

Introduction

1. PRE-1670 CARTOGRAPHY

The sixteenth century

Following the rediscovery of America by Christopher Columbus in 1492 the ensuing period had been dominated by the race for power and control over the New World by European powers. This included both those already with considerable power such as Spain, France and Portugal, and more fledgling ones such as England, Holland and Sweden. This struggle for control would rage for some 400 years, developing over time into one for independence from Europe. The fifteenth century was largely the preserve of Spain and Portugal backed by the Treaty of Tordesillas, which divided the non-Christian world between them. England and France at first had no further interest beyond the rich fishing grounds off Newfoundland.

Neither the Spanish nor the Portuguese took much interest in North America; Spain, particularly, was diverted by the rich plunder it was finding in Mexico and Peru. Their only move into North America was the Spanish settlement of St Augustine founded in 1565. Even this was seen more as fortifying the important sea lane off the Florida coast, which was transporting vast quantities of gold and silver back to the mother country. It was at this time that the French made the first serious move into North America, following the voyages of discovery by Jacques Cartier 1534–36. In 1562 they attempted to settle unsuccessfully along the Carolina coastline. The English, with the encouragement of Queen Elizabeth I, made their first moves in 1585 under the guidance of Sir Walter Raleigh. The stage was set.

The seventeenth century

The first English colony would founder, but not deterred they would start again more successfully in Jamestown, Virginia, in 1607. This was the seed from which the English colonies grew. Throughout the seventeenth century the English would settle up and down the east coast of America so that by 1670 they had contiguous control, and development, along virtually the entire region from present-day Charleston, South Carolina, into Maine.

One small nation that came to have considerable power in the seventeenth century was Holland. On the back of trading it came to possess a formidable navy. This maritime experience it used in developing both American and Asian interests. In 1624 the Dutch founded Fort Orange near Albany on the Hudson River and two years later settled Manhattan to the south. The same Peter Minuit who acquired Manhattan for the Dutch in 1626 would help another fledgling European nation gain a foothold on the continent. In 1636 he settled the Swedish colony of 't Fort Christina on the Delaware River. For a while the two lived side by side in relative peace until rivalry led to the Dutch seizing the entire Swedish colony in 1655. The seemingly strengthened Dutch hold would eventually fall harmlessly to the English in 1664 without a shot being fired. This seizure unified much of the east coast in English hands.

The French meanwhile were taking a different route to power. They concentrated on reaching as far as possible into the rich fur-trading country further to the north and west. This enabled them to claim and to some degree control a vastly larger area, but in spreading themselves so thin it was potentially weaker than the more populated English colonies. By 1670 the French had extended their influence throughout most of the Great Lakes region and were beginning to infiltrate the country around the Upper Mississippi River.

2. PRINTED MAPS OF NORTH AMERICA FROM 1670–1700

By 1670 European knowledge of the outline of the continent of North America varied considerably. For understandable reasons the northern polar regions would remain largely unknown for a couple of centuries to come. In contrast the shape of the eastern seaboard was reasonably understood, although its accuracy needed much improvement. The Gulf of Mexico and Florida had not really been explored in detail let alone settled and would only gradually unfold in the coming decades. The west coast also remained largely unknown and although by the end of the century a common consensus on California as a peninsula would take hold, it would be another hundred years before it would have any accurate form thanks to the likes of Captain James Cook and George Vancouver. The only internal regions understood followed the St Lawrence waterway inland and the foreshore of the east coast. The major internal river systems of the Mississippi and its two great tributaries the Missouri and Ohio were unknown.

Cartography like many of the sciences is one that follows wealthy and active countries, with few exceptions. The one clear unusual example being the Spanish, who undoubtedly had the power and wealth to have been able to attract much scientific development. However, it was their strict Catholic regime and the undoubted desire to protect the source of its mineral wealth in America which led to a suppression of the sciences, and for us more specifically any cartographic knowledge being released. For European powers maps were essential to the awareness of their possessions. They enabled them to understand, guide and control the colonies. This was the case not only for governments and administrators, but plantations holders and traders alike.

Dutch and Swedish

The centre of cartographic production in Europe by the middle of the seventeenth century was Holland, with the powerhouse publishers of Joan Blaeu and Joannes Janssonius. However, following a third Anglo-Dutch War 1672–74, and a continuing one with France until 1678, the Dutch economy all but collapsed. Combined with the disastrous fire of 1672 at a Blaeu workshop, its cartographic pre-eminence also began to wane. There were few highlights in Dutch cartography throughout the rest of the century. The most significant were the sea atlases of Arent Roggeveen in 1675, Frederick de Wit's, c.1675, and those of the prolific publisher Johannes van Keulen, from 1680 (plate I).



PLATE I. Gerard Valk's highly ornate map of America published in Amsterdam, c.1686. (Entry 625).

English

Following the restoration of Charles II to the throne in 1660 England went through a period of rapid expansion. It was a time of enlightenment, with many advances, particularly in the sciences. The Royal Society was founded in 1660, and the Royal Observatory was established at Greenwich in 1675. There was increasing resentment over the other great north European Protestant power, the Dutch, in particular their merchant navy. This had already led to one war and a second Dutch War 1665–67 was fought over the English Navigation Acts of 1660 and 1662. These restricted Dutch access to English colonies and only allowed goods to be carried on English vessels, through English ports. In 1670 Charles II signed the Treaty of Dover with France. Both countries agreed to go to war with the Dutch, the two previous wars had been inconclusive and Charles II needed the help of Louis XIV to defeat them. Charles II was in need of funds and under a secret section of the treaty would receive £200,000 per annum in subsidies in exchange for a public conversion to Catholicism, and also for working towards the same for the country. This led directly to the third and last Anglo-Dutch War 1672–74. The Dutch economy collapsed, which led directly to the rise in power of both England and France.

