainly been a great amount of trade with Iceland, and cod-fishing in the waters nearby since at least 1424. Tension between England and Denmark over Iceland (a Danish dependency since 1380) meant that after 1480 this began to wane. To this day the only evidence indicating that American shores had been visited by the Bristol merchants is found in a letter written by John Day to, most probably, Columbus (see below). In it he refers to the fact that '*It is considered certain that the cape of the said land [that discovered by Cabot in North America] was found and discovered in other times by the men of Bristol*'.

The first known landfall of this period in North America was by John Cabot, an Italian travelling in the service of England. Unfortunately, we know very little of him. No portrait survives or any sample of his writing, and we do not know his date or place of birth. He was possibly born in Genoa. He certainly spent a number of years in Venice, from where it seems he made a number of voyages engaged in the spice trade, possibly travelling as far as Mecca. Like Columbus he conceived of a plan to reach the Indies by sailing westwards. Documents survive to show that he was quite probably

present in Spain for the triumphant return of Columbus in 1493. By 1495 Cabot was in England attempting to gain the interest of Henry VII in his plan. Eventually gaining the necessary support, he set sail from Bristol with only about twenty men in the *Mathew* in May 1497. He landed on American soil on 24 June and took possession of it on behalf of England. The location, and Cabot's route thereafter, are also unknown. The most detailed knowledge of the voyage is found in a letter discovered in 1956 by Dr. Louis Vigneras in the archives of the Simancas in Spain. Written in Spanish by the Englishman John Day between December 1497 and January 1498, it is addressed to '*Almirante Mayor*', who is presumed to be Columbus. It states that after leaving southern Ireland Cabot sailed south-west and made landfall '*west of Bordeaux River*'. This latitude would place Cabot in the region of Cape Breton Island. Day then describes how Cabot's return journey, following about a month sailing along the American coast, was made from a point '*west of Dursey Head*', Ireland. This would translate to approximately the northern tip of Newfoundland.

Cabot's second voyage consisted of five vessels and left Bristol in 1498. One vessel put in to Ireland suffering damage. The remaining four ships with John Cabot sailed out into the Atlantic never to be seen again. Their fate is one of the great mysteries of the history of the New World. Following the disastrous second voyage of Cabot the English concentrated on the remarkably rich fishing grounds off Newfoundland and made few further attempts at exploration. Cabot's son Sebastian made exploratory voyages in 1502 and again in 1508—09, little is known of either of them with certainty.

Credence is given to Day's letter by the remarkable similarities the details bear to the earliest known surviving world map to depict the New World (plate VI). This is the only known document to illustrate unequivocally the findings of Cabot. Drawn by Juan de la Cosa, it was discovered in an antique shop in Paris, in 1832, by Baron Walckenaer, in whose possession it remained until his death. When it came up for auction in 1853, the noted bookdealer Henry Stevens was keen to acquire it. Leaving a bid of 1000 francs, he was soon informed that the bid would not be enough. Doubling it, he was again told that it would not win. He raised his bid to 4000 francs on the day of the sale but it was acquired by the Queen of Spain for 4020 francs. It resides today in the Museo Naval, Madrid. The northern portion of North America begins as a traditional north-east Asian coastline. It then begins using Day's narrative marking with a flag a point west of Dursey Head, Ireland, *cauo de ynglaterra*. The coastline extends westwards and bears four further flags, the last just beyond *Mar descubierto por inglese*, which is due west of the Gironde (Bordeaux) River, in France. It then extends towards the recorded discoveries of Columbus in the West Indies. Central America is conveniently obscured by a portrait of St. Christopher, signed and dated by de la Cosa. Much of the remaining cartography was learnt first hand as he sailed as a pilot with Columbus and made three voyages of his own to the north coast of South America. The latest information depicted is the discovery of Brazil, news of which reached Europe about June 1500. America appears oversized in relation to Europe, which not unexpectedly is far more accurate. However, some scholars argue that this map is a copy of a lost original and was drawn sometime before 1510. Similarly that the Old World has been attached to the New World which is drawn to a different scale.

The Portuguese voyages to North America

It was the Portuguese who made further albeit inconsequential voyages. João Fernandes, a humble landowner, or *lavrador*, from Terceira in the Azores, received letters patent from King Manuel in October 1499 to search for new lands. His voyage is recorded on the Cantino planisphere, 1502. A legend near Greenland recalls his landfall at Cape Farewell, 1500. It was to be named after him. Following the English voyages in search of a North West Passage, the old Norse name of Greenland was revived, and 'Labrador' was moved westwards and applied to mainland North America as it is to this day.

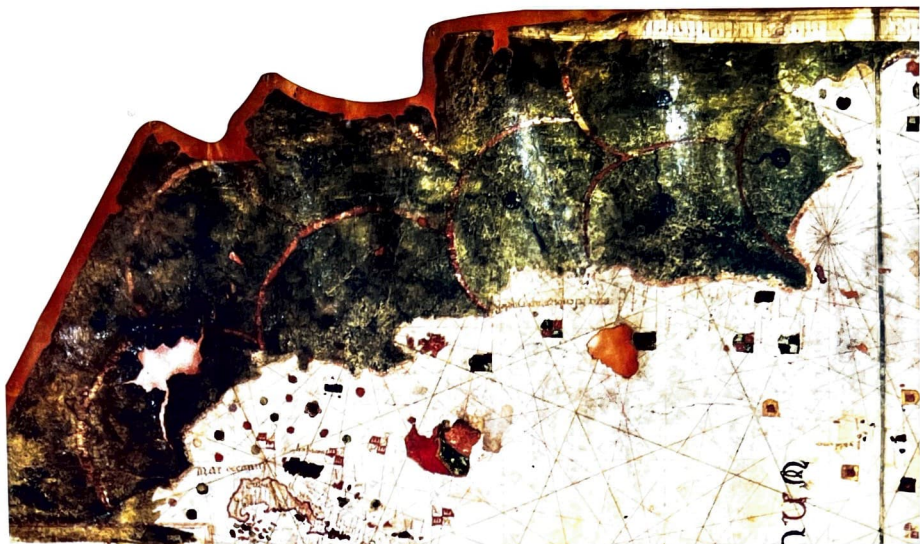


PLATE VI. The celebrated Juan de la Cosa portolan chart, 1500, the earliest proven cartographic depiction of the New World.

