The Harisse Codex
A magnificent portolan atlas by Battista Agnese in its original binding, inscribed and attributed to Agnese by the eminent bibliographer Henry Harisse

Between about 1536 and 1564, Battista Agnese, originally from Genoa but working in Venice, produced some highly prized and beautifully decorated manuscript atlases on vellum for high-ranking officials or wealthy merchants. His patrons included Charles V, Holy Roman Emperor and King of Spain, Phillip II, King of Spain, King of Portugal, King of Naples and Sicily, and jure uxoris King of England and Ireland, Duke of Milan, and Lord of the Seventeen Provinces of the Netherlands, and Henry VIII, King of England. The present atlas, which is not recorded in the census of Agnese portolans published by Wagner in 1931, nor in Pflederer’s census of 2009 (although added to its corrigenda in 2011), fits within a group of atlases, all produced between 1545 and 1555. Using Wagner’s classification system – which was based on cartographic details – this atlas would probably belong to Type 3-“A”, ‘post Californian’, but with the new chart of Scotland and the land map of Scandinavia.

Portolan charts

The oldest surviving portolan chart, made around 1285, is the Carta Pisana (Pisan Chart); named after Pisa where it was discovered. The early charts are relatively plain and functional, everyday tools for mariners that were used in conjunction with a portolano or pilot book, containing written sailing directions and information about coastal hazards, ports and anchorages. The form changed little over the next 200 years, however, with the emergence of the printed chart in the late fifteenth century, the portolan began to lose its function as a navigational tool. It is at this time that we see the emergence of the portolan as a work of art to be admired and treasured in one’s library. To reflect their new status these portolan charts are often astonishingly beautiful artifacts, embellished in gold and silver, and rich in both ornament and detail. One of the new art forms greatest exponents was Battista Agnese. The production of portolans as art would continue to flourish up until the 1700s, gradually falling out of fashion, and being replaced by the printed sea atlas.

Although the portolan evolved over the centuries, all charts bear a few defining characteristics. Typically, they are drawn on vellum, although a few charts were made on high quality paper. All portolan charts display a distinctive network of intersecting directional lines, called rhumb lines, that radiate out from particular points on the chart to indicate wind directions. Furthermore, most portolan charts incorporate one or more decorative compass roses. Coastal place names are written on the landside of the coastline, and perpendicular to it, so as not to interfere with the marking of sailing courses. In general, there is minimal detail within the interior of the landmasses.
The Genesis of the Portolan

There is nothing in the historical record to suggest the charts had any precursors before their introduction in the thirteenth century. We have no documentary evidence concerning the people who collected the information on which the charts were based, nor explanation of how the particular style of the portolan chart was developed; there is no apparent interaction between these practical sea charts and the mappae mundi, produced in medieval monasteries in this same period.

Although we cannot know for certain the genesis of the portolan production, technological advancement and geopolitics in the Mediterranean, in the late Medieval era must have played a significant part.

The 1200s saw the emergence of the first magnetic compasses. These early compasses used a lodestone (a lump of magnetite rock) to indicate the direction of the magnetic north. It is reasonable to suppose that the corpus of traditional information about coasts and ports, probably handed down by word of mouth, was combined with new information about compass bearings and distances between ports to create both the portolani or pilot books and the portolan charts that accompanied them.

Another catalyst for the emergence of the portolan chart was the political climate in the Mediterranean during the late Middle Ages. The Crusades had not only pitted Christians against Muslims, but had also greatly stimulated Mediterranean trade, leading directly to the rise of Genoa, Pisa, and Venice as maritime trading powers through the shipping of supplies and personnel to the Crusader kingdoms in the Middle East. These had collapsed in 1187, but the conquest of Constantinople by a western crusading army in 1204 further boosted Venetian power in the eastern Mediterranean. This combined with the Mongol invasions of the thirteenth century that destroyed Muslim centres of power in the Middle East and opened up trade between China and the west along the Silk Road, allowing Genoese and Venetian traders to penetrate the Black Sea.