In America this period marked the final expulsion of the Dutch following the English recapture of New York in 1673–74. This meant that the English had control of all the land between New England and Carolina. The colonies were a disparate collection of private, commercial and royal territories, many with overlapping claims. There was little interest in England for any empire; the grand vision set out by the likes of Richard Hakluyt had withered with a century of religious and constitutional struggle, and a civil war. As late as 1689 an influential government official wrote *'To me it appears wee have already but too much Territory abroad, and to gett more, were but to drain England of People and to loose at home.'*

The two most important regions were New England and Virginia. The largest by population was New England, which by the mid-1660s numbered some 40,000 people. Up to the 1670s growth was rarely impeded until King Philip's War erupted in 1675–76. This series of attacks by the American Indian Metacomet (King Philip) stretched along the entire frontier region. The war was bloody, costing several thousand lives on both sides. Financially, too, it was estimated to have cost £100,000 and to take twenty years to recover from. Three particular maps grew out of this period; those of Robert Morden and William Berry and John Seller in 1676 (plate II) recorded much of the conflict. However, the most significant was the publication in Boston of the first printed map in North America, by John Foster. It was bound into *A Narrative of the Troubles with the Indians*; a version would be printed in London within weeks.



PLATE II. The first state of John Seller's *Mapp of New England*, 1676, recording King Philip's War. (Entry 473).

Virginia, the first successful colony, was still growing from strength to strength, its most dangerous American Indian problems having already been faced. By the mid-1660s its population was around 30,000. Its cartography was still largely derived from the original John Smith map of 1612. Then in 1673[74] after years of preparation the landmark Augustine Herrman map was published in London (plate III). In four sheets it transformed knowledge of the region, not because of any major cartographic advances, but because of its inclusion of English settlements. More general works were also published, which encouraged interest. The largest was John Ogilby's book *America*, 1671, which contained extensive descriptions. Despite being largely a translation of a Dutch work, issued the same year, there was much original English input. The most important was the introduction of the First Lords Proprietors map of *Carolina*, c.1673.



PLATE III. The highly important four sheet Augustine Herrman map of *Virginia and Maryland*. (Entry 429).

Carolina had struggled from its beginning in 1663. Owned by eight 'Lords Proprietors', early settlements failed to succeed. Much of its initial attraction was sapped by the attractive seizure of Jamaica from Spain in 1665. Finally, in 1680, the present site of Charleston was chosen. It was self-promotion, through works like Ogilby's *America*, that enabled the colony to survive. It still grew slowly, having a population of only about 1,000 by 1680. A second Lords Proprietors map was published by Joel Gascoyne in 1682 (plate IV). Smaller works containing individual maps, such as John Lederer's account in 1672, and Samuel Wilson's in 1682, were all fuel to publicise the colonies. That of Lederer recorded one of the first attempts to explore the inland regions. Smaller more general works were also published, which enabled more modest folk to learn about the colonies. Publications included Richard Blome's *Description ...* of 1672, John Speed's folio and miniature atlases of 1675–76, and Robert Morden's *Geography Rectified* in 1680.

England's great advantage in the struggle for land was that far more of her territory was settled, not just claimed. Unlike the French it bore a large population. This ultimately was the French downfall. One exception to this English system was in the far north. For climatic reasons as much as anything the interests in the Hudson Bay region were purely commercial; they were for fur trading. Thirteen merchant adventurers ventured into the Bay believing that its southern reach through James Bay would take them into the rich fur-trading regions of the French. The Hudson Bay Company was ratified by Royal Charter in 1670. The first map to show its activities is John Thornton's of 1673.

