

**TITLE:** *The Ymago Mundi et tractatus alii*

**DATE:** 1410 [1483]

**AUTHOR:** Pierre d'Ailly [*Petrus de Aliaco*]

**DESCRIPTION:** A French prelate and cardinal, celebrated for his learning, Pierre d'Ailly had great influence on the theological controversies of the late 14<sup>th</sup>, early 15<sup>th</sup> centuries, especially during the council at Constance. However, the cosmographical writings of this Archbishop of Cambrai, though immensely popular during the 15<sup>th</sup> century, were almost forgotten after the great discoveries of the early 16<sup>th</sup> century. Thanks to the research of scholars such as Alexander von Humboldt, d'Ailly's influence on subsequent exploration has received proper recognition and general acceptance. Overall, the text, generally referred to only as *Ymago Mundi*, is actually a series of twelve short treatises which contain geographical and astronomical speculations and a reform of the calendar, all of which are bound up with four contributions by Jean Gerson. The most important and influential treatise, called *Tractatus de Imagine Mundi*, is the first one in the published volume. It was written in 1410 when d'Ailly knew the astronomical work of Ptolemy through his *Almagest*, but had not yet read his other work, *Geographia*, which was being translated into Latin for the first time by Jacobus Angelus almost concurrently with d'Ailly's production of his twelve treatises.



That d'Ailly was soon aware of the shortcomings of his *Ymago Mundi* may, perhaps, be inferred from the appearance of a subsequent treatise. Three years later, in 1413, the Cardinal, having acquired the new Latin translation of Ptolemy's *Geographia*, began writing another geographical work entitled the *Cosmographiae Tractatus Duo*, or the *Compendium Cosmographiae* (1414), especially to summarize the useful things contained in Ptolemy's work. D'Ailly is, therefore, not only the last of the medieval geographers before the Ptolemaic revival, but also the first of the Western scholars who began that revival and thus had a great influence on contemporary thought. Besides these two treatises the Cardinal also drew a *mappamundi* to illustrate his geographical ideas and wrote a short explanatory note, the *Epilogus Mappe Mundi*, to accompany it.

While the original treatises were, of course, produced in manuscript form, of which many copies are still extant attesting to its widespread popularity and circulation, the best known form to modern scholars is probably that of the printed (woodcut) edition of ca.1483 (Louvain).

Cardinal d'Ailly's work is marked by great erudition, although he seldom pronounces any positive opinion of his own. The learned prelate, otherwise so orthodox, often allows a doubt to glimpse forth as to the geographical dogmas of the Church. He expounds on controversial theories and supports various arguments by quotations from famous Greek and Latin writers such as Aristotle, Ptolemy, Seneca, Pliny, Orosius, Augustine, Esra; "modern" sources such as Sacrobosco, Roger Bacon and Nicholas Oresme; and even Arab authors like Averroes, Hali, Alfragan and Avicenna - obviously a remarkably well read scholar. A singularly significant literary source frequently quoted by d'Ailly, often verbatim, is the *Opus Majus* by Roger Bacon. Although d'Ailly compiled his *Tractatus de Imagine Mundi* 140 years after the time of Roger Bacon, the Cardinal chooses not to name a single medieval explorer, whether Asiatic or African. That all knowledge of recent explorations should have escaped his notice is hard to believe. Had not his own countrymen, Jean de Bethencourt and Gadifer de la Salle, for

instance, attempted to conquer and evangelize the Canary Islands at the very beginning of the 15<sup>th</sup> century? The whole work, with the exception of a few Arabic citations, mainly from Latin translations of the works of Avicenna and Averroes, might have been composed a thousand years previously. Indeed, some of it had. To take only one instance, his discussion of the *Antipodes*. In approaching this controversy, d'Ailly states it with such clarity that we expect to hear him assert the truth. But as a good theologian he finds himself confronted by the arguments of St. Augustine, Cosmas and others, as well as the biblical texts upon which it was founded. Overpowered by the weight of this authority, d'Ailly takes refuge in hearsay.

Some say that it (i.e. the zone between the winter Tropic Capricorn and the Antarctic Circle) is a temperate and habitable as our own . . . However, according to them, there can be no communication between the Antipodes and us because of the impossibility of crossing the intervening Torrid Zone and the Tropics. According to this opinion, the population of this region would be ignorant of the teachings of Christ and the Apostles, which is contrary to the sacred affirmation that 'their sound went into all the earth and their words unto the ends of the world'. In the sixteenth chapter of his *City of God*, St. Augustine refutes this opinion. However, certain writers maintain that it is a fable and that the fourth zone (i.e. the southern zone) is for the most part covered with water, and this view is supported by highly probable reasons . . .