There would appear to have been little or no state control over the production and content of the early charts, and it seems that information about sea routes was frequently traded between pilots and chart makers. When European mariners began to venture into the Atlantic and Indian Oceans, at the end of the fifteenth century, the picture changed, with the likes of Portugal and Spain jealously guarding the new cartographic, and commercially sensitive information gleaned from their voyages of discovery.
Centres of production and extent
Three Mediterranean ports appear to have monopolized production during the fourteenth and fifteenth centuries: Genoa on the Ligurian coast of Italy, Venice on the Adriatic, and Palma de Majorca on the largest of the Balearic Islands in the western Mediterranean. Not until 1470 do we see substantial chart production in any other place.

Both Venice and Genoa were the major entrepôts in the western Mediterranean: importing luxury goods from the east, such as spices, textiles, and silks which had passed through the ports of Alexandria and Constantinople. Thanks to the introduction of the magnetic compass, navigation became a year-round activity. New sea routes opened up between the Mediterranean and northwestern Europe, and northern waterways such as the English Channel, the Irish Sea, the North Sea and the Baltic Sea began to appear on portolan charts, along with important ports such as Calais and London, Antwerp and Hamburg, even as far as Bergen in Norway. By the 1440s, the area covered on most portolan charts included the Mediterranean Sea, Black Sea, North Sea, Baltic Sea, and the Atlantic coastal waters of Europe and Northwest Africa.

As Portuguese exploration extended along the west coast of Africa and into the previously uncharted waters of the open oceans in the course of the fifteenth century, there was an explosion of new information. Soon the entire outline of Africa, then India, East Asia, and the Americas appeared on the charts. Although fully complying with the above definition of portolan charts, these oceanic charts differed in one important detail: the inclusion of a latitude scale. In these waters, mariners needed to apply celestial navigational techniques to find their way across large expanses of open oceans.

By the mid-sixteenth century, the portolan chart style was being applied not only to pure navigational charts but also to presentation pieces, predominantly atlases. These works were often cartographically and stylistically identical to navigational charts, but the richness of their production and their smaller scale made it unlikely that they were ever to see service at sea. Notable recipients of such works include King Henry VIII and Queen Mary Tudor of England; the Dauphin, later King Henry II, of France; King Sebastião of Portugal; and the Emperor Charles V. Some cartographers produced substantial numbers of these presentation atlases, as well as individual charts. For example, the surviving body of work of the Benincasa family, father Grazioso and son Andrea, who worked in a variety of ports including Venice from 1461 to 1508, contains 18 atlases and 11 individual charts. Similarly, the known works of the sixteenth-century Portuguese cartographer Diego Homem include 13 presentation atlases and ten charts.
Battista Agnese

It is against this background that the work of the most prolific of all portolan atlas makers, Battista Agnese, must be considered. In the words of Professor Corradino Astengo, the pre-eminent authority on portolan charts, Agnese was the man “whose personality and output dominated the cartography of the sixteenth century”. Although Agnese’s atlases found their way into the libraries of emperors, kings, cardinals and dukes, virtually nothing is known of his life. From his inscription on the relatively few atlases he actually signed, it is apparent that he was born in Genoa, probably near the end of the fifteenth century or early in the sixteenth century. However, it appears that all of his atlases were produced in the Republic of Venice, beginning around 1535. In Agnese’s day Genoa and Venice were independent rival states, though Genoa’s fortunes had been on the wane for some time at the expense of Venice, now at the height of its maritime power in the eastern Mediterranean. The exact circumstances of Agnese’s abandonment of his home city-state for Venice are not known, but it must have been a significant move.