Another Portuguese of the same period had similar interests in both the Azores and the New World. Gaspar Corte Real was the youngest of the three sons of João vaz Corte Real and had considerable interests in the island of Terceira. Serving the king before his accession to the throne, Gaspar was offered extensive privileges to undertake a voyage of discovery in the New World. It is recorded that he landed at about 50° north, and named it *Terre Verde*. This is largely accepted to have been Newfoundland. Returning to Lisbon in the autumn of 1500, he obtained three further ships and departed in May 1501 for another voyage. In October 1501 two of the ships returned, but Corte Real was not heard of again. There were no clues as to how he was lost, although it is recorded that his expedition reached the northern shores of America. Early in 1502 the king assigned Gaspar's half of the territory discovered to his next eldest brother, Miguel. In May 1502 Miguel left with two vessels for Newfoundland. He was lost with all hands, and only the accompanying ship returned. The eldest brother, Vasco Annes, asked the king for permission to go in search of his brothers. This request was refused.

The return of two of Gaspar's vessels to Lisbon in the autumn of 1502 was witnessed by Alberto Cantino, an Italian diplomat in the employ of the Duke of Ferrara. At the latter's request, he had an unknown cartographer clandestinely make a beautiful world map (plate VII). Preserved today in the Biblioteca Estense, Modena, Italy, it depicts the *Terra del Rey de Portugal*, completely ignoring the earlier explorations along this coast by Cabot. A Portuguese flag is placed here and the nearby legend states '*by command of his most excellent majesty D. Manuel, King of Portugal, by Gaspar de Corte Real, a gentleman of the Royal household ...*' The island is depicted with a forest of tall trees as described by the Corte Reals, and is placed mid-Atlantic some considerable distance from the mainland of the new continent.

Harrisse, in his *The Discovery of North America*, records the full and fascinating history of this document. Cantino personally carried it to Genoa in November 1502, where it was entrusted to be sent on to the Duke. It remained in the house of Este, in Ferrara, until 1592 when the entire library was transferred to Modena after Pope Clement VIII stripped Cesare d'Este of his duchy. At some point it was used to cover a screen. Unfortunately to achieve this a strip was removed from the top. This appears to have contained some kind of title, as the remains of some of the descender characters can still be seen. The map was stolen from the palace during a populist outbreak in 1859. A few years later Signor Boni, the librarian of the Biblioteca Estense, happened to pass a pork butcher's shop in the Via Farini where it was still being used as a screen. He bought it, removed it from the screen, and presented it to the Este Library.

This is the earliest surviving chart depicting America that can be confidently dated. One of the most fascinating aspects of the map is the delineation to the north-west of *Yssabella* (evidently Cuba) of a land mass. This appears to be remarkably similar to the Florida peninsula, if so, it is depicted some years before its first recorded European discovery in 1513. It is highly likely that Florida was seen earlier as the strait with Cuba was already employed by the Spanish for their return journeys. It is probable that Juan Bermudez would have used it when he discovered Bermuda in 1505. Another theory is that it actually represents the Asian mainland that Cabot believed he had reached. This form for the North American region was influential and can be seen in later works such as the Caveri portolan, c.1505, and Waldseemüller's maps of 1507 and 1513. The demarcation line of the Treaty of Tordesillas, signed by both Spain and Portugal in 1494, is prominently displayed for the first time. This divided the world's non-Christian territories between them. To the east of it became Portuguese, and to the west was Spanish. Greenland is similarly adorned with a Portuguese flag and a legend stating that '*according to cosmographers it is called the point of Asia*'.

One further important portolan survives from the period prior to the first printed maps to depict America (plate VIII). Signed by Nicolo Caveri (Canerio), Genoa, it bears a strong resemblance

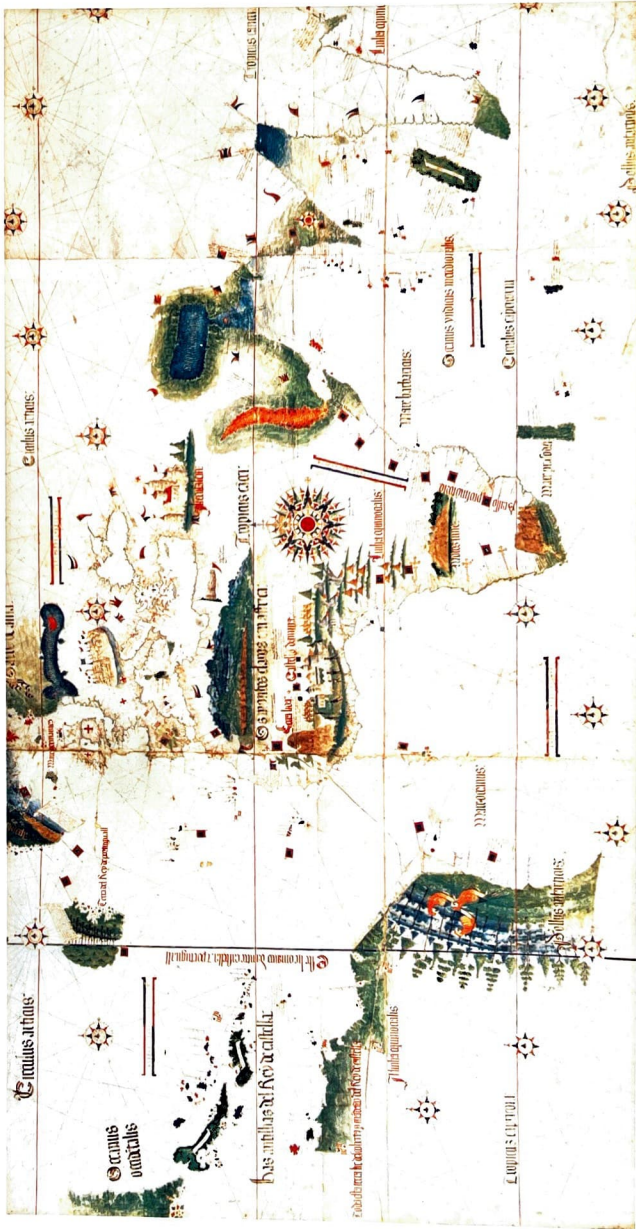


PLATE VII. This beautifully drawn portolan by Alberto Cantino in 1502 is the earliest positively dated map of America.



