

TITLE: *Bianco World Maps*

DATE: 1432-1436

AUTHOR: *Andrea Bianco*

DESCRIPTION: The maps of Andrea Bianco (Bianchi), along with those of *Walsperger* (1448), the *Catalan-Estense* map of 1450, the 1430 *Borgia* map, the *Genoese* map of 1457, and *Fra Mauro's* map of 1459 (see #245, #246, #237, #248 and #249), form the beginnings of a transition period, away from the circular, Jerusalem-centered religious depictions of the earlier medieval *mappaemundi*, and toward those that were to form the Renaissance period of cartography. The maps mentioned above are ones that began to assimilate the new discoveries into the Ptolemaic framework (*Book I*, #119), thereby abandoning the form and format of the earlier maps. Since the traditional frame no longer held the new discoveries in the 15th century it became a practical impossibility to center the maps on Jerusalem. The Andrea Bianco's *mappamundi*, made in Venice in 1436, forms part of an atlas, which also includes nautical instructions, a series of sea charts, and a Ptolemaic world map. Andrea Bianco's world map of 1436 literally breaches its circular border in East Asia. These transitional maps are often circular, with a well-defined Mediterranean and Black Sea area directly derived from the *portolan* [nautical] charts. The accuracy, however, falls off dramatically outside the Mediterranean basin. The cartographic signs and generalization are similar in style to those of the *portolan* charts, as is the network of rhumb lines radiating from the center of the map.

However, biblical sources still predominate, especially for the land areas toward the edges of the map. The clerical hold on scholarship was responsible for two of the most conspicuous features of the typical world map: (1) the prominence given to biblical topics and topography and, (2) the survival of certain traditions at a time when fresh knowledge was making them untenable or at least demanding their modification. The *Terrestrial Paradise*, for instance, forms an almost constant component of the *mappamundi*, and what could be more natural? No orthodox Christian in the Middle Ages doubted the existence of this original home of mankind as a fact of contemporary history. Many writers devote long chapters to the description of its delights, though none from first-hand enjoyment of them. Even Mandeville, the most romantic geographer of the age, confesses that he had not visited it on account of his unworthiness, but that he had derived his information about it from trustworthy men. John of Hesse (Hese), who professes to have seen it from a distance in the Far East, (fl. ca. 1389) also assigns a terrestrial position to *Purgatory*, possibly on the authority of Dante who tell us that the *Earthly Paradise* was situated in the Southern Hemisphere on the summit of the mount of *Purgatory*, antipodal to Jerusalem. John Marignolli was assured by the natives of Ceylon/Sri Lanka that *Adam's Peak* was only 40 miles distant from *Paradise* and that on a good day it was possible to hear the water falling from the river which '*went out of Eden to water the Garden*'. Typical of the circumstantial descriptions of this earthly Eden are those coming from the pens of Gervase of Tilbury and Ranulf Higden (#232), who based their statements mainly on the opinions of the early Fathers, Augustine, Basil and Ambrose. But the authority upon whom the mapmakers relied mostly was Isidore (*Book II*, #205), whose statement that *Paradise* was '*hedged about on all sides by a long wall of flame . . . in such a way that the fire reached almost to the sky*', is vividly portrayed in the *Hereford* map (*Book II*, #226). The vitality of the tradition was so great that this *Garden of Delights*, with its four westward flowing rivers, was still being located in the Far East long after the travels of Odoric and the Polos had demonstrated the impossibility of any such hydrographical anomaly, and the moral difficulties in the way of the identification of *Cathay* [China] with *Paradise*. The embarrassment arising from the

knowledge that the sources of the rivers were mutually remote was banished by assuming that each of the streams, upon leaving *Paradise*, went underground and reappeared at their respective sources. Thus *Paradiso Terrestre*, adjoining *C. Comorin*, is prominently displayed on Bianco's 1436 world map, with four rivers shown flowing through the center of India, one to the north of the Caspian, near Agrican, that is *Astrakan* [the Volga], a second into the south of the Caspian, near *Jilan* [Araxes?], a third into the *Gulf of Scanderoon* [Orontes?], while the fourth river is the Euphrates. The physical existence of the *Earthly Eden* was believed by many people, long after the Middle Ages; its location was still an academic issue when Bishop Huet of Avranches wrote his *Tractatus de Situ Paradisi Terrestrii* in the 18th century.

John Marignolli, who reached Ceylon in the 14th century, describes a glorious mountain (probably *Adam's Peak*) barely forty miles from paradise, according to the natives. And from the height, the water falling from the fountain of paradise divides into four rivers that flow through the country. "The second river," relates Marignolli, "is called the *Phison*, and it goes through India, circling all the land of Evilach." Though he does not name the river, Marignolli's description points to the Ganges, "for on its banks are great and noble cities, rich above all in gold. And on that river excellent craftsmen have their dwellings, occupying wooden houses, especially weavers of silk and gold brocade (Banaras?), in such numbers, as in my opinion do not exist in the whole of Italy".