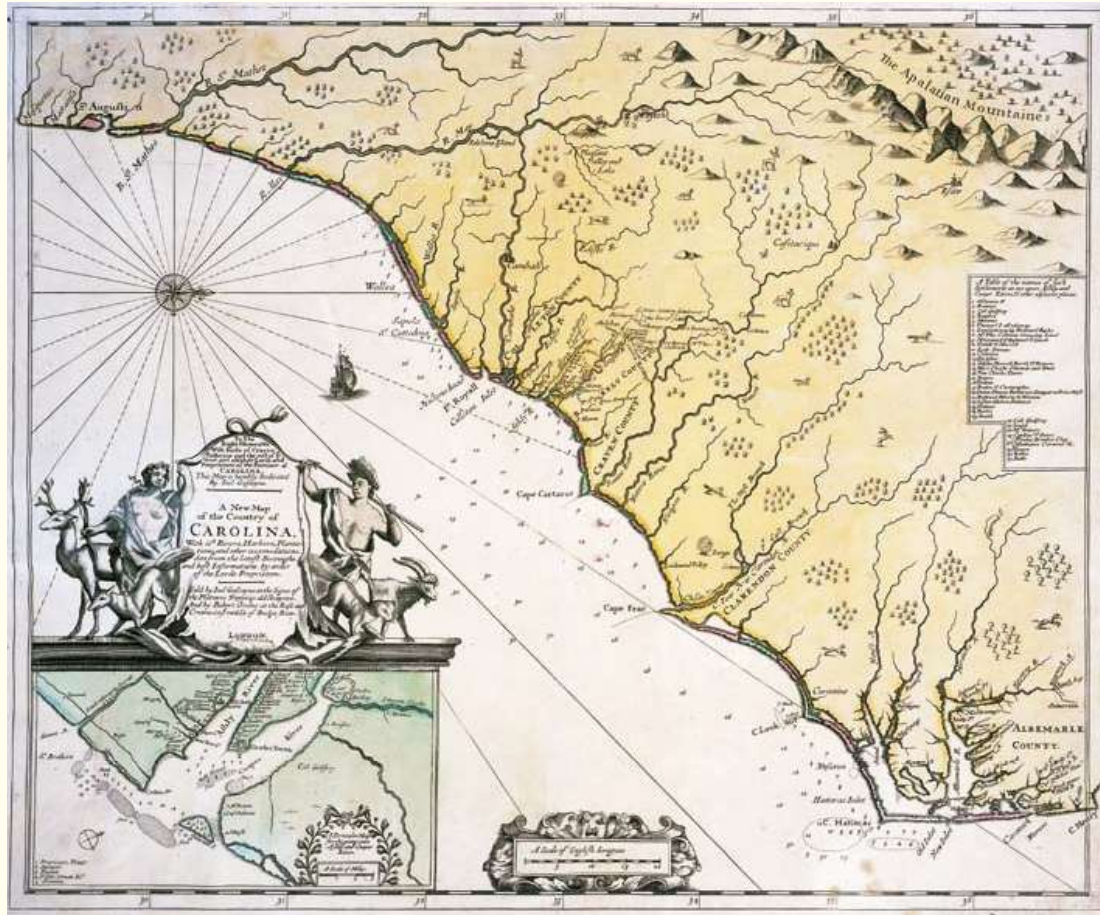


PLATE IV. A magnificent example of the Second Lords Proprietors map of Carolina by Joel Gascoyne, 1682. (Entry 543).

In the ten years since the founding of New Jersey in 1664 even less had happened than in Carolina to the south. It was only in 1674 that Lord John Berkeley consigned his half share to two Quakers. Thus began the history of the Quaker colonies in America. Like other colonies cartography was one of the tools utilised to promote it. John Seller's map of c.1675 was an important contribution to its success (plate V). A dispute soon arose as to the boundary between the two halves and it was William Penn who oversaw the Quaker interests in the Quintipartite Deed signed in 1676. Five years later in settlement of a considerable loan made by Penn's father, Charles II granted him an extensive tract of land to the west amounting to some 47 million acres. Pennsylvania as it would be named also used maps to promote it, more than most. The first was by John Thornton and John Seller in 1681. The second was by Thomas Holme in 1683, which was a plan of the new city of Philadelphia, the first English American town plan to be published. This colony grew rapidly with aggressive marketing, and would expand on the back of mercantile activity. A year after the colony was formed twenty-three ships arrived bearing settlers. By 1700 the population of Philadelphia was 2,200, and would grow by some 50 per cent per decade for the next century. It surpassed that of New York by 1750 and Boston before the American Revolution.

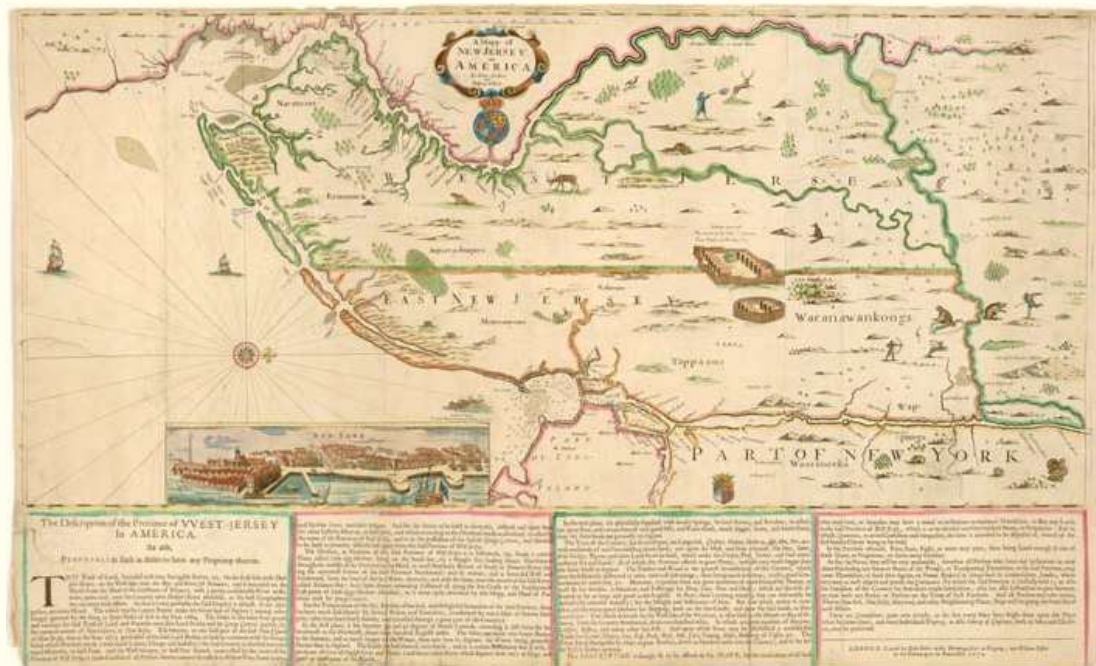


PLATE V. An example of the final state of John Seller's *Mapp of New Jersey* issued c.1677 with the accompanying text from the Blathwayt Atlas. (Entry 463).