The reasons given, however, such as the claim that the elevation of the sun there makes life impossible, presumably because it scorches the earth, are highly improbable. For d'Ailly's personal opinion on this subject, or for that matter on any other, one is hard put to find them within his writings. Probably the most significant passages of d'Ailly's writings are those in which he discusses the extent of the habitable globe. Some extracts from these will provide some insight to his ideas of cosmogony (from the seventh chapter of his *Ymago Mundi*):

The earth is spherical and the Western ocean is relatively small. Aristotle pretends, contrary to Ptolemy, that more than a quarter of the whole globe is inhabited, and Averroes sustains the same opinion. The Stagyrte affirms also that the extent of sea is small between the coast of Spain in the West and the shores of India in the East. We are not concerned here with the actual Spain, but with the *Further Spain*, which is Africa. Seneca asserts that one can traverse that sea in a few days if the wind is favorable. Again, Pliny teaches us that ships from the Gulf of Arabia can arrive in a short time at Gades in the South of Spain. Whence we conclude that the sea is not big enough to cover three-quarters of the globe. Esdras affirms in his fourth book that six parts of the earth are habitable and inhabited and that the seventh part alone is covered by the waters. The authority of that work has been recognized by the saints, who have made use of it for confirming the sacred verities. Beyond Thule, the last island of the Ocean, after one day's sail the sea is frozen and stiff. At the Poles there live great ghosts and ferocious beasts, the enemies of man. Water abounds there, because those places are cold, and cold multiplies humors [or vapors].

In the forty-eighth chapter he tells us:

Thus the water runs from one Pole to the other forming a sea which extends between the extremity of Spain and the beginning of India, of small width, in such a way that the beginning of India comes to beyond the half of the

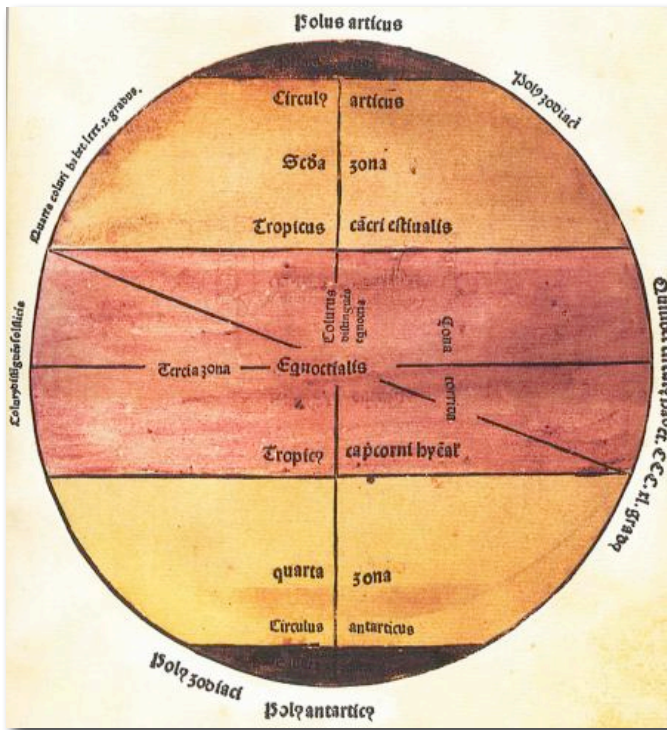
equinoctial line [i.e. in the other hemisphere], a situation very near to that which the end of our hemisphere occupies.

In the forty-ninth chapter he uses another argument that he had borrowed from Aristotle: "*The west coast of Africa cannot be far removed from the east coast of India, for in both those countries elephants are found.*"

Now the greatest interest of these and similar extracts from d'Ailly is that they were of fundamental importance in governing the ideas of the last of the medieval travelers, Christopher Columbus. However uncertain the premises and unsound the conclusions may appear to a modern reader, they were seized on by Columbus and his contemporaries and stimulated exploration to the west and south. It has now been proved that practically the only books on cosmogony that were familiar to Columbus were two, the *Ymago Mundi* of d'Ailly, an edition published between 1480 and 1487, and the *Historia rerum ubique gestarum* of Aeneas Silvius (Pope Pius II), published at Venice in 1477. There are still preserved in the Library of the Colombine at Seville the original copies of these books that were used by Christopher and his brother Bartholomew, and their margins are filled from end to end with remarks and notes in their own hands.