Following custom, Marignolli notes that the river *Gyon* (Gihon), after passing through Ceylon, encircles the land of Ethiopia and flows into Egypt. Such a belief is based on the ancient theory of subterranean watercourses flowing deep in the earth, under oceans and between continents. As mentioned above, this belief, as old as Pindar, was later revived by Christian writers to explain the rivers of paradise flowing into the world from some remote point in the east.

Other Old Testament stories to be commemorated were the fortunes of Noah's Ark, the punishment of Lot's wife, the destruction of Sodom and Gomorrah, the sojourn in Egypt and the Exodus. However, of all the topics to be given pictorial expression, few enjoyed a wider vogue than those concerning the lands of *Gog* and *Magog* which are also displayed on Bianco's map. In the north of Asia, on a peninsula that stretches far out into the sea, are the words "*Gog Magog chest Alexander gie ne rocon ecarleire de tribus iudeoron*" [*Gog and Magog* of the Jewish tribes whom Alexander enclosed in the rocks (mountains) ages ago]. *Gog* and *Magog* begin at this time, following the trend established by the 12th century in popular exegesis, to be confused on world maps with Jews, especially the Ten Lost Tribes.

In his world map of 1436, Bianco places a large island in the Atlantic Ocean to the west of the Straits of Gibraltar, the mythical *y:a de Antillia*, the outlines of which are only indicated, and then farther north, at the western corner of the map, another large island, *y:a de la man Satanaxio*. This legend, or the narrative to which it alludes, seems to have impressed the geographers of the following centuries, the *Insula Dæmonum* being retained on manuscript and printed maps long after the rediscovery of the New World, e.g., on the map of Wytfliet of 1597.

Andrea Bianco described himself on his chart of 1448 as *comito di galia* [a senior officer on a galley], and official documents survive that link him with almost annual galley sailings throughout the period 1437-51. Bianco signed his 1448 chart from London. That was the only year in the period 1445-51 for which his destination is not independently documented. No doubt, as in 1446, 1449, and 1451, he was an officer on one of the Flanders galleys. Three ships were certainly fitted out by the Venetian Senate in February 1448, two

of them intending to call at London. Presumably Bianco drew the chart ashore during the three and a half months allotted for cargo loading and customs clearance. Bianco is also recorded as having collaborated with Fra Mauro at Murano on his celebrated world map (#249), as payments made to him between 1448 and 1459 testify.

Bianco was an experienced ship master and navigator of Venetian merchant galleys. The Archives of the Republic record his certification, at various dates between 1437 and 1451, as *ammiraglio* and *uomo di consiglio* in ships plying the trade routes to *Tana* [Black Sea], Flanders, Beirut and Alexandria, Rumania, and Barbary. He signs his chart of 1448 from London as *comito de galia*.

Two cartographic works from Bianco's hand have survived. These are the atlas of ten leaves, with nine charts or maps, dated 1436 and preserved in the Biblioteca Nazionale Marciana, Venice, and the nautical chart of 1448, preserved in the Biblioteca Ambrosiana, Milan. The latter is the primary cartographic authority (since no Portuguese charts of this period are extant) for the Portuguese exploration of the Atlantic and of the African coast up to the year 1445, extending southward to Cape Verde. This chart, which has been frequently reproduced, has been the subject of much discussion in regard to its representation of the Azores and of islands shown at the southern edge of the chart, two off Cape Verde (conjecturally identified as the Cape Verde Islands) and *ixola otenticha*. The chart is signed *Andrea biancho. venician. comito di galia me fexe a londra. m. cccc.xxxx.viiij*; it is thus the earliest surviving nautical chart prepared in England, and testifies to the manner in which intelligence of new discoveries could reach England in the 15th century.

The atlas of 1436 comprises ten leaves of vellum, measuring 29 x 38 cm., in an 18th century binding. Until 1813, when it came to the Biblioteca Marciana, it was in the possession of the Venetian family of Contarini, and there is no evidence that it ever left Venice, where Bianco seems to have executed and signed it. The designs on the leaves are as follows:

- I. Description of the Rule of Marteloio (*la raxon de marteloio*) for resolving the course, with the "circle and square", two tables and two other diagrams; to the right a windrose. Above is the signature: *Andreas. biancho. de ueneciis me fecit. m. cccc. xxxvj*.
- II. FIRST CHART: coasts of the Black Sea.
- III. SECOND CHART: coasts of the Eastern Mediterranean.
- IV. THIRD CHART: coasts of the Central Mediterranean.
- V. FOURTH CHART: coasts of Spain and Portugal, NW Africa, and Atlantic islands (Azores, Madeira, Cape Verde Islands, *Antillia*, *Satanaxio*).
- VI. FIFTH CHART: coasts of North Spain, France and Flanders, the British Isles.
- VII. SIXTH CHART: coasts of the Baltic, Denmark and Scandinavia.
- VIII. SEVENTH CHART, on a smaller scale: all the coasts of Europe and NW Africa comprised in the previous six charts.
- IX. Circular world map, 25 cm in circumference.
- X. Ptolemaic world map on Ptolemy's first (conic) projection, with graduation.