One further map of Pennsylvania by Thomas Holme was sold by Robert Greene and John Thornton in 1687[88] (plate VI). At the time of issue it was undoubtedly the finest cartographic work of anywhere in North America. Its scale was one inch to the mile, almost unimaginable



PLATE VI. The only known example of the first state of Holme's magnificent map, 1687[88], engraved to the scale of one inch to the mile. (Entry 628).

at the time for England, let alone North America. An earlier large map of the *English Empire* was published by John Thornton, Robert Morden and Philip Lea in 1685 in a rather confusing production surviving in just one loose sheet example (plate VII). Another even earlier and larger work by Joseph Moxon, 1673, is lost to us altogether (see Appendix 1). Towards the end of the century, c.1698, the merchant Reeve Williams along with John Thornton and Robert Morden published a large map of *Virginia, Maryland, Pensilvania, New Jersey [and] part of New York*. Their very size and separate publication means the survival of large maps is always difficult.

As the economic impact of rapidly increasing trade with the colonies developed so did the need for a system of overall control from a central government. Gradually the institutions evolved from a colonial office to a civil service, whilst at the same time becoming more uniform in structure throughout the colonies. Nowhere were these changes more contentious than in New England, where New Hampshire was separated from Massachusetts in 1680 by Royal Charter. In 1691 the latter would be made a Royal province and would include Maine.

Inter-colonial trade began to take off, with amongst other things a regular postal service between New York and Boston starting in 1673. But the main influence of the increasing trade was in the production of sea charts; after all most trade was with the mother country. English reliance on Dutch maps was an embarrassment, especially as the Dutch were largely considered the enemy. To fight them at sea using their own maps was not an ideal situation. It was one that the government wished to alter. It was not until 1693 that the British Isles had a home-grown coastal survey at the hands of Greenville Collins. As for the American colonies the development



PLATE VII. The first state of a separately issued single sheet from Thornton, Morden & Lea's wall map of the *English Empire*, 1685. (Entry 616).

was more piecemeal. John Seller was arguably the first to enter the market, publishing the *English Pilot* in parts from 1668; that for North America he never published. His *Atlas Maritimus* in 1675 contained several sea charts relating to America. It was followed by a miniature version in 1682. The truly great contribution, however, was the *Fourth Book of the English Pilot*, which was finally published by John Thornton and William Fisher in 1689. It was so successful it ran to thirty-seven editions lasting until 1794.

Following the rapprochement with the Dutch in 1688 and the Glorious Revolution that put the Dutch William of Orange on the English throne, attention was focused more and more on the French. They, too, had grown in power since the demise of the Dutch in 1674 and Louis XIV began aggressively expanding his interests in Europe and the colonies. The English had come to realise that France was the greater threat. Louis XIV was also conspiring to return James II to the throne. As Louis pushed eastwards towards France's traditional border on the Rhine with Germany the League of Augsburg, including the Dutch, opposed him. William brought the English into the conflict. This would be a power struggle between England and France that would last until 1815. Each outbreak of hostilities would involve more and more the American colonies. It began in 1688 and is known by several names; the Nine Years War, the War of the League of Augsburg, the War of the Grand Alliance, King William's War and the War of the English Succession (1688–1697).

The conflict in North America was known as King William's War and would be the first of many between England and France for control of the continent. It was fought in Canada and New England, where the English captured Port Royal, Acadia (later Nova Scotia), but failed to take Quebec. The French attacked Schenectady, New York, Salmon Falls (New Hampshire) and Casco Bay (Maine). It was settled at the Treaty of Ryswijk in 1697, bringing four years of peace before war was resumed in 1701 as the War of the Spanish Succession.

During this period a few significant maps were published. The first of note is George Harwar's map of the *River Canada*, c.1691, which documents the failed attack on Quebec in 1690. The same year Thomas Pound put out a very detailed *New Mapp of New England*, which unfortunately survives in just the one known example. In about 1695 John Thornton and Robert Morden published a magnificent survey, effectively the first map of South Carolina (plate VIII). By the end of the century the population of the English colonies numbered about 275,000; by the 1760s it had expanded to 2,000,000.

French

The French colony in Canada by the early 1660s was in a very weak state. In 1665 it numbered just 3,200 souls. It was so weak that in 1663 the Company of New France relinquished control to Louis XIV and became a crown colony. In 1664 Jean-Baptiste Colbert sent the Marquis de Tracy to restore authority and its population doubled by 1672. Devastated by war between the French-backed Huron and the Iroquois nations a peace was negotiated that allowed expansion. One body that had considerable power still was the Jesuits, who were tenaciously pushing the body of cartographic knowledge westwards through all the Great Lakes and beyond. In 1672 they published a magnificent map of Lake Superior by Fathers Claude Dablon and Jean Claude Allouez.