After his three historic voyages westward, Columbus in 1498, in letters to his sovereigns, attempting to substantiate his claims of discovering a new route to the Indies, proved that he was a man whose philosophical foundation lay firmly in the Middle Ages. Not a discriminating scholar, Columbus took his arguments ready-made from old fashioned, handy compendia, but assumed an appearance of immense erudition by quoting passage after passage from classical authors, both Greek and Latin, to prove that the islands and mainland he had discovered are part of Asia. He refers incidentally to d'Ailly as an authority supporting his view, but he does not reveal the fact that almost every scrap of his classical learning is lifted bodily out of the Cardinal's pages. This style of research produced two of Columbus' major errors. One was underestimating the unknown waters to the west of Europe because he adopted Marinus of Tyre's concept of the world through d'Ailly's work; the other error Columbus' acceptance of Ptolemy's calculation of distance around the world and, of course the size of a degree of longitude. Thus, according to authorities such as Humboldt, Newton, and Vignaud, Columbus in 1498 cribbed his views from d'Ailly who wrote in 1410, d'Ailly cribbed from Roger Bacon whose work dates from 1267, Roger Bacon derives through the Arabs from the Greeks. The most famous of the explorers of the new age, in fact, drew none of his ideas directly from the newly recovered geographical literature of the Greeks as did the true Renaissance thinkers like Peter Martyr or Damian Goes. Therefore, according to some scholars, his discovery of a new world was accomplished not with Greek or modern geographical concepts but with medieval concepts.

With specific reference to the writings of d'Ailly after his discovery of Ptolemy's *Geographia*, it can be seen that the Cardinal was a critical scholar. While he makes no attempt to incorporate or assimilate all of the Ptolemaic technique into his own system, he is not slow to exploit it. Thus he finds the 22 parallels of the *Alexandrine* climatic division too cumbersome for his own use and reduces them to 12. Seven of these correspond to seven of Ptolemy's *climata*; three, namely, *Montes Barditi*, *Raptum* and *Cattigara*, are adopted from the *ante-climata*, while the remaining two, Britain and Thule, pass through the *post-climata*. Out of the thousands of places tabulated in the *Geographia*, d'Ailly selects 353, the choice of which hardly commends itself from a geographical standpoint, giving them their Ptolemaic latitude and longitude.



Whereas *Meroe* was formerly d'Ailly's most southerly outpost of the *oikoumene* [inhabited world], now it is *Montes Barditi qui meridionalem limitem nostre habitabilis terminant*, and to those he gives the latitude of 16° S Ethiopia is similarly affected, receiving an ill-defined southern extension and made to adjoin the hitherto unmentioned land of *Agysimba*. Again, whereas in his first treatise d'Ailly describes *Africa parem Europae longitudine, tamen multo angustiore*, now he tacitly refutes it by admitting it to be habitable as far as 16 degrees South and to extend still farther.

So it must not be imagined that the Cardinal followed his

new-found authority unquestioned. Occasionally he leans towards the arguments of Pliny and others, and this, so it would seem, less from caprice than from an appreciation of their intrinsic merit. Thus, for instance, in a passage made famous by its association with the name Columbus, he demonstrates that the length of the habitable earth is greater than that postulated by Ptolemy and points out, as a corollary, that the commencement of India in the East could not be very far distant from the western extremity of Africa. From this same passage we learn that d'Ailly favors the concept of an open, rather than an enclosed Indian Ocean, and, in consequence, a sea-girt Africa, although this is nowhere stated categorically.

When all is said and done, however, d'Ailly is nothing if not deferential. There is not a single idea in any of his geographical writings which cannot be traced back, sooner or later to some impeccably orthodox source. At the same time there is a keen sense of proportion pervading them all and an obvious sincerity of intention. Thus, the Cardinal refuses to have anything to do with such superstitions as the monstrous one-eyed giants, the *Monoculi*, and the 'umbrella-footed' folk, the *Sciapodae*, who were commonly reputed to be inhabitants of central Africa. Conversely, it is regrettable that his preoccupation with classical erudition should have blinded him to the importance of events nearer his own time.