The first five charts are drawn and colored in the usual *portolan* style, with strongly accented coastlines; they are on a common scale, and oriented with south to the top (as indicated by the writing of names and legends not on the coasts). The sixth chart is drawn in somewhat different style, with the coastlines traced in smooth broad curves, suggesting less detailed knowledge or information from hearsay. The seventh chart embraces the "normal *portolani* area", with some extension to the north (from the sixth chart) and to the south and west (from the fourth chart). The geographical delineations in this and in the

circular world map agree on the whole with those in the six special charts and seem to be generalizations from them. The world map has iconographic representations of kings, natives, and so on.

To this he appended his world map in the old circular style as well as a copy of Ptolemy's world map. This juxtaposition of *portolan* theory, wheeled map tradition, and Ptolemaic theory signals that Bianco was an acute thinker about global geography and interested in stimulating the thinking of his contemporaries. The incongruous appearance of a circular *mappamundi* of archaic design and a Ptolemaic world map in this company has prompted the suspicion that one or both may have been added to the atlas at a later date. The similarity of the handwriting in these two maps and in the rest of the atlas, however, leaves little doubt that they were executed at the same time as the other charts, or else a little later and certainly at the same time as one another.

The circular world map shows an island in the same place as the *Dicolzi* of the Vienna-Klosterneuburg corpus, and on it is the notation "griffons and girfalcons." However, this map's treatment of *Gog and Magog* is different from that on any other map. Bianco depicts this land as an extension of Asia that juts out into the blue border surrounding his map, as if beyond the middle of d'Ailly's equinoctial circle (#238). Part of Bianco's representation of *Taprobana* [Sri Lanka/Ceylon] also extends into the other hemisphere by use of d'Ailly's device. However, it does not appear that Bianco clearly understood or intended this map as a global representation in the same sense as d'Ailly did his *Seventh Figure*. While Bianco's meridian line passes through the same area as d'Ailly's, his equatorial line passes through Greece, Italy, and Spain, far north of the true global equator. The curious mixture of wheel-map tradition with global projection theory is further emphasized in the west. There Bianco apparently gives explicit attention to d'Ailly's ocean problem by showing the full extent of the ocean to the global horizon. This is a device that appears again below and seems to be part of a transitional phase in which consideration was being given to the situation of the world continent relative to the global ocean.

In its general character the circular world map faithfully reproduces the pattern introduced by Fra Paolino and Petrus Vesconte (#228) over a century earlier, augmented only by the representation of northwest Africa and the Atlantic islands borrowed from Bianco's charts. Neither in design nor in content does its author seem to have sought novelty; there is no attempt at originality of design as in Pirrus de Noha's world map (#239), or at conscientious scrutiny of sources, as in the maps of Leardo and Fra Mauro. Rather than dismiss Bianco as "a casual and untutored cartographer", it is tempting to speculate that in adding the two world maps to his atlas he was deliberately presenting side-by-side the old world picture and the new, the geographical lore of the Christian Middle Ages and the lately discovered geography of Ptolemy; just as 16th century editors of the *Geographia* printed a modern world map, based on experience, alongside the traditional maps of the Ptolemaic atlas. The first Latin translation of Ptolemy's Greek text was completed by the Florentine Jacopo d'Angiolo in 1406, and the maps were turned into Latin soon after. Bianco's copy of the Ptolemaic world map, made in Venice in 1436, testifies to the diffusion of the Latin manuscripts of the *Geographia* and has a possible relevance to the Ptolemaic echoes in the nomenclature of the *Vinland Map* (#243), few and faint though they are.

