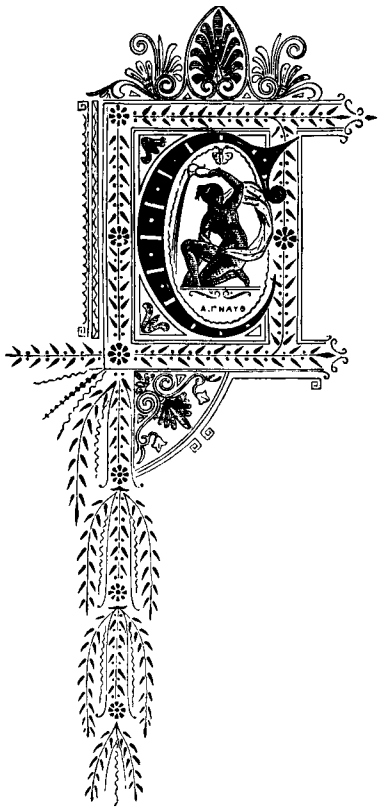


Today we know that the Caspian Sea is the world's largest inland body of water, variously classed as the world's largest lake or a full-fledged sea. It is classified as an *endorheic* basin [a basin without outflows] located between Europe and Asia, to the east of the Caucasus Mountains and to the west of the broad steppe of Central Asia. The sea has a surface area of 371,000 km^2 (143,200 sq mi) (excluding the detached lagoon of Garabogazköl) and a volume of 78,200 km^3 (18,800 cu mi). It has a salinity of approximately 1.2%, about a third of the salinity of most seawater. It is bounded by Kazakhstan to the northeast, Russia to the northwest, Azerbaijan to the west, Iran to the south, and Turkmenistan to the southeast. Over 130 rivers provide inflow to the Caspian, with the Volga River being the largest. A second affluent, the Ural River, flows in from the north, and the Kura River flows into the sea from the west. In the past, the Amu Darya (Oxus) of Central Asia in the east often changed course to empty into the Caspian through a now-desiccated riverbed called the Uzboy River, as did the Syr Darya farther north. The Caspian also has several small islands; they are primarily located in the north and have a collective land area of roughly 2,000 km^2 (770 sq mi). Adjacent to the North Caspian is the Caspian Depression, a low-lying region 27 meters (89 ft) below sea level. The Central Asian steppes stretch across the northeast coast, while the Caucasus mountains hug the western shore. The biomes to both the north and east are characterized by cold, continental deserts. Conversely, the climate to the southwest and south is generally warm with uneven elevation due to a mix of highlands and mountain ranges.

The Caspian Sea has numerous islands throughout, all of them near the coasts; none in the deeper parts of the sea. Ogurja Ada is the largest island. The island is 37 km (23 mi) long, with gazelles roaming freely on it. In the North Caspian, the majority of the islands are small and uninhabited, although some of them have human settlements. The Caspian Sea is approximately 1,391 miles (2,239 km) from the Arctic Ocean.

Antiquity

The sea's name stems from *Caspi*, an ancient people who lived to the southwest of the sea in Transcaucasia. Strabo (AD 20) wrote that "to the country of the Albanians belongs also the territory called Caspiane, which was named after the Caspian tribe, as was also the sea; but the tribe has now disappeared" (*Caucasus Albania* not to be confused with the country of Albania). Moreover, the *Caspian Gates*, part of Iran's Tehran province, may evince such a people migrated to the south. The Iranian city of Qazvin shares the root of its name with this common name for the sea. The traditional and medieval Arabic name for the sea was *Bahr* [sea] *Xazar*, but in recent centuries common and standard name in Arabic language is *Baḥr Qazvin*, Arabized from Caspian. In modern Russian language, it is known as Russian: Каспи□йское мо□ре, *Kaspiyskoye* more.

Some Turkic ethnic groups refer to it with the Caspi(an) descriptor; in Kazakh it is called *Каспий теңізі, Kaspiy teñizi,* Kyrgyz*: Каспий деңизи*, romanized: *Kaspiy deñizi*, Uzbek: *Kaspiy dengizi*. Others refer to it as the *Khazar sea*: Turkmen: *Hazar deňizi*; Azerbaijani: *Xəzər dənizi*, Turkish: *Hazar denizi*. In all these the first word refers to the historical Khazars who had a large empire based to the north of the Caspian Sea between the 7th and 10th centuries. In Iran, the lake is referred to as the *Mazandaran Sea* (Persian: مازندران دریای), after the historic Mazandaran Province at its southern shores. Old Russian sources use the *Khvalyn* or *Khvalis Sea* (Хвалынское море / Хвалисское море) after the name of *Khwarezmia*. Among Greeks and Persians in classical antiquity it was the *Hyrcanian ocean*.

Renaissance European maps labeled it as the *Abbacuch Sea* (Oronce Fine's 1531 world map, #*352.1*), *Mar de Bachu* (Ortellius' 1570 map), or *Mar de Sala* (Mercator's 1569 map, #*406*).

It was also sometimes called the *Kumyk Sea* and *Tarki Sea* (derived from the name of the Kumyks and their historical capital Tarki).

In Antiquity the learned philosophers of the day, mostly the Greeks, began to consider the extent of the world that they lived on. However extensive travel was rare and they were limited by the extent of what was known through military expeditions, sailors and commercial tradesmen. Very little was known outside the Mediterranean basin area by these philosophers who were also the first "geographers" and "cartographers".

In classical Antiquity among Greeks and Persians the Caspian Sea was called the *Hyrcanian Ocean*. In the Persian Middle Ages, as well as in modern Iran, it is known as خزر دریای, *Daryā-e Khazar,* which was named after Khazars an ancient Turkic nomadic tribe in the region. It is also sometimes referred to as *Mazandaran Sea* (Persian: مازندران دریای) in Iran. The word *Caspian* is derived from the name of the *Caspi*, an ancient people who lived to the southwest of the sea in Transcaucasia. Some Greek philosophers such as Herodotus (450 B.C., #*109*) correctly described the Caspian Sea as a land-locked body of water. *Herodotus Book I, 109-205:*

> *"Like the Gyndes (Kerah), which Cyrus divided into 360 channels, the River Araxes (Arras) rises in the country of the Matieni. It has 40 mouths, all but one issuing into swamp and marshland, where even are said to live those who eat raw fish and dress in seal-skins: by the remaining mouth it flows clear into the Caspian Sea. The Caspian Sea is a sea in itself and has no connection with the sea elsewhere, unlike the Mediterranean Sea which the Greeks use, and what is called the Atlantic beyond the Pillars of Hercules, and the Indian Ocean, all of which in reality is part of a single sea"*

> *"The Caspian, however, is quite separate; in length it is 15 days voyage, using oars, and it is 8 days voyage in its broadest part."*

Others, such as Hecataeus' (550-480 B.C., #*108*) held the erroneous impression that the *Hyrcanian* [Caspian] *Sea* flowed into the circumfluent Ocean. It was this perception of the Caspian Sea that persisted the longest, almost 1,500 years. Hecataeus' writings, *Periegesis,* were divided into two books, *Europe* and *Asia,* the latter also including *Libya* [Africa]. Hecatæus had personally traveled in Asia and Egypt. Modern reconstructions, based on these writings, reasonably show a map that is likely to have accompanied his book, as circular, with the ocean surrounding a landmass that ends eastwards at the *Indus River* and the *Caspian "Gulf" (see illustration below)*. Hecatæus believed that the upper surface of the earth pillar was a curving disc.

The map of the world in 300 B.C. by Democritus, considered to be the father of modern science and popularly known as the "Laughing Philosopher", shows an increase of geographical information, mainly in the easternmost parts. This comes from the information from the conquests of Alexander the Great in the East. The Greek philosopher Strabo (A.D. 18, #*115*) wrote that "to the country of the Albanians *(Caucasus Albania not to be confused with the country of Albania)* belongs also the territory called *Caspiane*, which was named after the Caspian tribe, as was also the sea; but the tribe has now disappeared". Moreover, the *Caspian Gates*, which is the name of a region in Iran's Tehran province, possibly indicates that they migrated to the south of the sea. The Iranian city of Qazvin shares the root of its name with that of the sea. In fact, the traditional Arabic name for the sea itself is *Baḥr Qazwin* [Sea of Qazvin].

Until the latter half of the 14th century, the medieval geographical tradition depicted the Caspian Sea as body of water far in the northern lands of *Scythia* (roughly modern-day Russia) with a narrow passage leading out into the ocean, where it could only be guessed what may lay beyond; in other words, the mouth of the Caspian Sea, and its coastal regions, represented the furthest reaches of the known world in the north, bordering the unknown. The origins of the Caspian Sea's basic form in the early period of the *mappaemundi* tradition – that of an indistinct shape of water, with a passage leading out into the unknown ocean – has its roots in classical geography. Pliny the Elder described the Caspian Sea's narrow passage, with a personified enthusiasm, as *"[...] bursting through, [...] into the back of Asia"* (Pliny the Elder, *Historia Naturalis*, VI. XV.); The Greek geographer Strabo noted that *it is rather narrow at its entrance, but it widens out as it advances inland [...] its entrance is approximately on the borders of the uninhabited world"* (Strabo, Γεωγραφικα (*Geographica*), VI.)

However, it would be an error to suggest that this was the extent of opinions that Greco-Roman writers had of the hydrographic nature of the Caspian Sea. Duane W. Roller in his *Eratosthenes' Geography* notes that whilst Aristotle and Herodotus had described the Caspian Sea as an inland lake, a significant effort was made by Alexander the Great to re-imagine the topography of his campaigns to enhance his reputation, frustrated having failed to traverse the Caucasus. Alexander the Great was accompanied by an entourage of scholars to record his exploits, including Kleitarchos, keeper of the official history of Alexander's campaign, and Polykleitos of Larisa, who engaged in a revision of the topographical data surrounding the Caspian and the Black Seas. Eratosthenes (c. 275-194 BC), whose *Geographica* would be immensely influential and would inform both Pliny the Elder and Strabo, had criticized the revisions made by Alexander that the Sea of Azov and the Caspian Sea were connected, and that the *River Tanais* [the River Don, which was believed to separate Europe and Asia] emptied into

the Caspian Sea. Compounded with Alexander's other account of the Caspian Sea being a gulf, the relocation of the *River Tanais* served to exaggerate and push the boundaries his campaign. Ptolemy's *Geographica* (c. 150 CE) was based on a long tradition of Greek mathematics including Euclidian geometry, and though marred by unreliable reports from merchants, it represented an attempt to produce a consistent framework for producing a map suited for future revisions; like Aristotle and Herodotus, it rendered the Caspian Sea as landlocked and further south; however, Ptolemy's *Geographica*, unlike Pliny and Strabo which influenced Isidore and Orosius, would not reach Europe until 1409, when it was published in Latin.

Thus, that Eratosthenes' criticism failed to address the Alexandrian claim that the Caspian Sea was a gulf, alongside his popular calculation of a longitude/latitude ratio of 1:2, would mean the Alexandrian topographical revision would remain partially intact. The effect of this is seen in the description of the Caspian Sea in Isidore's *Etymologies (#205)*:

> The larger inlets of the sea are called gulfs (sinus), as the Ionian in the Mediterranean, and in the Ocean, the Caspian, Indian, Persian and the Arabian gulf – which is also the Red Sea, which is assigned to the Ocean. - Isidore of Seville, *Etymologies*, XIII., XVII., I., p. 278.

This description, however, does reveal the error in Ptolemy's projection: his position concerning the Indian Ocean, and that it is land-locked. Orosius, having strong links with Strabo, states that *"[...] the river Boreum flows out into the ocean, and westward from there along the ocean to the Caspian Sea [...]"*, but does not appear to associate with clarity the River Don and the Sea of Azov with the Caspian, writing more generally that *"[...] the area westward from the Caspian Sea as far as the river Don and the Maeotic marshes and then south to the Mediterranean and the Taurus Mountain and northward to the ocean is all Scythia [...]"*.

So, over the course of the next 1,500 years the depiction of Caspian Sea on maps, location, shape, orientation, and size would remain misunderstood. First it would remain for most as a gulf or bay off the surrounding ocean in the extreme northeast. Then it would be depicted as an inland body of water, but with an erroneous shape and orientation and often in conjunction with the original unlabeled gulf off the surrounding ocean in the northeast. During this period only the historian Herodotus and the scientist Claudius Ptolemy reported the Caspian Sea as an inland body of waster without direction connection with the northern ocean,

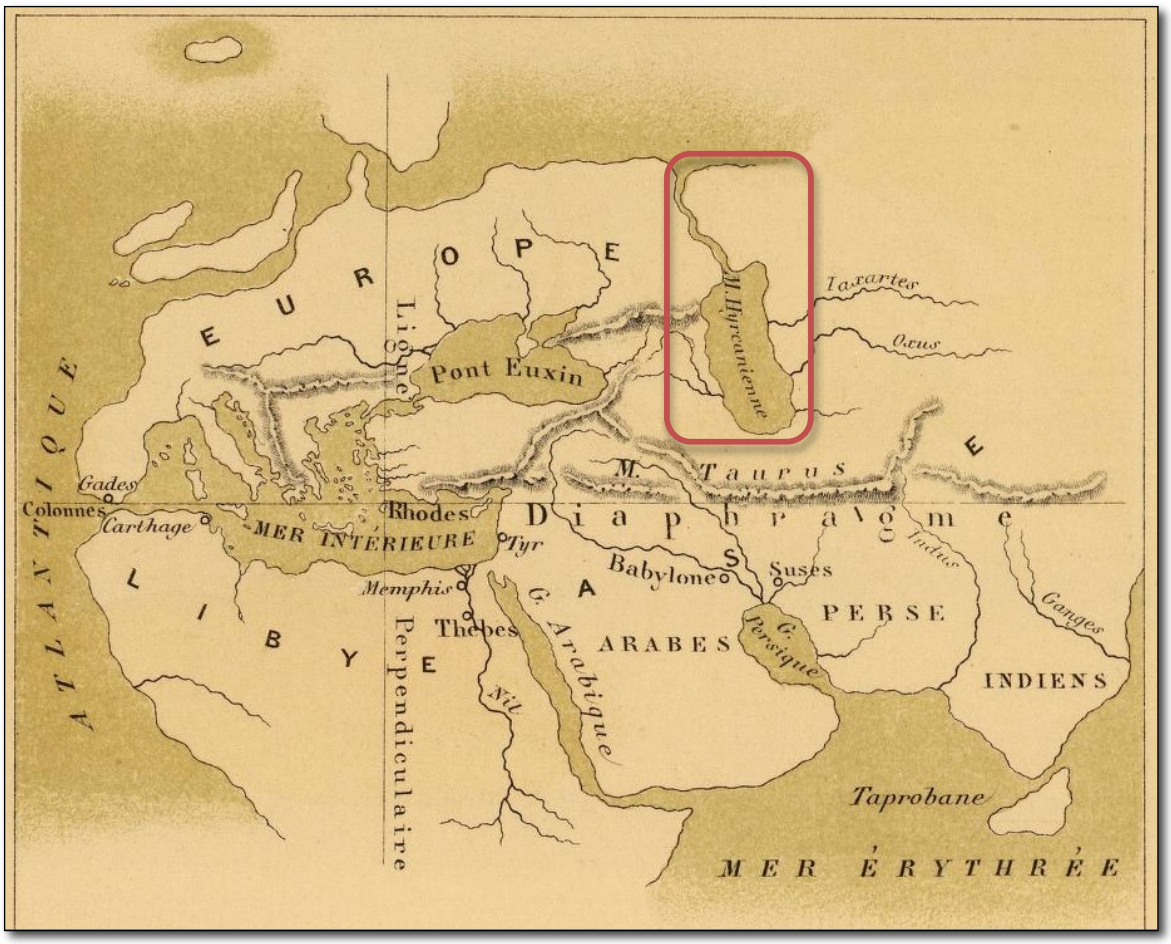
NOTE: the numbers shown in parentheses (#xxx) represent longer monographs on the website related specifically to the map referenced

Reconstruction of a world map by Hecatæus, ca. 500 B.C. showing the Caspian Sea open to the circumfluent Ocean (#108)

On a reconstruction of a map by the Greek historian Herodotus (450 B.C., #*109*), shown below, the Caspian Sea and the Araxes River delimit the extreme northeast, but east of India there is an uninhabitable desert whose topography is unknown. According to Herodotus the Caspian Sea "*in length it is a voyage of fifteen days if one uses oars, and in breadth, where it is broadest, a voyage of eight days. On the side towards the west of this sea the Caucasus runs along by it, which is of all mountain ranges both the greatest in extent and the loftiest . . . while towards the east and the rising sun a limitless plain succeeds*". In this respect, Herodotus' knowledge was considerably in advance of his time. He realized that the Caspian was an inland sea and not, as many geographers thought, a gulf connected to the ocean that was supposed to encircle the earth. However, Herodotus' correct perception would not prevail.

A reconstruction of the world view of Herodotus based upon his writings (#109)
His description of the Caspian Sea reflected the modern reality that it is an inland sea, not a gulf of the Mare Cronium [surrounding Ocean] as most philosophers in Antiquity thought.

A reconstructed world according to Dicæarchus (300 B.C, #*111*) shows the *Hyrcanian Sea* with a significant outlet to the surrounding Ocean.



Reconstruction of the world view according to Dicæarchus (#111)

After actually exploring the Caspian Sea, the Greek and specifically a Macedonian general and writer on geographical subjects, Patrocles somehow concluded that the Caspian was a gulf or inlet that could be entered from the Indian Ocean. The only information on his work (even the title is unknown) is documented in the work of Strabo. It was doubtless from the same authority that the Greek philosopher Eratosthenes derived his statement as to the dimensions of the Caspian Sea, as well as that concerning the outflow into it of the rivers *Oxus* and *Iaxartes*, which he asserts "... was well known to the Greeks". Yet the erroneous idea of its communication with the Ocean to the north sufficiently shows how questionable the information possessed by the Greeks really was. A view that was adopted by all ancient geographers for a period of three centuries,

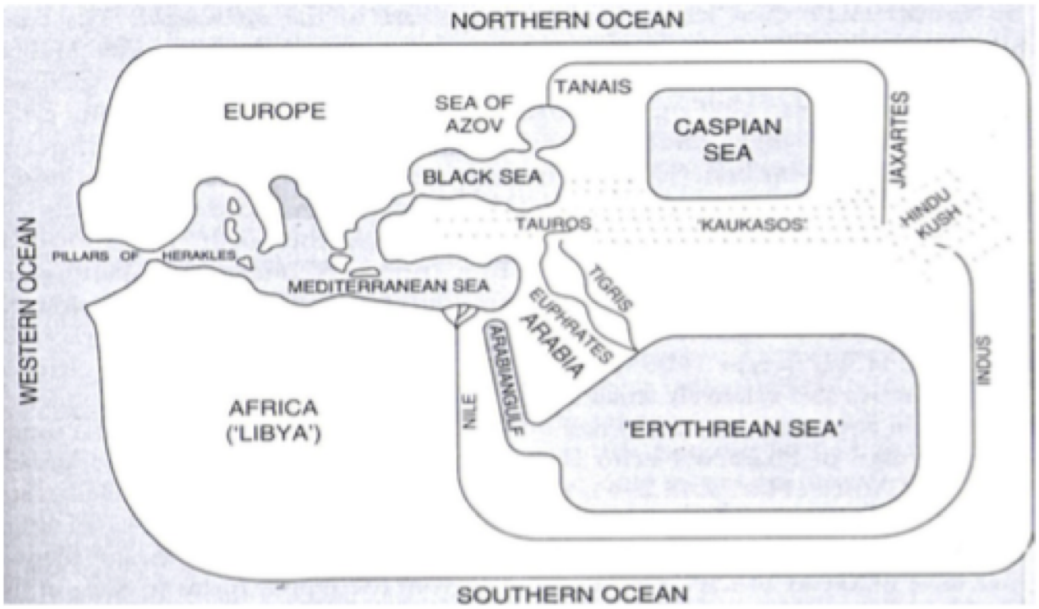
Strabo, following Eratosthenes, records how some of Alexander's followers postulated that *Lake Maeotis*, into which the *Scythian Tanais* flowed, was connected with the Caspian Sea, into which they erroneously believed the *Jaxartes* flowed, with its source in the *Paropamisus Mountains* [Hindu Kush]. This theory supported the notion that the *Jaxartes* was a tributary of the river *Tanais*, branching off from it and flowing into the same body of water at a separate locality. Therefore, the boundary line between Europe and Asia was greatly extended to the east, dividing the Scythians and other European peoples in the north from the *Bactrians*, *Sogdians* and other peoples of Asia in the south.

From that point Strabo supposed the coast to trend away towards the northwest, so as to surround the great unknown tracts of *Scythia* on the north, but sending in a deep inlet to the south, which formed the Caspian Sea. Of the northern shores of Asia or Europe he had really no more knowledge than Herodotus, but, unlike that historian, he assumed the fact that both continents were bounded by the Ocean on the north; a fact which is undoubtedly true, but in a sense so widely different from that supposed by Eratosthenes that it can hardly be held as justifying his theory.

"It [the Caspian Sea] is rather narrow at its entrance, but it widens out as it advances inland [...] its entrance is approximately on the borders of the uninhabited world." – Strabo, Γεωγραφικα (Geographica), VI. VI. I

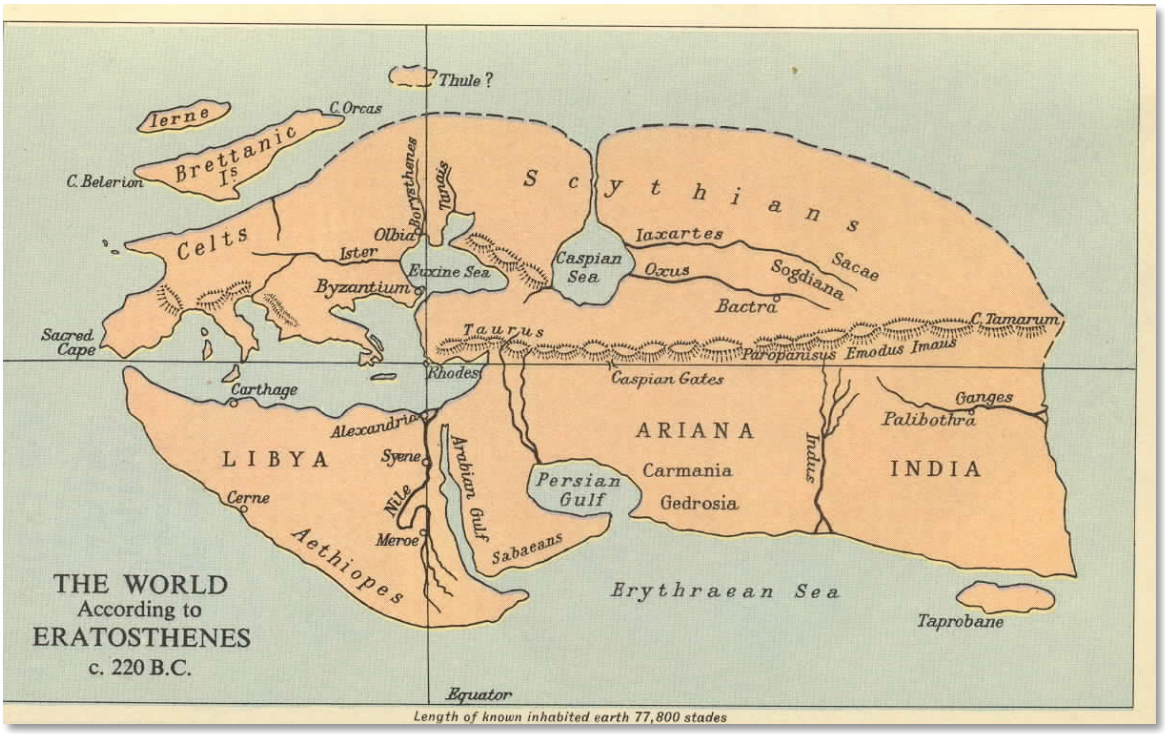
Para 2.5.18. "Continuing our former sketch, we now state that the earth which we inhabit contains numerous gulfs, formed by the exterior sea or ocean which surrounds it. Of these there are four principal. The northern, called the Caspian, by others designated the Hyrcanian Sea, the Persian and Arabian Gulfs, formed by the (southern) Sea, the one being nearly opposite to the Caspian, the other to the Euxine; the fourth, which in size is much more considerable than the others, is called the internal and Our Sea. It commences in the west at the Strait of the Pillars of Hercules, and continues in an easterly direction, but with varying breadth. Farther in, it becomes divided, and terminates in two gulfs; that on the left being called the Euxine Sea, while the other consists of Egypt, Pamphylia and Issos. All these gulfs formed by the exterior sea, have a narrow entrance; those of the Arabian Gulf, however, and the Pillars of Hercules are smaller than the rest."

Para 11.3.1, to the country of the Albanians (Caucarus Albania) belongs also the territory called Caspiane, which was named after the Caspian Tribe as was also the sea, but the tribe has now disappeared."



A schematic diagram of the world map at the time of Alexander the Great's campaigns. In this reconstruction the Tanais and Jaxartes are connected but the Jaxartes does not flow into the Caspian Sea and that sea is not connected to the Northern Ocean.

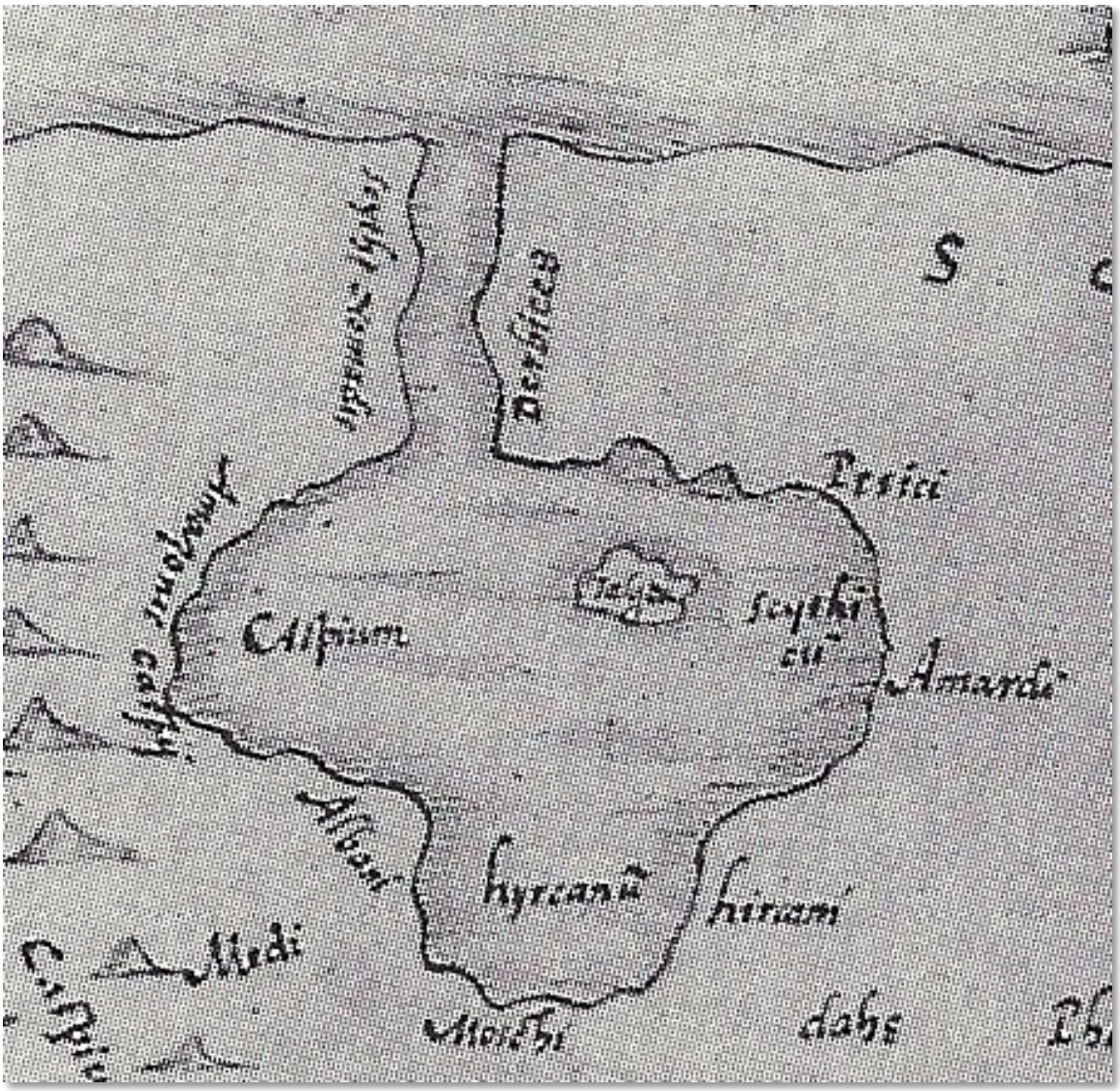
The above quotes from Pliny the Elder and Strabo were to represent not only the geographical, but also ethnographical discourse of the Caspian Sea in the western medieval *mappaemundi* tradition.