PLATE VIII. Nicolo Caveri (Camerio), c.1505, indicating for the first time a rudimentary Gulf of Mexico.

to the Cantino chart, displaying the use of Portuguese sources. Indeed, it is stated on the map that Caveri is Genoese, indicating that the map could well have been constructed by him in Portugal, one of numerous talented Italians in that country at the time. The fact that the nomenclature is decidedly Portuguese, and not Italian, would support this hypothesis. It is interesting to note that within the legend in the West Indies, which is largely copied from the Cantino, *ienoize* (Genoese) follows Columbus' name. The coastlines and nomenclature of the Americas are virtually identical to the Cantino with the exception of the addition of new placenames from two voyages of exploration in South America. These are the voyages of 1501—02, including amongst others Amerigo Vespucci, and 1503—04 undertaken for Fernando de Noronha. This indicates a probable year of 1505 for the map. One further difference here is the inclusion of a rudimentary Gulf of Mexico before the voyage of Pineda in 1519. This delineation was utilised in a number of maps in the ensuing years, including the Waldseemüller, 1507. It is interesting to note the circular medieval *Mappa Mundi* at its centre. Contrasting this is one of first appearances of scales of latitude; they can also be seen on the manuscript map of Pedro Reincl, also known as Kunstmann I, dated to sometime after 1504. This perception of the North American coastline would not be corrected until the voyage of Verrazzano, 1524.

3. THE EARLIEST PRINTED MAPS TO DEPICT AMERICA

There are a total of seven known printed world maps depicting America that pre-date the Peter Martyr of 1511, the first one to be devoted to the New World. Many of those produced following the momentous voyage of Columbus in 1492 continued to depict the world along the classical lines of Ptolemy.

1506	Florence or Venice	Giovanni Matteo Contarini—Francesco Rosselli
1507	Rome	Johann Ruysch
1507	Strasbourg	Martin Waldseemüller, wall map
1507	Strasbourg?	Martin Waldseemüller, globe gores
c.1508	Florence	Francesco Rosselli, oval map
c.1508	Florence	Francesco Rosselli, rectangular map
1509	Strasbourg	Anonymous

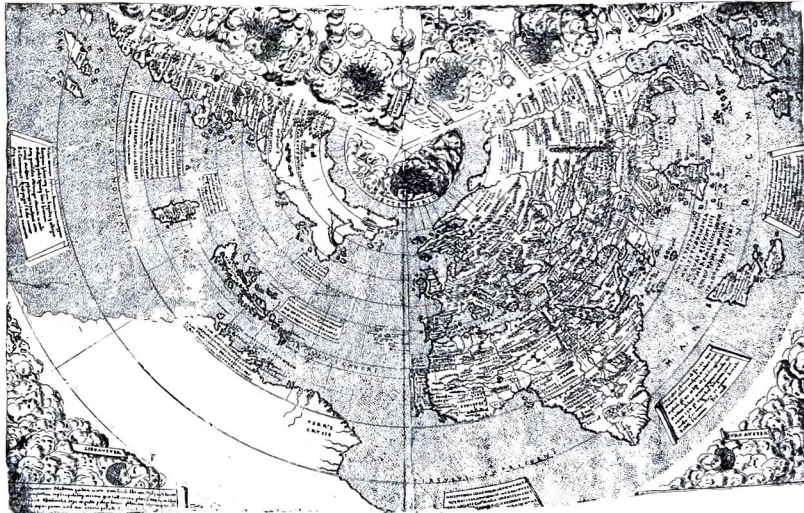


PLATE IX. The Contarini—Rosselli of 1506 is the first known printed map to depict America.

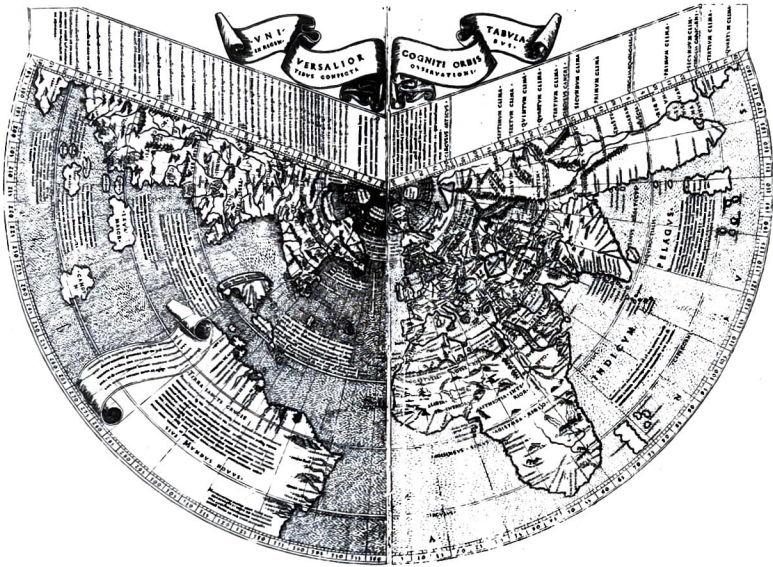


PLATE X. This Johann Ruysch world map published in Rome, 1507, is the first printed map by a visitor to the New World.

The Giovanni Matteo Contarini—Francesco Rosselli, 1506 (plate IX)

The first of these new maps survives in only one known example; acquired by the British Library following its rediscovery in 1922. It was printed in either Florence or Venice. A legend near South Africa states that it was designed by Giovanni Matteo Contarini, engraved on copper by Francesco Rosselli, and is dated 1506. Fan shaped, it uses the coniform projection, and depicts Greenland and Newfoundland as an eastern extension of Asia. A legend near Newfoundland indicates the land was discovered by the Portuguese. This is a reference to the voyages of the Corte Real brothers in 1500—02. The West Indies are identified as the Spanish discoveries of Columbus. Little is known of Contarini beyond the statement on the map that he is '*famed in the Ptolomaeian art*'. Rosselli is well known as the engraver of a number of early maps in Florence.