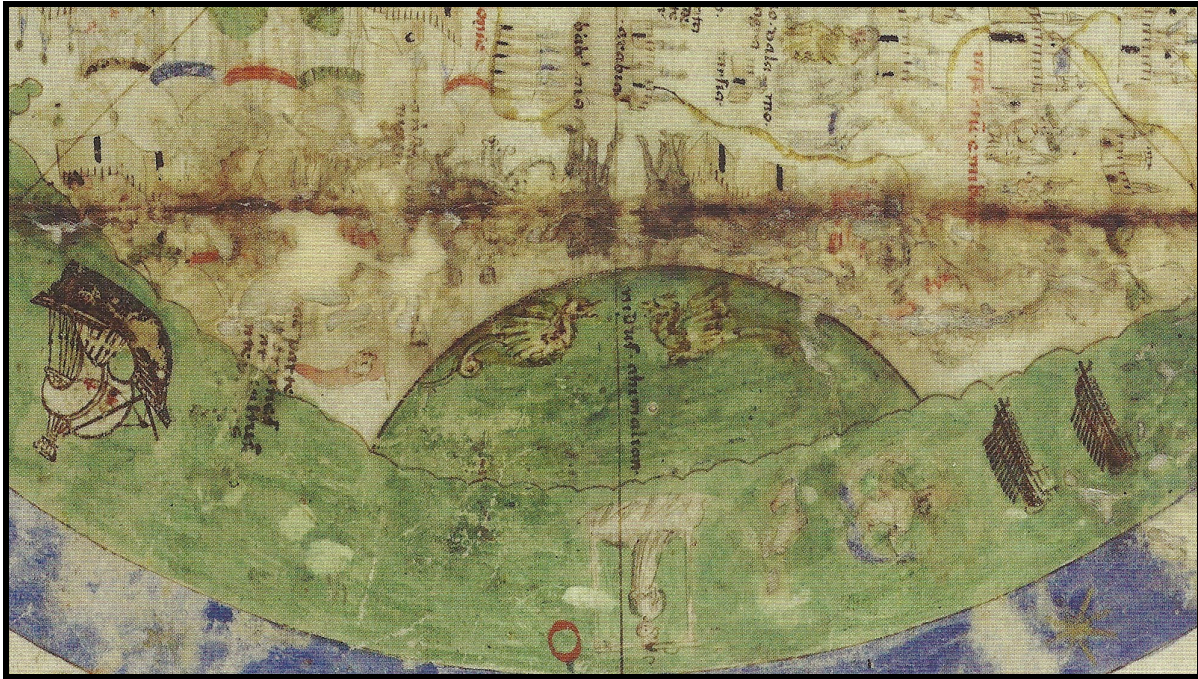
The circular world map is oriented to the East, surrounded by a blue rim representing not the ocean (which is green) but the heavens, as we can see from the stars painted on it. The landmass of the earth is shrunk considerably within its frame in order to increase the size of the ocean and to include the polar regions. Even so, a bit of land in East Asia protrudes into the frame. To the south of this promontory lies a long gulf, and on the peninsula nearby is the *Garden of Eden*, with Adam and Eve standing on either side of the tree, and the four rivers flowing to the west. Below is another garden, where God is instructing Adam, alas, to no avail. Near the center we find the Virgin Mary and child being adored by the Magi and at the River Jordan the baptism of Christ. Noah's Ark is shown in Armenia and Mt. Sinai in Arabia. Despite dire warnings, a fully caparisoned ship sails down the coast of West Africa toward the south, where a tribe of dog-faced men march under a banner. In the far eastern extension of Africa can be found legendary Christian king Prester John. The Indian Ocean is open to the east and crowded with islands, while Africa extends far to the east, bounding the ocean on the south. The two polar regions are not inviting. In the north, marked off by a half-circle, we read that it is terribly cold and that every-one born in that region is a savage. To the east are the enclosed peoples of *Gog* and *Magog*. The South Pole is described as "*nidus alli malion*" [nest of all evil], and there is a man hanging from a gallows, as well as several sea monsters.

Not surprisingly, the map borrows the coastal forms from the sea charts, and the vernacular winds, whose lines divide it into eight pie-shaped section. Scattered over the map are familiar place-names like Cathay, Samarkand and India in Asia, while in Europe we find Paris and the king of the French, Norway, Sweden, England and Ireland. Because of this map's early date, there is no record of the Portuguese voyages, but in Bianco's 1448 chart, their progress in west Africa is duly noted. An unusual feature of this map is the large number of human figures on it. Real animals such as elephants and camels are displayed along with mythical beasts. Asia is almost entirely taken up by an array of enthroned kings, flanked by what appear to be their entourages. It is almost as though all of Bianco's pent-up creativity is unleashed after drawing the more restrained sea charts.

The *mappamundi* is the only map in the atlas to have sea monsters, and they are all in the southern ocean, at the edge of the world far from Europe: there we see a two-tailed siren and two winged dragons. The dragons are in what looks initially like a bay, but the feature is actually intended to represent an underwater abyss at the southern end of Africa: the wave pattern at the southern edge of this feature indicates that the dragons are underwater. The legend between the dragons is usually transcribed as *nidus abimalion*, but without adequate explanation. Bianco frequently ends words with "-on" where "-urn" would be normal in Latin, e.g. *inperion* for *imperium*. Thus, according to Van Duzer we are to understand *nidus abimalion* as *nidus abimalium*, and the phrase evidently means "nest of the creatures of the abyss," though *abimalium* is not attested in other sources (compare the French *abime*, "abyss").