After elaborating the various geographical concepts transmitted by Pierre d'Ailly and noting his impressive list of sources, it is curious to take note of the particulars of the *mappamundi* (drawn about 1410 perhaps after an original by Roger Bacon of the 13<sup>th</sup> century) that accompanied both the manuscript and printed editions of the *Ymago Mundi*. Unlike the more provocative text, this circular map itself would probably never have stimulated or inspired such exploration as that undertaken by Columbus. A world map in the tradition of the medieval schematic zone-climate types, d'Ailly's map is hemispherical (20.3 cm in diameter), and displays the entire habitable world within the northern half. It is one of the earliest medieval maps from Europe that was oriented with



the North at the top. There is no attempt at continental outlines or standard representation of landmasses. Instead various countries are indicated by name only, with their relative positions to one another thus conveyed. Also depicted, again by name only, are rivers and mountain ranges. Exceptions in this regard being the Nile River, indicated by wavy vertical lines extending from Alexandria to *Meroe*, the *Mons Athlas* in Africa sketched half-heartedly near the Hesperides, and a few wavy lines called *Oceanus*. Otherwise, there are only carefully ruled climate zones and a few legends among the jumbled typography and no display of monsters or mythical figures that could often be distributed throughout other medieval and even Renaissance maps.

In the southern hemisphere are lines for the tropic of Capricorn and the Antarctic Circle. Geographical names are scattered throughout the northern hemisphere, more or less in relation to their locations, but no geographical forms are drawn. Most of the names are traditional and can be found on any medieval map. One oddity is the appearance of the mythical city of *Arym* in the center of the map on the equator. This place-name comes from Hindu cosmology, via the Arabic world, though its origins are somewhat mysterious. It was introduced to the West by Petrus Alfonsus, a Spanish Jew converted to Christianity, who put it on a climate map in 1110. *Arym* is also mentioned by Roger Bacon, who identifies it with Syene but observes there must then be "two Syenes," one on the tropic (as the original Syene in Egypt was) and one on the equator. d'Ailly repeats this curious information. The importance of *Arym* as a center point is that it was astronomically determined, as equidistant between the extreme east and west of the habitable world, unlike the center point of Jerusalem, which was theologically determined.

Like many other unfortunate authors, d'Ailly became aware of the reappearance of Ptolemy's *Geography* soon after his book was completed. In a manuscript of the *Ymago Mundi* at Cambrai, his anonymous "research assistant" added a note near the end that Ptolemy in the *Geography* contradicts his view, expressed in the *Almagest*, that the climate at the equator was temperate. In stead he now says that the Ethiopians living near the equator were burnt black by the force of the sun's rays. The heady intellectual exchanges at the council caused d'Ailly to produce another book *Compendium Cosmographiae*, a summary of the *Geography*, of which he now seemed to possess a copy. D'Ailly did not accept Ptolemy unconditionally. He noticed that there are conflicts between Ptolemy and other ancient authorities. For example, Ptolemy said the extreme north of the habitable world is 66°, but Pliny said that the *Hyperboreans* live beyond this point. He also reorganized Ptolemy's data according to climate rather than continent and proposed to make a more useful map, using straight lines for latitudes instead of curved ones. No such map survives.

Again, the map by itself does not speculate or promote new geographical ideas, however, given the concepts and ideas expressed in d'Ailly's text and using the analogy between present-day radio, this seemingly blank map with the provocative text and combined with an active imagination may have been the most appropriate design for d'Ailly to have chosen. By omitting any real or speculative coastlines, the author could leave the interpretation of the textual material and speculation up to his reader.

This woodcut schematic map showing climatic zones. First edition. Pierre d'Ailly, Cardinal of Cambrai, wrote in 1410 a text-book on geography which he supplemented with a second treatise in 1414, that, for all its medieval authoritarianism, is believed to have had a profound effect upon the great explorers. In traditional fashion Pierre quotes earlier authorities such as Orosius and St. Augustine, but he also drew

heavily on the great 13<sup>th</sup> century scientist-scholastic, Roger Bacon. Bacon's arguments as to the proportion of land and water on the globe were repeated almost verbatim by Pierre d'Ailly, and, as mentioned, these convinced Columbus and his contemporaries that the shores of India in the East could not be very far distant from the western extremity of Africa. It is believed that d'Ailly's text, despite its medieval unreality, was directly linked to the first efforts to sail westward across the Atlantic to the Orient. Columbus' own copy of the 1483 edition of d'Ailly's *Imago Mundi* still exists, annotated by Columbus' own hand, and with the passages underscored that impressed him most. It is preserved in the Columbian Library in Seville.