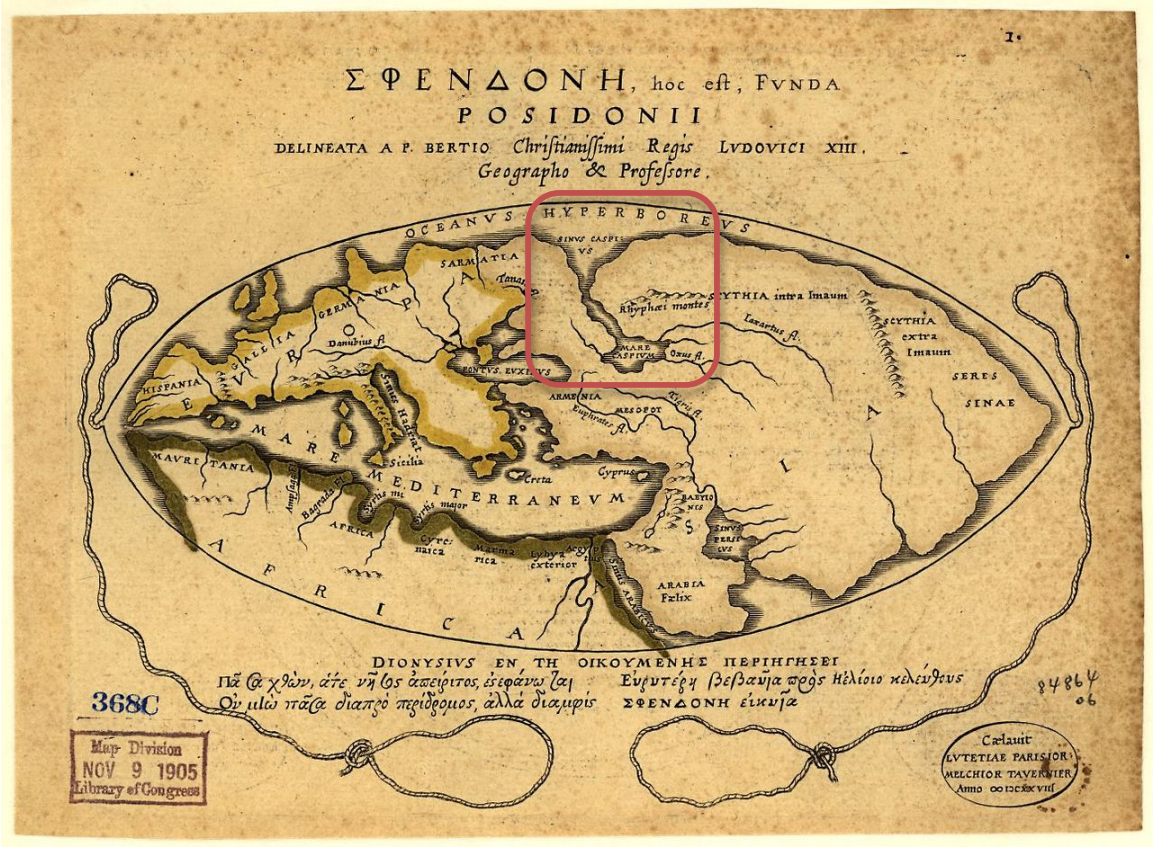
Eratosthenes (c. 275-194 BC), used many sources from the generation after Alexander the Great. Patrocles traveled into the Caspian Region and from there to India, probably in the 180's BC, although there are difficulties with his account because it presents a Caspian Sea connected to the External Ocean and a sea route from it to India. (See Strabo 11.6 and Pliny NH 6.58)

Eratosthenes' then described the northeast parts of the habited world, from the Caspian Sea to the *Pontus* [Black Sea]. He believed in the fashion of the day that the Caspian Sea was an inlet of the External Ocean. (Note that with the flooding of the estuaries of the Volga and Ural Rivers, this could account for the description.), Alexander's topographers had tampered with data in order to enhance his reputation. His record keepers altered the topography by connecting the *Maiotic Lake* [Sea of Azov] and the Caspian Sea and moving the *Tanais River* [Don] so that it emptied into the Caspian Sea rather than the Sea of Azov, calling it the "*Iaxartes River*" [Syr Darya], thus the *Tanais*, because it did flow into the Caspian Sea (although its outlet is actually the Aral Sea).

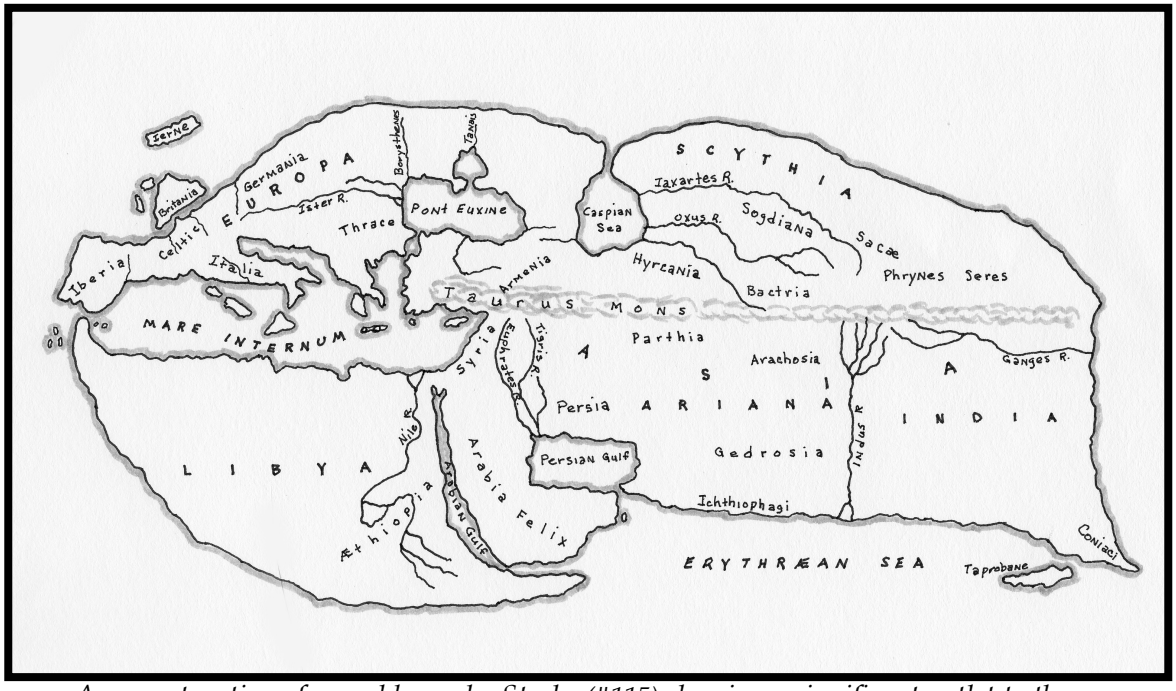
Eratosthenes whose *Geographica* would be immensely influential and would inform both Pliny the Elder and Strabo, had criticized the revisions made by Alexander that the Sea of Azov and the Caspian Sea were connected, and that the *Tanais River*, which was believed to separate Europe and Asia) emptied into the Caspian Sea. Compounded with Alexander's other account of the Caspian Sea being a gulf or bay, the relocation of the *Tanais River* served to exaggerate and push the boundaries his campaign.



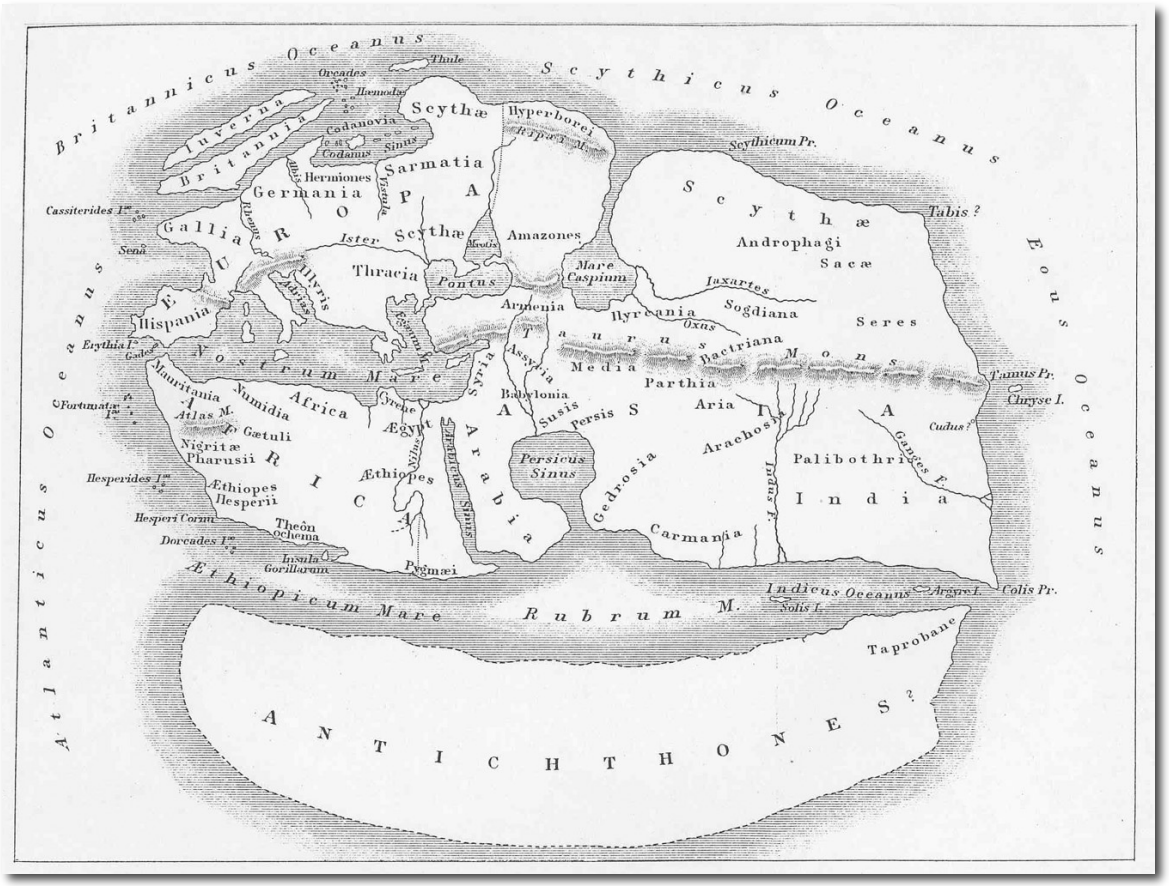
Caspian Sea as interpreted from the writings of Strabo, 18 A.D.
on Generalis…[Strabo?] descriptio, 1550,



Reconstruction of Posidonius' World View by Bertius, 1630 (#114) showing a significant outlet to the surrounding Ocean from the Caspian Sea



A reconstruction of a world map by Strabo (#115) showing a significant outlet to the surrounding Ocean from the Caspian Sea

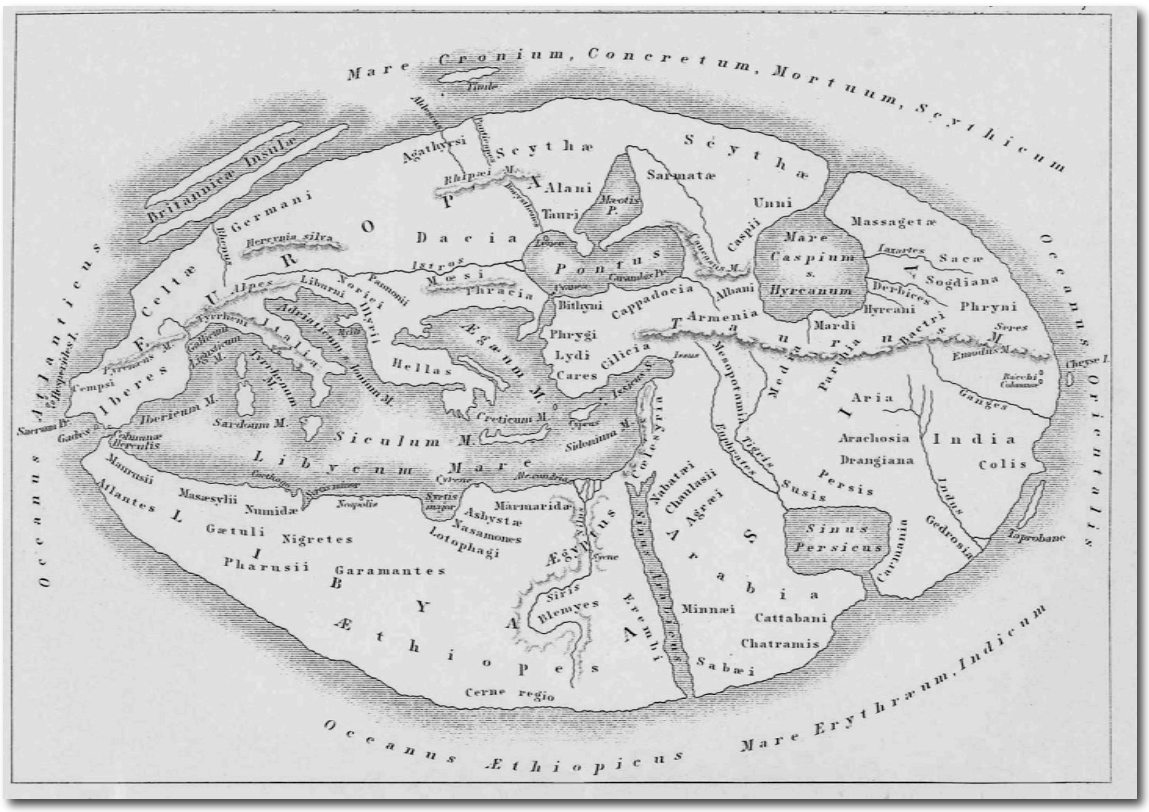


Reconstruction of Pomponius Mela's world view (#116) showing a significant outlet to the surrounding Ocean from the Caspian Sea

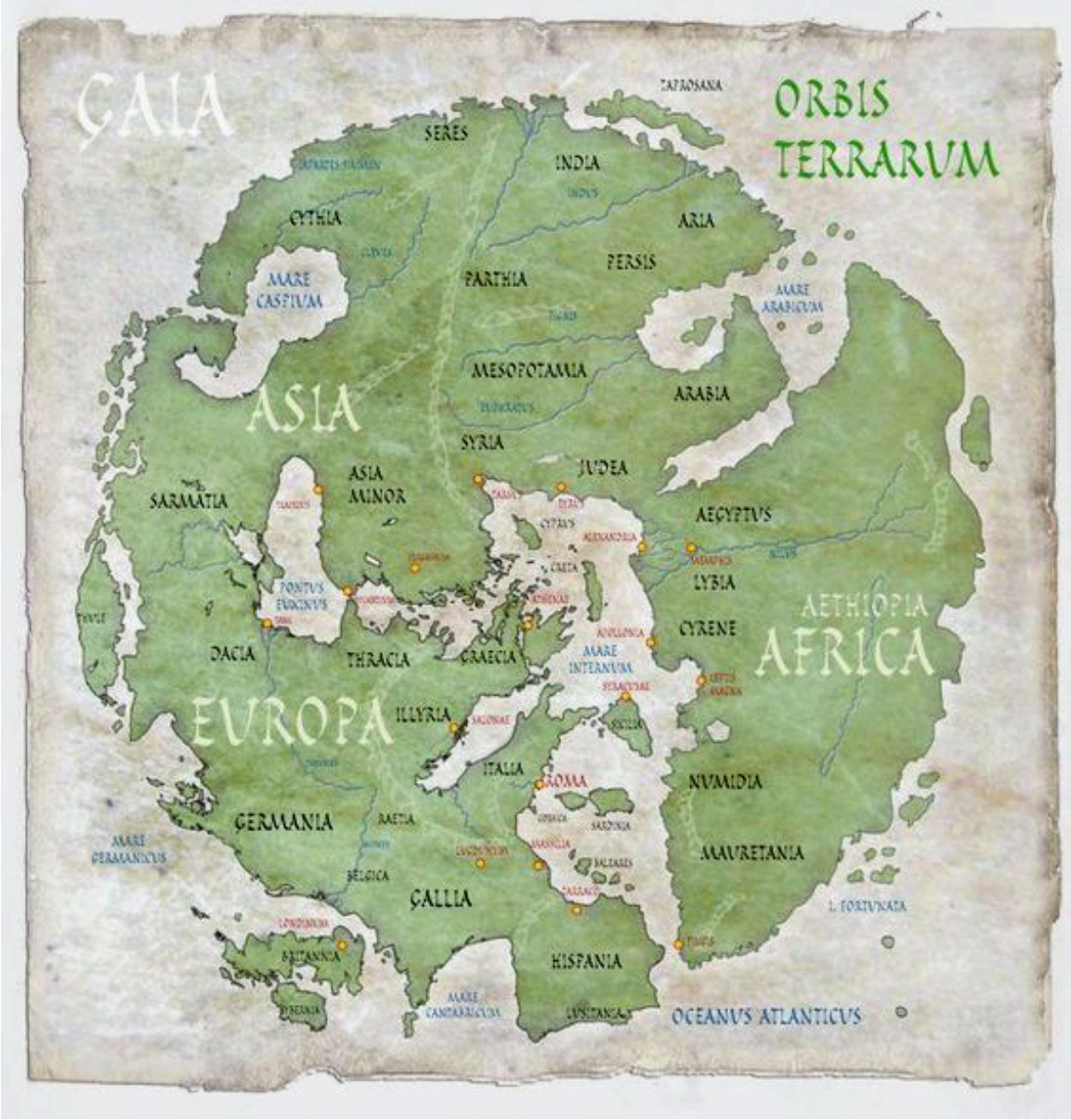
Pliny, the Elder, Natural History 6.15 (part) and 6.18 (part); AD23-AD79

Bursting through, this sea makes a passage from the Scythian Ocean into the back of Asia, receiving various names from the nations which dwell upon its banks, the two most famous of which are the Caspian and the Hyrcanian races. Clitarchus is of the opinion that the Caspian Sea is not less in area than the Euxine. Eratosthenes gives the measure of it on the south-east, along the coast of the Cadusia and the Albania, as five thousand four hundred stadia; thence through the territories of the Anariaci, the Amardi, and the Hyrcani, to the mouth of the river Zonus he maks four thousand eight hundred stadia, and thence to the mouth of the Jaxartes two thousand four hundred, which makes in all a distance of one thousand five hundred and seventy five miles.Artemidorus, however, makes this sum smaller by twenty five miles. Agrippa bounds the Caspian sea and the nations around it, including Armenia, on the east by the Ocean of the Seres, on the west by the chain of the Caucasus, on the south by that of the Taurus, on the north by the Scythian Ocean; and he states it, so far as its extent is known, to be four hundred and eighty miles in length and two hundred and ninety bin breadth. There are not wanting, however, some authors who state that its whole circumference, from the Straits, is two thousand five hundred miles----------.

The rivers which run through Albania in their course to the sea are the Casius (Koisou) and the Albanus (Samour) and then the Cambyses which rises in the Caucasian mountains, and next to it the Cyrus, rising in those of the Coraxici, as already mentioned (in C10). Agrippa states that the whole of the coast, inaccessible from rocks of immense height, is four hundred and twenty five miles in length, beginning from the river Casius. After we pass the mouth of the Cyrus, it begins to be called the 'Caspian Sea'; the Csapii being a people who dwell upon its shores.



Reconstruction of the map of the world, drawn as per the second-century description provided by Dionysius Periegetes (A.D. 124, #117)

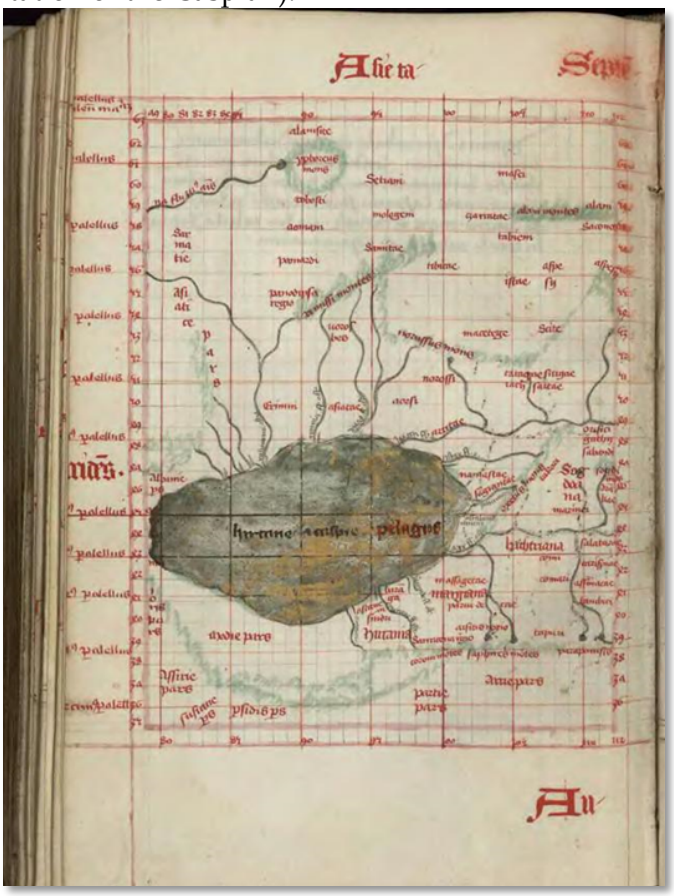


A "reconstruction" of the Orbis Terrarum (A.D. 20, #118), oriented with East at the top

Agrippa is said to have written that the whole coast of the Caspian from the Casus River consists of very high cliffs, which prevent landing for 425 miles. If the commentary had not been continuous, but had merely served as supplementary notes where required, there is a possibility that by Pliny's time, some eighty years later, it might have gone out of circulation. Two late geographical writings, the *Divisio orbis* and the *Dimensuratio provinciarum* (commonly abbreviated to *Divisio* and *Dimensuratio*) may be thought to come from Agrippa, because they show similarities with Pliny's figures. There are, however, cases, e.g. the combined measurements of Macedonia, Thrace and the Hellespont, that agree with Pliny on areas where he does not name Agrippa but may nevertheless in fact have been using him.

The most famous "cartographer" from Antiquity, Claudius Ptolemy (A.D. 200, #*119*) provides a descriptive summary in his text in which he tells us that the habitable part of the earth (the *oecumene*) is bounded on the south by the unknown land which encloses the Indian Sea and that it encompasses Ethiopia south of Libya, called Agisymba. On the west it is bounded by the unknown land encircling the Ethiopian Gulf of Libya and by the Western [Atlantic] Ocean which borders on the westernmost parts of Africa and Europe; on the north, "by the continuous ocean called *Ducalydonian* and *Sarmantian* which encompasses the British islands, the northernmost parts of Europe and by the unknown land bordering on the northernmost parts of Greater Asia; that is to say, on *Sarmatia, Scythia* and *Serica*". There are three seas surrounded by land. Of these, the *Indicum Mare* [Indian Ocean] is the largest, *Our Sea* [the Mediterranean] is the next and the *Hyrcanian* [Caspian] is the smallest.

Ptolemy was apparently the first of the ancient geographers to have a fair conception of the relations between the *River Tanais* [Don], usually considered the northern boundary between Europe and Asia, and the *Rha* [Volga], which he said flowed into the Caspian Sea. Ptolemy was also the first geographer, excepting Alexander the Great, to return to the correct view advanced by Herodotus and Aristotle, that the Caspian was an inland sea without communication with the ocean (the European Christian medieval cartographers were a long time in returning to this representation of the Caspian).



From Ptolemy's Geographika, Latin translation by Claus Swart, 1411-1427
Like Herodotus, Ptolemy's Caspian Sea is an inland body of water far from the ocean

The world map from Leinhart Holle's 1482 edition of Nicolaus Germanus' emendations to Jacobus Angelus' 1406 Latin translation of Maximus Planudes's late-13th century rediscovered Greek manuscripts of Ptolemy's 2nd-century Geography. Ptolemy's second projection. (#119)

Ptolemy's Caspian Sea was located very much like it is in reality, although it should have been rotated 180°

The Mare Hyrcanium [Caspiam Sea] on a colored map segment from a copy of the original Tabula Peutingeriana (100 CE), engraved and printed at "half-size" by Johannes Moerentorf (Moretus) in 1598

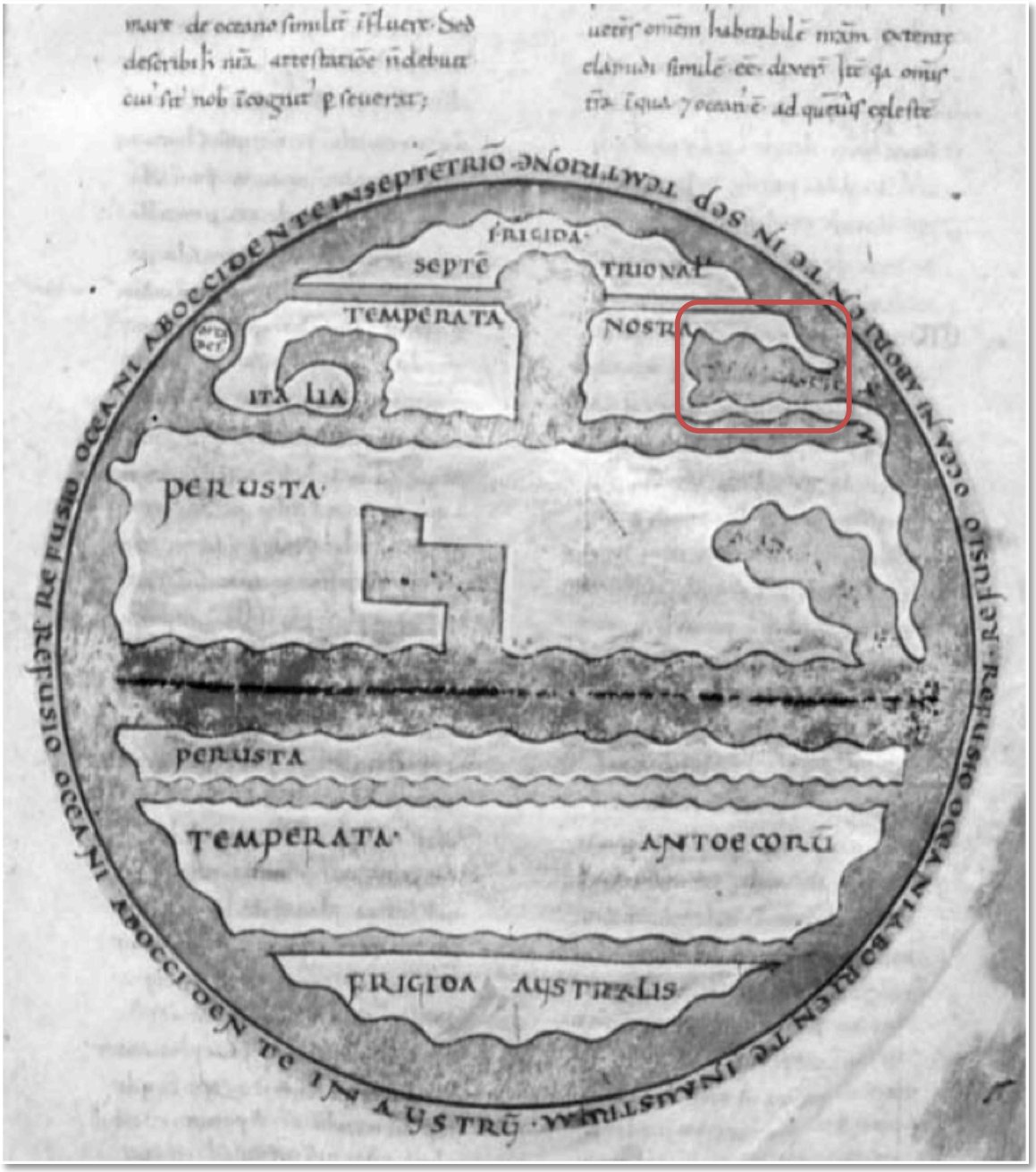
The *Tabula Peutingeriana (#120)* was an early road map of the imperial highways of the Roman world from around 100 CE, covering the area roughly from southeast England to present day Sri-Lanka. The original has not survived, but a copy of it, now in Vienna, was purportedly made in 1265 by a monk at Colmar who fortunately contented himself with adding a few scriptural names, and who seems to have omitted nothing important that appeared in the original. Here one can see that its creator considered the Caspian Sea as a bay off the northern circumfluent ocean.

The European Middle Ages

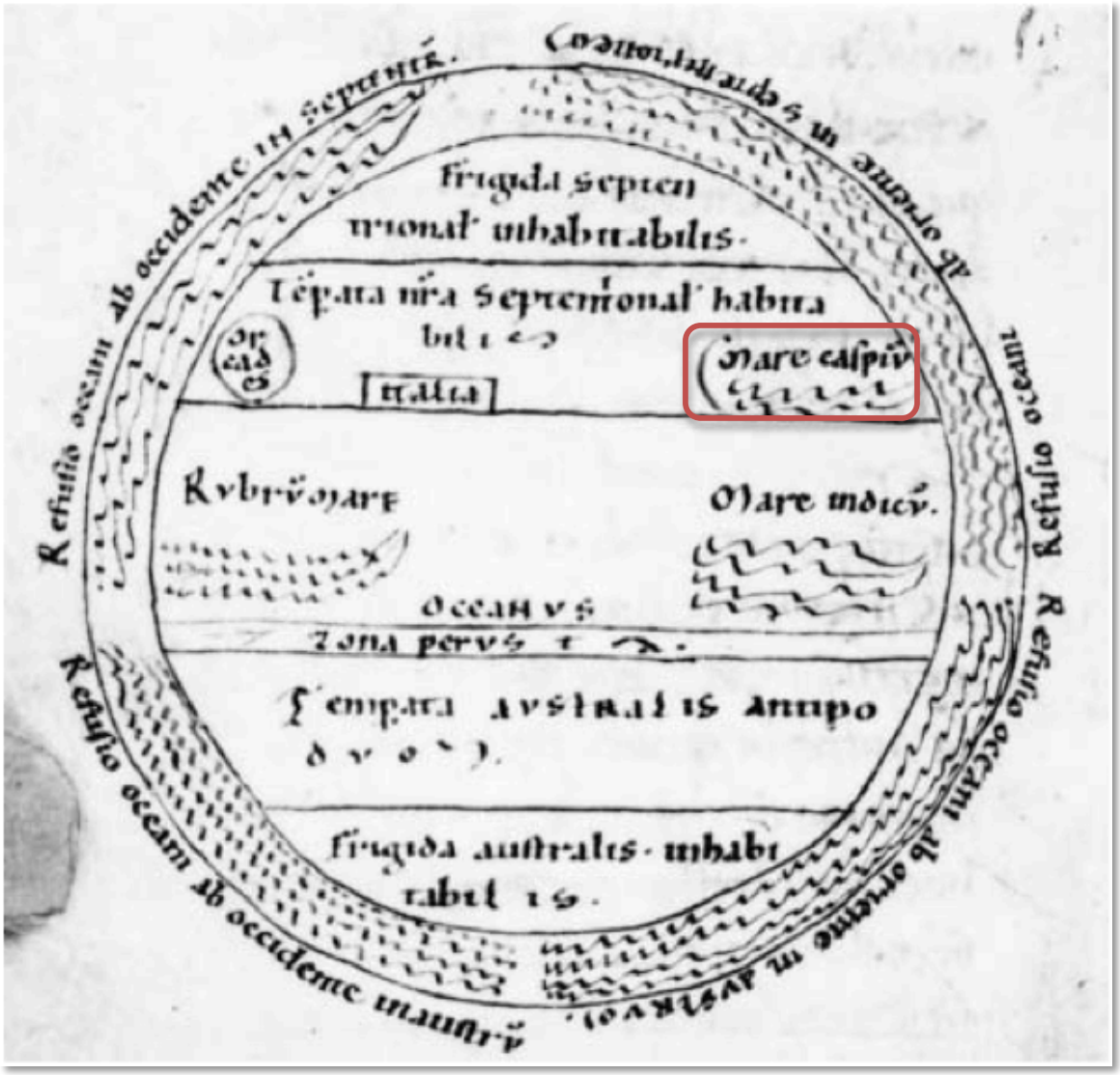
Until the latter half of the 14th century, the medieval geographical tradition depicted the Caspian Sea as body of water far in the northern lands of *Scythia* (roughly modern-day Russia) with a narrow passage leading out into the ocean, where it could only be guessed what may lay beyond; in other words, the mouth of the Caspian Sea, and its coastal regions, represented the furthest reaches of the known world in the north, bordering the unknown. Even a thousand years later the learned southern European and Islamic philosophers, geographers and cartographers knew little about northern Eurasia (Scandinavia, Russia, Asia). The vast majority of pre-12th century *Macrobius* maps *(#201)* contain some representation of the Mediterranean, Red, Indian, and Caspian seas, the latter usually represented, in accordance with classical writings, as an inlet at the northern limits of Eurasia from the outer, encircling Ocean. Maps based upon the writings of Macrobius were normally always oriented with North at the top.