The correctness of this interpretation is confirmed by the presence of a figure who can only be Judas on an island near this abyss: in the *Nauigatio sancti Brendani abbatis*, St Brendan while sailing in the Atlantic encounters an entrance to Hell, and nearby, Judas alone on an island, and Judas tells Brendan that he is allowed to escape Hell and rest on the island on Sundays and church holidays. Bianco's transfer of this entrance to Hell to the southern tip of Africa is surprising, particularly as some authors and cartographers had located the *Terrestrial Paradise* in the same area. But his location of an underwater nest of monsters, including sea monsters, at the southern end of the world (which is what he

represents, whatever the precise interpretation of the text) is a startling innovation that defies ready explanation.



A two-tailed siren and two winged dragons in a watery abyss in the southern ocean

This circular medieval *mappaemundi* had placed the world in its universal context, frequently including the structure of the four elements, the nine spheres, and the ordering of time by the motions of the moon and the sun. The three continents of the then-known world were associated with the biblical distribution of the lands to the sons of Noah (*Book II*, #205). The classical heritage was marked by the surrounding twelve winds, as well as the dominance of geographical names harking back to ancient times. While current events and newly founded cities were not excluded from the maps, historical sites were equally important: the cities of Troy and Carthage, the sites of ancient battles, the exploits of Alexander, the progress of the empires from east to west. Of special significance was biblical history, and the most complete *mappaemundi* covered it all, from the *Creation* through the *Incarnation* to the *Last Judgment*, important sites such as the barns of Joseph, the sites connected with the life of Christ, the missions of the apostles, and the bishopric of Saint Augustine, set forth the sacred story in spatial terms. The Red Sea, bearing a text on the passages of the Israelites and/or the drowning of Pharaoh's army, was shown still divided, in order to indicate the eternal present of these spiritually significant events.

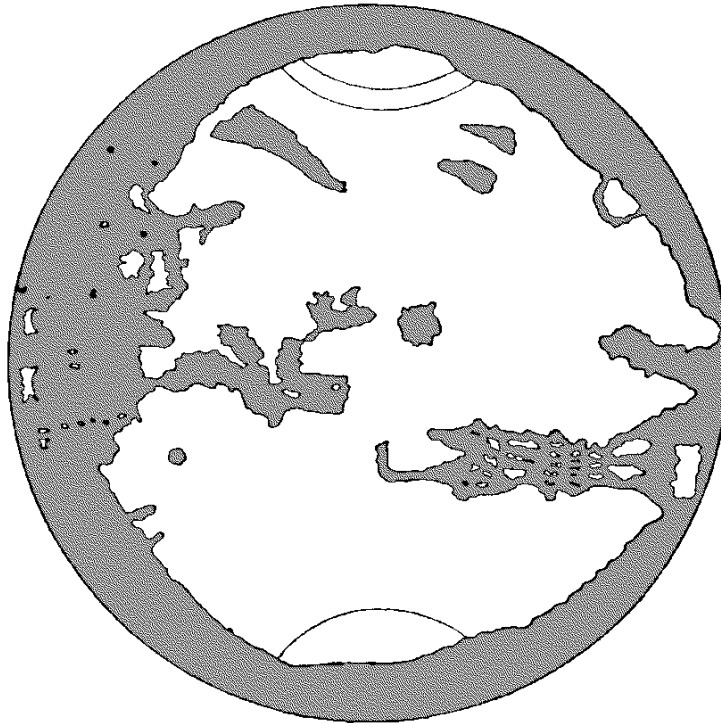
The Bay of Biscay, the English Channel, and the coast of Holland are given with remarkable fullness we find *Alixart* [Lizard], *Falarnua* [Falmouth], *Codiman* [Dodman], *Fable* [Fowey], *Cao de Rame* [Rame Head], *Premua* [Plymouth], and so on. No doubt the chart was studied by the sailing-masters of the Flanders galleys. Andrea Bianco was followed in 1459 by Fra Mauro, who made his famous planisphere for Alphonso IV of Portugal (#249).

LOCATION: Biblioteca Nazionale Marciana, MS. Fondo Ant.It. Z.76, fol. 8, Venice, Italy