Pierre's circular map of itself would never have stimulated exploration, as it is of medieval schematic type, marked into five climatic zones. The names of many geographical localities are inserted, but without any land configurations. Formerly in the collection of John Jacob Astor.

**LOCATION:** New York Public Library

**SIZE:** 20.3 cm/ 8 inches diameter

**REFERENCES:**

\*Bagrow, L., *The History of Cartography*, p. 49, fig. 7.

Brown, L., *The World Encompassed*, , 1952, #16.

\*Bricker, C. et al, *Landmarks in Mapmaking*, pp. 14, 77.

\*Edson, E., *The World Map, 1300-1492*, pp. 127-131, Figure 5.6.

\*Kimble, G.H.T., *Geography in the Middle Ages*, pp. 23, 92, 208 212, 218.

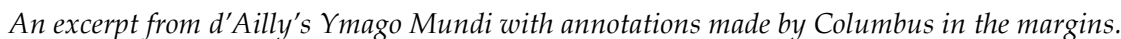
\*Newton, A., *Travel in the Middle Ages*, pp. 17-18.

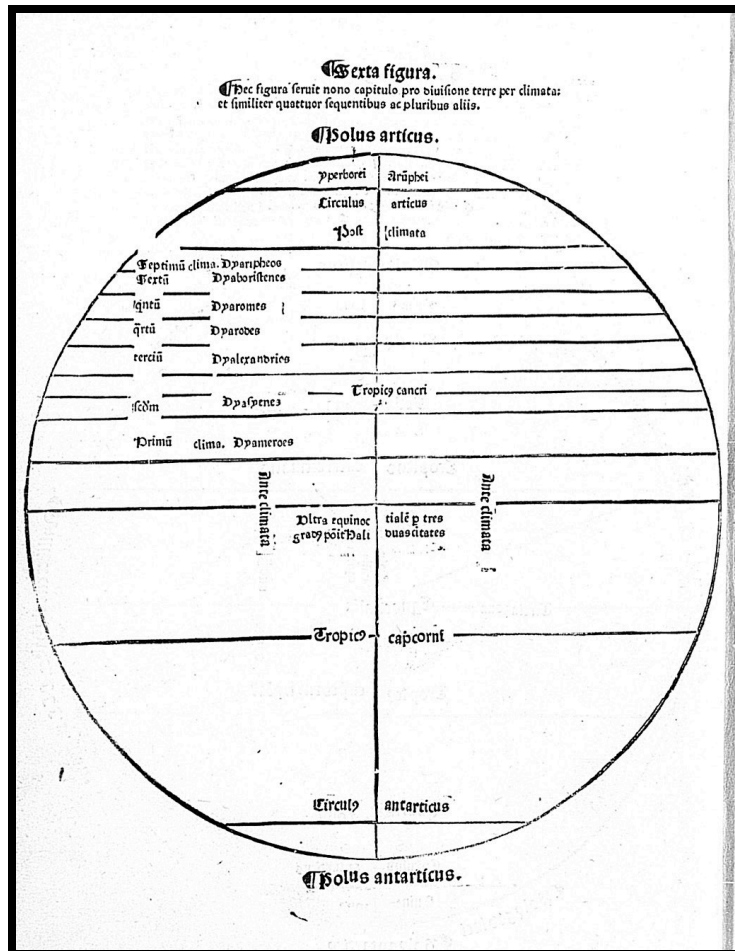
\*Miller, K., *Mappaemundi*, 3:128.

\*Nordenskiöld, A.E., *Facsimile Atlas*, pp. 37-38.