Agnese was primarily, if not exclusively, a maker of atlases, all quite elaborate and very expensive in their day; while depending on navigation and the voyages of discovery for their content, his charts should not be considered as navigational works per se. His work displays such a distinctive style that besides the 25 signed atlases, it is possible to attribute the present work and 52 other unsigned atlases to him as well. These 78 works comprise an amazing total of 746 charts. But while the overwhelming preponderance of Agnese’s output was in the form of atlases, there is some evidence that he produced a few individual charts as well. The most intriguing is a chart in the Herzog August Bibliotek at Wolfenbüttel, Germany. On the strength of the Latin inscription (‘Baptista Januensis f. Venetiis MCCCCXIV [F] Julii’) and certain coastal features and place-names, two distinguished twentieth-century Italian historians, Giuseppe Caraci (1928) and Roberto Almagia (1949), have confidently attributed this work to Battista Agnese. If this attribution is correct, his working career would have lasted at least fifty years, from 1514 to 1564, the date of his last-known signed atlas.

If only surviving examples of his work are counted, Agnese’s output would have averaged 25 charts a year between 1535 and 1564. Despite the lack of any supporting documentary evidence, it is generally accepted that, rather than working on his own, Agnese must have operated an atelier in Venice in order to achieve this high output. It is easy to imagine a production process in which one person prepared the sheets of vellum, another drew the coastal outlines, another entered the place-names, and so on. Francesco Ghisolfi is thought to have been one of Agnese’s pupils. His series of 11 highly decorated atlases – none signed or dated – seem to have appeared toward the end of Agnese’s period, and bear some striking resemblances to Agnese’s work. They are by no means counterfeits, but the coastal outlines, and some decorative elements, are so similar that they were undoubtedly influenced by Agnese in a significant way.
The Atlas

This atlas is in its original Agnese binding, and it can confidently be stated that the order of the sheets is just as Agnese originally produced it: it contains the more or less standard preliminary pages found in most Agnese atlases, including a table of the declination on the sun, an armillary sphere, and a circular zodiacal calendar.

Charts 1, 2, & 3 – The world

These preliminary features are followed by a set of three consecutive charts representing the entire world in a style that Agnese employed in virtually all of his atlases. The first sheet covers the Pacific Ocean and adjacent coasts, including the peninsula of California, after the discoveries of Francisco de Ulloa and Marcos de Niza in 1539, and which first appeared in the Agnese atlas of 1542. Other features of this chart include a gilt Sumatra, a red-coloured Sea of Cortez, a vignette of Mexico City in the midst of a lake, and the Grand Banks off the east coast of North America. Also noted is the characteristic missing coastline on the west coast of South America from about 18° to 45° and on the west coast of North America above 35°. The representation of the world continues with the next sheet, which centres on the Atlantic Ocean and its coasts. Notable on this chart is the outline of Africa, which is quite accurate and enriched with many place-names along the coastline. This sheet continued virtually without changes over the entire range of Agnese’s atlases.

The final sheet in this representation of the world covers the Indian Ocean and its coastline including the east coast of Africa, Arabia, the Indian subcontinent, Southeast Asia and the South China Sea. Noteworthy on this chart are the eight cherubs representing the major winds, each labelled in Italian with the name of the compass direction. All three of these charts include simple, unadorned latitude and longitude scales. The latitudes are organized in the normal system increasing from zero at the equator, but longitudes are marked in four ranges of 90° each. The four points of zero longitude are near the Canary Islands, the western Indian Ocean, Mexico City, and the Moluccas Islands.
Chart 4 – Northwest Europe
A somewhat atypical sheet, which Wagner called a 'land map in portolan style', follows the three-chart world. The coverage is the British Isles and the northwest part of continental Europe. Agnese first included this map in an atlas dedicated to Henry VIII sometime after 1545, now preserved in the Vatican Apostolic Library. Although there are some waters represented—the Baltic and North Seas, part of the Adriatic, and the Bay of Biscay—the focus is clearly on the land. This map is also more heavily decorated than are any of the sea charts in this atlas, with town vignettes, rivers, lakes, mountains, and forests covering the land. A distinctive feature, which offers a guide to dating the atlas, is the representation of Scotland as a peninsula rather than an island. This treatment of Scotland is significant in that, according to Wagner, it did not appear until about 1552.