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*illustrated



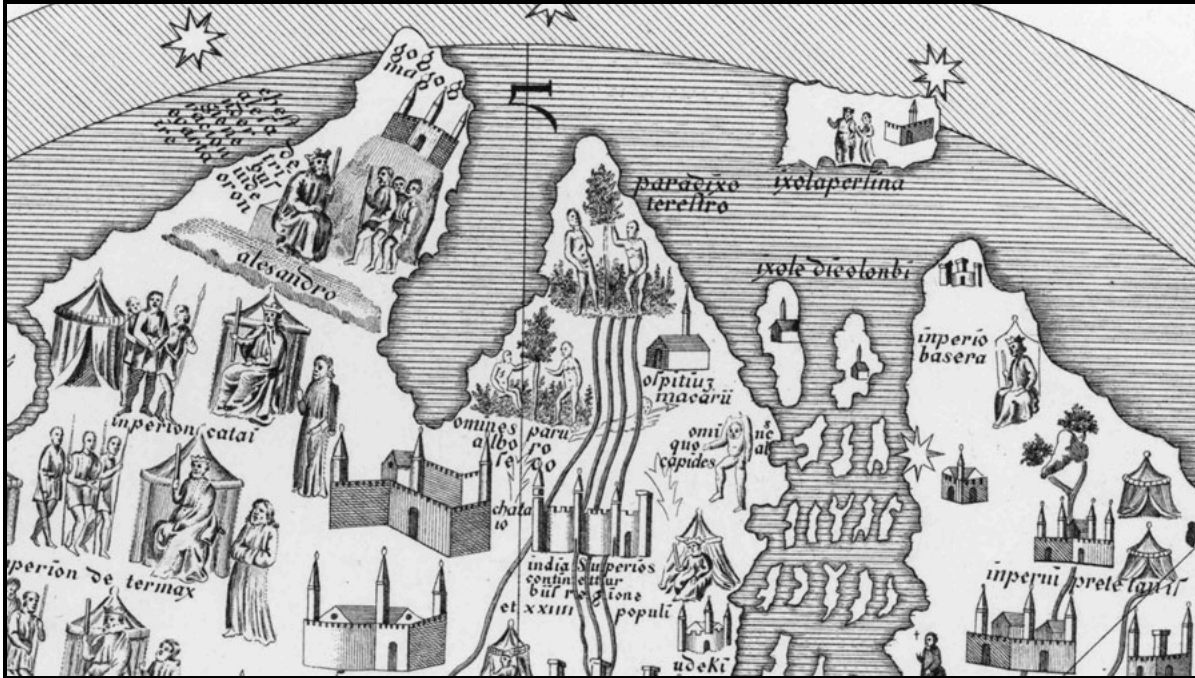
Outline of the Bianco world map re-oriented with North at the top



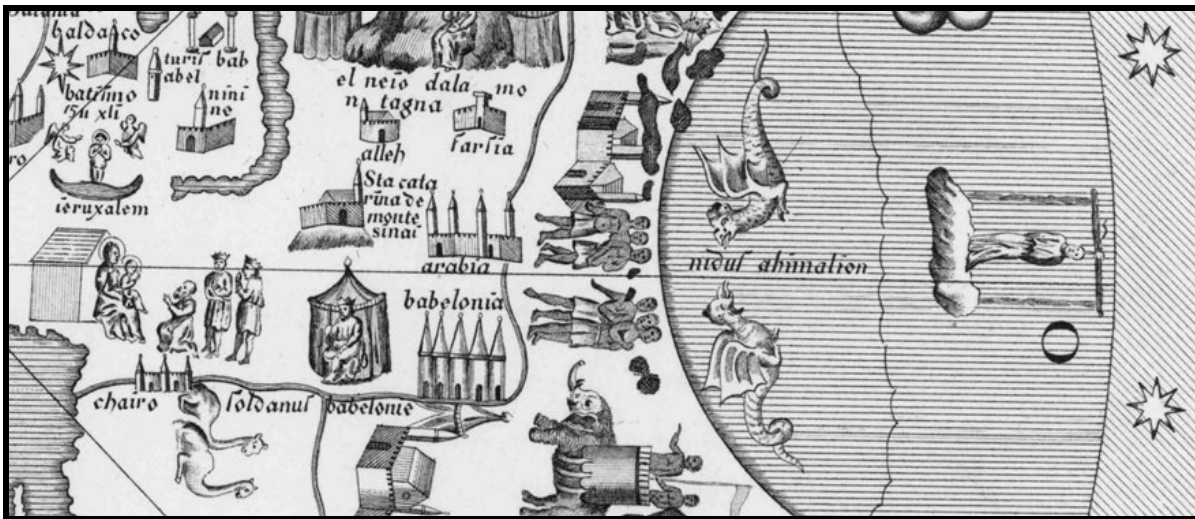
Andrea Bianco's World Map, 1436, 25 cm diameter, Nazionale Marciana, Venice, MS It. Z,76, fol. 8 oriented with East at the top, this map shows Paradise with Adam and Eve and the four sacred rivers that flow from it. The Indian Ocean is open to the east, and is dotted with islands. Africa extends to form its southern shore and includes kings, dog-headed men and dragons. The two poles are marked with semi-circles and the Atlantic Ocean is greatly enlarged to show the recently discovered islands of the Azores. All the oceans and seas are colored in green, the Red Sea is colored appropriately and the surrounding blue band is dotted with stars representing the heavens.