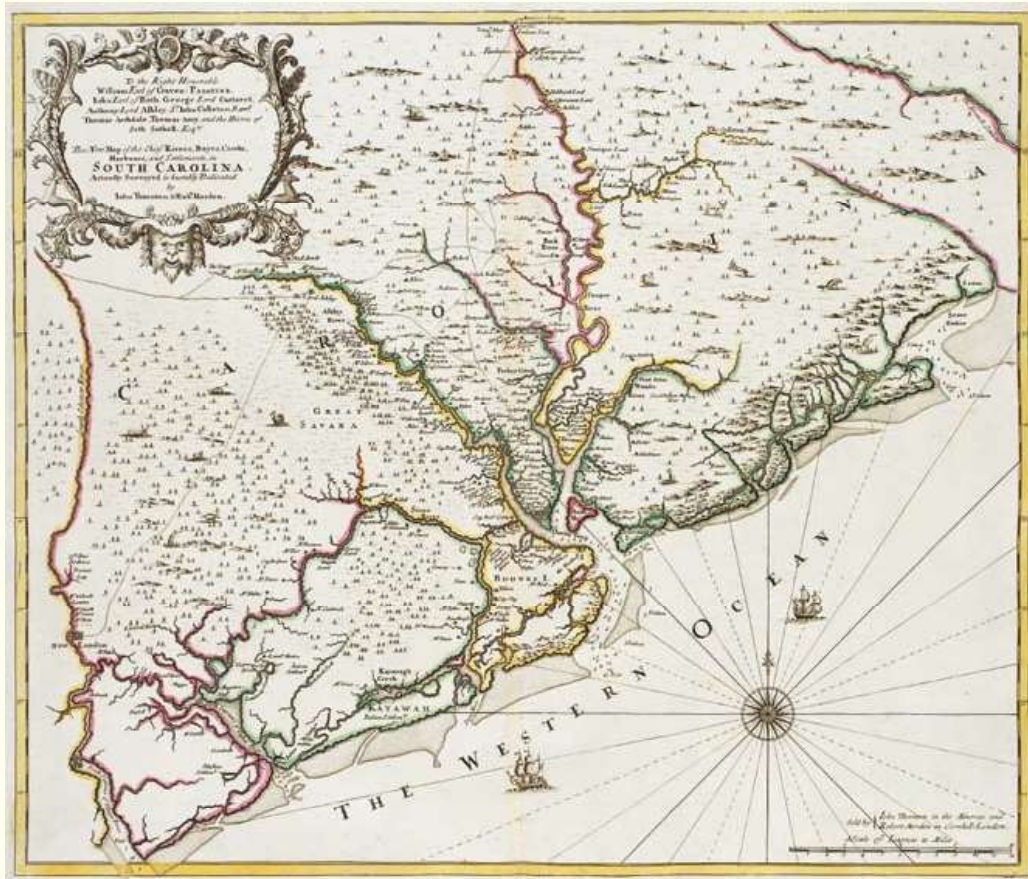


PLATE VIII. The first map of South Carolina by John Thornton and Robert Morden, c.1695. (Entry 712).

In 1672 the French appointed Canada's first Governor, the Comte de Frontenac. Quickly recognising the personal gains to be had in the fur trade, he condoned an expedition even further westwards. In 1673 Louis Jolliet and Father Jacques Marquette explored the Upper Mississippi River. Pushing south they sighted the Missouri and the Ohio, reaching as far south as the Arkansas River. They returned by the Illinois River, portaging across the region of present-day Chicago. Their account was not published until 1681 when Melchisedech Thévenot included a map, the first devoted to the Mississippi River (plate IX).

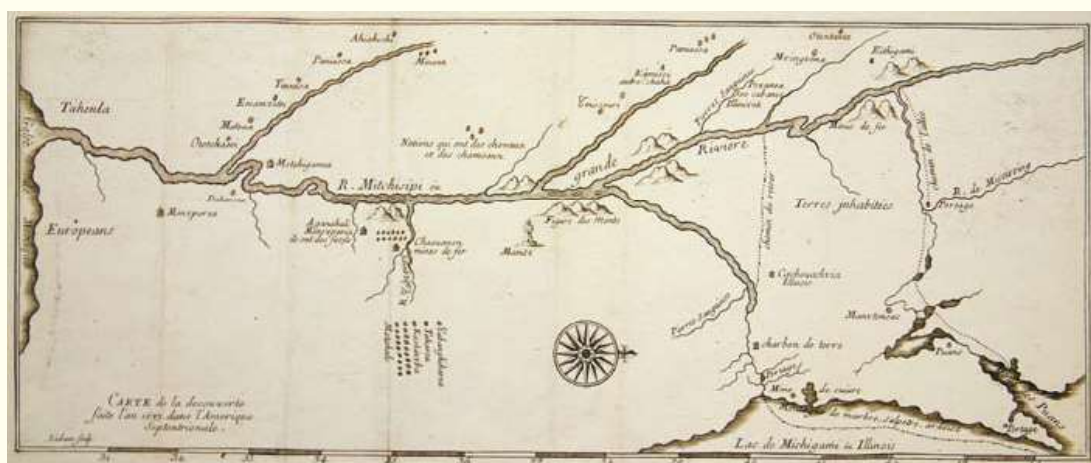


PLATE IX. Melchisedech Thévenot's printed map is the first of the Mississippi River and was published 1681. An example of the second state. (Entry 540).