A Macrobian world map from a 12th century French manuscript, showing five Climate Zones and the Antipodes (#201)

The map illustrated on the left is characteristic of the later medieval versions of the *Macrobian* world-picture, although some examples preserve richer nomenclature. This example displays a roughly drawn landmass to the left, representing Europe: *Temperata nostra*, above which is the northern frigid zone: *Septentrionalis frigida inhabitabilis*. The enclosed water represents the Mediterranean Sea, the Black Sea, etc. To the right is a vaguely formed Asia with the words *Mare Caspian*, set down at random, below which are areas intended to depict Arabia and India. The scribe has mis-located the caption for the Red Sea and Indian Ocean: *Mare Rubrum* and *Mare Indicum*.



World map from a 10th or 11th century north Italian manuscript of Macrobius, Commentary on the Dream of Scipio. North is at the top. The earth is divided into five zones, with the central zone (perusta) unequally divided by the equatorial ocean. Italia and the Orcades are marked, along with the Caspian Sea, in the northern Temperate Zone (temperata nostra). The Red and Indian seas are shown as inlets of the equatorial ocean. The southern temperate zone is marked Temperata antoecorum (temperate zone of the antoikoi). (#201V)



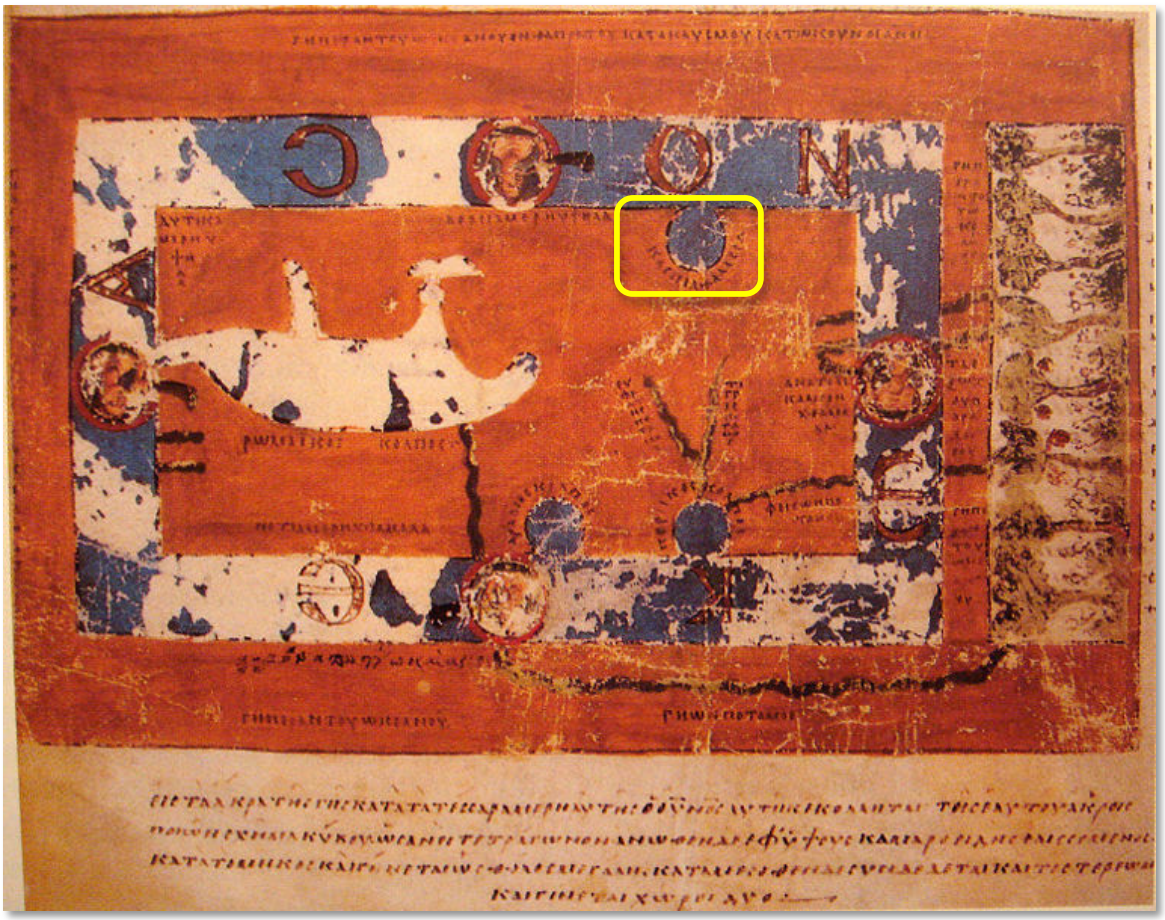
World image illustrating a 9th or 10th century French manuscript of Macrobius, Commentary on the Dream of Scipio. This visually simple map is essentially a zonal diagram with two topographical features (Italia and the Orcades) and the Red, Indian, and Caspian Seas sketched in. The unusual position of the Red Sea extending inwards from the far west of the outer ocean, and the thin strip of the zona perusta (usually a prominent feature), supports the impression that this image may be a rather cursory attempt to elaborate a zonal diagram.
Brussels, Bibliotheque royale, MS 10146, fol. 109v. Appendix 1, no. 2.
(Reproduced with permission of the Bibliotheque royale de Belgique.)

Macrobian world map, 11th century

Zonal map, oriented to the North with 'septentrio' above, this diagram map shows the two Frigid Zones ('inhabitabilis') and the two Temperate Zones, while a colored band indicates the middle Torrid Zone. The two Temperate Zones are labeled 'temperata nostra' [our temperate zone] and 'temperata antetorum' [the opposite temperate zone], though 'antetorum' appears to be a contrived word. The northern Temperate Zone contains several geographical features, including the Orkney Islands, the Caspian Sea, Italy, the Red Sea and the Indian Ocean and representation of the Mediterranean, Adriatic, and an umbrella-shaped Palus Maeotis-Tanais (Sea of Azov/Don river) confluence. From Macrobius' Commentary on the Dream of Scipio, Book II; 12 cm diameter, London, British Library, MS Harley 2772, f.70v (#201F)

A highly unusual manuscript map from the 12th century version of Macrobious' Commentary on the Dream of Scipio. North is to the left, and the three seas depicted include the Mediterranean, the Caspian and the Indian or Red Sea. The central wavy zone divides the northern hemisphere from the southern. (American Museum, Bath) (#201Z4)

A manuscript on vellum Macrobius world map, 11th century, 12 cm diameter, the Caspian Sea is labeled on the right, open to the surrounding Hyperborean Ocean (#201)



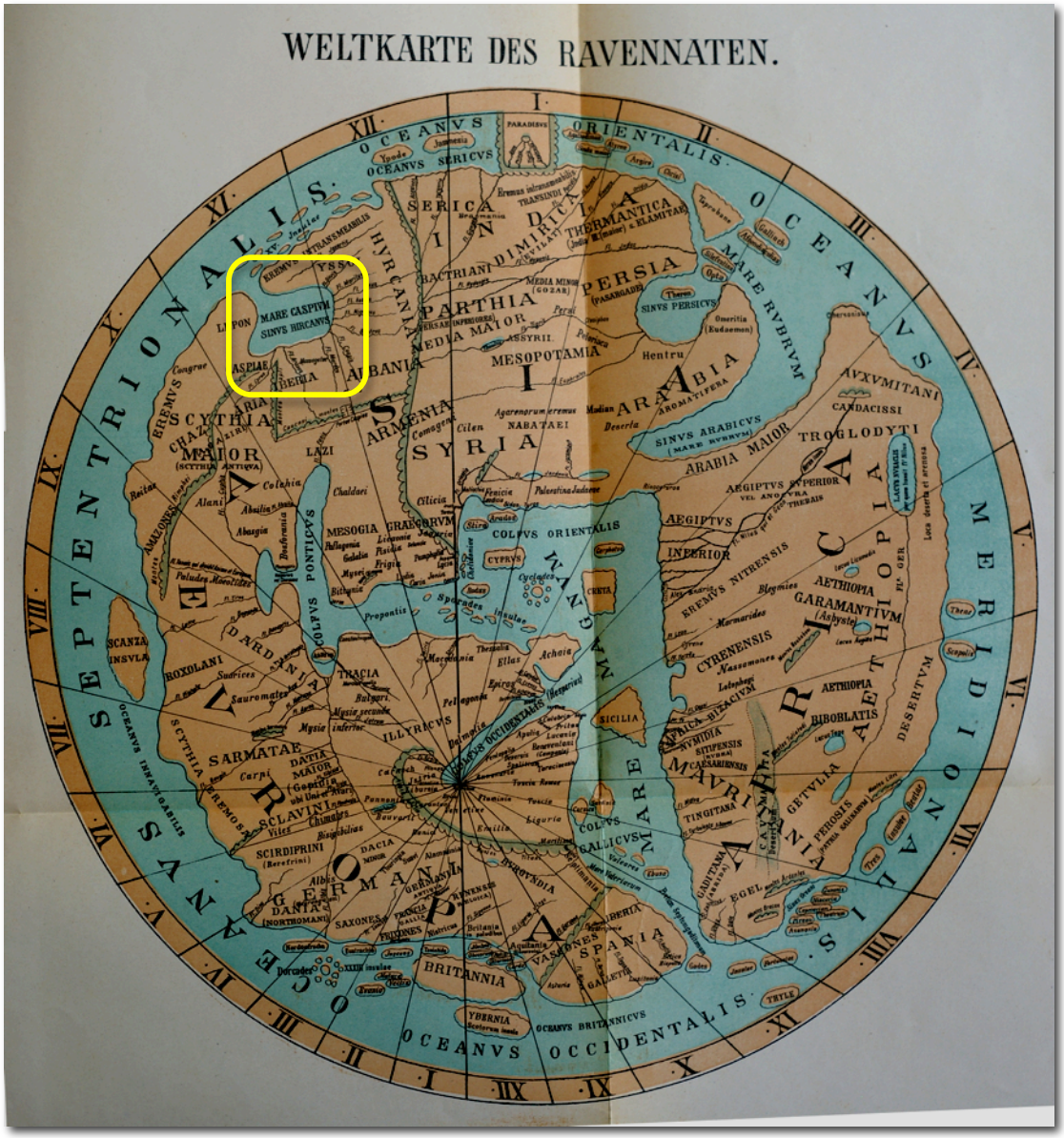
Cosmas, Christian Topography, copy from 7-8th century, Bibliotheca Apostolica, the Vatican, MS Vat. Gr.600, f.40v (#202)
Orienyed with North at the top

On Cosmas' map four seas break the regular outline of the *oikoumene*: the Mediterranean in the west, the Caspian in the north, and the *Arabian Gulf* [Red Sea] and the Persian Gulf in the south. Cosmas describes and represents the seas as four gulfs of the ocean. This perception of the seas may have been determined by the influence of *Genesis* 1:9, in which all the waters under the firmament gather in one place and therefore only one body of water can exist — an interpretation requiring all seas to be connected. This opinion appears in the *Hexaemeron* of Basil of Cesarea. However, a comparable notion of the seas is given in the *Geography* of Strabo:

> Our inhabited world, being girt by the sea, admits into itself from the exterior sea along the ocean many gulfs, of which four are very large. Of these four gulfs the northern one is called the Caspian Sea (though some call it the Hyrcanian Sea); the Persian Sea and the Arabian Gulf pour inland from the Southern Sea, the one opposite the Caspian, the other about opposite the Pontus; and the fourth, which far exceeds the others in size, is formed by the sea which is called the Interior Sea or Our Sea.

When Cosmas describes his conception of the seas as the gulfs of the ocean, he admits that this view is in agreement with the opinions of pagans:

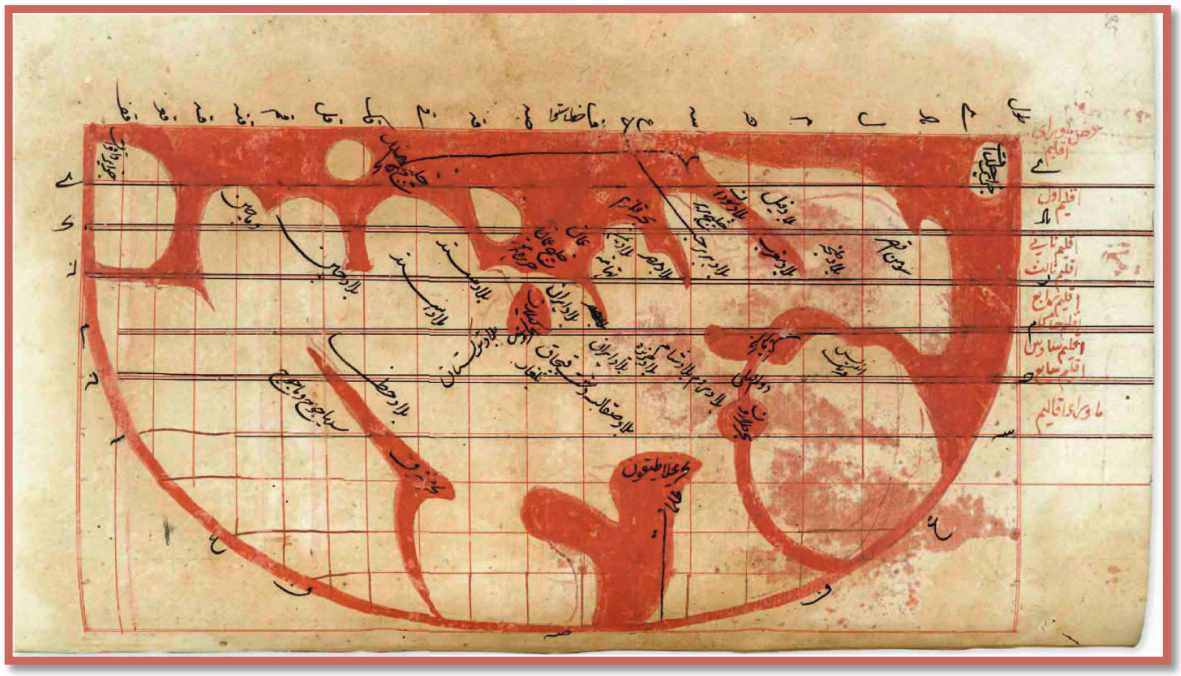
There are, in our part of the earth, four gulfs penetrating into it from the Ocean, as is attested by pagans, in accordance with truth, when they deal with this subject, that is: this gulf of ours, which extends along Roman land from Gadeira, penetrating into the earth from the west, the Arabian Gulf, called the *Erythrean* and *Persian*, both penetrating from *Zingium* (Ziggion) in the south-east part of the earth, next to so-called *Barbaria*, where the land of Ethiopians terminates. They know *Zingium*, those who navigate across the Indian Sea. It is situated beyond the frankincense-bearing country called *Barbaria*, which the Ocean borders before, penetrating into both gulfs. The fourth gulf penetrates from the northeastern part of the earth. It is called the Caspian Sea or Hyrcanian.



A reconstruction of the seventh century world map by the anonymous geographer of Ravenna, centered on Cyclades, with islands circling the sacred isle of Delos (#203)
from Konrad Miller's Die ältesten Weltkarten, Vol. VI, Map table 1, 1898
Oriented with East at the top

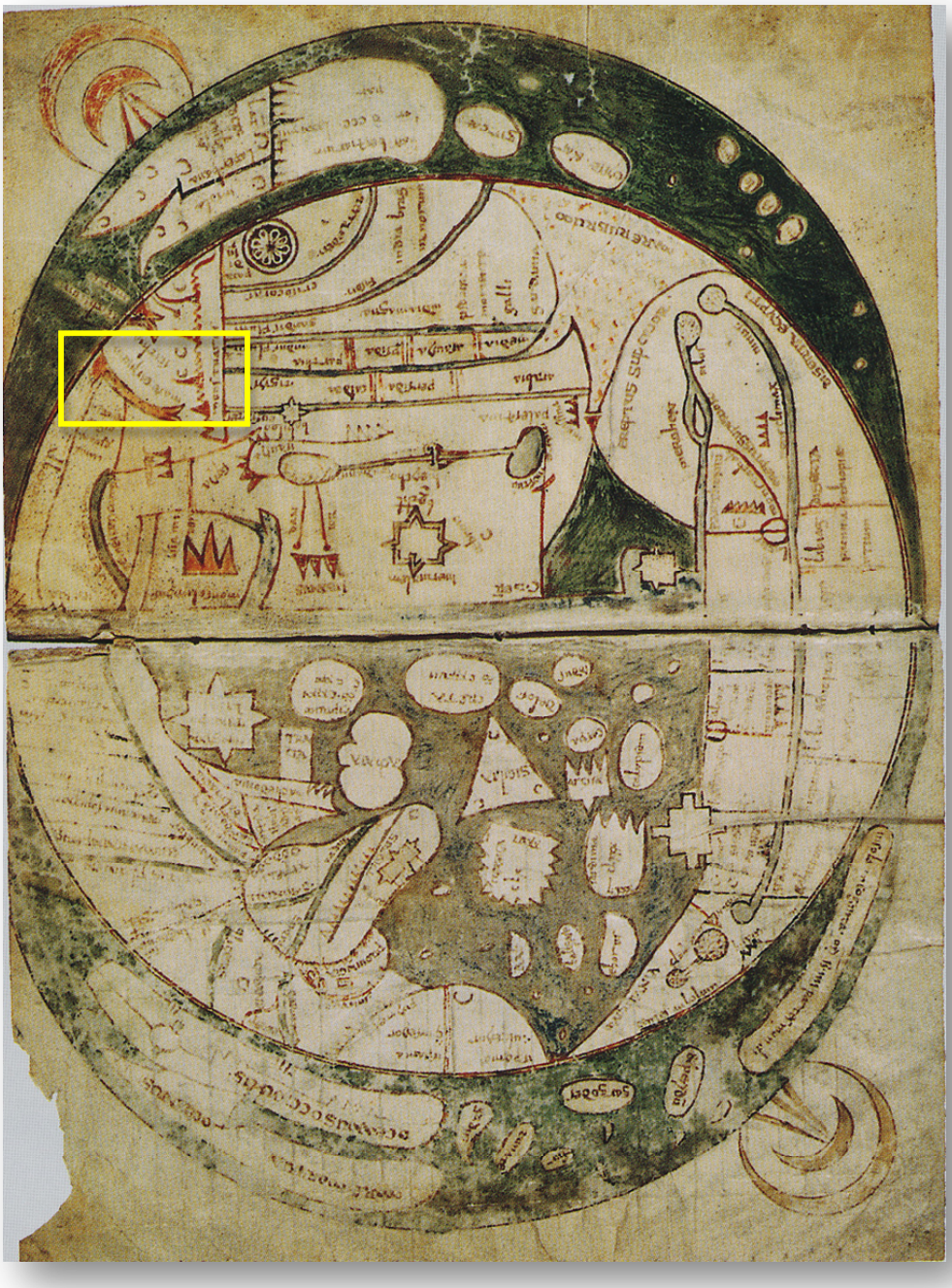
The Caspian Sea is yet again pictured as a gulf, leading into the Northern Ocean, while the Persian and Arabian gulfs open into the Red Sea, which itself leads into the Southern Ocean. Places shown in the vicinity of the Caspian are *Iberia, Albania* and *Caspia*, as well as *Montes Caspii* – running from the shores of this lake to the *Caucasi Montes*. The rivers *Araxis* and *Cyrus* (Kura), which, in reality, join before they reach the Caspian, here are shown flowing into it separately. In the middle of the Caucasian range there is a gate named *Portae Caspiae*, which denotes the Daryal Gorge or Pass, since these are located in the middle of mountain ranges, while the actual Caspian Gates (the pass near Derbend) are located at the extremity of the mountain range, near the Caspian Sea.

Albania is shown southwest of the Caspian Sea, near Armenia, from which it is separated by the *Caucasi Montes.* Iberia is located north of Albania, near the Caspian Sea and the *Montes Caspii* [Caspian Mountains, which is the name given also to the Caucasus]. Colchia[s] is shown at the northeastern shores of the Black Sea.

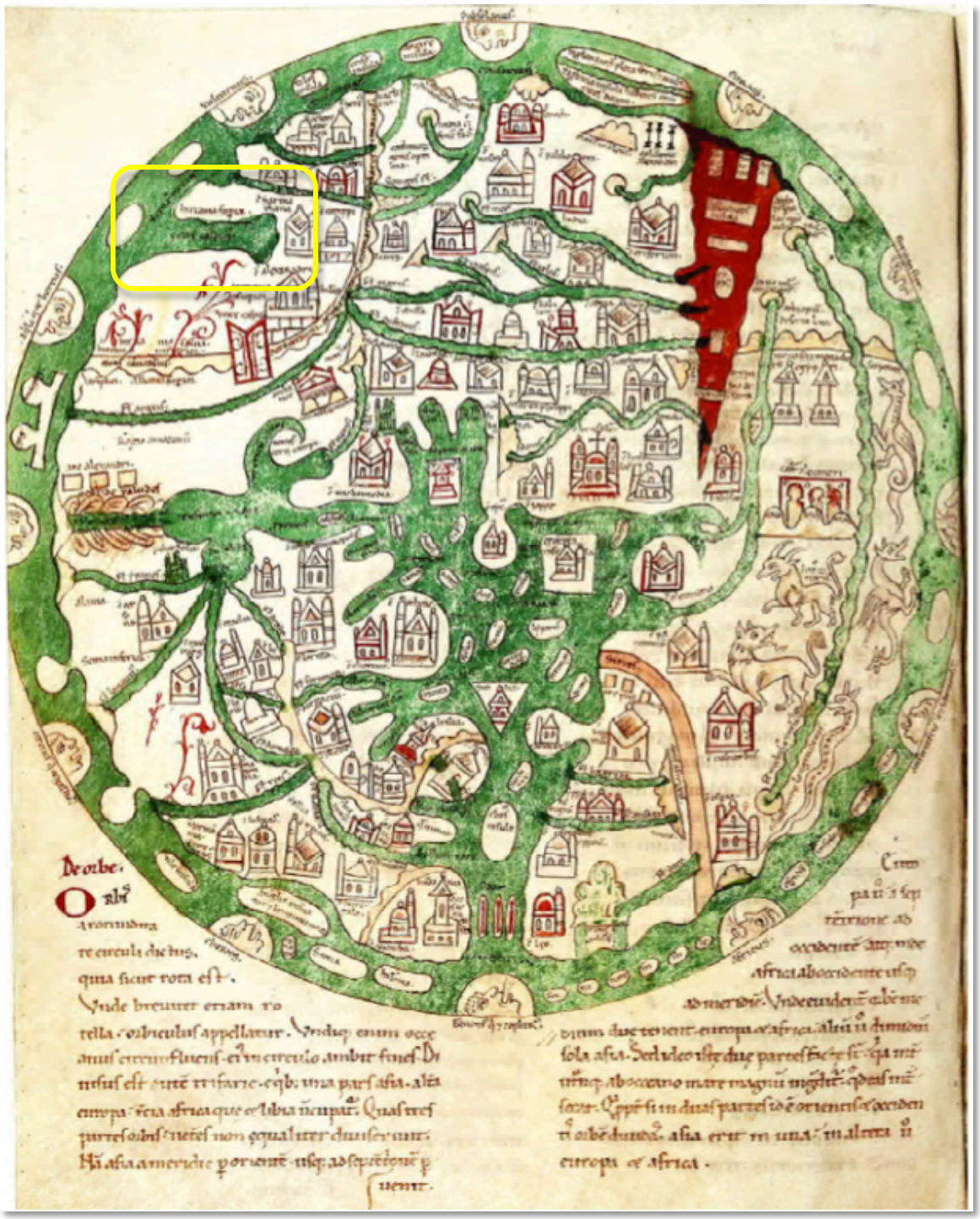


Map of the "Inhabited Quarter", 1647, by Sadiq Isfahani (#204)

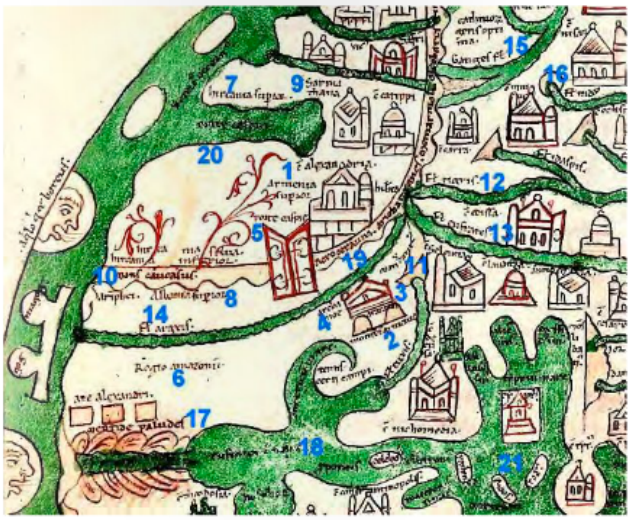
The Caspian Sea. *Having been made in India, the map understandably has a Central Asia emphasis. At the center is the triangular Caspian Sea. Iran is to the right and below left are the Kipchak Desert in Uzbekistan, Russia and Turkestan (a Chinese region today)*



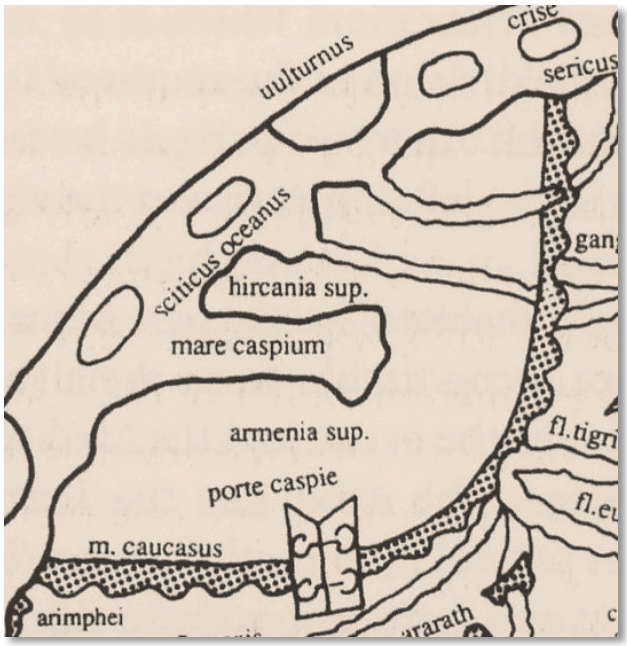
The "Vatican T-O", a.k.a. the "Easter Tables" map, an eighth century T-O map bound with Isidore's Etymologiarum, *21 x 14.5 cm. One of the oldest detailed world maps, placed with a group of computus materials. It shows the inhabited continents as a circle surrounded by the Ocean. To the southwest of Africa is the island which has been interpreted as a vestigial fourth continent. Paradise is represented by a rosette in the Far East. Two apparent islands in the northwest are both labeled with the names of seas:* 'mare mortun' *and* 'oceanus occiduus' *[dead sea, or sea of the dead, and western ocean]. Oriented with East at the top. Biblioteca Apostolica Vaticana, MS Lat. 6018, ff 63v-64 (#205M)*



Isidore mappamundi, ca. 1130, known as the Munich map, 26 cm diameter (#205DD)
Bayerische Staatsbibliotek, Munich, Clm 10058, f. 154v (oriented with East at the top)



The detailed map on the left with the superimposed numbers relates to the region south of the Caucasus Mountains. *Albania Superior* (8) is shown south of the Caucasus Mountains (19). An important feature m the map is the vignette of a house sitting on two mountain peaks. The "house" bears the inscription *Archa Noe* (4., Noah's Ark) and the twin peaks are named *Ararat* (3). This is possibly the first time that the Ark and Mount Ararat are shown on a map pre-dating the Crusades. Below Mount Ararat the additional legend reads *Montes Armenia* (2. Mountains of Armenia), which are situated near the over *Euxis* (possibly Halys or Kizilirmak river) flowing from Mons Taurus (11. Taurus Mountains) towards the Back Sea (18). *Armenia Superior* (1. Greater Armenia) is located west of the Caspian, the green inlet connected to the ocean. Northwest of *Armenia Superior* are *Mons Caucasus* (10. Caucasus Range) with *Porte Caspie* (5. Caspian Gates) at its southern end, the southeast extension of which is called *Acroceraunis* (according to Orosius these form part of the Caucasian Mountains and are called Mountains of Daghestan). The gates possibly denote the Daryal Pass, since they are located between the *Caucasus* and *Acroceraunis* ranges. Further down *Acroceraui* joins *Mons Taurus* (11) extending westward. At the junction of the three mountain ranges lies the source of the rivers *Tigris* (12) and *Euphrates* (13), which flow all the way to the Red/Arabian Sea, as well as that of the river *Araxis* (14. Arax), then flows north wards into the surrounding ocean.