Johann Ruysch, 1507 (plate X)

The second known printed map to depict America survives in a number of examples. This is because it was included in two editions of the Ptolemy atlas published in Rome. Despite this it is rarely available for sale. It is the work of Johann Ruysch, and is the seventh new map produced for this expanded edition of the atlas first issued in 1478. Clearly prepared late in 1507, it is not in the list of contents until the following year's edition, but is sometimes found bound into examples of the atlas. A legend near *Taprobana* (Sri Lanka) identifies a Portuguese voyage to the area in 1507. Using the same projection as the Contarini—Rosselli it draws upon largely Portuguese sources, but illustrates independent knowledge. This it appears is the first hand knowledge of Ruysch himself who, it is said in the commentary that accompanies the map in the following edition of 1508, '*has navigated from the southern part of England to 53° north latitude, and that he has sailed on the latter parallel as far as the eastern coasts [of America]*'. Newfoundland is named *TERRA NOVA* for the first time, a harbinger of its future name. Off the coast *I BACCALAVRAS* is the most recognisable name, being, in fact, Baccalieu Island in the south-east of Newfoundland. The Cape of the Portuguese is found nearby. Cuba is delineated differently with its west coast obscured by a scrolled legend, and South America is named *MVNDVS NOVVS* for the first time.

Martin Waldseemüller, 1507, and the voyages of Amerigo Vespucci (plate XI)

Before examining the next map it is necessary to discuss Amerigo Vespucci. Born in Florence, 1454, he spent the majority of the first thirty-eight years of his life there, and worked in the service of the powerful Medici family. In 1492 he was sent to the Seville office, where in 1496 he was promoted to be the Medici agent. Making the acquaintance of Columbus whilst he prepared for his third voyage, Vespucci became intrigued by the newly found lands. It is generally accepted that he made his first voyage in 1499, although when the account of it was published in 1504 he claimed to have reached South America in 1497. This antedated Columbus' discovery of the mainland, and along with Vespucci's later voyage of exploration it encouraged the perception that Vespucci was first. Bear in mind that Columbus spent the last years of his life in a bitter feud with the king and queen over his titles, and Vespucci on the other hand became a member of the Casa de Contratación, the clearing house for all overseas voyages. In 1508 he was named its first Pilot Major, responsible for the examination of mariners and the maintenance of an up-to-date map of the world, the Padrón Real. It is, therefore, feasible to understand why when Martin Waldseemüller produced his large twelve sheet wall map of the world in 1507 he named the mainland 'America' in honour of Amerigo Vespucci, whose portrait is prominent at the top (plate XI). This error he later tried to correct, but by then it had become entrenched in the European vernacular.

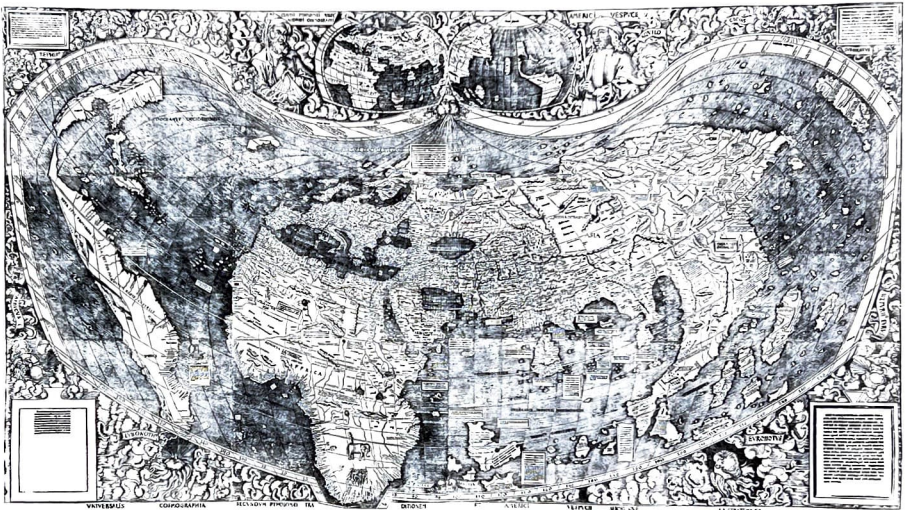


PLATE XI. Martin Waldseemüller's extremely significant wall map of 1507 was to give the New World its name, 'America'.

The existence of this map had been known for many years before an example was finally located in 1901 by Professor J. Fischer, in the library of the Schloss Wolfegg, Germany. It was found bound in sheet form alongside his other great work, the *Carta Marina*, 1516. It remains the sole survivor of a recorded 1000 copies printed. It is in twelve sheets taken from woodblocks prepared at St. Dié for the Duke of Lorraine, and was most probably printed at Strasbourg. Using a modified version of the Ptolemaic projection Waldseemüller breaks away from the mainstream of cartographic thinking and depicts quite clearly the North and South American continent separately from Asia. These two land masses are nearly one except for a narrow strait in Central America, although in the smaller inset map at the top they are joined. To the north-west of Cuba can be found a gulf clearly



PLATE XII. The world map by Peter Apian, published in Vienna in 1520, is the earliest obtainable to name 'America'.

derived from the Caveri portolan of c.1505. Newfoundland is depicted in the mid-Atlantic. This new delineation would influence future maps for many years. In the same year Waldseemüller published a small set of gores used to make a globe of about 180 mm. in diameter. They represent a largely unaltered reduced version of the wall map, although Newfoundland is omitted. Prior to the discovery of Waldseemüller's wall map, the earliest one known to name America was by Peter Apian (plate XII). Largely a reduced derivative of the Waldseemüller, it first appeared in the Viennese edition of Caius Julius Solinus' *Polyhistor* in 1520. It is to this day the earliest obtainable map to name 'America'.

Two further maps by Francesco Rosselli, c.1508

Two additional small world maps exist of this period by Rosselli. Both survive in just a few examples. One uses for the first time an oval projection. Although undated it appears to be a slight improvement on his earlier work and includes the results of Columbus' fourth voyage. The coast of North America is similar to that of the Juan de la Cosa using Cabot cartography, and is delineated more clearly here as an extension of the Asian land mass. It is attributed to c.1508, as is the companion map with which it is found bound in the National Maritime Museum, Greenwich. This second map is within a rectangular frame and is laced with the rhumb lines typical of navigational charts. Cartographically North America is virtually unaltered, although this map could possibly be of a slightly later date.