Facsimile of the Bianco World map



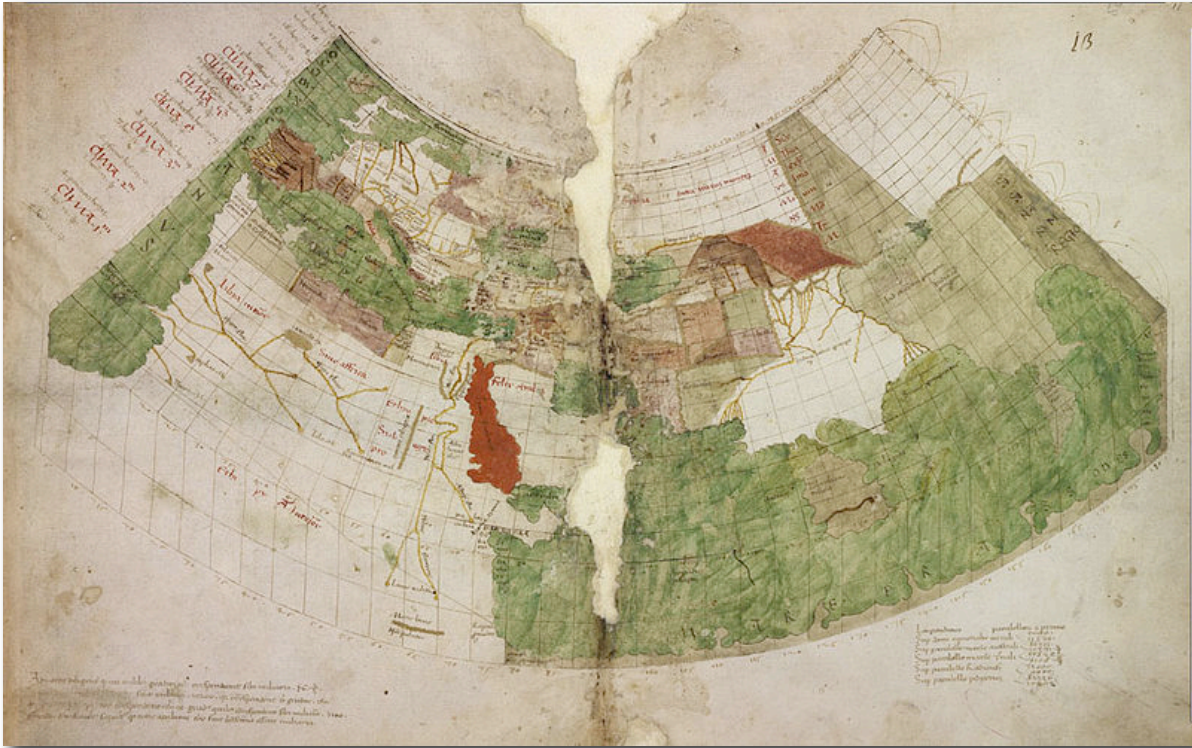
Detail of Bianco's mappamundi showing Adam & Eve, the Terrestrial Paradise and the four great rivers (right) and the location of the notorious Gog and Magog on a peninsula (left)