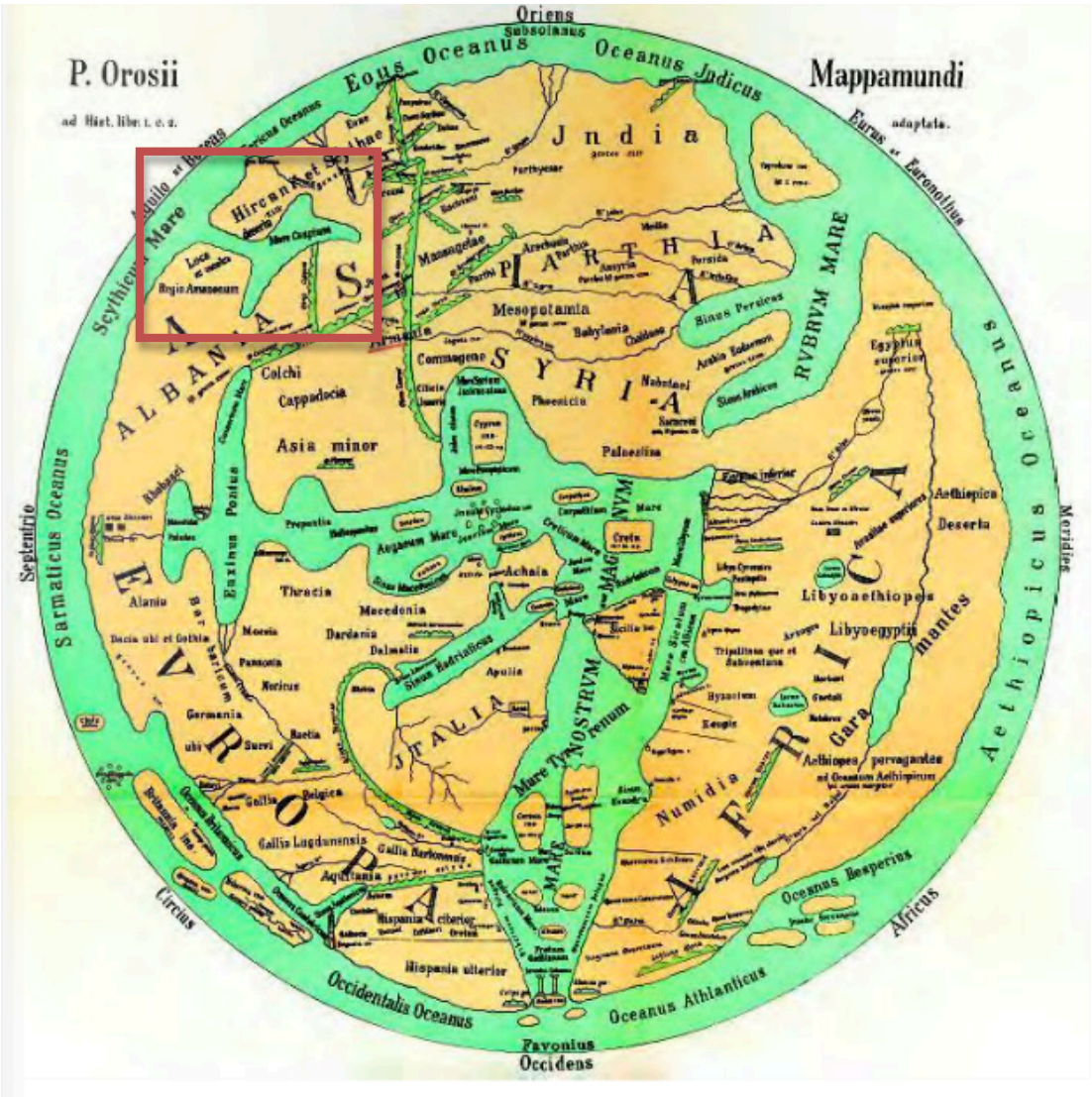
In Isidore's *Etymologies*: "*The larger inlets of the sea are called gulfs (sinus), as the Ionian in the Mediterranean, and in the Ocean, the Caspian, Indian, Persian and the Arabian gulf – which is also the Red Sea, which is assigned to the Ocean.*"

The map shown above *(#205Z14)* is from another copy of Isidore's *Etymologiae*, which dates from the 13th century and is kept in the Library of Heidelberg University (MS Salem IX 39, fol. 1v, 21 cm diameter). The map is unusual in that it is a mixture of Macrobian *(#201)* zonal and T-O maps, while its layout is more akin to those of Beatus maps *(#207)*.

The map is oriented with East at the top but also has the five *Macrobian* zonal divisions, which are normally shown on north oriented maps, therefore here the zones, instead of being horizontal, are shown as vertical divisions. The earth is surrounded by a wavy ocean, which has a few inlets in the northeastern and eastern parts, bearing the legends of *Caspium Mare* and *Rubrum Mare* [the Caspian and Red Seas].

Map of Albi, 750 A.D. (#206)
Mediatheque Pierre Amalric, Albi, France, MS 29, f.57, 29 x 23 cm

This map shows the *oikoumene* [known inhabited world] as a rectangle with rounded corners, oriented with the East at the top, its outline broken by the massive basin of the Mediterranean in the west, the Red Sea and the Persian Gulf in the south, and the Caspian Sea in the north where it is displayed as an inlet from the Northern *Hyperborean* Ocean.



Reconstruction of the Paulus Orosius mappa mundi by Konrad Miller in his Die ältesten Weltkarten, Volume VI, Map 3., Stuttgart 1898

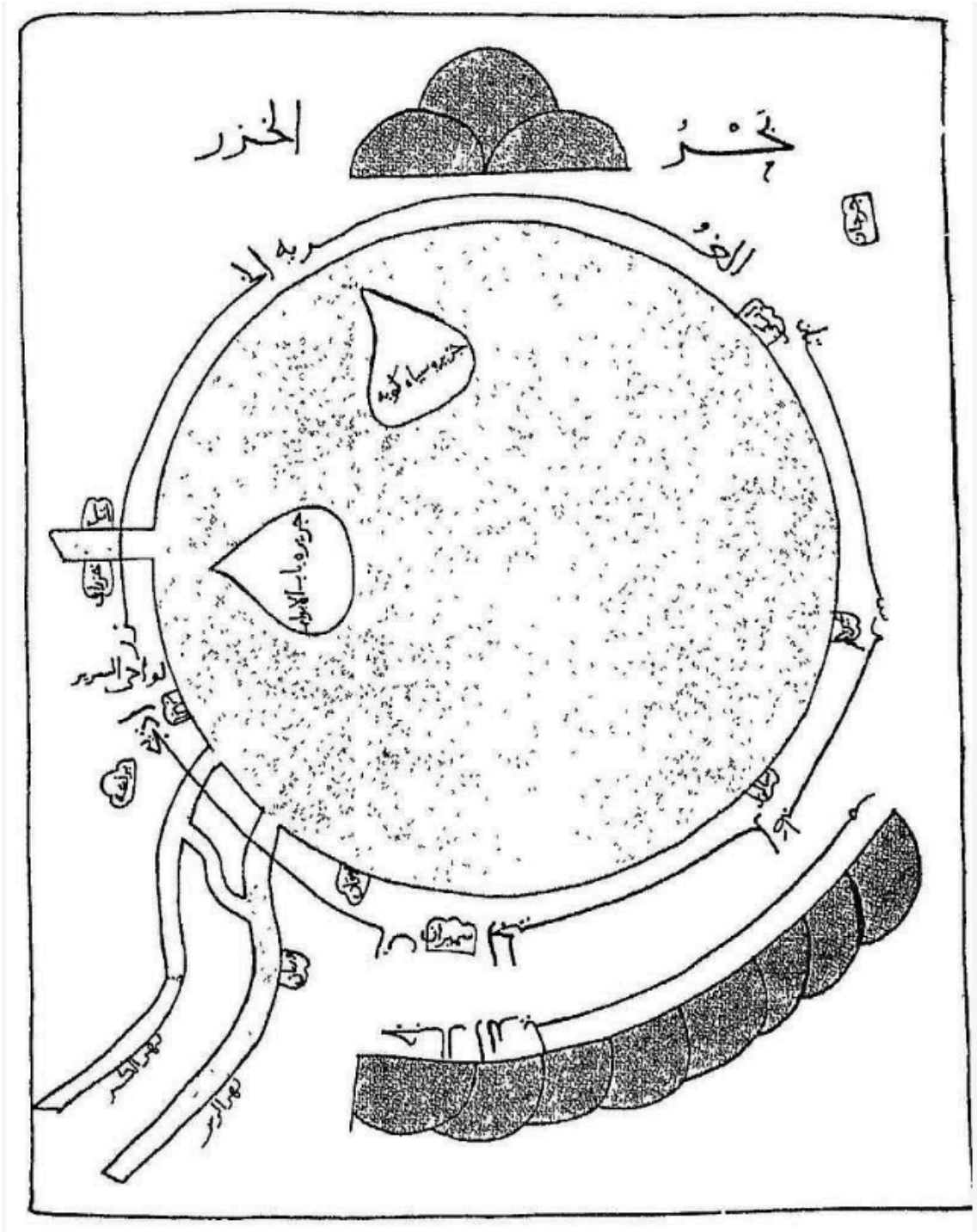
The Caucasus Mountains are shown as a very long ranged mountains extending from west of the Caspian Sea to east of India. Armenia (undefined red) straddles *Mons Taurus and* is the source of the rivers *Tigris* and *Euphrates.* Above *Armenia* the mountain range cutting into the *Taurus* has the legend *Montes Taurus* (Armenian Mountains), which should be the Armenian Chain or Range and to its south, at the junction of the two mountain ranges there is a vignette of a gate indicating Gates or the *Pillars of Armenia [Armenia pilae].* The northern part of these mountains is separated from the rest by a second gate named *Portae Caspiae* [the Caspian Gates]. To the east of the gates the range is named *Mons Caspiu* and to its north, *Caucasus.* Given their location, the Caspian Gates can only be reference to the Daryal Gorge the midst of the Caucasus range.

The provinces near and south of Caucasian Mountains included in the Orosius maps are *Commagene, Asia Minor, Cappadocia, Colchi[s], Albania. Mesopotamia, Parthia* and *Iberia* According to Pliny *Hircania* is situated south of the Caspian Sea and the Caucasus Mountains, but here it appears northeast of the *Mare Caspium* (the Caspian Sea), which is

shown as a bay connected to the *Scythicum Mare* [the Scythian Sea, part of the northern ocean].

The Beatus Saint-Sever a.k.a. Paris I mappa mundi, 1060, (#207.13)
Bibliotheque Nationale, Paris, France (oriented with East at the top)

The encircling ocean on the *Saint-Sever* map is interrupted by inlets representing *mare Caspivm* [the Caspian Sea] in the northeast and two gulfs off the southwest coast of Africa north of the Atlas Mountains. The Caspian Sea is shown as a gulf in the far northeast of the encircling ocean. *Hircania [Hyrcania]* is an area along the southern border of the Caspian Sea.


الخزر
خزر
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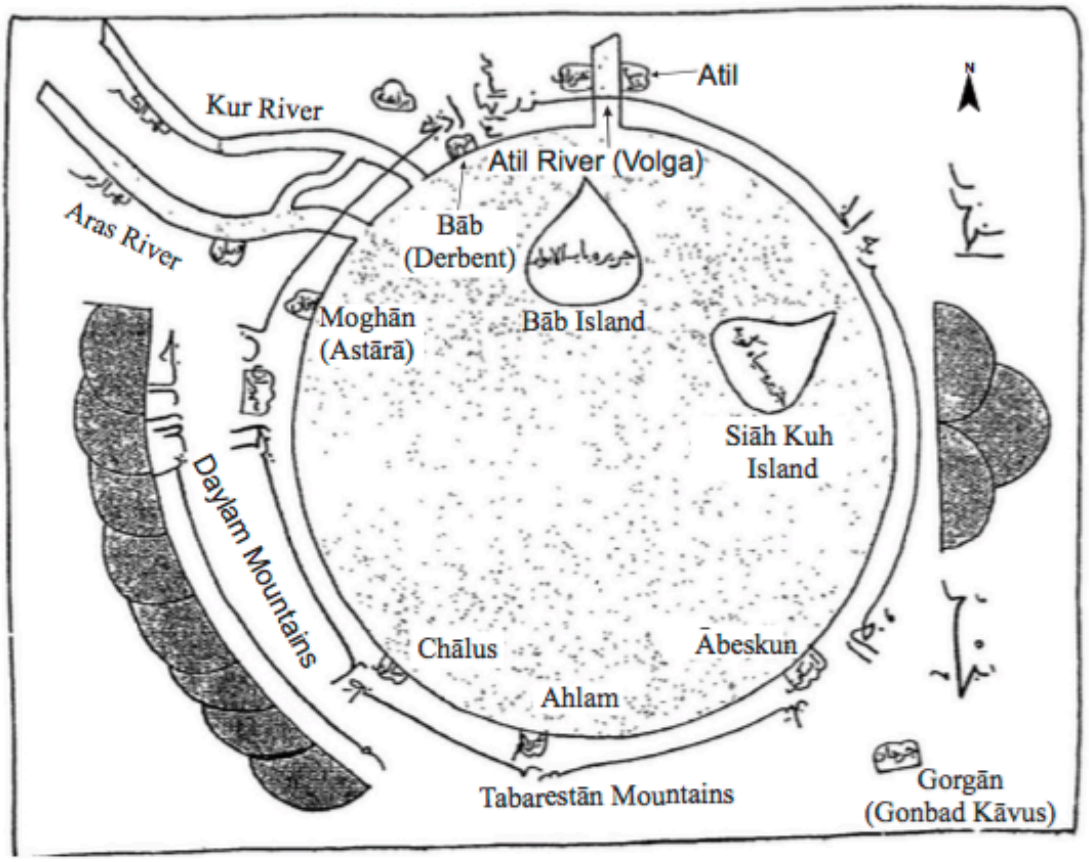
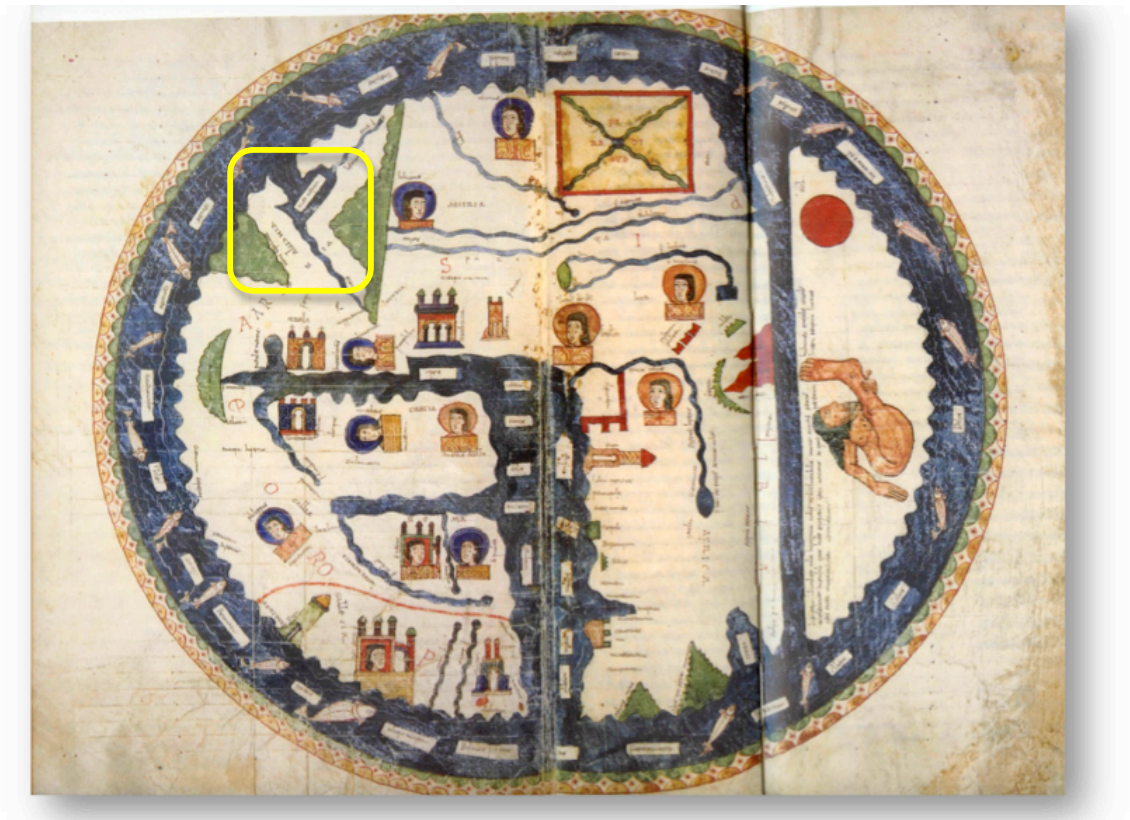
جزيرة باب الابواب
بحر طبرستان
بحر جرجان
بحر الخزر
نهر الرس



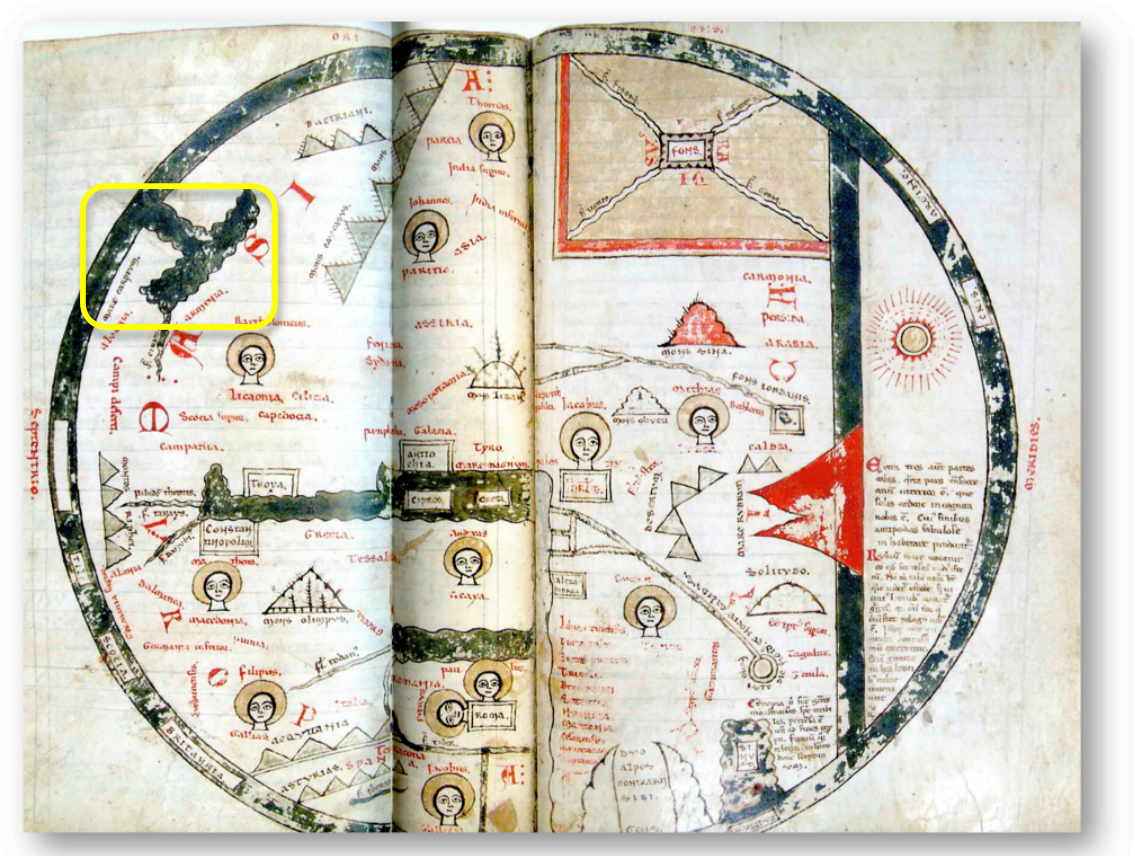
The tenth century map of the Caspian Sea by Ibn Hawqal. The map was rotated to show the north at the top and some of the names have been translated into English. Abeskun, Gorgan, Ahlam and Chalus were described as the most important ports of the south Caspian Sea by the tenth century geographer.

From The Book of Curiosities, Bobliean Library MS ARAB C 90

Kitab Ghara'ib el-Funun wa-mula al–uyyn. In Book 2, the Caspian Sea is shown diagrammatically as with most Islamic maps, and the rivers Volga and Aras (Rass) plus two islands are indicated.



The Beatus El Burgo de Osma, 1086, Archivo de la CatedraL Cod. 1, ff.34v-35 [I] (#*207.14)*
Oriented with the East at the top
mare Caspivm [Caspian Sea] is shown in the far northeast of the encircling *Hyperborean Ocean*.



The Beatus Milan or Mapa de Oña Beatus derivative, 12th century, MSS F. 105 sup. Dela Biblioteca Ambrosiana, Ms. F. 105. SUP., folios 71v-72r, Milano, Italy, (#207.26)

The mare Carprvm [Caspian Sea], which forms a "T" in the northeastern region in Asia is shown as a gulf in the far northeast of the *Hyperborean Ocean*

The Cottoniana or Anglo-Saxon Map, 995, (#210)

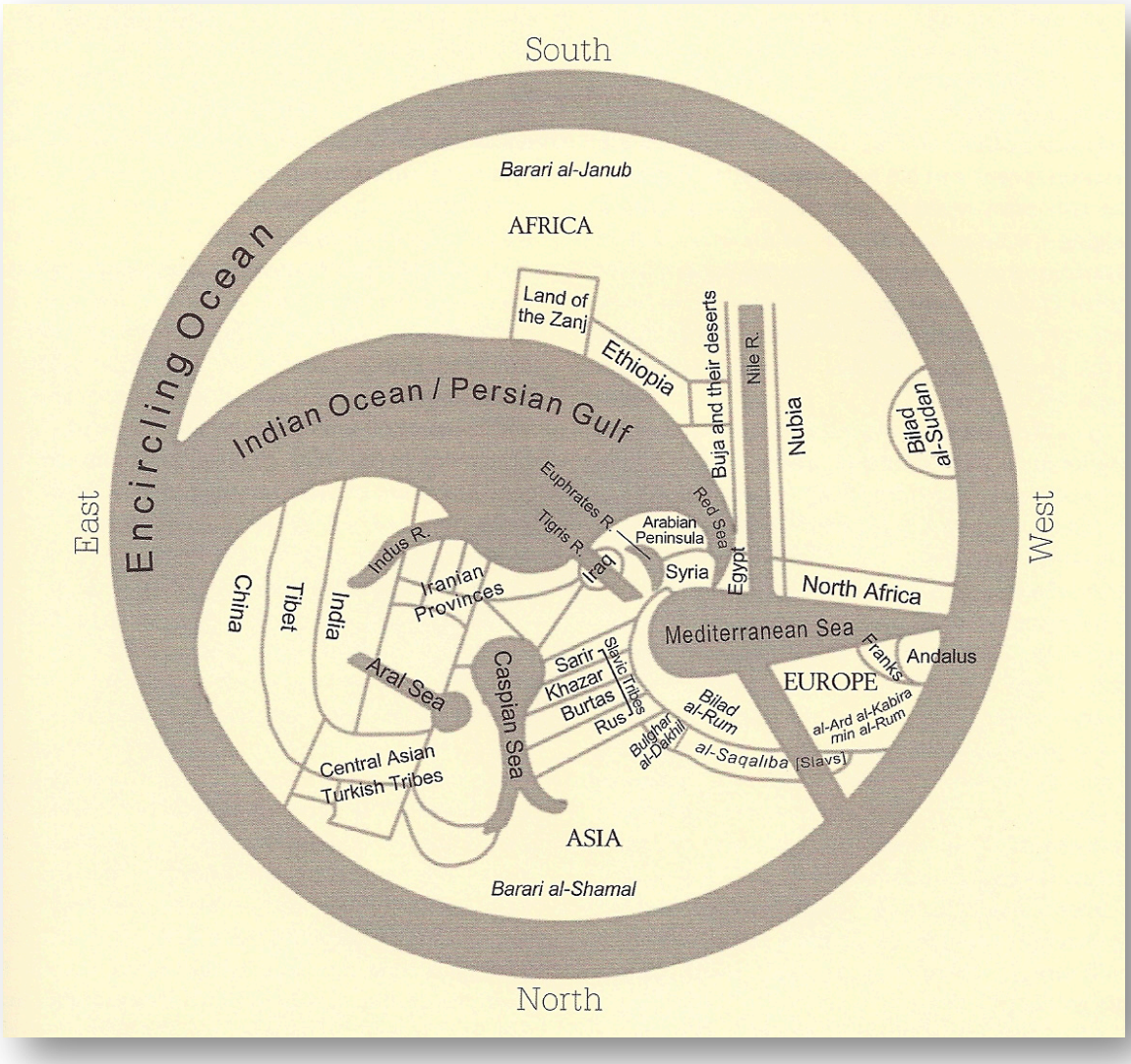
The 10th century *Cottoniana (#210)* and the 12th century *Sawley* map *(#215),* the rendering of the Caspian Sea is heavily invested in Alexandrian classical tradition, with an Orosian influence being particularly evident. On the *Cottoniana*, the Caspian is depicted as a roughly rectangular body of water with two islands; the narrow entrance is emphasized with an island at its mouth. The *Sawley* does not depict any islands within the Caspian itself, but names an island at its mouth – *Rapharrica*. The mostly likely source for this is a perplexing eighth century forgery by an author claiming to be St. Jerome - *Cosmography of Aethicus Ister*, whereby the author (pseudo-Jerome) alleges that they are editing a "periplus" (a document recording coastal areas) of the *Scythian* philosopher Aethicus, which is supposedly written in both Greek and Latin. The *Cosmography* derives material from Isidore's *Etymologies*, and the author's knowledge of Greek has prompted further study; the island of *Rapharrica* (*Raphir* in the *Cosmography*) in particular is, according to Herren, constructed from references made to the *Riphaeus Montes* [Riphaeus Mountains] alluded to by several Greco-Roman writers; The *Cosmography* itself may have drawn from the sixth century *Topographia Christiana* of Cosmas Indicopleustes *(#202)*, which contains a map of the Caspian Sea as a gulf. On the *Cottoniana,* the Caspian Sea inaccurately opens into the *Hyperborean Ocean* and is of

an unusual size containing two islands. Inside the area between the Black and Caspian Seas are two legends. One reads *Mons Albanorum* [Albanian Mountains, possibly the Caucasus] and the other is *regio Colchorum*, the region of Colchis, located northeast of the Black Sea. To the west of the Caspian Sea can be found the mythical *Gog* and *Magog.*

Map of the world from the earliest of the KMMS Ottoman Cluster, 878/1473, Sulemaniye Camii Kutuphanesi, Istanbul, A.S. 2971a, fol. 3a. Diameter 19.5 cm.
Oriented with South at the top. (#211)
(Reproduced with permission from Sülemaniye Kütüphanesi, Istanbul)

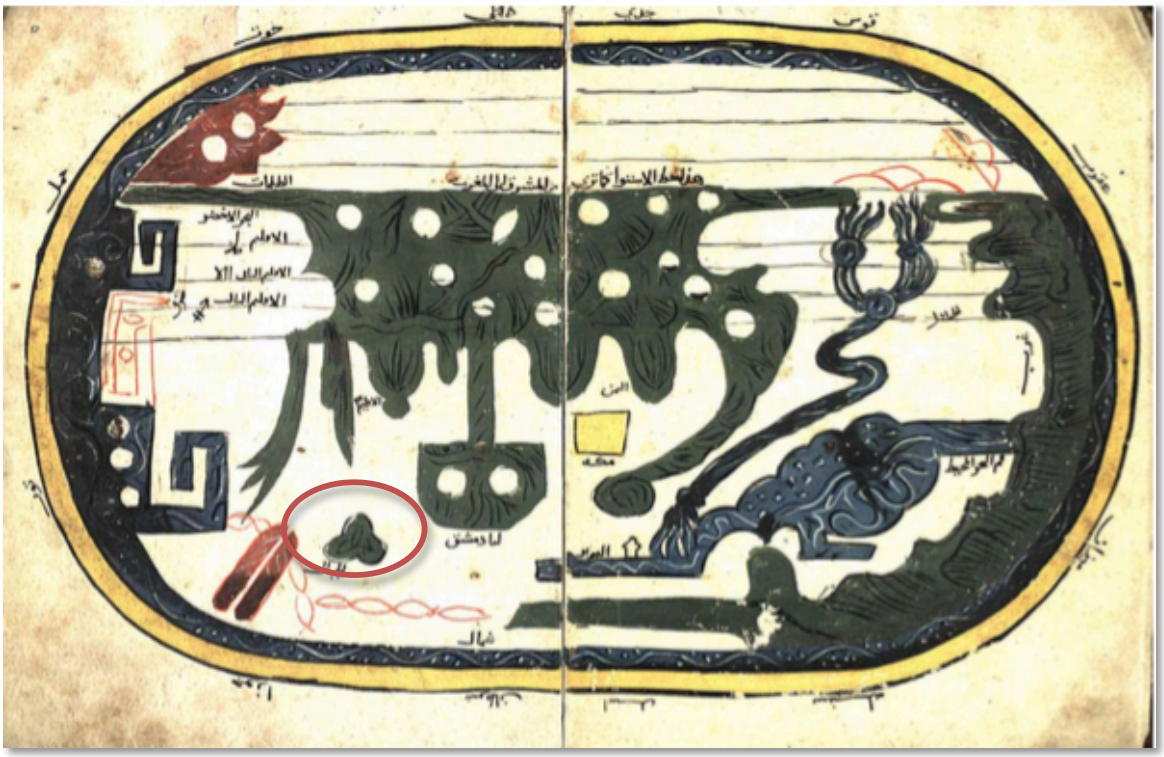
The two inland seas, the Caspian and the Aral, retain their keyhole appearance as circular inland lakes, with wide rivers flowing in. The seas were described briefly, and the fact that the *Khazar* [Caspian] Sea and the *Khwarazm* [Aral] Sea were landlocked is

mentioned, as well as the sea connection between the *Encircling Ocean* and Istanbul—that is, the Baltic joins up to the Bosporus.



Whilst the western *mappaemundi* tradition would largely retain the Alexandrian image until the early 14th century, cartography in the Islamic world was being developed in the context of a growing direct transmission of Greek sources. Muhammad Al-Idrisi's *Tabula Rogeriana (#219)*, produced in 1154, was commissioned by the Norman King of Sicily, Roger II, whose realm was particularly tolerant of the Muslim population of Sicily, which had previously been under Islamic control in 1070. The *Tabula Rogeriana* appears to be evident of the Islamic reception of Greek geographical works, as it depicts the Caspian Sea as a landlocked sea much further south than its European contemporaries. Whilst Ptolemy's *Geography* would not be published in Latin until 1409, it appears that it may have had an impact on the development of the early *portolan*-style maps emerging in the 1300s, particularly in Spain and Italy, both of which

had a strong and dynamic exchange with the Islamic world. The *Catalan Atlas* (1375, #235) retains a synthesis of the Alexander and *Gog and Magog* traditions, but locates them in a vague region of the northeast, preferring to locate the Caspian Sea specifically as a land-locked sea further south.