The last of the pre-Martyr maps is unattributed and was published in Strasbourg, 1509. Printed by J. Grüniger, it is a small globe appearing on the title page of a geographical tract. Largely depicting Europe and Africa, to the south-west is a small area of land named *niew welt*.

4. PRINTED MAPS OF NORTH AMERICA FROM 1511

North American cartography to Ortelius, 1570

The first printed map devoted to America appeared in the *Legatio Babylonica ...* by Peter Martyr d' Anghiera, and was published in Seville, 1511 (see entry 1). Immediately the Spanish king issued a decree forbidding the map's distribution, as it revealed sensitive information about the New World. Both Spain and Portugal kept their knowledge closely to themselves. Some of it escaped, such as in the Cantino chart of 1502. But it was the other European countries who would largely be responsible for the dissemination of American cartography. The first half of the century produced maps largely printed either in Italy or in Germany. In 1513 Waldseemüller published his own edition of Ptolemy's *Geographiae* which contained an American map drawn from his own wall map of 1507.

In the years 1519—21 Hernando Cortés was conquering one of the great civilisations of the modern era, that of the Aztecs. To keep the king of Spain apprised of his progress, he wrote a series of letters. The second reported on the initial occupation of *Temixtitan*, present day Mexico City. This letter was published in both Nuremberg and Venice in the year 1524. Each contained a woodcut map of the old city, and alongside the first accurate delineation of the Gulf of Mexico (plate XIII). This largely represented the expedition of Alonzo Alvarez de Pineda in 1519. Searching for the elusive passage through to the Pacific Ocean first sighted by Vasco Nuñez de Balboa in 1513, he followed the coastline throughout the Gulf, proving beyond doubt that the North and South American land masses were one.

The earliest maps of America displayed a large South American land mass, but the cartographers were still confused by the northern one, many depicting it as an extension of the Asian land mass.

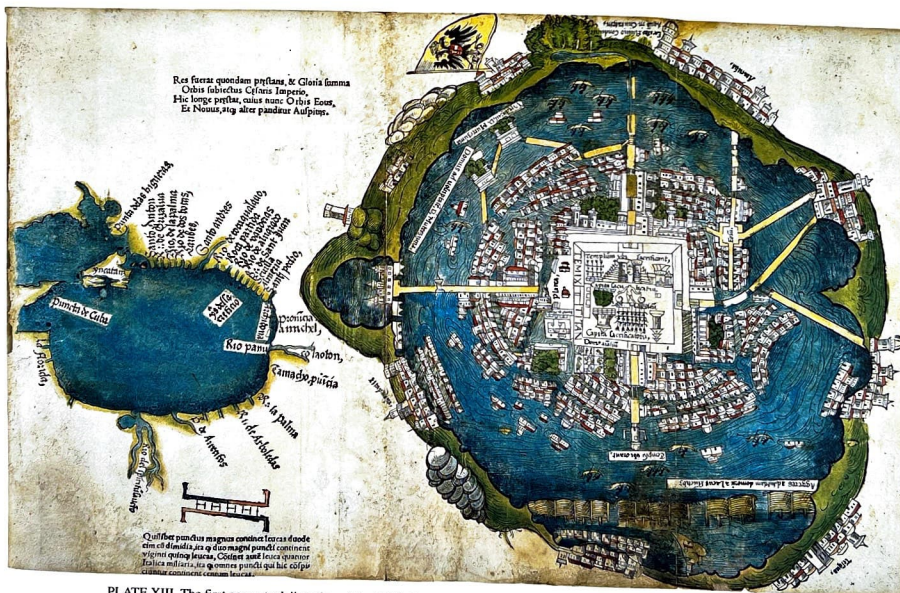


PLATE XIII. The first accurate delineation of the Gulf of Mexico appears alongside a depiction of the Aztec capital *Temixtitan*. It accompanied the 1524 Nuremberg edition of Hernando Cortés' second letter to the King of Spain. (Entry 5).