Chart 5 – Iberia and North Africa
A version of this chart appears in most of Agnese’s atlases from about 1539 to 1564. It covers the western Mediterranean Sea and the Atlantic coasts of Spain, Portugal and Africa down to approximately Cape Bojador, and includes the Balearics, Canaries, Madeira and the Azores. The interior of Iberia is decorated with mountain ranges, rivers, and dozens of town vignettes, and the Atlas Mountains are prominently pictured in Africa. This chart, which is primarily a sea chart, is unusual in that several cities of the interior are depicted and named, including Toledo, Burgos, Cordoba, and Pamplona.

Charts 6, 7, & 8 – The Mediterranean
Following Iberia/North Africa is a set of three charts covering the Mediterranean Sea, west, central and east. If assembled into a single chart, this set would be very much the archetypical portolan chart of this area. Among the features of the standard form of the Mediterranean Sea chart are:
• the distinctive angular rotation of the chart from true bearings (about 9° anticlockwise)
• absence of a latitude scale
• the white cross against the red background of Rhodes (even though the Knights Hospitaller were evicted from Rhodes some decades earlier)
• highlighting of key ports in red ink (including most of the coastal towns of Italy)
• red coloration of the Red Sea

All of the charts and maps in the present atlas are oriented with North to the top of the sheet; except for chart 7, the central Mediterranean, on which North is to the right and chart 10, the Aegean, on which North is to the left.
Chart 9 - The Black and Marmara Seas
This chart reflects the importance to Venice of its trade with the East. In a form similar to chart 3, the eight principal winds are depicted by cherubs, but here their names are given in Italian (Tramontana, Grego, Sirocco, Ostro, etc.). Even after the fall of Constantinople to the Ottomans in 1453, Venice maintained its historical trading privileges with the city, which is represented on this chart by the single town vignette.

Chart 10 - Aegean and Marmara Seas
Drawn on a scale about twice as great as the previous four charts, and oriented with North to the left. Rhodes displays the same white-on-red cross as seen on chart 8. Fourteen Aegean isles are heightened in gilt, making this one of the most striking sheets in the atlas.

Chart 11 - Scandinavia
The land map of Scandinavia is unlike any other sheet in the atlas. It is copied from the magnificent map of Olaus Magnus printed from nine woodblocks in Venice, 1539. The sea is coloured blue and the land is yellow and its coverage includes Scandinavia, Iceland, the Baltics, and Russia, as well as Scotland, England, Ireland and Greenland on the margins. It is heavily decorated with sea monsters, seated monarchs, and numerous town vignettes. This map is important for dating the atlas in that other maps of this type first appear in the atlas Wagner lists as ‘XI’, which he estimates to be drawn about 1545. This is the only non-portolan style map in the present atlas. In other Agnese atlases from many more – up to a dozen or so – maps of this general type may be found from around 1553 onwards.

Chart 12 – The World
The oval world map is also useful for dating purposes because of two features: the unnamed strait separating ‘Terra de Bachalans’ from the rest of North America, and the courses of two voyages (Magellan’s circumnavigation and the route to Peru from Spain). This map contains twelve windheads, each named in Latin; the landmasses are green and two seas – the Red Sea and the Sea of Cortez – are coloured red. This map is centred on the Canary Islands and exhibits a grid of latitude and longitude. Although there are some curious cartographic features such as the peninsula of Norway continuing to the North Pole and the Verrazzano strait in North America, its function is primarily decorative.

The oval world map from the Agnese atlas in the Library of Congress (c1544) does not contain the strait.
Chart 13 – Ptolemaic World
The final map is referred to by Wagner as “Eastern hemisphere, derived from Ptolemy”. Its type first appeared in an Agnese atlas c1548. The map covers the northern part of the eastern hemisphere centred on the Persian Gulf down to the source of the Nile, near the equator. The landmasses are coloured green and the oceans and seas are left uncoloured. The geography is essentially Ptolemaic but the projection is hemispherical. Exactly what Agnese had in mind by including this map is unclear, but it may be an illustration to assist with the information he reproduces in the final leaves of the atlas. In any event, Agnese included such an illustration in nine of the atlases documented by Wagner.