World map by Ibn Hawqal, Kitãb súrat al-ard, ca. 1200
Istanbul, Süleymaniye Kütüphanesi, Ms. Aya Sofa 2934, fol. 19r
Oriented with South at the top (#213)

Some sampling of the details of the text of Hawqal's treatise reveals some of the geographical philosophy/theory that was so prevalent among the Moslem world in the late 10th century. In his description of the Caspian Sea region, he states:

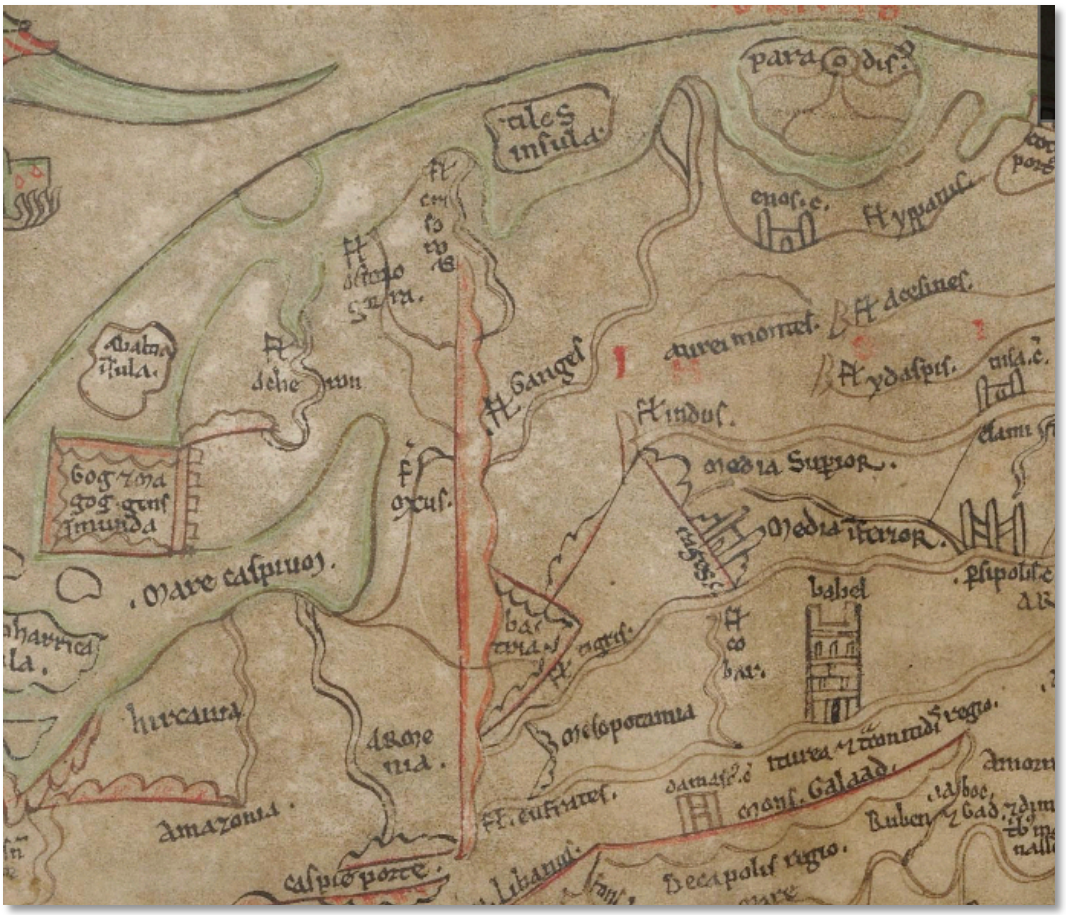
> The Western side of this sea belongs to Deilman and Taberistan and Gukan, and its borders; and part of it is bordered by the deserts of Khuarezm. On the Eastern side is Aran and Moukan and the territories of Serir and part of the deserts of Azziah: and on the north it has the desert of Azziah, to the territories of Siah Kouh: and on the south, Bakeil and Deilman and the neighboring places. This sea is not connected with any other; and if a person wishes to make a tour completely round it, nothing will impede him but a few rivers which fall into it from various quarters. The waters of this sea are bitter and dark-colored: its bottom is blackish sea, differing in this respect from the *Sea of Kolzum* [Red Sea] or *of Oman* or *of Pars* [Persian Gulf]. This *Sea of Pars* is of such clear water that one may see the white stones at the bottom; but the waters of this *Sea of Khozr* [Caspian Sea] are dark-colored, and in it there are not found any such things as pearls, or coral or similar marine productions. It is, however, much frequented by the ships of merchants who traffic from one town to another: but there are many trees and forests. One island is considerable, with a spring of water, and many

> trees: and there is another large island on the borders of Lekzan, which also has fresh water. In this ocean there are not any inhabited islands as in the *Sea of Pars* or *of Roum* [Mediterranean Sea]: but it affords much fishing. To the island bordering Lekzan they bring cattle from Berdaa in boats, and turn them out to graze and leave them until they become fat.

Of great inland seas, the Persian Gulf and the Mediterranean communicate with the outer ocean, but not the Caspian Sea. Ibn Hawqal avoids the trap into which stumbled so many Latin geographers, and describes how one may make the circuit of this great salt lake without ever quitting *terra firma* except for the crossing of rivers.

The *Sawley* (*shown below, #215*) the author also agrees with the *Hereford mappa mundi (#226)* in the mountains of Syria, East Asia and *Bactria* and in the *Caspian Gates*. Following the temporal conventions of other encyclopedic *mappae mundi,* the *Sawley* map not only contains references to the Christian past and present, but also alludes to future time. The biblical *Gog* and *Magog*, a "foul breed" (*gens immunda*) destined to be released at the end of time, appear in an enclosure in northern Asia, just beyond the Caspian Sea. *Mare Caspiuos* [Caspian Sea] a shown (top left) as a gulf in the shape of a boot, as an inlet from the northern ocean. Below it, from left to right, the provinces are named *Hircania, Amazones* and *Armenia*. The rivers of Asia also agree closely, for example the *Hydaspes, Acesines* and *Hypanis* (drawn as independent of the *Indus*); the Ganges, on the other side of *Paradise*, towards the north, flowing due east; the *Acheron* and *Oxus*, flowing into the Caspian; the two unnamed rivers on the west side of the Caspian; the *Pactolus*, flowing into the *Euxine*; and the *Cobar* [Chebar?], flowing into the upper Euphrates.

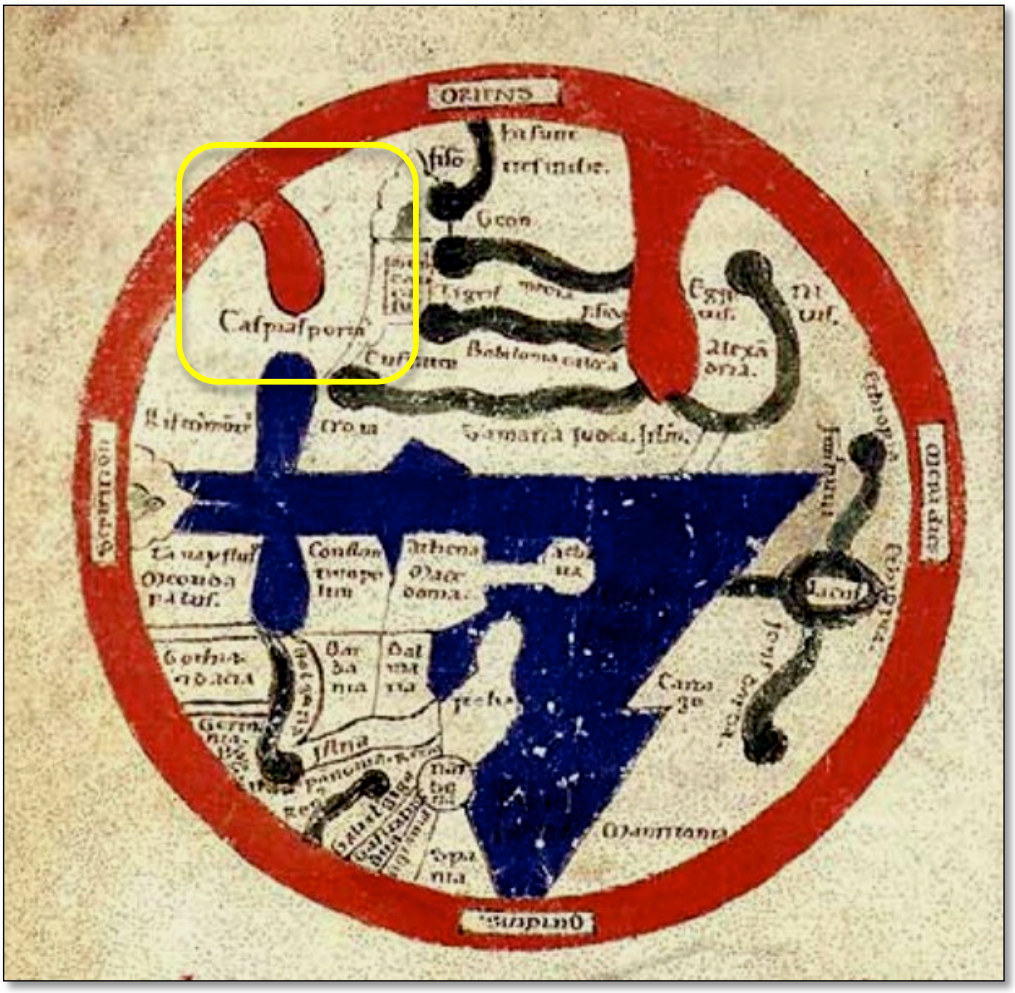
The Sawley Map (a.k.a. the World Map of Henry of Mainz), ca.1110 A.D.
Oriented with East at the top (#215)



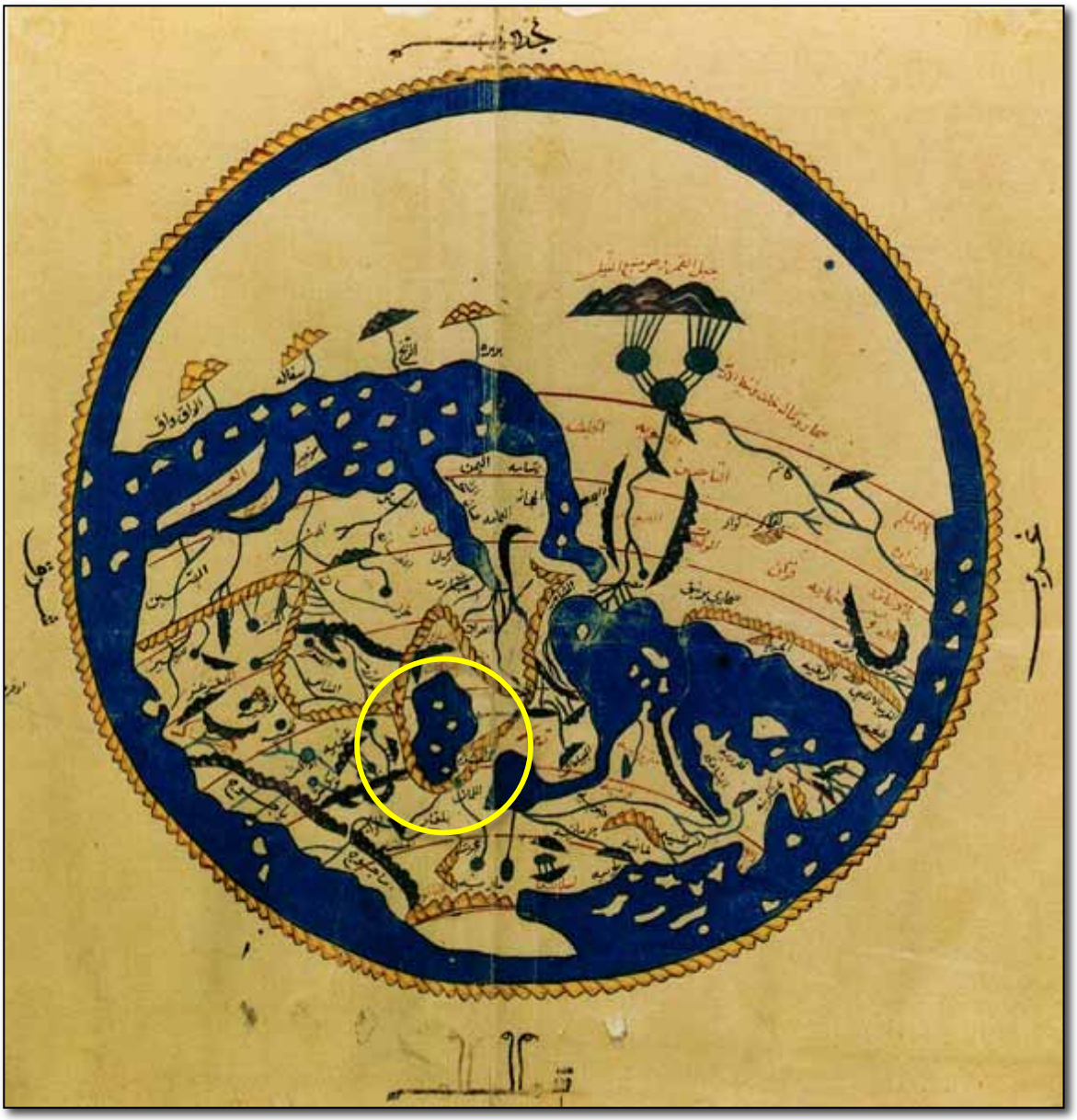
Detail of the Caspian Sea and Gog & Magog

The *Sawley Map* is held in Corpus Christi College Cambridge, MS 66 pt 1 and is a *mappamundi*, which concentrates upon the Biblical 12 Tribes, and their territories. But in the north-west we see clearly drawn the *Mare Caspious*, which is shown as a large inlet from the *Scythian Sea*, with the *Fluvius Oxus* and *Hyrcania, Arazenia* and two unnamed rivers, one of which is shown flowing from the mountains which hold *Caspio Porte*. Albania is shown next to what must be the *Sea of Azov* or *Mare*.

As the *Mare Caspious* is shown as a gulf, neither the Arab maps nor the Al-Idrisi map *(#219)* can be seen as the "forma" for this map. The text by Pliny the Elder 6/15, "*bursting through this sea makes a passage from the Scythian Ocean into the back of Asia*" and the tradition stemming from Patrocles the Macedonian continued for some 1500 years as clearly drawn.



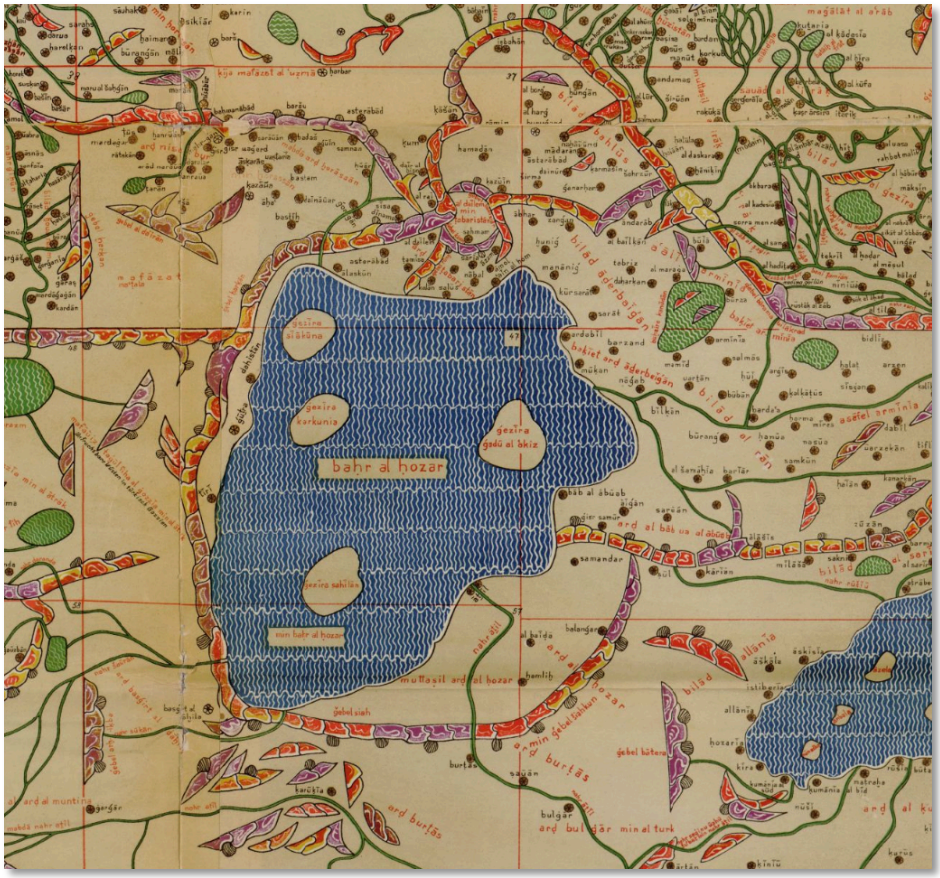
World Map of Guido, 1119 manuscript, Bruxelles, MS 3897-3919 f.55v
13 cm diameter (#216) showing the Caspian Sea as a bay of the Hyperborean Ocean



al-Idrisi's world map, oriented with South at the top, 21 x 30 cm (23 cm diameter), 1154 Bodleian Library, MS Pococke 375, dated 1553/960 H, (#219) showing, correctly, the Caspian Sea as a land-locked body of water

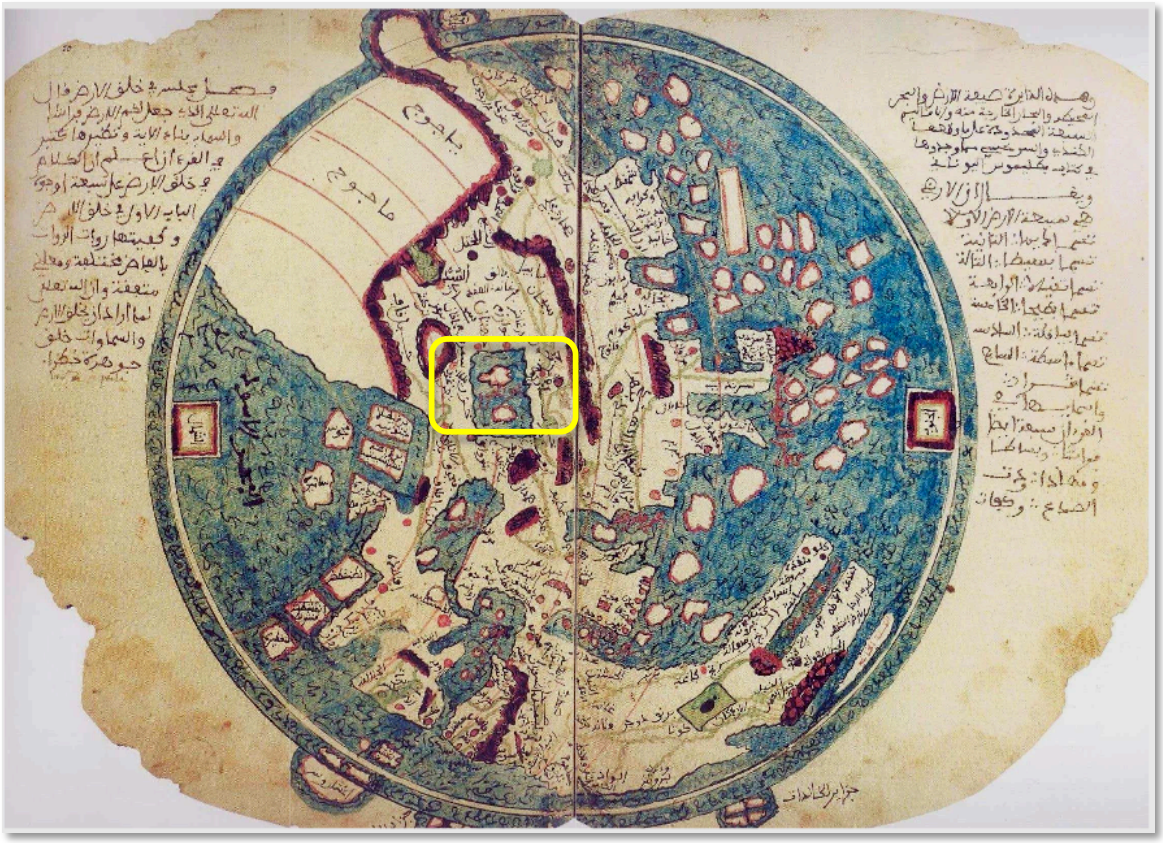
Whilst the western *mappaemundi* tradition would largely retain the Alexandrian image until the early 14th centuries, cartography in the Islamic world was being developed in the context of a growing direct transmission of Greek sources. Muhammad Al-Idrisi's *Tabula Rogeriana (#219)*, produced in 1154, was commissioned by the Norman King of Sicily, Roger II, whose realm was particularly tolerant of the Muslim population of Sicily, which had previously been under Islamic control in 1070. The *Tabula Rogeriana* appear to be evident of the Islamic reception of Greek geographical works, as it depicts the Caspian Sea as a landlocked sea much further south than its European contemporaries. Whilst Ptolemy's *Geographica* would not be published in Latin until 1409, it appears that it may have had an impact on the development of the early *portolan*-style maps emerging in the 1300s, particularly in Spain and Italy, both of which

had a strong and dynamic exchange with the Islamic world. The *Catalan Atlas* (1375, #*235*) retains a synthesis of the Alexander and *Gog* and *Magog* traditions, but locates them in a vague region of the northeast, preferring to locate the Caspian Sea specifically as a land-locked sea further south.



Caspian Sea on the world map by al-Idrisi (#219)
A modern copy of al-Idrisi world map from the Nuzhat al-Mushtāq fi'khtirāq al-āfāq, a.k.a Tabula Rogeriana, oriented with South at the top, 1154

Exceptionally large at 30 x 42 cm and composed of high-quality artwork, this abbreviated copy of al-Istakri's Kitab al-masalik [Book of routes and realms] from 1193 CE (#211) declares royalty as its intended audience. The manuscript and its 18 maps are decorated with elaborate gold calligraphy and illuminated with madder red scallops and intricate wave-designs for the seas. Of Arabo-Norman Sicilian provenance, these folios were likely prepared as wedding gift for Constance, the daughter of Norman King Roger II. Pictured is the Caspian Sea between the mountains of Daylam and Samarkand along what was then the central Silk Road. Al-Istakhri's geography went on to become the most heavily copied work of the Islamic atlas series, with copies surfacing even from mid-18th century Mughal India.



Ibn Sa'id's world map from the Kitab al-bad' wa-al-ta'rikh, 13th century
Oriented with East at the top, 28.5 cm diameter (#221)

To the east of the Black Sea is the Caspian, which is the rectangular lake at the center of the map, with two large (imaginary?) islands and land-locked. Below the Caspian (to its west) lies a large mountain mass, possibly the Caucasian Mountains, with a second one further west (below), which probably is the depiction of the Armenian Highlands or the Taurus range. Below the Caspian (to its west) lies a large mountain mass, possibly the Caucasian Mountains, with a second one further west (below), which probably is the depiction of the Armenian Highlands or the Taurus range.

Psalter mappamundi, 1225-1265 A.D., 8.5 cm (3.7 inches) diameter
Oriented with East at the top (#223)
Manuscript on vellum: BL Add. MS 28681
The Caspian Sea is displayed as an inlet off the encircling Ocean

Detail showing the Caspian Sea as a long bay off the encircling Ocean, along with Gog and Magog behind the Caspian Rampart and Noah's Ark on Mount Ararat

The Ebstorf mappamundi, 1234, was originally engraved on 30 pieces of goatskin that had an overall measurement of 3.58 x 3.56 meters 3.57 meters [12 feet] in diameter. (#224)
This reconstruction is currently on display in the Ebstorf nunnery

Detail showing the Caspian Sea and narrow, rectangular-shaped inlet off the surrounding Ocean. Gog & Magog just above and Noah's Ark lower right

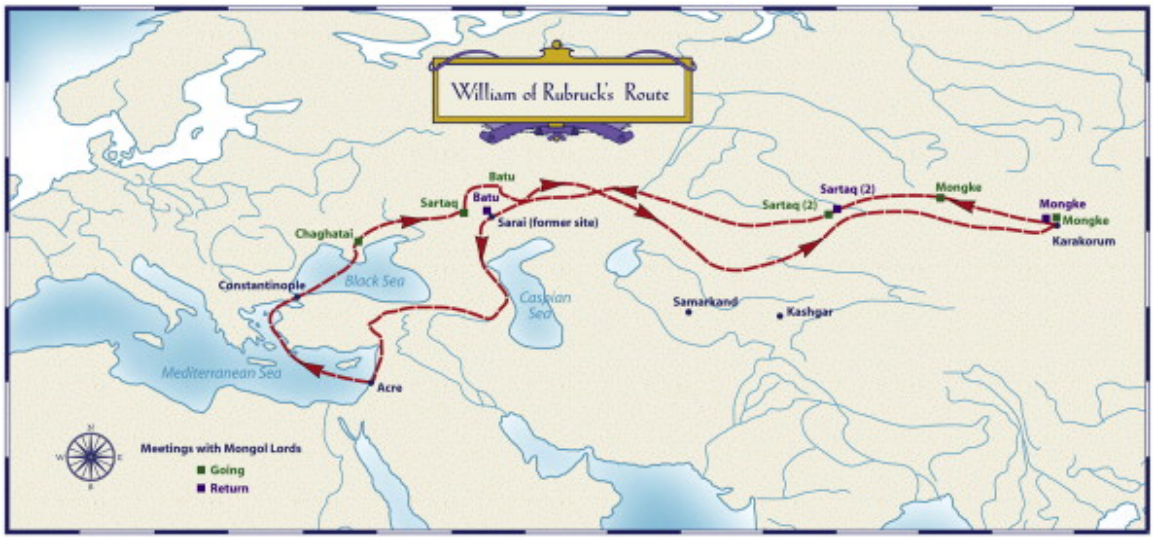
The Hereford mappa mundi (1290, #226), oriented with East at the top.
The Caspian Sea, upper left, appears more like a river emptying into the Hyperborean Ocean

Detail of the Caspian Sea, appearing more like a river shaped like a foot. Note that the Caspian Sea is painted green and inflowing rivers are blue. Also in this excerpt are the Gog & Magog enclosure and Noah's Ark

13th century *mappaemundi* such as the *Hereford mappamundi (#226)* developed the traditions established by most earlier *mappaemundi*. The Caspian Sea is still associated with a sense of peripherality on the northern coast of Asia, and is still imagined in a monstrous context; its shape is more elongated and less irregular, as it is also on the *Ebstorf mappamundi (#224)* – perhaps to assist the scribe in placing inscriptions; - *Mare Hyrcamium* [the Caspian Sea] is indicated on the *Tabula Peutingeriana (#120)* with a wedge shape. On the *Hereford mappamundi,* the Alexandrian legend is emphasized by a large inscription warning of "*[...] all [kinds] of horrors, more than can be imagined; intolerable cold [...]*". The island of Aethicus Ister's *Cosmography*, which is later described as being home to people with fearsome siege weapons, is also indicated (*Capharica Insula*), which may be an attempt by the *Hereford* to strengthen the message of apocalypticism.

Heading into the late medieval period the Caspian Sea is predominately being displayed a gulf/bay or inlet off the surrounding Ocean. Again this emphasizes how little was known of the northern area of Eurasia and how important and influential were the classical Greek writings. During the late 13th century, however, various long distance travelers such as William Rubruck (1253-55) and Andrew of Longjumeau 1249-

51) introduced new knowledge to Christian Europe and the Muslim world: the Caspian sea is landlocked and these classical authorities are mistaken.



Giovanni Boccaccio, 1313 – 1375, was an Italian writer, poet, correspondent of Petrarch, and an important Renaissance humanist. Boccaccio stated his dilemma between *antiqui* and *moderni* in his geographical treatise *De Montibus*: "I found out that there are two Caspian Seas. The one is in the middle without any connection to the ocean. The other is an advanced part of the sea not far from the *Scythian* ocean. I assume that negligence of copyists made two seas out of one. …. Certain *moderni*, who traveled in our time the kingdoms of the *Scythians*, reported that the Caspian Sea occupies an immense space between the *Caspian* and *Hyrcanian* mountains. The sea has no entry or exit. …The *antiqui* reported that the Caspian Sea enters from the *Hyperborean Ocean* into the land through a narrow mouth like a riverbed. I leave the choice to decide which opinion of the two is truthful to those who are more diligent than me. For my part, I cannot remove my confidence in the *antiqui*, but at the same time cannot deny the testimony of the *moderni*".

In maps which are ideologically oriented - such as world maps and maps of Holy Land, there was no room to doubt classical textual authorities (the Greek *antiqui*). The emerging functional oriented maps such as *portolan* [nautical] charts and regional maps in the 14th century were less affected. The Caspian Sea is not depicted in *portolan* charts and European regional maps before the 16th century due to lack of political and economic relevance. The only exception might be the *Catalan Atlas (#235)* and its derivatives, which expose a detailed Caspian Sea. The Caspian Sea suffered from an additional marginalization in which the Caspian gulf was designated to offer the habitat for the eschatological figures *Gog* and *Magog* and other *anthropophagi*. In the maps below Vesconte labeled the "lower" Caspian Sea with three names. Paolino misplaced a third *mare caspium*.

"Mappemonde de Merino Sanuto, qui se trouve dans un MS. du XIVe siecle de la Biblioteque Royale de Paris, No. 4, 939 qui a pour titre: Chonicon ad annum MCCCXX", in Vicomte de Santarem, Atlas compose de Mappe-mondes.Marini Sanudo world map, 1849, 35 cm diameter, oriented with East at the top, Bibliotecheque Nationale, Paris, France, MS Lat. 4939/ Oxford University B1a.10, map sheet 17 (#228)

The Caspian Sea is shown as landlocked, rather than as a gulf of the northern ocean, and there is an extra sea, labeled *Mare de Sara* between the Black and Caspian Seas. *Mare de Sara* is usually understood as another name for the Caspian Sea. The legends and place-names are a mix of classical and modern. A somewhat better conceptual construct is also shown of the greater continental rivers of the North, from the Danube to the Don and Volga, and from the Vistula to the *Oxus* and *Jaxartes*. In this fluvial detail, however, as in the delineation of two Caspian Seas, Vesconte is more traditional and unnatural on his map than the one ascribed to him in Sanuto. Again. In addition to the two landlocked Caspian Seas, there is still an unlabeled gulf in the northern ocean that resembles the classical Caspian Sea.

Detail showing three Caspian Seas, two are inland seas, one with islands; the other an unlabeled gulf/bay off the surrounding northern Ocean

The legend on the left states: "This is called the *Mare de Sara* on account of the city where the [Mongol] emperor lives, and it is also called the Caspian because it is near the Caspian Mountains and for the same reason it is called *Gurganian Sea* [likely from Gurgania, i.e. *Hyrcania* and not Georgia]. There is inside a whirlpool where the sea level went down, but on account of an earthquake it stopped up. The sea rises a hand's width each year, and now many good cities have been destroyed. Eventually it seems that it will enter the *Sea of Tana* [likely to be translated *Azovian* and not the Black Sea] not without danger for many. It is 2500 miles wide in circumference ".

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Detail of Paolino Veneto, Vatican, Ms.lat. 1960, dated 1326 - 1334.
Detail showing three Caspian Seas, two are inland seas, one with islands;
the other an unlabeled gulf/bay off the surrounding northern Ocean resembling the classical rendering of the Caspian Sea.