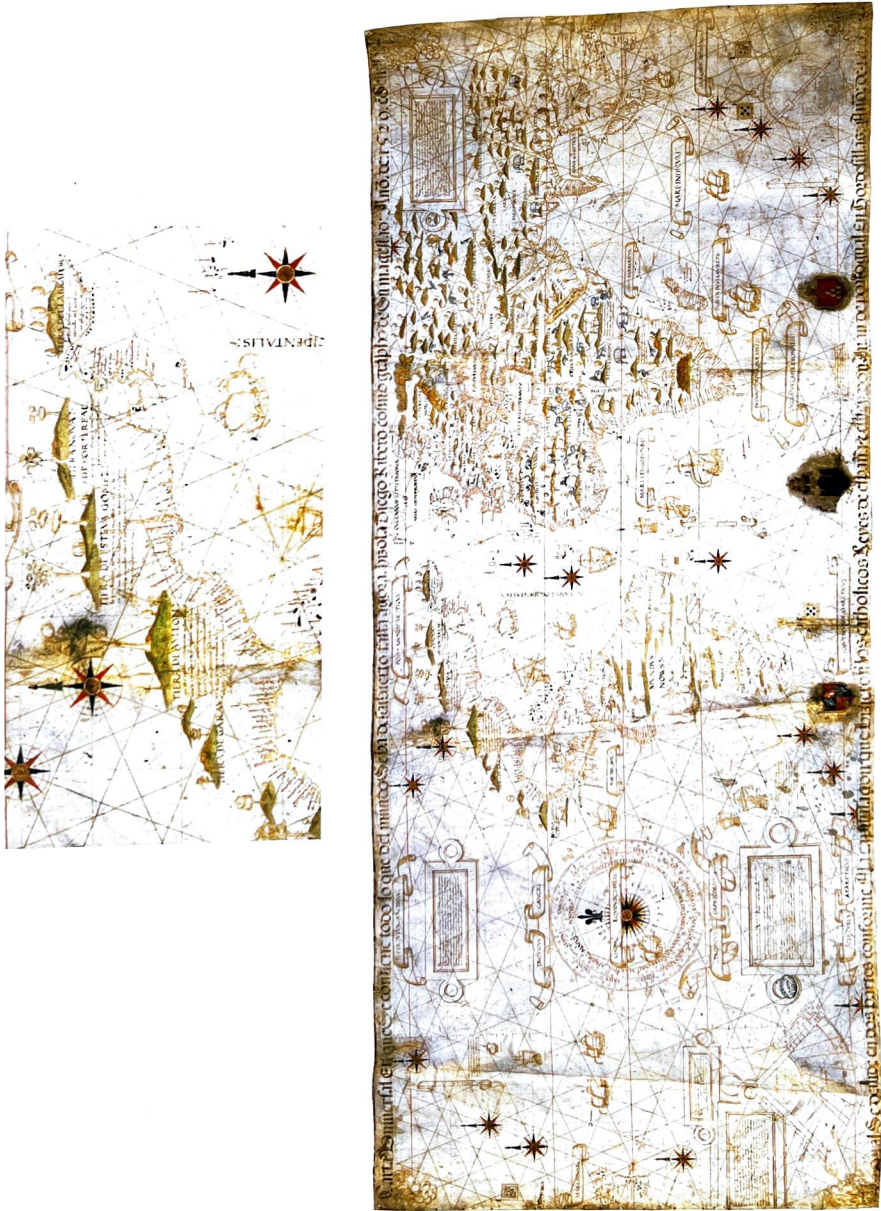


PLATE XIV. The Diego Ribero portolan of 1529 is considered one of the most beautiful of the early portolans of the world.

Various parts of the coast had been visited, but little had been accurately noted. It was not until the voyage of Giovanni di Verrazzano on behalf of the French in 1524 that the extent of the Atlantic coastline was realised. Even then it would be another 130 years before it would be relatively accurately portrayed. The majority of the west coast, of course, would remain a mystery until the era of Captain James Cook in the 1770s. As with many new discoveries the first cartographic representations of them were often in manuscript. One of the finest of this period is that of 1529 by Diego Ribero (plate XIV), a Portuguese in the service of the Charles V of Spain, who had twice navigated to India and succeeded Sebastian Cabot as Pilot Major. Here the world as we know it is slowly taking a familiar form. This map recorded the latest information, although it has to be noted that Verrazzano's voyage was omitted. The results of this journey first appeared in the chart of the same year by his brother Gerolamo. Ribero's chart can be seen in printed form on the extremely rare Giovanni Battista Ramusio of 1534.

The mid-sixteenth century, North America develops a recognisable form

The first printed representation of Verrazzano's voyage is on the highly influential continental map of Sebastian Münster published in Basel, 1540. Through the medium of his atlases, which ran to some thirty-three editions over the ensuing thirty-eight years, an ever increasing proportion of the European public were becoming aware of America. In 1545 another less influential map appeared in Valladolid, Spain. Of the northern waters of the Atlantic Ocean, it accompanied Pedro de Medina's influential book on navigation and would be followed by a number of later mapmakers. Another Spanish map appears in the *Istoria de las Indias* by Francisco Lopez de Gómara, 1552. Although rather simple, its delineation of the west coast of North America is remarkably accurate.

Münster aside there followed a period of Italian dominance in cartography, generated by the flowering of the Renaissance. The most important cartographer of this period was Giacomo Gastaldi, whose beautiful little atlas of 1548 contained the first regional maps of North America. In his pamphlet entitled *La Universale Descrizione del Mondo*, printed in 1561, he describes a strait between the continents of Asia and America. Here he confronts an issue skirted by the majority of mapmakers and separates confidently the two land masses by a Strait of Anian. In 1939 a nine sheet world map by Gastaldi was discovered. It is currently the map ascribed to accompany this pamphlet. This sole surviving example resides in the British Library. One of the most important American maps of this period was undoubtedly the Paolo Forlani printed in Venice, 1565. This incorporated Gastaldi's Strait for the first time and is by far the most detailed map produced to date.

The first map published in the Low Countries to depict America was the curious little one by Franciscus Monachus, c. 1527. The next accompanied Jean Bellère's edition of the Lopez de Gomara first published in Spain. Printed in 1554 it went through numerous editions. In 1562 a Spanish map by Diego Gutiérrez was printed in Antwerp by Hieronymus Cock. It is the first wall map of the continent and survives in just two complete examples. The greatest cartographer north of the Alps at the time was unquestionably Gerard Mercator. In 1569 he published in Duisburg arguably the single most important map ever produced. A world map in twenty-one sheets, it was the first to use the projection named after him. The projection solved the problem of depicting direction in a straight line on a plane surface. It was not until the first edition of Abraham Ortelius' *Theatrum Orbis Terrarum* in 1570 (plate XV) that the cartographic centre of Europe began to move to the north of the continent. At first this was in the culturally rich city of Antwerp. After the Spanish occupation a large number of merchants and craftsmen fled, many setting up business in Amsterdam. Within a few decades this city would dominate cartographic production like no other before or since. Ortelius' atlas sold widely throughout Europe and with many editions survived into the next century. It was also disseminated by means of a miniature version first issued in 1577. These atlases were popular as they were more manageable in size.



PLATE XV. The second state of Abraham Ortelius' classic map of the American continent published in Antwerp 1570. (Entry 39).

The first probing voyages of discovery

English mapping shadowed its economic development and at first relied on deriving maps from continental sources. The first of these was the Richard Eden of 1555. Subsequent English voyages to the New World after Cabot concentrated like those of other nations on the rich fishing grounds of the Grand Banks near Newfoundland. Following numerous publications there was a renewed period of interest in a westward passage to Asia. As the continent was now widely accepted as being a continuous land mass there could only be two courses around it, a North West Passage or a southern one. The English concentrated at first on a north-west route, culminating in the voyages of Martin Frobisher, 1576—78. The first account of these, written by George Best, appeared in London, 1578, and was accompanied by an important map of the region. In 1582 a further map by Michael Lok appeared which is of considerable importance. Illustrating the North West Passage it depicts the results of many other voyages. It bears the first reference to Sir Francis Drake's presence in the Pacific Ocean harassing the Spanish galleons.