Jolliet and Marquette did not reach the mouth of the river; that task was left to Robert Cavalier, Sieur La Salle. It was La Salle's vision which saw the control over the continent that possessing the Mississippi River region could afford. He would travel with Friar Louis Hennepin who would record much of his exploits. During the preparation for the exploration Hennepin would find Niagara Falls. Travelling together in the *Griffon*, the first ship made in America, they crossed Lakes Erie and Huron into Lake Michigan in 1679. Exploring the region to the south during the winter, La Salle sent Hennepin to explore the Upper Mississippi region. This account he published in 1683 and accompanying it was an important map of the area as known at the time. It was an immediate success. In April 1682 La Salle managed to reach the mouth of the Mississippi River and on his return named the entire valley Louisiana in honour of the King of France. Returning to France he received a commission to command the region. In 1684 he set sail with several people of note, Henri Joutel and Father Chrestien Le Clerc amongst them. Both of them would later publish their own accounts of the voyage with maps, the latter in 1691. Planning to arrive at the mouth they had difficulty in finding it. Starting out with four vessels they lost one to Spanish piracy, one famously ran aground, another returned to France. La Salle lost the fourth and set up camp onshore. Several parties argued which led ultimately to one of the most famous murders in American history, that of La Salle in 1687.

Nicolas Denys had been involved with the region of Acadia since 1631. Later granted Governorship of the region between Cape Canso and Penobscot Bay, he was rewarded in 1670 by the gift of Cape Breton Island. Making abortive colonisation attempts he came to explore and survey the region. The result was an accurate map of it accompanying his account published in 1672. A further map of note was published by Alexis-Hubert Jaillot in 1685. Its depiction of the river systems of New France was well advanced.

Despite being Italian, the magnificent contribution to North American cartography by Vincenzo Maria Coronelli is largely down to the French. In 1681 he moved to Paris following a commission to make a large pair of globes for Louis XIV. He had at his disposal all the latest cartographic knowledge and incorporated it into his own maps. Arguably the greatest of interest to us is his two sheet map of North America published in 1688. Some of his acquired information made it to the public through the auspices of Jean Baptiste Nolin, who published magnificent maps of the south-west and Great Lakes regions c.1687. A distinct highlight of the 1690s was the virtually unknown Nicolas Cordier's *Carte de la Baye de Canadas*, c.1695 (plate X). Published in Le Havre it drew upon the extensive local knowledge of Canadian waters. As such its cartography is unique. A map of great cartographic and cultural influence was Nicolas de Fer's wall map of 1698 (plate XI). Decorating its advanced cartography is the now famous beaver scene of Niagara Falls. An allegorical scene it jointly represents the building of a dam and the wealth of the fur available in the country. Beaver pelts were a richly commanded product in Europe at the time.

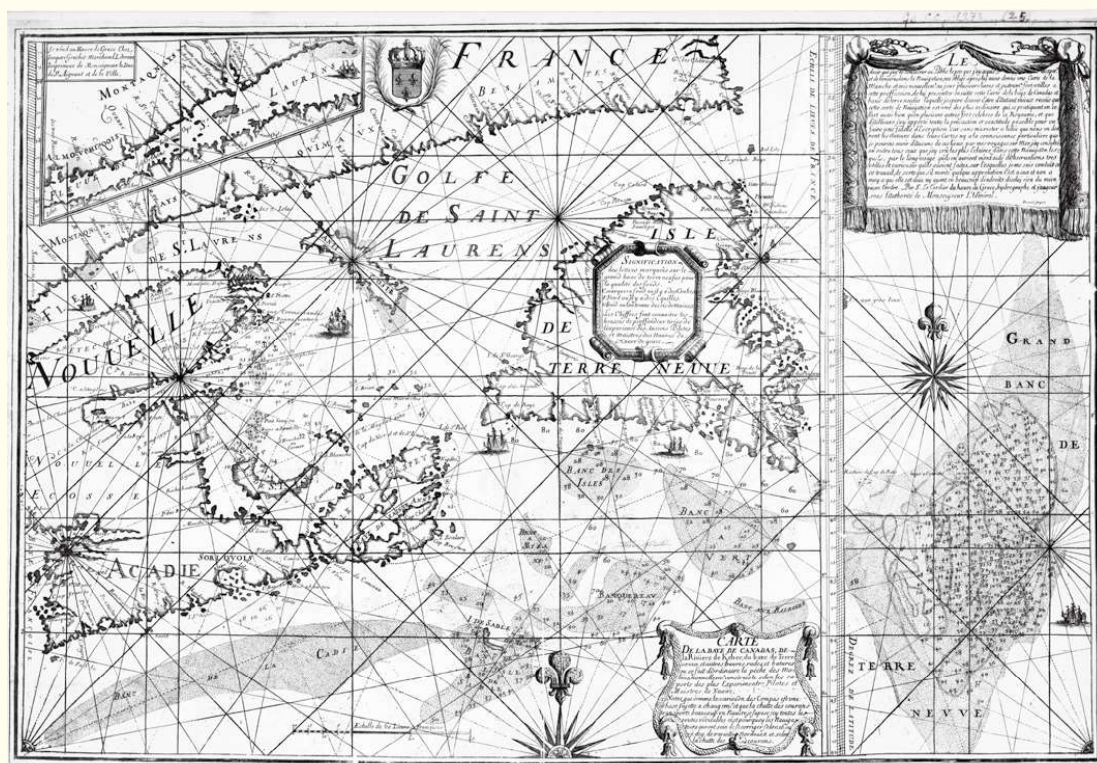


PLATE X. This extremely rare map of the St Lawrence River was published in Le Havre by Nicolas Cordier.
An example of the first state. (Entry 708).