Vesconte world map, ca.1321, 35 cm diameter, oriented with East at the top
Biblioteca Apostolica Vaticana, Rome/Scala (#228)

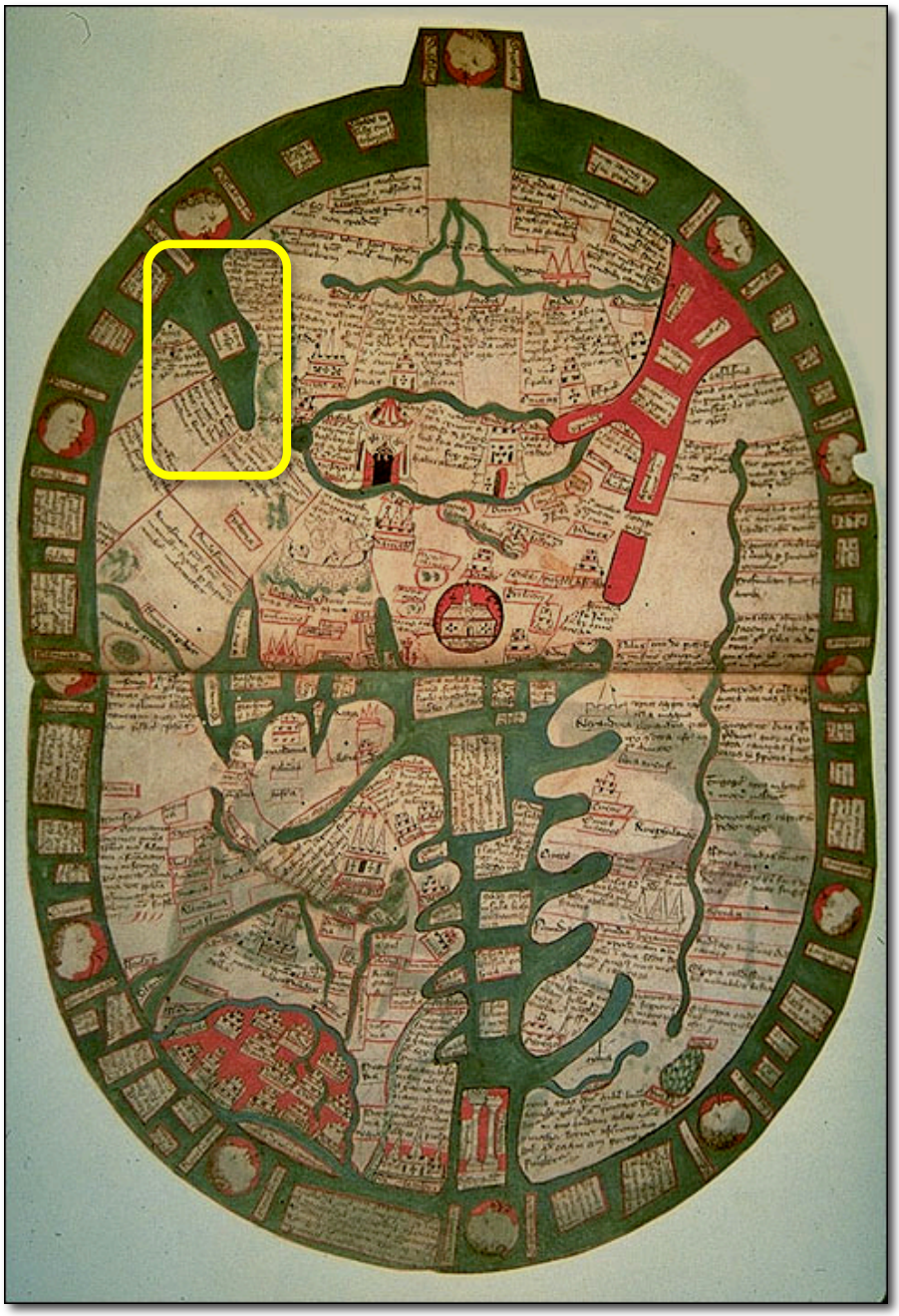
Detail showing three Caspian Seas, two are inland seas; the other an unlabeled gulf/ bay is drawn off the surrounding northern Ocean

The flat-bottomed circular sea enveloped by mountains is named *Mare Caspiu* [the Caspian Sea]. Situated between this and the Black Sea *[Mare Pontos]* there is another arrow-like lake, which bears the legend "*mare*" only. This should in fact be the Caspian Sea, since to its south the legends read *Caspia* and *Yrcania,* two provinces located south of the Caspian Sea. It follows that the true identity of the flat-bottomed sea above should have been the Sea of Aral, situated in western central Asia, with *Bactria* shown on its shores.

The unnamed mountain range running between the Black Sea and the arrow-like Caspian Sea can only be the Caucasus Mountain range. At its intersection with the second mountain range the vignette of a large gate reads *Porte Forree* [Iron Gates, the name given to the *Caspian Gates* by the Persians, Turks, Armenians and others]. For the first time in medieval western maps this passage, also known as the *Caspian Gates*, has been shown in as correct position, namely on the western shore of the Caspian Sea. The text surrounding the Vesconte world map provides explanatory comments about various provinces and their features. On the left of the map, line 27, is the description of Albania, which loosely translates: … *its people are white and to its east is the Caspian Sea, which is connected to the Northern Ocean, it extends to the Meotides Marshes [Sea of Azov] and deserts.*

Some differences in detail occur in the Vesconte maps; for example, though both the Vatican copy and the Paris copy have two Caspian Seas, in the Vatican copy they are the same shape, while in the Paris copy the western Caspian corresponds to the later form of the Catalan maps. The three names for the Caspian Sea were adopted from Vesconte's world map Vaticana, Pal. lat.1362A.

Nevertheless, the concept of the Caspian Sea being a gulf continued to exist in world maps until the 17th century.



World Map by Ranulf Higden, a.k.a The Ramsey Abbey map, 1342, 46 x 34 cm, British Library, Royal MS. 14 C.IX, ff.1v-2. Oriented with East at the top (#232)

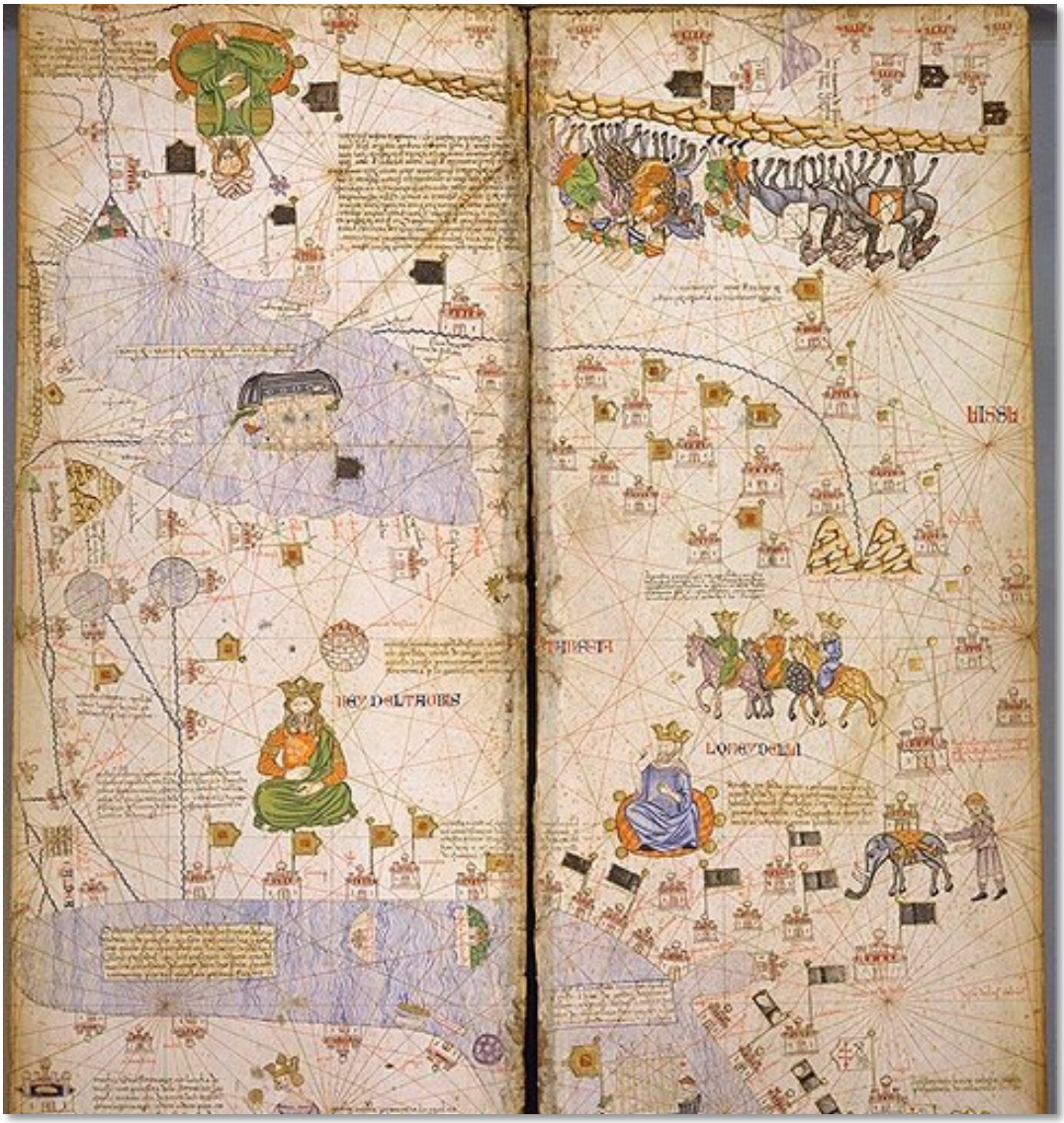
Ranulph Higden's world map of shows a walled-off area in the northeast, south of the Caspian Sea. That the Caspian is not an inland sea but open to the ocean signals this depiction's conservatism. The text specifies that *Gog and Magog* will break out at the end of the world and do great damage, and that they were enclosed by Alexander. Higden's work seems to have been very popular: around 185 Latin manuscripts traceable to Higden's design.

On several of the late medieval maps such as the *Catalan Atlas* (1375, #235) and the *Medicean Atlas* (1351, #233) the depiction of the Caspian Sea becomes more "modern". This concordance deems to be all the more significant because the form of the Caspian Sea on the *Dulcerto* chart of 1339 and on the *Pizzigani* chart of 1367 is not entirely closed.

Portolano Laurenziano Gaddiano from the Laurentian Sea Atlas, Medicean Atlas, 1351
Biblioteca Medicea Laurenziana, Florence, Italy, oriented with South at the top (#233)

Comparison of the delineation of the Caspian Sea on the Catalan Atlas (Left, #235)
and the Medicean Atlas (right), both more realistic in shape and orientation

Even in the 14th century the Caspian Sea to most of the cartographers of this period was not a region on which first hand knowledge was generally available. For evidence we have only to look at the maps of the 14th and 15th centuries and, therefore, it may easily be that the *portolan* charts of Dulcerto and Pizzigani preferred not to commit themselves and to leave the eastern and northern portions unmapped. In passing it can be pointed out that as early as 1321 Marino Sanudo represents the Caspian as a closed sea, showing that, because Pizzigani left it open, there is no reason to suppose that the *Laurentian* map must be later than 1367.

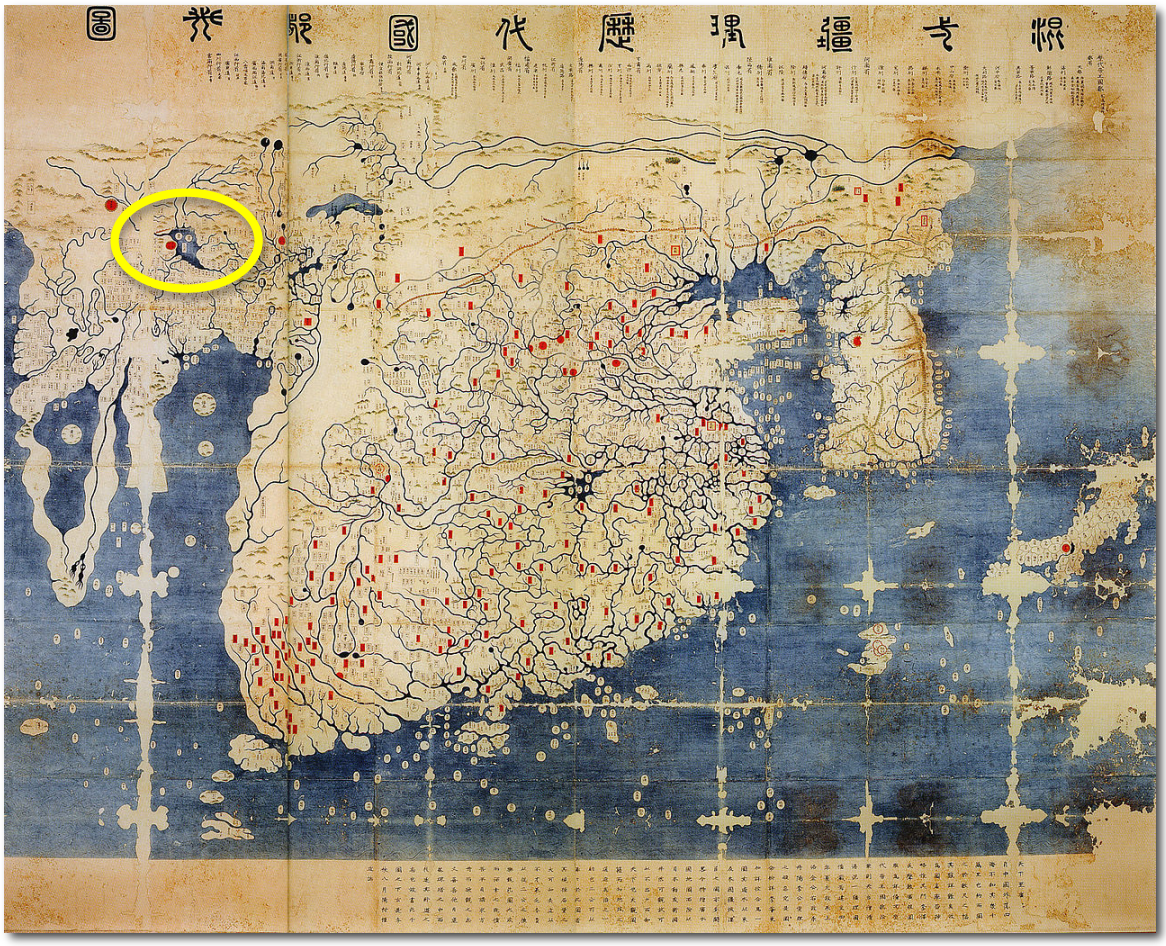


A panel of the Catalan Atlas, 1375, showing the Caspian Sea as an inland body of water, the Black Sea, Central Asia, Arabia, Caucasus, Queen of Sheba, caravan, the Magi, Noah's Ark and three ships (one in the Caspian Sea, two in the Persian Gulf) #235

The Caspian Sea is typical of the charts having an east/west orientation, but the River Volga with its many outlets disgorging into the Caspian Sea is quite clear as is the "Flum Dozganci", which emanates from the mountains to the east and is the "Jaxartes". But the name of the

Caspian Sea "Mar de Sara" comes from the Emperor "Janbech, Lord of the Sara", as is illustrated to the north of the "mar de Sara and Bacu". (It refers to the Saray Peoples).

A re-oriented view of the Caspian Sea which is becoming more modern in shape and orientation There is only a single text appended "Aquest mar es appelleda mar del Sara e de Bacu", with a large vignette of a ship east of Bacu, having a large square sail and a flag on what must be the foremast. The sail is made of Reed and Palm leaf as illustrated. Thus the previous comment re "Palmam" makes sense. The Caspian Sea is typical of the charts having an east/west orientation, but the River Volga with its many outlets disgorging into the Caspian Sea is quite clear as is the "Flum Dozganci", which emanates from the mountains to the east and is the "Jaxartes". But the name of the Caspian Sea "Mar de Sara" comes from the Emperor "Janbech, Lord of the Sara", as is illustrated to the north of the "mar de Sara and Bacu". (It refers to the Saray Peoples).



The Honkoji version of the Kangnido map, 1402 (#236)

General map of the distances and the historic capitals (chinese: Hunyi jiangli lidai guodu zhi tu; japanese: Kon'itsu kyoori rekidai kokuto no zu), Korea, roughly 1402. Ink and paint on paper. Height 220 cm, width 289 cm. Honkoo-ji Tokiwa Museum of Historical Materials, Shimabara, Nagasaki prefecture. Based on two Chinese maps from the 14th century, Shengjiao guangbei tu [Large map that shows the pronounciation of place names] and Hunyi jiangli tu [General map of the distances also showing historical capitals (of China)]. Both maps were brought to Korea in 1368, and put together to one new map around 1402. The most obvious feature distinguishing this later version from the original Kangnido is the more correct size and orientation of Japan. The geographical knowledge represented in the map beyond China and Korea seems mainly a result of 14th century trade connections within the Mongol Empire. On the western edge of the map the names Marseille and Sevilla have been identified. Note the depiction of the Cape of Good Hope, the second-earliest known to date. Note: The "crack" on the left side of the image is due to the map being printed on two adjacent pages in the source, an exhibition catalogue. It is not from the original.

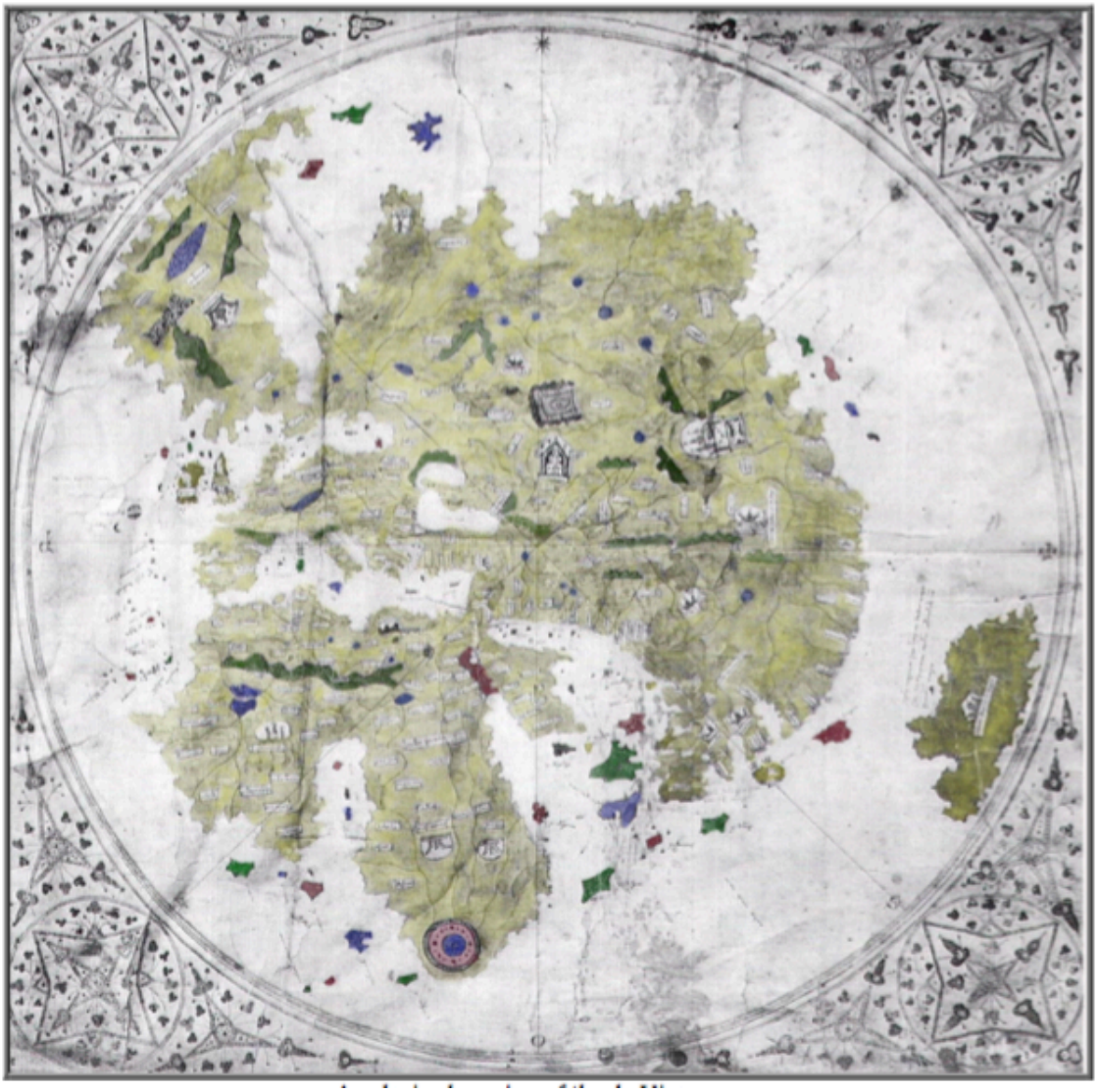
The depiction of the Caspian Sea on the *Kangnido* map seems to be based on the way these places are traditionally depicted in the Arab and Persian Ptolemaic cartographic traditions. To the east of Sri Lanka, India betrays its triangular shape only by a river, obviously the Ganges. The long river emerging to the south is the *Hei-shui* [Salween], and the great lake in the upper center combines the Black and the Caspian Seas.

The Caspian Sea on the Evesham mappa mundi, 1390 (#236.2), oriented with East at the top

The Borgia mappa mundi, 1410-1458 (#237) oriented with South at the top

Detail showing the Caspian Sea as an inland body of water with a ship

World map by Pirrus de Noha, 1414 (#239) showing the Caspian Sea as a large inland body of water, although a large unlabeled inlet off the northern ocean is still drawn that resembles the classical location of the Caspian Sea.

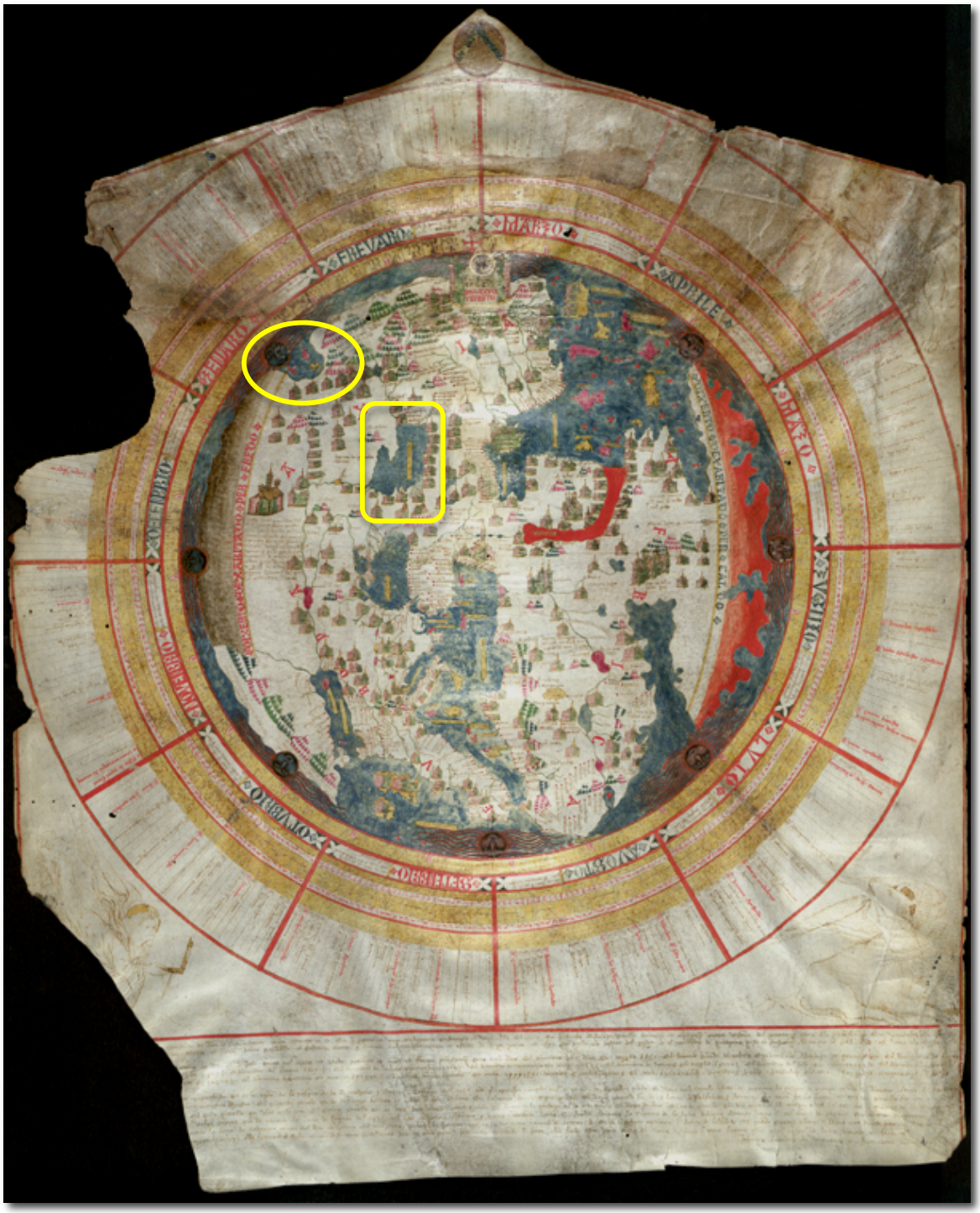


The de Virga map, 1411-1415 (#240)

Oriented with North at the top, the world map contains a wind rose with eight divisions, the center of which is situated on the western shores of the *Mar Capara* [Caspian Sea] the northern division is marked with a star and the eastern division is marked by a cross. The Caspian Sea is located at/near the center if this *mappa mundi.*

Map of a Swiss codice that contains the "Conspiracy of Catilin" and the "Jugurthine War"by Sallust, 1420 (#240.1), oriented with East at the top. The Caspian Sea is clearly depicted as an inland body of water, although a large unlabeled inlet off the northern ocean is still draw like during the earlier medieval and ancient periods.

Andrea Bianco's world map, 1436, 25 cm diameter,
Nazionale Marciana, Venice, MS It. Z,76, fol. 8 (#241)
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. The Caspian Sea is definitely displayed as an inland body of water.

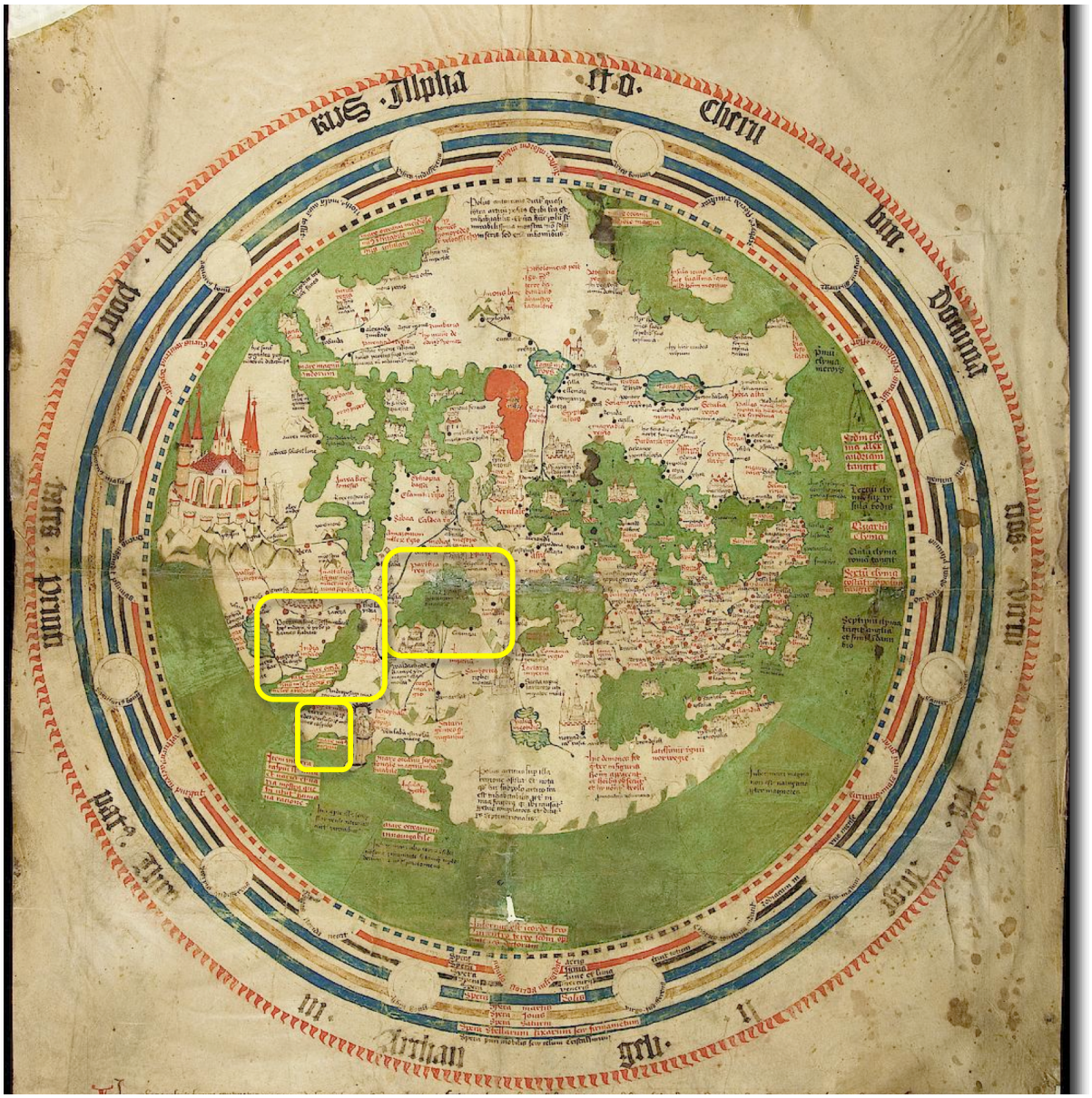


World map by Giovanni Leardo, 1452-53,
American Geographical Society, Milwaukee University
oriented with East at the top (#242)

The Black Sea is fairly well drawn, though it is in the latitude of England; the Caspian has much the same shape as the Black Sea, but it is correctly shown as a closed sea and without the supposed communication with the *Icy Ocean*. In central Asia there are two

rivers entering the eastern side of the Caspian Sea, the *Jaxartes* and the *Oxus.* South of the sepulcher can be seen the River Volga flowing into the northwestern corner of the Caspian Sea. Again, there is the unlabeled gulf in the northern ocean the resembles the location of the classical Caspian Sea.

Detail: The Caspian Sea, Asia and the sepulcher of the Grand Khan, but notice, again, the unlabeled gulf off the northern ocean.