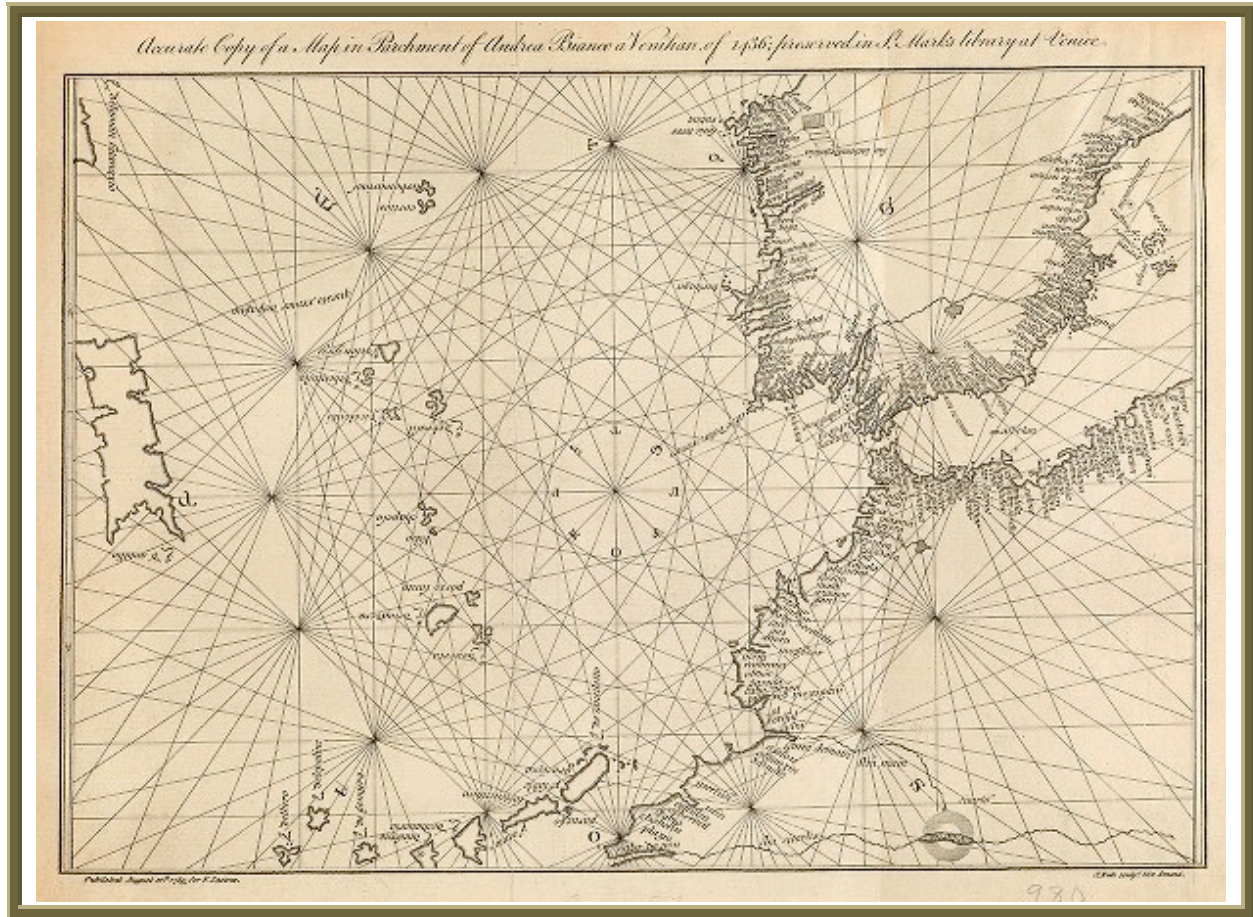
Detail showing (on the left) Mary of the Christ child, and (on the right) the southern portion of Africa with hanging man and sea monsters.



Planisfero Antico di Andrea Bianco Che si conserva in Venezia nella Biblioteca di S. Marco., copper engraved version (1783) from the first Italian edition by Vincenzio Antonio Formaleoni's (1752-1797) "Saggio sulla nautica antica de' Veneziani ", 10.0 x 9.8 inches. / 25.5 x 25.0 cm



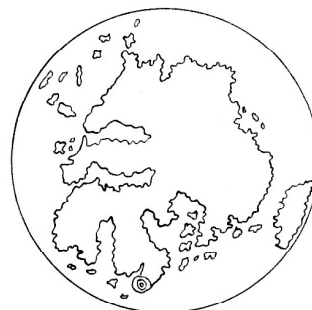
A Ptolemaic map of the world, from the tenth page of the ten-sheet atlas by Venetian cartographer Andrea Bianco, dated 1436. Held by the Biblioteca nazionale Marciana, Venice. This is one of the first Ptolemaic maps made since the recovery and Latin translation of Ptolemy's work in the early 15th century.



A copy of a portolan chart of Europe or the Iberian peninsula and northern Africa. This map also includes some Atlantic islands such as the fictitious Antillia island. The legend of Antillia (or Antilia), also known as the Isle of Seven Cities, originated in an old Iberian legend about seven bishops from the eighth century who fled Muslim conquerors by fleeing westward to the island. Andrea Bianco included the island in his map of 1436, but it was omitted in his later map of 1448. The existence of the island on maps has been used for theories of pre-Columbian trans-oceanic contact and some say may represent the American landmass.



Petrus Vesconte, c. 1321



Albertin de Virga, c. 1414



Andrea Bianco, 1436



Borgian, first half XV century



Andreas Walsperger, 1448



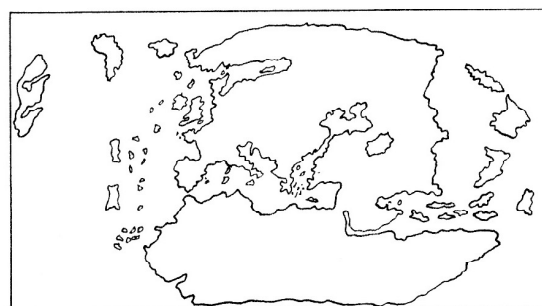
Catalan-Este,
c. 1450



Giovanni Leardo, 1452-3



Genoese, 1457



Vinland Map, mid XV century (?)



Fra Mauro, 1457-9

A comparison of European medieval mappaemundi, uniformly oriented with North at the top