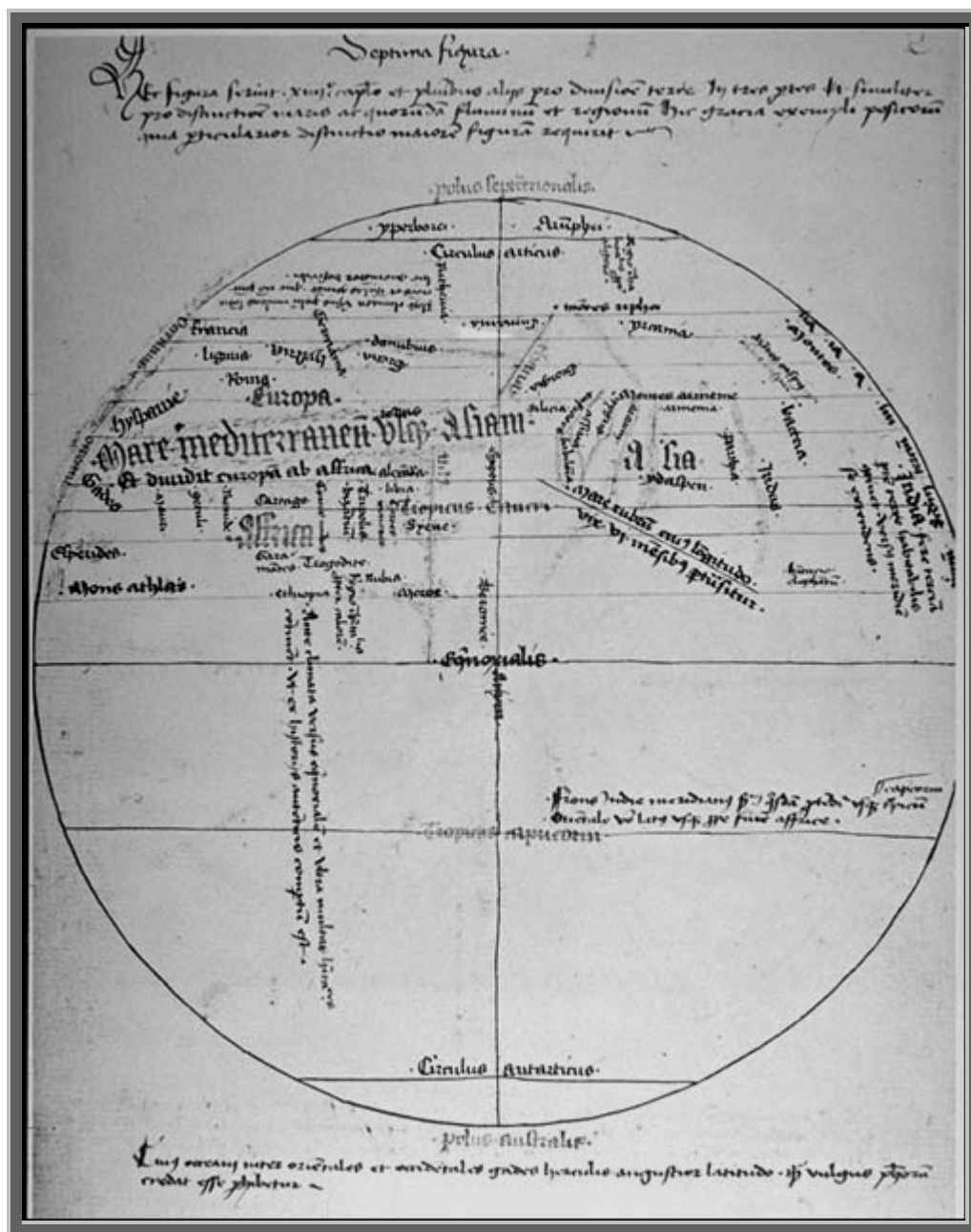
*World Encompassed*, no. 16.

\*illustrated

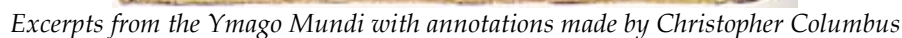








Pierre d'Ailly's World Map in his *Ymago Mundi*, 1410, 20.2 cm diameter





**Septima figura.**

Quia figura struit. nūc caputem planitū aliis pro diuisione terre in tres partes et si  
palliat pro diuisione maris ac quorūdam fluminū ac regionū hic gēo exemplū posui  
viri quā particulariter diuisione maris figurā requirit. Quare meridianus erit ab  
occaso per Arctūm meand. circa bispaniā prope gētes britān. Adā vērūmēdū erit  
ab occaso circa mēdiū oritū et meridiū in cā. versus meridiū circa mēdiū oritū et occi  
dentis et colos litorē vī in āno terminus litorū oceanū nōuēgationē attingitur.

**Polus septentrionalis.**