Andreas Walsperger's World Map, 1448, Biblioteca Apostalica Vaticana, Rome, Pal. Lat. 1362b (oriented with South at the top) 57.5 cm diameter (#245)

The *Walsperger mappa mundi (#245)* has nothing to do with the more 'modern' practice as expressed in the *portolan* charts and continues to show the Caspian Sea as a branch of the ocean. This attempted fusion of classical and ecclesiastical ideas produces interesting results. Konrad Kretschmer, who discovered the *Walsperger* map back in the 1890's, said with disgust, "Not a single line of the map is from Ptolemy!" This is not quite fair, as random features from Ptolemy appear, such as the *Aurea Kersonesus* [Golden Chersonese] in the Far East, an enclosed Caspian Sea - though a Caspian gulf is also retained - and the stone tower that marks the border with India. One of the most unusual fusions of both the rediscovery of the Ptolemaic projections and of the Alexander myth's topography is to be found in Andreas Walsperger's mid-15th century *mappamundi.* The *Walsperger* map's treatment of the Caspian Sea is initially problematic as at least two

bodies of water could be described as being the Caspian. Firstly, in the northeast, a large body of water appears to burst through from the outer ocean, as Pliny had described, but does not appear to widen up, as it should according to Strabo – this sea is named *mare orride*. Whilst the name is inconclusive, a number of inscriptions allude to it being associated with the Caspian Sea of the Alexander legend. Below the pigmies (gnome-like creatures) are said to be the *andropofagi* who also appear on the *Hereford mappamundi* as those who are "[...] walled in [...] by Alexander the Great. Just below the *andropofagi* is *gog et magog*, and the image of a human eating another human, and a sea named *mare mig caspui* [sea that goes beyond Caspia], which may suggest that it is referring to the previous sea (*mare orride*) that which it is past.

Detail of the Walsperger mappamundi showing the mare orride opening to the Ocean Sea and a sea named mare mig caspui. Also opening to the Ocean Sea

The text is heavily worn, but it appears to be highly likely to read mare [...] *hyrcanium* on another body of water just a short distance southwest of *mare orride*, being a strong indication of the *Hyrcanian Sea*. *Hyrcanian* refers to an alternate name for the Caspian Sea in Greek literature, referring to the land of *Hyrcania* on the Caspian Sea's southern coast. A number of other icons may support this, including that of a large city on a delta, which could be a number of major settlements such as *Xacitarxan*; *Noah's Ark* is resting upon the mountains of Armenia, as it is near the Caspian Sea on the *Anglo-Saxon Cotton* map. Thus, it appears that the *Walsperger* map is not only representative of a shift to a more accurate spatial depiction as seen in the *Catalan Atlas* impulse by the reintroduction of the Ptolemaic projection in European cartography, but also of the earlier didactic function of the *mappaemundi* tradition. Remarkably, another map also illustrates this paradox, but with a possible reversal of names: the 15th century copper-plated *Borgia* map *(#237)*. As with the *Walsperger* map, *magog* is indicated as being walled in on a peninsula in the northwest, but on the east side of the sea, which may read as *mare [...]rcamium*. Where the *Hyrcamium* is on the *Walsperger* map, *Mare Caspium* appears on the *Borgia* map.

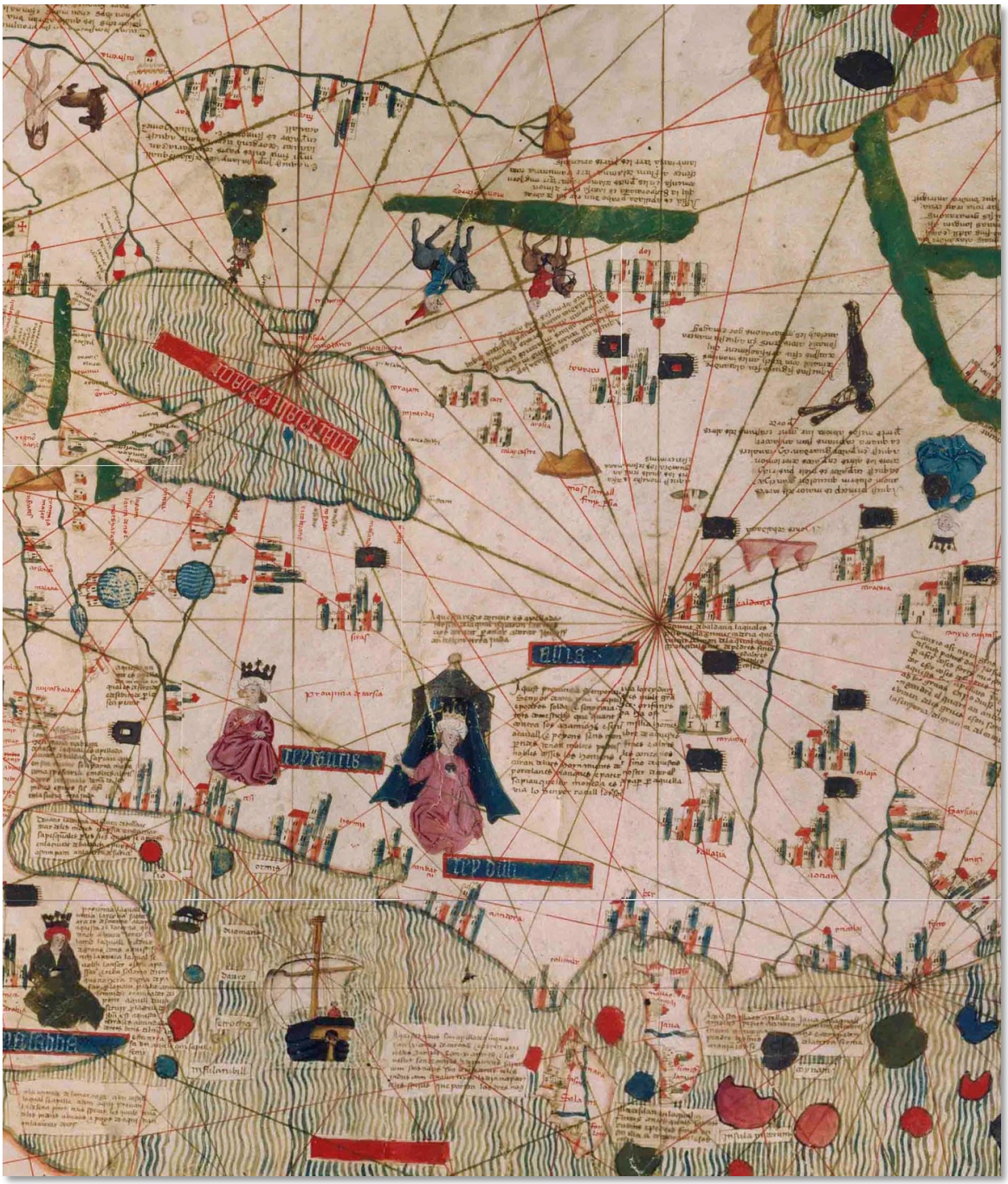
MONSTROUS RACES
Nile
Red Sea
EGYPT
AFRICA
Mediterranean Sea
Earthly Paradise
Gihon
AMAZONS
Euphrates
Tigris
Pishon
Jerusalem
Caspian Sea
Prester John
PIGMIES
CATHAY
EUROPE
ASIA
BRITISH ISLANDS
GREAT KHAN
Gog and Magog
CANNIBALS
PALUS MEOTIS
NORWAY
S

Catalan-Estense mappa mundi, 1450-60 (#246)

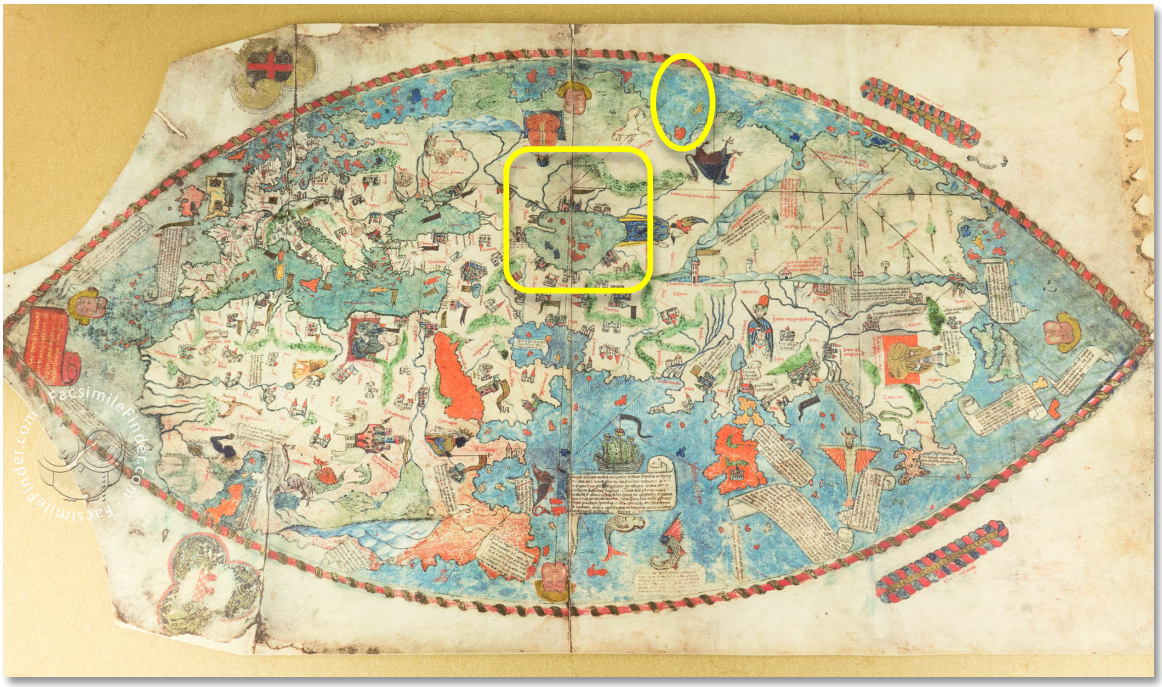
Elsewhere, this mapmaker was aware of the empirical travel knowledge of his time, be it in Asia or in Western Africa. In the hinterland of Asia the most prominent feature is the Caspian Sea, orientated northwest-southeast as in the *Topkapu Siray* fragment, but similar in shape to Ptolemy's. Not only are the Portuguese discoveries up to 1445 represented, but we find the Caspian Sea only once on the map and as an inland sea with the names *Mar de sala* (from *Sarai*, the Mongol central place at the lower Volga that flows into that sea), and *de bacu* (from the city of Baku in Azerbaijan, still today on the western coast of that sea). This clearly is a decision by the mapmaker in favor of empirical knowledge and against antique traditions, while other geographical sources chose to combine the different descriptions by putting one alongside the other.

The Ocean, the Baltic Sea and the Caspian Sea (*mar de sola e de bacu*) have blue stripes and a pale blue shore; the Mediterranean and the Black Sea, wavy green fence lines with a pale green shore. The rivers are in blue, the mountain ranges in green

(some in brown), the islands in red, black, blue and brown, the terrestrial *Paradise* in pink shade of bruno The names are in black or red. *Note also the two "gulfs" off the northern ocean that are reminiscent of the classical depictions of the Caspian Sea.*



Catalan-Estense: Northern Asia, India, showing the giant chasing the fox (upper left), the Polo-like caravans, Caspian Sea and Sri Lanka, and in the upper left-center, east of the Armenian plateau where the Tigris and Euphrates Rivers are shown originating, is Mount Ararat and Noah's Ark perched on top.



The Genoese mappa mundi, 1457 (#248)

On this *Genoese mappa mundi* Ptolemy is cited by name in several inscriptions, and there is evidence of his influence in the representation of Africa (Ethiopia, the source of the Nile), an enclosed Caspian Sea *(Mar de Sara),* the southern coast of Asia, and the *Golden Chersonese*, not named but identified by a legend noting that it is particularly rich in gold and precious stones. The Caspian Sea is drawn according to Ptolemy. It is rich in islands and is called *Mar de Sara*, after the principal city of the Kipchak. Marco Polo called it *the Sea of Ghel,* or *Ghelan*, since Gilan, the city whence silks came, was to the Italians the best-known city on its shores. Aside from the Volga and the Ural, two other rivers are here represented, rising in a range of mountains that extends in an east-west direction. One of these is perhaps the *Emba*, the other the *Jaxartes* of Ptolemy. South of the Caspian Sea we find a quadrangle framed by mountains that appears to be *Parthia*, according to the representation of Ptolemy. The Volga River flows into the Caspian Sea, though no names are affixed.

The Caucasus stretches across the isthmus between the Black and the Caspian seas, and as numerous rivers rising in the Caucasus empty into the former, the mountain range had to be drawn nearer the Caspian Sea in order that there might be sufficient space for the range and the representation of the *Iron Gate* near Derbent. This city is distinguished by a strong tower and the legend: *This is Derbent, which in their language [means] a gate of iron.* The *Iron Gate,* usually associated with Alexander the Great and the apocalyptic people, *Gog* and *Magog*, has an important place on the world maps of the Middle Ages. Doubtless it was the medieval wall stretching from the mountains to the sea near *Derbent*, closing the road along the Caspian Sea to the peoples of the steppes on the north, that called forth the legend of the *Iron Gate.* The city itself, *Derbent*, was founded in the Middle Ages by the Persian Sassanids, for the purpose of guarding this pass. The word is Persian, signifying gate or narrow pass, and

is a name often met with in Persia. In Arabic the city is called *Bab-el-Khadid*, in Turkish *Demir Khapussu*, that is, *Iron Gate.*

Among the cities referred to on the Caspian Sea appears a name no longer legible, but which is probably *Axum,* being at the time of Montecorvino a winter residence of the Persian ruler; *Ungro*, the best harbor of *Gilan*; *Zilan* and *Cavo Zilan*, by which perhaps is meant *Sari*, which in the middle of the 15th century was the most important commercial city on the south coast of the Caspian Sea. On the east side of the Caspian Sea, in Turkestan, there are only two cities represented, *Testango* and *Organzin*. *Testango*, which Pizigani calls *Trestago*, is Tysch-kandy on the Mertwyi-Kultuk Bay, whence the commercial highway led from the Caspian Sea over the Ust-Urt plateau to *Organzin*, the ancient capital city Chowaresmiens on the Darjalyk. *Organzin* is erroneously placed on the Caspian Sea. Destroyed first by Genghis Khan in 1221, and again by Timur, this great Asiatic frontier commercial city in the time of Conti was in ruins. The new city, *Urgendsch*, lies far to the east of the ancient city.

Detail showing the Caspian Sea, Noah's Ark

The mapmaker, when weighing antique authorities against each other, possibly looking for further information gained by eye-witnesses, in the end sets himself against Ptolemy. Implicitly, he follows Ptolemy, as in his picturing of a Ptolemaic landlocked Caspian Sea, which was confirmed by the findings of travelers like the Venetian merchant Marco Polo and the Franciscan William of Rubruck. Apart from a denomination in the Caspian Sea (unfortunately no longer legible), the mapmaker did not make any further clarifying comment. But to the north of the Caspian Sea, a bay or a gulf is depicted as seen on some of the previous medieval maps presented here. This might be a second Sea, as it traditionally was represented. Other mapmakers of the 14th and 15th centuries like Marino Sanudo, Paulinus Minorita and Andreas Walsperger also

showed two Caspian Seas. Could it be possible that the mapmaker of the *Genoese World Map* expressed his doubts about the Caspian Sea by showing it twice, thereby acting in line with a heterogeneous conception of space? The depiction of two Caspian Seas, without the need for a decision, contradicts the notion of a homogeneous space, where every object has but one exact location, and therefore could create an entirely different picture.

Fra Mauro's mappa mundi, 1459 (#249)
(oriented with South at the top) 190.5 cm diameter

The *Fra Mauro's mappa mundi* abandons the concept of the Caspian Sea as being a body of water connected to the outer ocean. A legend on this map states that the Caspian Mountains shown above start at the *Sea of Pontus* and extend eastwards as far as the *Sea of Hycanus,* which is also called the Caspian because near those coasts there are the *Gates of Iron*, which are named thus because they are impregnable. It is through them that one has to pass if one wants to go through these mountains, which are very high,

extend in depth for the distance of twenty days' travelling, and spread for many more days in length. In these mountains there are 30 peoples of different language and faith. They live up in the mountains, where the inhabitants - or, at least, most of them - work iron and make weapons and all that is necessary for the military art. Let it not seem strange that I have shown the mountains as both the Caspian and the Caucasus, because those who live there claim this is a single chain of mountains, which changes name because of the diversity of languages of the people who live up there. But to satisfy cosmographers I will in due place make a long note on this name. One could say other things on these mountains, if there was space to write them. [This inscription occurs along the final stretch of the river Don]

To some extent the European medieval travelogues reflect traditional imagery of the East and attempt to find answers to questions regarding the nature of legendary phenomena. That, however, does not mean that these authors were unable to also perceive reality around them and supplement or rectify earlier knowledge. The 13th century explorer William of Rubruck did not hesitate to dispute the sixth century Isidore of Seville's *(#205)* earlier claim that the Caspian Sea is a sea gulf by pointing out that it is rather a sea or a large lake and that it is possible to travel all around it in four months. The 14th century medieval missionary to China, Giovanni de Marignola, similarly did not shy away from rectifying earlier erroneous beliefs, whether they were related to the world's geography.

Foregoing the Ptolemaic co-ordinate system was going to be necessary for Fra Mauro to correctly interpret the Indian Ocean as an open body of water, but for the vastness of Asia, if not applying Ptolemy's specific longitude and latitude co-ordinates, Fra Mauro still adopted much of his accounts of geographical locations and their topography, including information concerning Jerusalem, the Persian Gulf, and notably the Caspian Sea. A number of bodies of water on the northwest coast of the Fra Mauro map are illustrated, but there appears to be no indication of there being an attempt to imagine them as regions associated with the Alexandrian concept of the Caspian Sea.

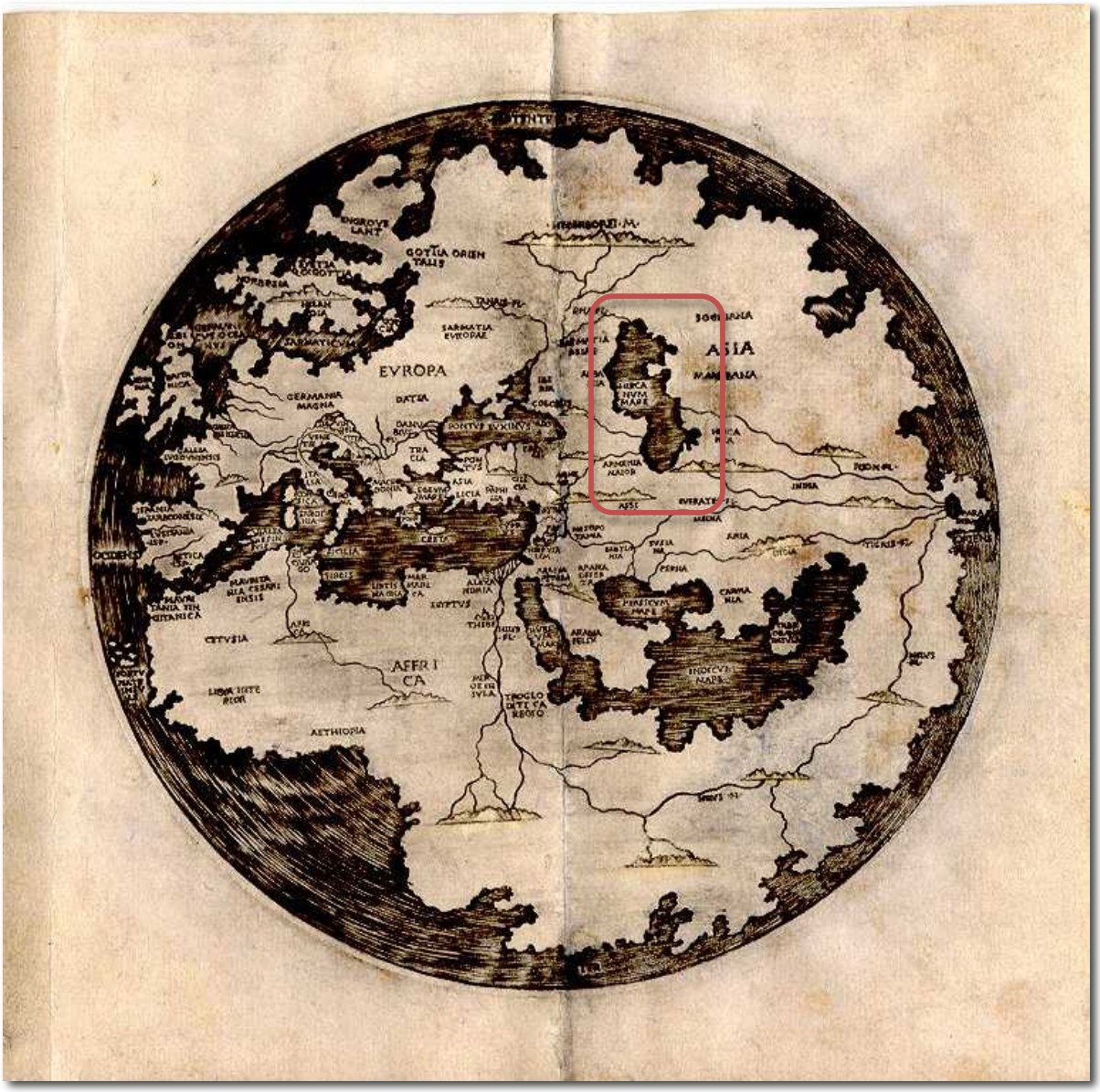
The Mappamundi in BAV MS Ottob. lat. 1417, 1465 (#250)
An exemplar of Cotrugli's mappamundi that was added to a manuscript of Justin's Historiarum Philippicarum libri XLIV, with Cotrugli's lists of provinces in the margins. Oriented with South at the top, Vatican City, Biblioteca Apostolica Vaticana, MS Ottob. lat. 1417, fol. 2v.

Benedetto Cotrugli's *De navigatione*, composed in 1464–1465, is the earliest known European manual of navigation. A manuscript in the Vatican made before 1438 opens with Guillaume Fillastre's introduction to Pomponius Mela, which is followed by the text of Mela's *De situ orbis*. Between them, on folio 8, is a Ptolemaic world map painted by Pirrus de Noha. Noha's map is geographically quite at odds with its manuscript context; in particular, it shows both the Indian Ocean and the Caspian Sea as surrounded by land, while Mela maintains the opposite.

Distinctive features of the map also lack any basis or corresponding descriptive passage in Cotrugli's text. The *Tanais River* is depicted as flowing by a northern route between the (unlabeled) Sea of Azov and the Caspian Sea, an unusual but not unprecedented course, and in his text Cotrugli says only that the river flows out of the Sea of Azov. For example, fluvial connections between the Caspian and the Sea of Azov are found on Giovanni Leardo's world map of 1452 or 1453 *(#242)* and on the *Catalan Estense mappamundi* of 1460 *(#246).* This conception of the *Tanais River* corresponds with that in 9th and 10th century Arabic geographical literature. Cotrugli's brief geographical description of the world precedes the areas left blank for the *mappa mundi* in both manuscripts. The text is an adaptation in Italian of part of Ptolemy's *Geography*, Book 7, Chapter 5, which is titled "A Descriptive Summary of the Map of the Inhabited Earth". On the one hand, Cotrugli borrowed a passage that addresses exactly the subject that interests him. On the other hand, according to Van Duzer the decision to introduce a *mappamundi* with an excerpt from Ptolemy in a book about navigation is bold, even in the 15th century context of the ready mixing of cartographical types. Here, in part, is Cotrugli's description in translation.

> We shall give a description of the habitable part of the world, which is the goal of our navigation. This habitable part ends in the terra incognita where the sun rises, which lies among the eastern peoples of Great Asia, namely the Chinese and the *Gerunna**, and so Asia is said to be the first part of the world because it is near the sunrise. In the South there is likewise terra incognita that surrounds the Indian Ocean and also embraces southern Ethiopia, the region called *Agisimba*. There is also terra incognita in the West that surrounds the Gulf of Africa by Ethiopia and the western ocean, which lies in the furthest West. In the North there is the ocean that unbrokenly surrounds the British Isles and the most northerly parts of Europe, and this is the ocean they call the *Deucalidonian* and *Sarmatic*. Moreover, the terra incognita has other boundaries, specifically that in the far north of Asia, namely *Sarmatia, Scythia* and *Serica*. Then there are the seas that are surrounded by land: our Tyrrhenian Sea with its various adjoining bays, and those of the Adriatic, the Aegean, the *Propontis, Pontus* [Black Sea], and the *Meotian Swamp* [Sea of Azov]: [their waters] flow out into the Ocean through the Sea of Hercules or Strait of Gibraltar, much as at *Chersonessus* [Strait of Kerch]. This narrow stretch of sea surrounds the *Hyrcanian* or Caspian isthmus, creating from the land the similitude of an island*, and they say the same of the Indian Ocean, which together with all its gulfs—the Arabian, Persian, Gangetic, and that which they call the Great Gulf—is encircled by land on every side.

Ptolemy speaks rather of the *Seres* in the passage that Cotrugli is translating here (Ptolemy, *Geography*, 7.5). Cotrugli's translation of Ptolemy 7.5 is rather rough here: what Ptolemy says is that the Caspian Sea is surrounded on all sides by land and has the shape of an island.



The Wieder-Woldan map, 1485, 17.5 cm diameter (#255)

An interesting feature of the *Wieder-Wold* map is that in Asia the Caspian Sea is shown for the first time in its correct north-south orientation unlike that in all other manuscript maps of the period. Even in *Fra Mauro's* map of 1450 *(#249)* only the shape, but not the orientation, of this sea is true to reality. The relative size of the Caspian Sea is exaggerated and the other characteristics of the map are resolutely traditional.

The Caspian Sea on the Ptolemaeus Romae, 1490

Surprisingly, in the following Renaissance period of cartography, until the late 18th century, the location, shape, and orientation of the Caspian Sea still did not generally reflected reality. It was reduced to only one body of water, land-locked location in Central Asia, but its generally north-south orientation was not reflected, and it remained an oval-shaped horizontally-oriented. On the late medieval world maps the Caspian Sea is displayed as a very large body of water. However, on many early Renaissance world maps the Caspian Sea is displayed in the identical manner as shown below: an oval, horizontally oriented inland body of water.

The Mare Hircanusive Caspi on the 1502 King-Hamy world map (#307.1)

Albrecht Durer and Johann Stabius, 1515

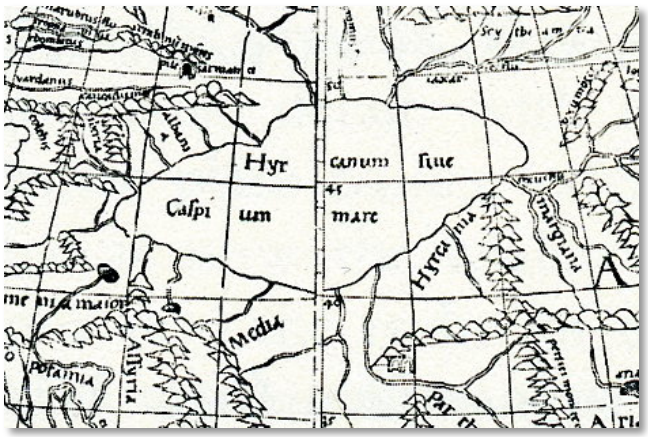


Chart of the Caspian Sea by Vesconte Maggiolo, 1519

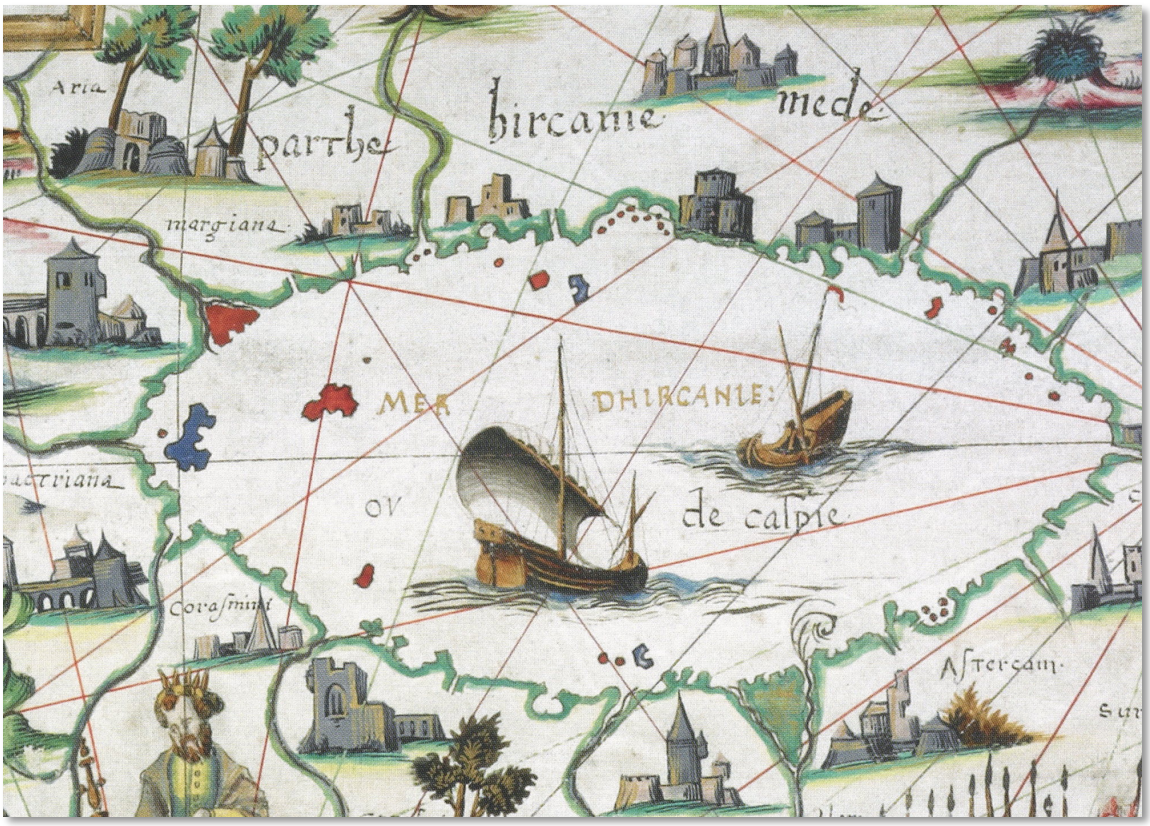
The chart is drawn with the Caspian Sea being ca. 900 *miliaria* long and ca. 250 *miliaria* wide, which equates to ca. 1100 km by ca. 300 km. His north point is ca. 45 degrees east of north mimicking many ideas of the age and his disposition of the vignettes is somewhat over stated. The *F. Ogus* (R Oxus) discharges into the Aral Sea and it is the River Atrax which enters the Caspian Sea at approximately this point, The outflow from the Aral Sea and the Samy Kamysh Lake is in fact the Uzboy Channel which discharged into the Caspian Sea opposite Baku. However, it is a finely crafted chart for 1519 when the actual knowledge of the Caspian Sea was so very limited.