In terms of knowledge of the interior not much had been learnt, for explorers concentrated on the safer regions of the coasts. The first probes inland occurred with the voyages of Jacques Cartier using the navigable St. Lawrence River. First hand knowledge of the interior did not occur until the intrepid explorations of Hernando de Soto, 1539—42, and Francisco Vázquez de Coronado, 1540—42. The results of de Soto's expedition around the present day southern United States were not seen on a map until Ortelius published them in 1584. The expedition of Coronado in the south-west was incorporated into the Giovanni Battista Ramusio of 1556.

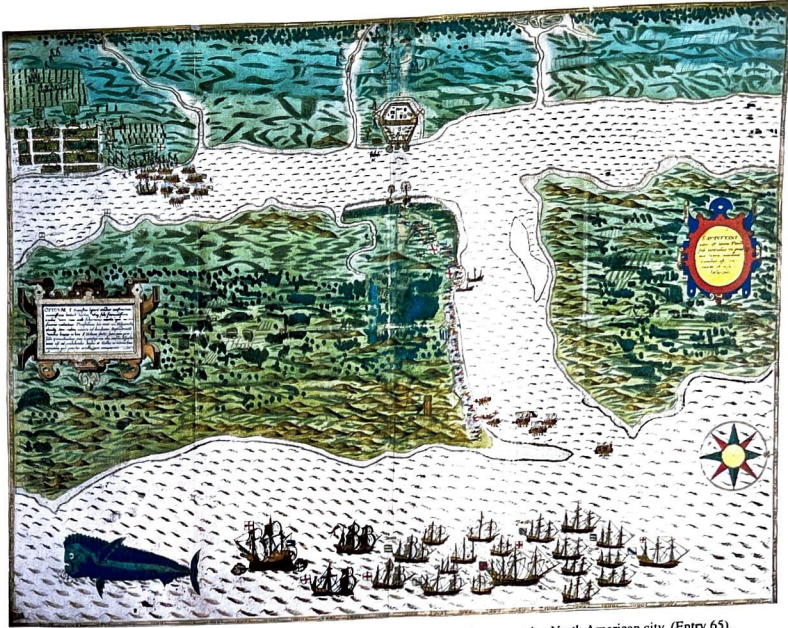


PLATE XVI. The Baptista Boazio plan of St. Augustine, 1588, the earliest of a present day North American city. (Entry 65).

The first attempts at settlement proved to be fruitless. The French were driven out of Florida by the Spanish, who founded St. Augustine in 1565 to protect the region. The French adventures here were recorded by Theodore de Bry in 1591, and the region would continue to bear their nomenclature for a century. The most influential attempt, however, was by Sir Walter Raleigh at Roanoke in Virginia. This was portrayed by de Bry, in 1590. It was, however, the Hakluyt map of 1587 that was the first cartographic representation of it. The poorly protected Spanish colony of St. Augustine was no defence against the marauding Sir Francis Drake when he attacked it in 1585. The voyage was celebrated in a set of four engravings, one of which is the earliest plan of a present day North American city (plate XVI).

In 1597 Cornelis van Wytfliet published the *Descriptionis Ptolemaicae augmentum*, the first atlas devoted to the Americas. Containing eighteen regional maps (plate XVII), it was a history of the New World to date. The maps provided a clear summation of the cartographic knowledge acquired over the past century. Clearly popular, its last edition appeared in 1615. By the end of the century two influential publishers began to flourish in Amsterdam, Cornelis Claesz and Jodocus Hondius. Claesz was responsible for a number of maps of the New World, the most important being the sea charts of *Nova Francia*, c.1594, the two of Gabriel Tatton, 1600, and his own magnificent and largely unstudied wall map, c.1602. A number of maps were produced that have disappeared over the years, many without leaving any trace. This book has unearthed some of them. Separately published ones without the protection of a binding suffered a particularly high attrition rate. Wall maps by their very size were also subjected to the elements more. Many of these have disappeared, the most famous of America undoubtedly being Gerard Mercator's of 1569. The first such map to use Mercator's projection was published by Jodocus Hondius in Amsterdam, 1598. Unfortunately we have an incomplete picture of it, as only two of the four sheets have been unearthed.

partnership. The second great house was that of Willem Jansz. Blaeu, who at first produced sea atlases and individual maps. Spurred into terrestrial atlas production in 1630, the two rivals would compete for the following forty years. During this period they produced numerous maps. Blaeu's first, and arguably most influential in terms of its derivatives, was the wall map of 1608 (plate XVIII).

The real rise in English contributions naturally followed the first successful colonial attempt at Jamestown, Virginia, in 1607. Under the capable Captain John Smith the colony would soon flourish. Despite his tremendous achievements in Virginia, its success was just as much owing to his tireless public awareness campaign in England. His map of Virginia was first printed in 1612, and appeared in a number of works constantly updated for the next twenty years. It also spawned numerous derivatives. Not stopping at Virginia he even contributed significantly to the fortunes of New England. Although he did not explore this region as much, his map in 1616 encouraged the journey of the Pilgrim Fathers. Indeed, although his discoveries do not rank as important as those of Champlain, if anyone deserved the title of the 'Father of the English colonies' it would be Smith. Further important English maps included those of Sir William Alexander, 1624, Henry Briggs and John Mason, 1625, John Speed, 1626 [27], and William Wood, 1634.

These fledgling colonies, and the not inconsiderable quantities of produce flowing back to Europe, meant an ever increasing number of voyages across the Atlantic. There arose a market for accurate sea charts, one that Blaeu was best poised to take advantage of. Around 1621 he published the extremely rare and important *PASKAART van Guinea* ... It records for the first time the voyage of Henry Hudson in the region of the river that bears his name. It is also the earliest representation of the island of Manhattan. The region between the Outer Banks of Carolina and Cape Cod remained the last part of the east coast to be mapped. In c. 1630 Blaeu published the *West Indische PASKAERT*, the first sea chart of North America to use Mercator's projection. The Netherlands were a rising important power in Europe, largely achieved on the back of commerce and trade. Their chief enemy



PLATE XVIII. The Willem Blaeu wall map as seen in this anonymous derivative in its second state published in Venice, 1646. (Entry 269).

at the time was the Catholic power of Spain and to compete with them in the American waters they established the Dutch West India Company in 1621. Their first expeditions were to South America, but in 1624 they founded Fort Orange on the Hudson River. In 1626 they centralised their scattered population at the tip of Manhattan Island, and New York City as we know it today was born. Initially known as New Amsterdam, its first appearance on a printed map is on the de Laet *NOVA ANGLIA, NOVVM BELGIVM ET VIRGINIA* of 1630.