PLATE XI. Nicolas de Fer's beautiful wall map of America, 1698, is renowned for its Beaver cartouche top left.
An example of the second state. (Entry 744).

The last great period of French discovery during this time was undertaken by Pierre Le Moyne d'Iberville in 1698–99. A further voyage to capitalise on La Salle's efforts was overdue and after several failures the Minister of the Navy, Louis Phélypeux, Comte de Pontchartrain, sent Le Moyne with instructions to establish a colony at the mouth of the Mississippi River and therefore enable control of the huge waterway. Leaving Brest in 1698 he founded Fort Maurepas on Biloxi Bay early the following year before returning home. Settling two further unwise regions in the following years, it ultimately failed. It was left to the founding of New Orleans in 1718 for the French to gain the foothold they so desperately wanted. Le Moyne's results are found on the seminal Claude and Guillaume De L'Isle *L'Amerique Septentrionale*, 1700 (plate XII).

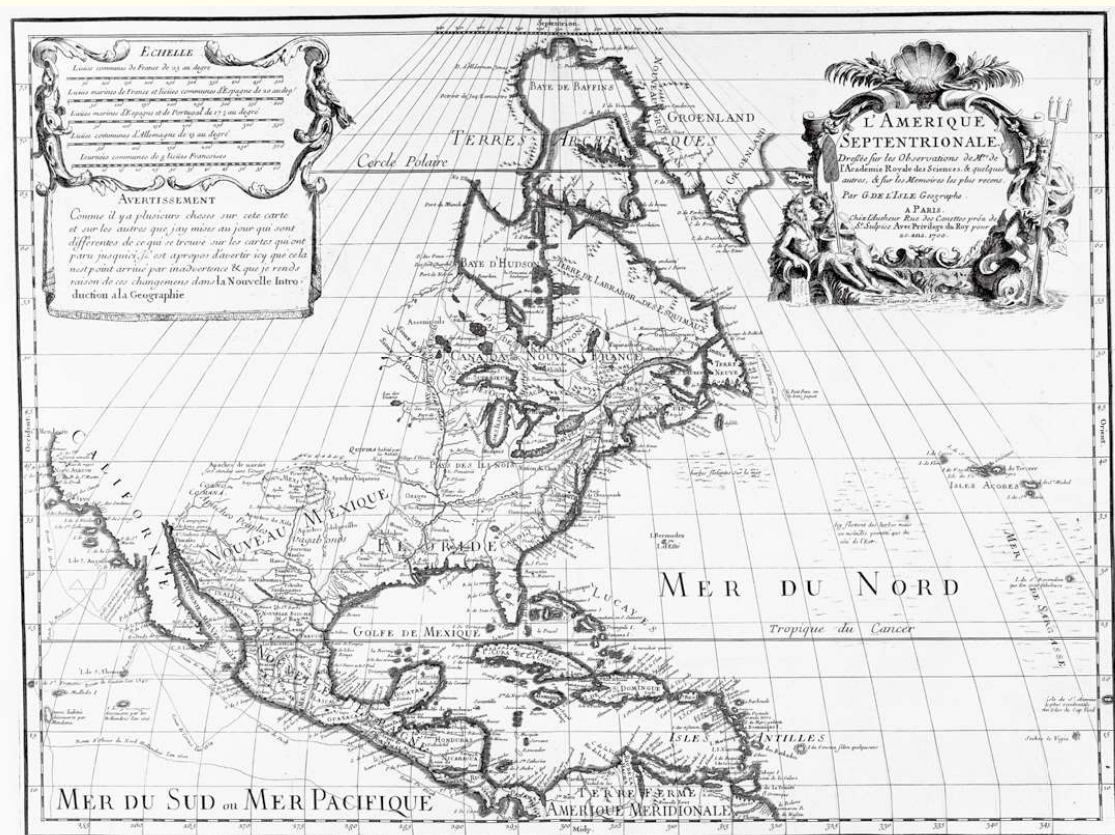


PLATE XII. Claude and Guillaume de L'Isle's landmark *L'Amerique Septentrionale* first published in Paris, 1700. (Entry 761).

Spanish

Spanish presence in North America was limited, and their activities during this period even less. However, there were some cartographic contributions. In 1675 Arent Roggeveen published *Het Brandende Veen* in Amsterdam (plate XIII). Roggeveen was a tutor of navigation to the Dutch West and East India Companies and as such had access to their vast archives of material. Much of this was of Spanish origin and we can assume many of the North American charts published in this book owe their origins to Spanish work. Without this publication they may have been lost to posterity.