Text
Following the thirteen charts and maps, there is a page of Latin text explaining the understanding of the ancients. For example, it presents an estimate of the length of a degree of latitude at about 57 miles and states that if there are 360 degrees in a great circle, then the circumference of the earth must be 20,400 miles. Using a good estimate for π (3 1/7), the text then calculates the diameter of the earth and finally the distance from the surface to the centre of the earth. There is also a table of cosmographical distances and diameters of celestial bodies, for example the distance from the centre of the earth to:

- Moon = 107,936 miles
- Mercury = 579,320 miles
- Venus = 3,892,866 miles
- Mars = 32,352,075 miles
- Jupiter = 20,192,626 miles
- Saturn = 73,387,747 miles

Compass
A 32-point compass rose is set into the lower board of the atlas. This is a distinctive feature of numerous atlases signed by, or attributed to, Agnese.
Collation:
fol. 1v: declination table.
fol. 2: armillary sphere.
fol. 2v-3: zodiac.
fol. 3v-4: Pacific Ocean according to the Vermeglio type, showing the coasts of North and South America, California as a peninsula. The area between Peru and the Straits of Magellan is left blank. Yucatan drawn as a peninsula.
fol. 4v-5: Atlantic Ocean, showing the east coast of North and South America. Yucatan again drawn as a peninsula.
fol. 5v-6: Indian Ocean, showing the coasts of Asia and Africa, with eight wind heads named in Dutch.
fol. 6v-7: Land map of North West and Central Europe. England and Scotland connected – Wagner’s ‘new map of Scotland’.
fol. 7v-8: Iberian peninsula and North West Africa with the Pyrenees and Atlas mountains plus numerous town vignettes.
fol. 8v-9: Western Mediterranean.
fol. 9v-10: Central Mediterranean, Italy and the Aegean.
fol. 10v-11: Eastern Mediterranean with the tip of the Red Sea.
fol. 11v-12: Black Sea with eight winds heads named in Italian.
fol. 12v-13: Aegean Sea with the Archipelago.
fol. 13v-14: Land map of Scandinavia (derived from Olaus Magnus’ map of 1539).
fol. 14v-15: Oval world map. The course of Magellan’s voyage around the world of 1520 is clearly drawn, as well as the route from Spain to Peru.
fol. 15v-16: Hemisphere of the eastern half of the world partially following the ancient Ptolemy with Africa shown down to the source of the Nile.
fol. 16v-17: A full page of text in Latin providing cosmographical dimensions.

Provenance:
Pencil inscription from Henri Harisse to inside of upper cover:

“Par Battista Agnese
Henri Harisse
Cf. mon Cahier p.190
& surtout mon Discovery of North America
Paris, Welter, 1892. H.15.”
A reference to two well-known books written by Henry Harrisse in 1882 and 1892 respectively. That the present atlas is not included in Harrisse’s 1892 survey of the works of Agnese in his ‘Discovery of North America’, indicates that it was not known to him until after publication.

Henry Harrisse (1829–1910) was a lawyer and American historian born in Paris, who moved to the US when very young. He studied at the University of South Carolina and began his academic career as a philosopher at the University of North Carolina. Later in life he became increasingly interested in the origins of modern America. Harrisse wrote extensively on Christopher and Ferdinand Columbus, John and Sebastian Cabot, and the early voyages of American exploration, and is best known for Bibliotheca Americana Vetusissima, a description of over three hundred writings on America published between 1492 and 1551.

Through his bequest, the Library of Congress acquired in 1915 his personal copies of his publications, complete with marginal comments and interleaved notes. In addition to over two hundred volumes, the collection preserves correspondence pertaining to Harrisse’s research, an original letter by Pietro Martire d’Anghiera, and a manuscript (ca. 1533) describing a voyage along the northern coast of South America. Harrisse was elected a member of the American Antiquarian Society in 1893.
Select Bibliography:

Harrisse, Henry, *Discovery of North America* (1892).