A number of European powers became involved in North American territorial claims. Other than those of Spain, England, France and the Netherlands, were those of Sweden. The same Peter Minuit who acquired Manhattan Island for the Dutch, in 1638 founded the Swedish colony of 't *Fort Cristina* on the Delaware River. This fledgling colony, however, was squeezed between those of the English and the Dutch. It was the latter that would finally take possession of it in 1655. The main struggle then occurred between the Dutch and the English colonies which were rapidly encroaching from the south and the north-east. It was not until England's second possession in 1674 that she finally retained the region and was able to claim control of the coast from Carolina to Massachusetts. For the following century France and England would struggle for control in North America. Spain did not really become heavily involved in territorial struggles in North America until the second half of the eighteenth century.

The evolution of the interior

The year 1622 marks the beginning of arguably the most notorious cartographic misconception ever. The title page of Michiel Colijn's *Novus Orbis*, 1622, contained a small outline map of America with an insular California. It was, however, the map of North America by Henry Briggs, London, 1625, that most influenced future cartographers. The origins of this myth extend further back in time, but until now had not been seen in printed form. In 1622 Briggs wrote about an insular California, stating that he had seen a Dutch map depicting one. He was an active proponent of the theory. A number of cartographers followed suit, including John Speed, 1626 [27], and Henricus Hondius, 1636. Nicolas Sanson's *AMERIQUE SEPTENTRIONALE*, published in 1650, introduced new nomenclature to the island, which was emulated by others. He also introduced for the first time in decades new nomenclature in the south-west. Further new names were to appear in his *LE NOUVEAU MEXIQUE, et LA FLORIDE*, 1656. The next evolution of the theory first appeared in the Luke Foxe map of the Arctic regions of 1635. The configuration of the island took on a double bay along its northern shore. It did not appear in mainstream cartography until Sanson introduced it in 1656. Disproved by Father Kino in 1698, an insular California would continue to appear on maps until the 1770s.

A further important development included in Sanson's 1650 map was that of the Great Lakes region. The area first started to take form on the two Samuel de Champlain maps of 1612. His later one of c.1616 introduced some first hand knowledge of Lakes Ontario and Huron. Champlain's last map of 1632 was the first to depict the entire Great Lakes network, albeit virtually unrecognisable. Jean Boisseau's *DESCRIPTION DE LA NOUVELLE FRANCE*, in 1643, was the first to name all five lakes, but follows Champlain's cartography. It was Sanson who in 1650 depicted and named all five of them. As it was the French who were exploring these waters it was understandable that their cartography would benefit. However, until Sanson, most of the French maps remained dependent largely on duplicating contemporary Dutch material. Two further maps illustrate the influence Jesuit missionaries would have on the mapping of New France. The Francesco Guiseppe Bressani of 1657 was the most accurate map of the region to date. It is a shame that it only survives in two examples. The second, by François Du Creux in 1660, made advances in the network of rivers and lakes feeding the Hudson and James Bays. There was one further short period of English activity in searching for a North West Passage. These voyages were undertaken by Captain Thomas James,

1631—32, and Luke Foxe, 1631. Both resulted directly in two English maps, the first by James in 1633, and the second by Foxe in 1635.

The east coast colonies expand

By the middle of the seventeenth century the colonial expansion was gathering pace and was particularly seen along the Atlantic seaboard. The first maps of the Dutch colony of the New Netherlands were largely outline in nature. The earliest to record the region in detail was that of Willem Blaeu, 1635. In 1651 Joannes Janssonius published his influential *BELGII NOVI ANGLIÆ NOVÆ*. The detail included within was remarkably up to date, even the English colonial encroachment is accurately portrayed. The first derivative of this is also of note. The Nicolaas Visscher of c.1655 introduced one of the earliest representations of New Amsterdam, present day New York. Between them they generated a celebrated series of maps by other Dutch cartographers (plate XIX). In 1646—48 the Englishman Sir Robert Dudley published in Florence the first sea atlas of the world in six large parts. This was followed in 1650 by that of Janssonius, who published a more manageable Dutch one. From this date most Dutch cartographical development involved the production of sea charts and maritime atlases. This reflected their great trading interests around the world.

As well as expanding towards each other in the north, the English colonies grew to the south and formed the colony of Carolina in 1664. The first map to contain the new colony was the Joseph Moxon of the same year. This was shortly followed by the Robert Horne of the colony itself in 1666. Up to this point English cartographic production had been largely of infrequent but often influential maps. The defeat of the Dutch and the formation of a single English controlled region from Carolina to Massachusetts, the American colonies boomed. Trade in all commodities including maps increased dramatically. This demand spurred new more accurate surveys and a constant stream of production. Between 1670 and 1700 there would be in total as many maps produced of the Americas as there had been in all the years before.

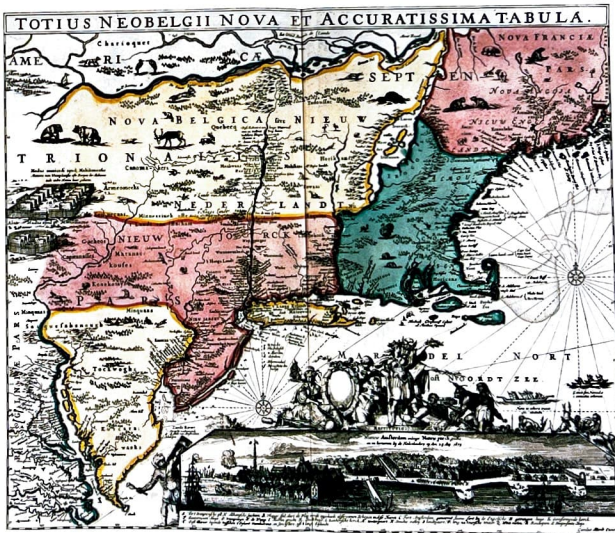


PLATE XIX. The fourth state of Hugo Allard's *Novi Belgii* by his son Carol, c. 1680. This formed part of an extremely important series of Dutch maps of the region begun by both Janssonius and Visscher. (Entry 373).