The northern rim of the Spanish empire in mainland America had been sleepy for over 100 years. The topography and climate dissuaded further development of the region. A modest

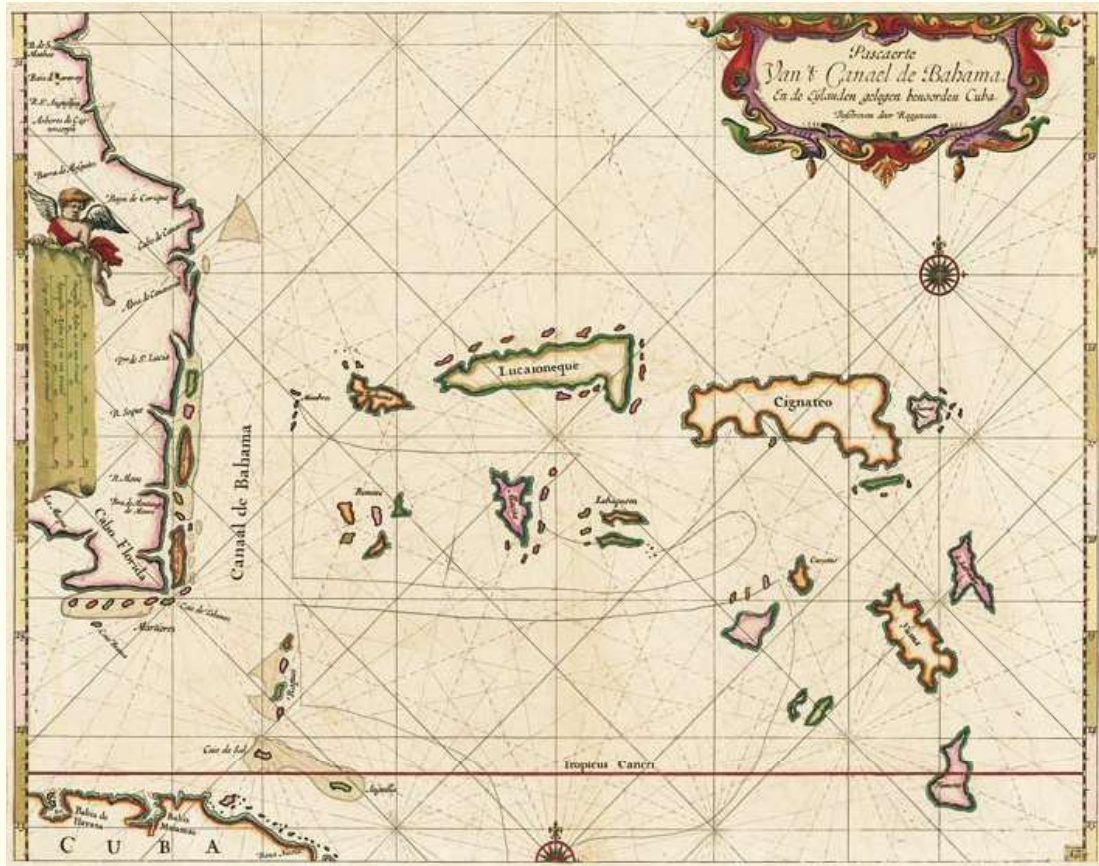


PLATE XIII. The very rare first state of Arent Roggeveen's chart of Florida and the Bahamas published in 1675. (Entry 453).

trade was created to the east following Captains Martin and Castillo meeting with the Jumanos Indians in 1650, and further east with the Tejas in present-day Texas. The latter was also being approached from further south along the lower reaches of the Rio Grande. Settlement in northern Mexico was extended with the founding of the provinces of Nueva León and Coahuila. Eyes were soon cast over the river and in 1675 the Governor of Coahuila sent Lieutenant del Bosque along with some soldiers and two missionaries into present-day Texas. They reached the Ona River, a branch of the Nueces. The sleepy region of New Mexico erupted in 1680 when, led by Popé, the local Indians attacked the Spanish settlements, resentful of the continuing attacks on their religion and culture. Santa Fe was under siege, over 1,000 taking refuge in the Governor's Palace. The survivors broke out and fled south along the river settling near El Paso, the site of the small Spanish mission of Nuestra Señora de Guadalupe, first settled in 1659. When it was all finished 2,800 had been killed. For years the hostility of the Comanches, Apaches and other tribes discouraged any move to return to this region. It was Governor Vargas who would start northwards again in 1692 and within a year had regained Santa Fe.

Prior to these events the Governor of New Mexico from 1661–65, Diego de Peñalosa, had been expelled from New Mexico following an Inquisition. He was noted for his avaricious and unlawful nature. Peñalosa fled to England in 1668 and went to Paris in the early 1670s and was soon passing his knowledge to the French. It is through Nolin that Coronelli published *Le Nouveau Mexique*, c.1687 (plate XIV). This seminal map displays much of this material. Its major influence was in convincing the cartographic community of the fact that the Rio Grande flowed into the Gulf of Mexico, and not the Gulf of California.



PLATE XIV. The first state of Vincenzo Maria Coronelli's important map of Nouveau Mexique published by Jean Baptiste Nolin in Paris, c.1687. (Entry 631).

Arguably the largest cartographic myth relating to North America was coming to an end. California had largely been perceived as an island on maps since 1622. In 1680 the Jesuit missionary Eusebio Francisco Kino (1645–1702) arrived in the New World and from 1683 acted as a surveyor on an expedition to Baja California. He assisted in setting up various missions in the area. He would settle the mission of Nuestra Señora de los Dolores in southern Arizona in 1687 and from there made countless journeys on horseback exploring the region. As late as 1696 he drew a manuscript map of the region displaying California as an island; however, he became obsessed by a possible land route to California. Following several attempts he finally made it across the top of the Gulf and down the east side of Baja California in 1702, confirming it as a peninsula. Unfortunately, he never made it to the Pacific. His communications with Europe led to the publication in Paris, 1705, of his influential *Passage par Terre a la Californie*. This map provided convincing evidence of the peninsula but it was its similar depiction in Claude and Guillaume De L'Isle's *L'Amerique Septentrionale*, of 1700, which swayed opinion.