The Caspian Sea [Mare Hircanum] on the 1526 Salviati Planisphere by Nuno Garcia de Toreno (#338)

Asia by Gaius Julius Solinus and Sebastian Münster, 1543

An example of the first state of Sebastian Munster's Ptolemaic map of the region between the Black Sea and Caspian Sea extending south to include all of Armenia Maior and part of Armenia Minoris. The map is centered on the modern countries of Armenia, Georgia and Azerbaijan. Munster's map shows Noah's Ark in the Caspian Sea, believed to have come to rest in a mountain in Armenia according to the map. Shows Armenia Maior, Iberia, Albania, Colchis, Porte Albanie, the Euphratis River, the Tigris, Assyriae, and many other place names in the cradle of civilization.

Tuto il Mondo Tereno, 1540, Giovanni Vavassore



Mer Dhircanle [Caspian Sea] on the world map by Pierre Descelier, 1550 (#378)

Map of the region around the Caspian Sea from an atlas by Angelo Freducci
Warsaw Polish National Library, BN ZZK 0.2401, Map 5 dated 1554

Asia Vetus, Gulielmi Sanson, 1567

World map by Heinrich Bünting, 1581

Caspian Sea on the 1585 Portuguese world map, unknown artist

Mardi Bachau [the Caspian Sea] in the Joan Martines Portolan Atlas, 1587 (#416)

Matteo Ricci's 1602 world map Kunyu Wanguo Quantu 坤輿萬國全圖
[A Complete Map of the Ten Thousand Countries of the World] #441

The Caspian Sea on the Kunyu Wanguo Quantu

John Speed, 1626 (#464)

The Sea de Bachau [the Caspian Sea] on John Speed's map of the Turkish Empire

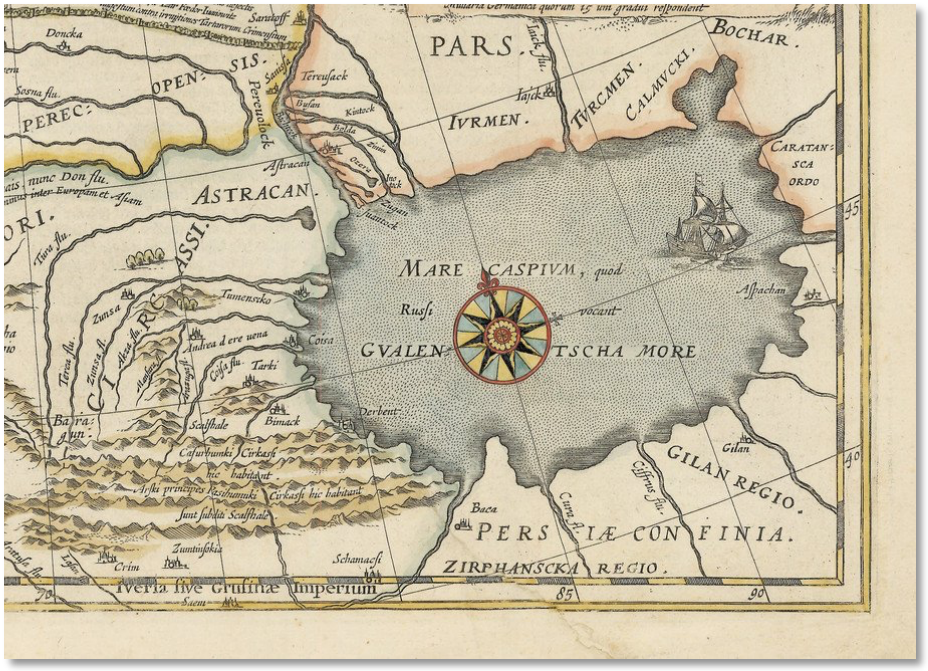
THE SEA OF BACHU, sometymes called
the CASPIAN and HIRCANIAN SEA,
and it is named wth other names, to witt of the re-
gions and next places: as the greateſt Lake of Y
whole world called Y Salt Lake, and it is ſaid to
abound wth great plentye of fiſhes
RS OF Y DUKE
A OR RUSSIA
PART
OF
TA
Aſtracan
Chinis
Sala
Riſan
Cosmai
Canabi
Caviahuſi
Caracus
Cochimacho
Cubent
Paganſa
S. Maria
Strann
Derbent, here dwelt Chriſtians.
Simiachia Erex
Caitachs
Malandara
Araſt
SERVAN
Talmas
Chirva
Caldaran campus
Raſt
Maſpis
GILAN
Aſtonil
Mulehonder
Amu
Taon
MESANDARAN
Meſandara
Pandaris
Perich:
Chepcen
Maratir
Nimerdon
The deſert of
Rugiſiriſitur
STA
RABAT
Abeſcum
Anchcaton
Girginan
The pearles of Turche
Lere
Caraß
Zahaſpa
Mora
Madrandan
ZAG
Derbent
Choſrovan
Zachan
Giaccho lake
Binguil

CASPISCHE ZEE
DE CASPISCHE ZEE
Een Zoute Zee
GILAN
Malandecam
of Melander

John Speed, 1626 (#464)

The Sea of Sala otherwise of Bachau called by the Russians Chualenike more in old time the Caspian and Hircan Sea

Map of Russia [Tabula Russiae…] 1635 by Hessel Gerrits / Willem Janszoon Blaeu
The shape and orientation of the Caspian Sea is still inaccurate, with an implication of river access to the surrounding ocean



Map of the Ponto-caspian region after Kircher (1678), who in his "*Mundus Subterraneus*" already envisaged that the Caspian Basin must have been connected to the open ocean to explain its relatively high salinity {> 10%} today. The Caspian Sea is in fact an isolated long-lived lake since at least 2.6 Ma. Kircher considered a subterraneous channel to the Persian Gulf for the marine connection. The location of this marine connection is still enigmatic today,

Regno di Persia, 1679, Giacomo de Rossi

MER CASPIENE, ou DE KUL'SUM.
TARTARES NAGAJE.
RALMUCKS NOIRS.
GRANDE
ROY D'ASTRACAN
Astracan
Vieux Astracan
Don ou Tanais R.
Volga R.
Tartares d'Agusestan
Koelalinskoy
Manguslau
Tartares.
Païs de Jurgetsi
GEORGIE, ou
GURGISTAN
Mingrelie
Derbent
Schirvan
Carduel
Enfil Isle
Mazanderan
Adherbetzan
Kilan.
Ardevil
Soltanie
Arion
Perisou
Raschan
Plaine de Sel
Sablustan
Herat
Candahar
EMPIRE, OU
ROYAUME
Hispahan
Chulpagan
Yezd
Maragan
Hamadan
Desert de
Kengavar
Jarcoia
Sarentz
Siraan
Cabul
Balch
Nisabour
Esterabath
Ferhabad
Gorgian
Moschet
Choroslan
Bust
Candahar
Bamian
Caspian Sea on Nicolas de Fer's 1700 map L'Asie Dresée selon les dernierer Relations…

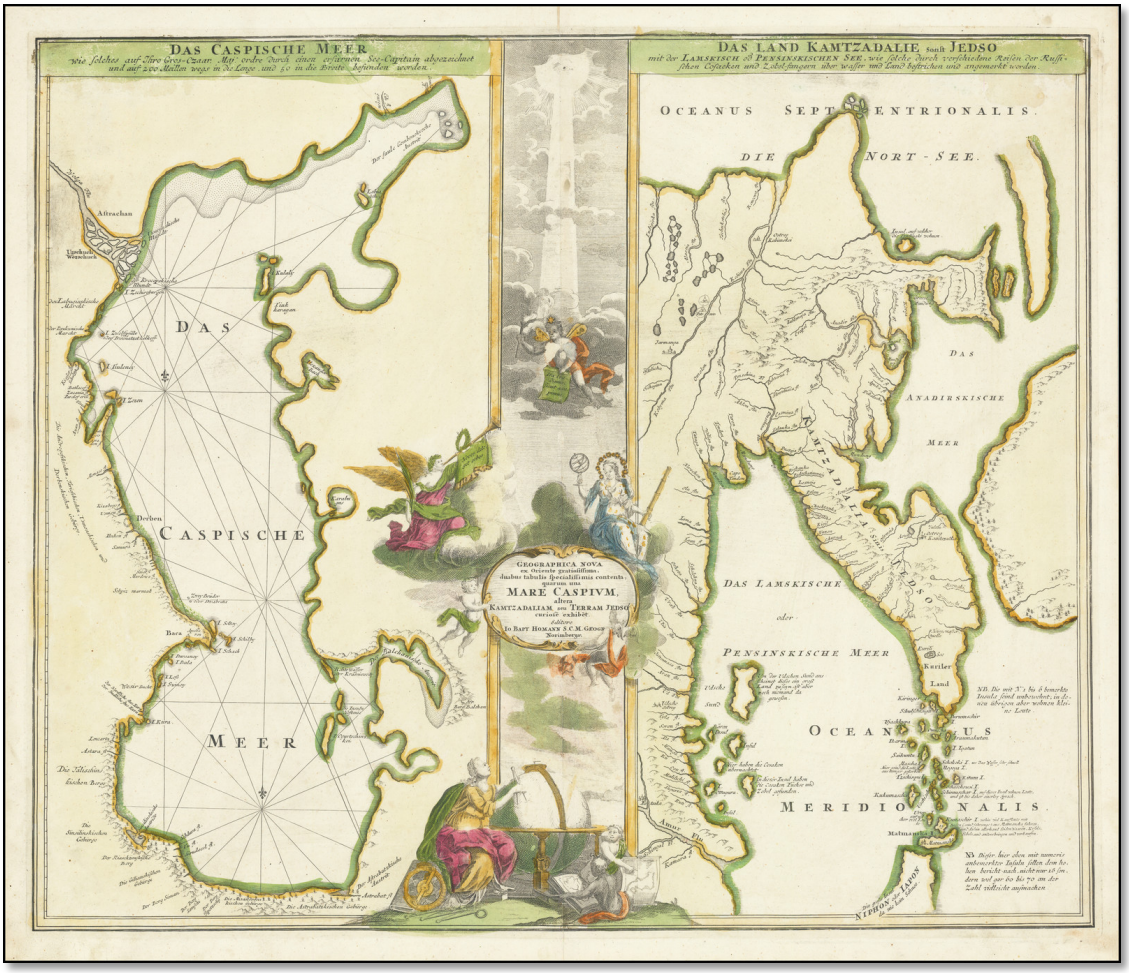
The Caspian Sea Drawn by the Czar's Special Command By Carl van Verden in the Year 1719, 1720 and 1721 – published 1728

Herman Moll's map provides a detailed portrayal of the Caspian Sea region. This map is based on the groundwork of Carl van Verden, a Dutch seaman in the employ of the Russian Navy, who created one of the most precise maps of the Caspian Sea at the time. The map by Moll features a range of valuable geographic information, including several cities' inset views. Among these are the "City of Astracan" shown across the bottom of the map, the "City of Terky" depicted in the upper left corner, and the "City of Derbent" presented above the title cartouche.

Astrakhan, located at the northernmost part of the Caspian Sea, was a significant city in the Volga Delta due to its strategic position for trade routes and fisheries. Terki, now known as Makhachkala, is the capital of the Republic of Dagestan, Russia. In the early 18th century, it was a fortress and a critical location for controlling the trade route from the Caucasus to the Caspian Sea. Derbent, one of the oldest inhabited cities in the world, lies in the Republic of Dagestan and served as a vital checkpoint along the north-south passage between the Caspian Sea and the Caucasus Mountains.

The map also includes the naming of various coastal towns along the western coast of the Caspian Sea. This attention to detail reflects the meticulousness of van Verden's original survey, which provided an in-depth perspective of the Caspian Sea's geographic complexity.

Van Verden's work on mapping the Caspian Sea was significant because it directly preceded and likely influenced Peter the Great's 1722 invasion of Baku and Derbent and consequently established Russian hegemony in the region. Despite the importance of his work, Van Verden was later overlooked by the Czar, favoring Vitus Behring for the commission to discover a Northeast Passage through the Russian Arctic.



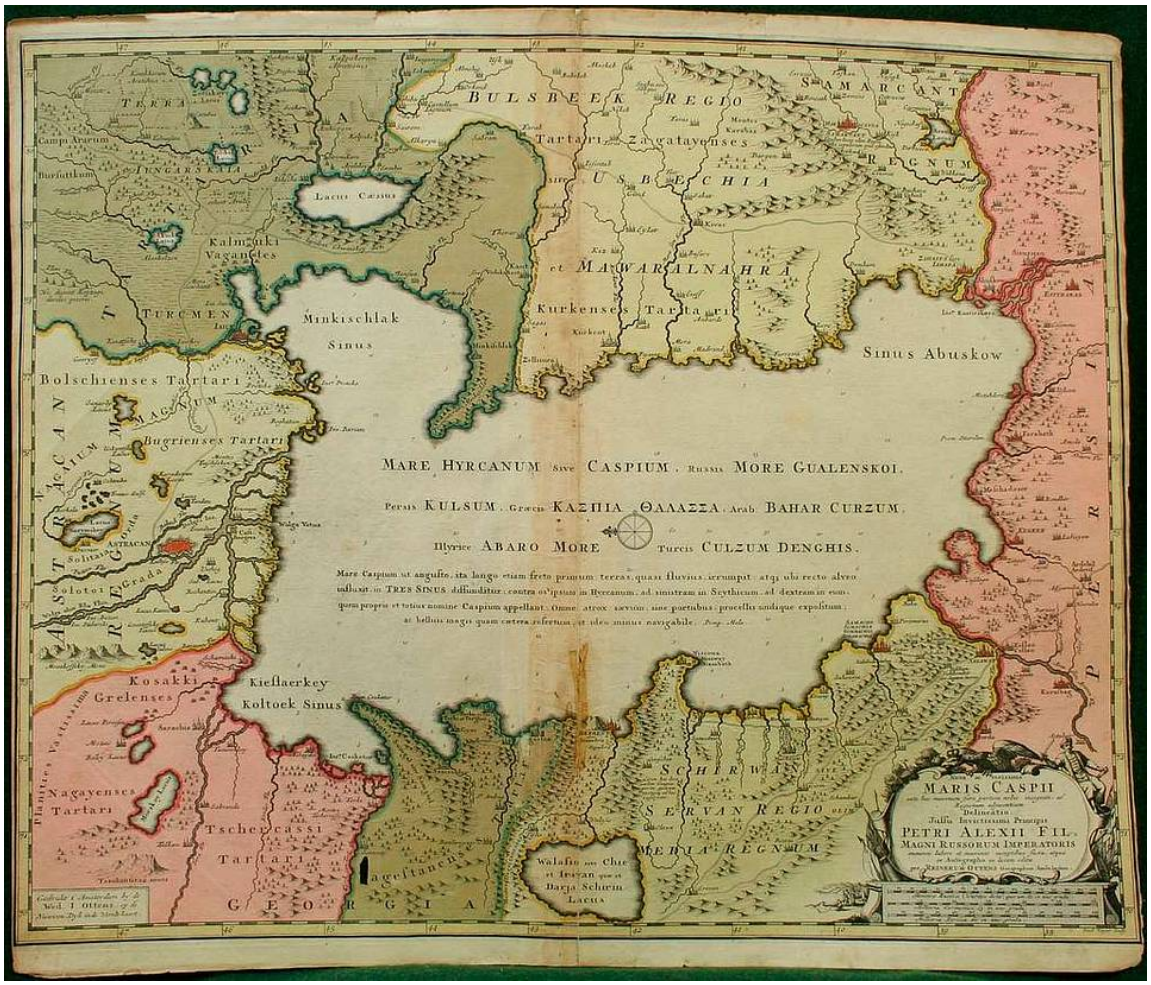
Geographica Nova ex Oriente gratiosissima, duabus tebulis specialissimis contenta, qua ram una Mare Caspium. maps of the Caspian Sea and Kamchatka, published by Johann Baptist Homann, 1720

The two maps surround a decorative central image with allegorical figures and putti in a cloud background. The map of the Caspian Sea is drawn from Karl van Verden's 1722 survey of the Caspian, the first accurate map of the sea the region. The second map covers the Jedso as part of the Kamchatka Peninsula with a huge unnamed landmass (reminiscent of the Compagnies Land on earlier maps) to the east. The image is drawn from a Russian expedition in 1697 that encountered a shipwrecked Japanese in Kamchatka. The sailor told the Russians that Japan was not far from Kamchatka and that the sea between was strewn with islands.

Asia, 1720, Herman Moll

Note the eastern "Unknown Coast" on this mis-shapened Caspian Sea

Provinciarurn Persicarum Kilaniae nempe Chirvaniea Dagestniae , .. 1720


MARE HYRCANUM sive CASPIUM. Russis MORE GUALENSKOI.
Persis KULSUM. Græcis ΚΑΣΠΙΑ ΘΑΛΑΣΣΑ. Arab. BAHAR CURZUM.
Illyrice ABARO MORE Turcis CULZUM DENGHIS.
Mare Caspium ut angusto, sta longo etiam freto pronum terras, quasi fluvius, erumpit: atq; ubi recto alveo
adhuc in TRES SINUS dilinditur: contra ostium in Hyrcanum, ad sinistram in Scythicum, ad dextram in eum,
quem proprio et totius nomine Caspium appellant. Omne atrox, asperum, sine portubus, procellis undique expositum,
ac belluis magis quam cetera refertum, et ideo minus navigabile. Plin. Mela.
TERRA
Campi Aurum
Burfutthum
Lacus Caspius
Kalmuki Vagantes
TURCMEN
Minkischlak Sinus
Bolschienses Tartari
Bugrienses Tartari
Solotoi Grada
Kosakki Grelenses
Kieflaerkey
Koltoek Sinus
Nagayenses Tartari
Tschercassi Tartari
BULSBEEK REGIO
Tartari Zagatayenses
et MAWARALNAHRA
Kurkenses Tartari
SAMARCANT
REGNUM
USBECHIA
Sinus Abuskow
SCHIRWAN
SERVAN REGIO
MERIA REGNUM
Walachi nec Chri
et Iberes qui et
Darja Schirin
Lacus
GEORGIA
MARIS CASPII
Delineatio
Jussu Invictissimi Principis
PETRI ALEXII FIL.
MAGNI RUSSORUM IMPERATORIS

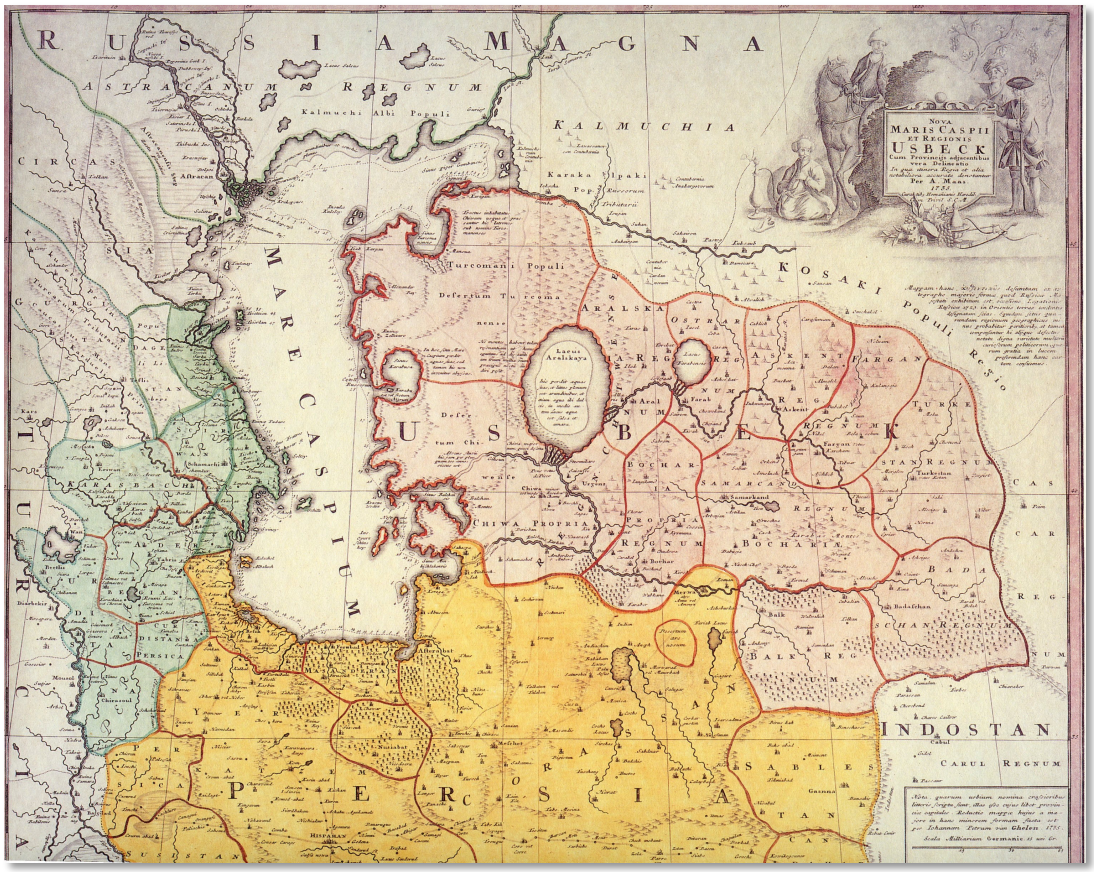
Maris Caspii, 1728, Reiner Ottens

1728 map of the Western Caspian Sea region by Joseph Nicholas de l.lsle

Persian map of the Caspian Sea, 1729, Ibrahim Mutafarrikah

Nova Maris Caspii Et Regionis Usbeck Cum Provincis Adjecentibus vera Delineatio", 1735

Caspian Sea by Emanuel Bowen, 1747



Nova Maris Caspii et Regionis Usbeck cum Provincijs adjacentibus vera Delineatio [New True Delineation of the Caspian Sea and the Uzbek Region, with the Adjacent Provinces]
49 x 58 cm Nuremberg, Homann Heirs, 1735

Abraham Maas, a Dutch cartographer working in Saint Petersburg during the era of Peter the Great, compiled this map of central Asia. It was edited by Johann Peter von Ghelen of Vienna and published by the Homann firm in Nuremberg. One of the first maps to show the results of recent charting ordered by the Russian czar, it contributed significantly toward filling in the blanks of Asian cartography in the Western world. Earlier maps produced without benefit of a direct survey of the Caspian Sea had repeated the centuries-old inaccurate configuration of the earth's largest body of fresh water with a Ptolemaic east-west orientation.

This delineation of central Asia concentrates on the center of the Silk Road trade routes. Extending from Baghdad on the Tigris and Astrakhan on the Volga delta (lower and upper left), it covers the heart of central Asia, eastward to Cabul *(Kabul),* Indostan *(Mghanistan), and* Cascar *(Kashgar) in western China. Few early maps of the region locate as many cities and villages as well as depict the network of roads or caravan trails that linked them. The area noted as Usbeck includes the five modern "Stans": Turkmenistan, Uzbekistan, southern Kazakhstan, Kyrgyzstan, and Tajikistan. Two dominant rivers, the Amu and the Syr, known in ancient times as the Oxus and the Jaxartes, flow to the Aral Sea from the Pamir Mountains, which separate Uzbek from the western Sinkiang Province of China (at right). Surrounding the title cartouche are three Uzbeks, one smoking a* huqqah*, or water pipe, one mounted on horseback, and one in a vineyard. The fourth figure is a Russian infantryman in full uniform.*

Kart over Karazm Turkestan og det Store Bukarie til den Almindelige Reisebeskrivelse af Engelske Skribentere ved N. Bellin Ingenieur ved see Etaten. 1749/1757
Map of Caspian Sea with present-day Turkmenistan, Uzbekistan, Kazakhstan, and Azerbaijan including part of Russia. Prime meridian: Ferro.

The Caspian Sea on the 1851 map of Independent Tartary by John Tallis (#801)
Here the Caspian Sea if finally in its correct shape, orientation, location

As concluded by Richard Keyes McDonnell, the depiction of the Caspian Sea – whether physically accurate or abound with marvels and the monstrous (and in both cases, whether intentional or not) – represents an active and complicated reception of classical sources, transmitted by late antique scholars.

During the rule of Peter I the Great, Fedor I. Soimonov was a pioneering explorer of the sea. He was a hydrographer who charted and greatly expanded knowledge of the sea. He drew a set of four maps and wrote *Pilot of the Caspian Sea*, the first lengthy report and modern maps. These were published in 1720 by the Russian Academy of Sciences.

Unless we conclude that the first cartographers to map the Caspian Sea were just making it up from verbal descriptions, quite a possibility, the only other reasonable answer is that travelers actually took note of the actuality of the Sea. Hence, Herodotus 490/435BC could write that "it is a sea on its own with no connectivity"; completely correct. But, the tables already shown indicate that the rise in the Caspian Sea level was around 600/500 BC. Hence, it must be the later period for it to have cleared when the traveler who informed Herodotus of the Caspian Sea and its form. But from the fifth century BC we are informed that ships sailed from the Caspian Sea through the Gulf and up the Uzboy Channel, serving as a trade route and having peoples on its littoral, which further indicates a seventh century BC occurrence. Then, there is no mention of the Sea of Aral, perhaps because it was well north of the trade routes but we have the comment that Arab Historians of the Middle ages

wrote that the Uzboy was a water course used by Merchants who navigated it for centuries, and had to overcome several rapids, the trade was perhaps to the Sary Kamysh Lake area only.

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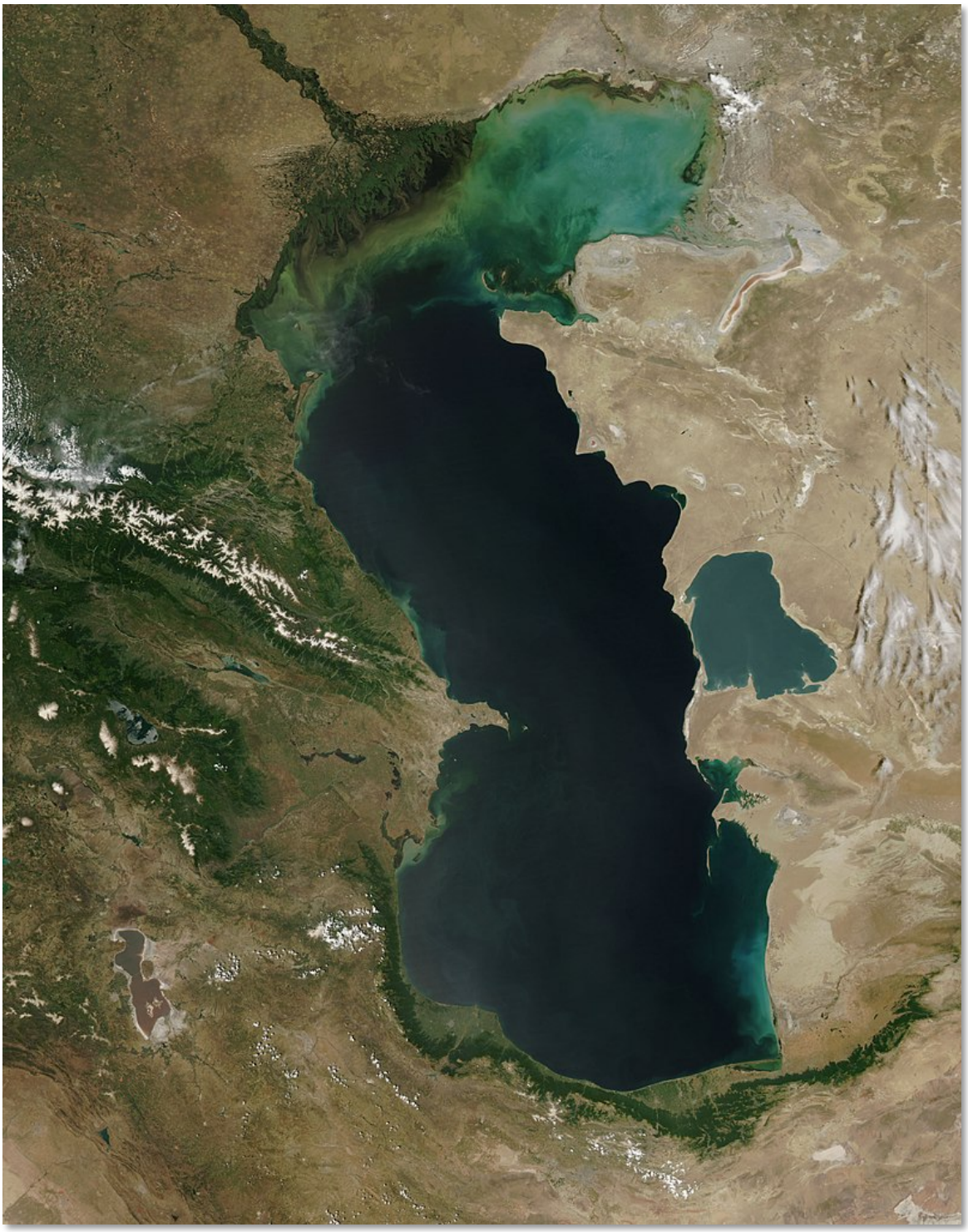

Satellite view of the Caspian Sea

The Caspian Sea is the largest inland body of water in the world by area and accounts for 40–44% of the total lake waters of the world, and covers an area larger than Germany. The coastlines of the Caspian are shared by Azerbaijan, Iran, Kazakhstan, Russia, and Turkmenistan. The Caspian is divided into three distinct physical regions: the Northern, Middle, and Southern Caspian. The Northern–Middle boundary is the

Mangyshlak Threshold, which runs through Chechen Island and Cape Tiub-Karagan. The Middle–Southern boundary is the *Apsheron Threshold*, a sill of tectonic origin between the Eurasian continent and an oceanic remnant, that runs through Zhiloi Island and Cape Kuuli. The Garabogazköl Bay is the saline eastern inlet of the Caspian, which is part of Turkmenistan and at times has been a lake in its own right due to the isthmus that cuts it off from the Caspian.

Differences between the three regions are dramatic. The Northern Caspian only includes the Caspian shelf, and is very shallow; it accounts for less than 1% of the total water volume with an average depth of only 5–6 m (16–20 ft). The sea noticeably drops off towards the Middle Caspian, where the average depth is 190 m (620 ft). The Southern Caspian is the deepest, with oceanic depths of over 1,000 m (3,300 ft), greatly exceeding the depth of other regional seas, such as the Persian Gulf. The Middle and Southern Caspian account for 33% and 66% of the total water volume, respectively. The northern portion of the Caspian Sea typically freezes in the winter, and in the coldest winters ice forms in the south as well.

Over 130 rivers provide inflow to the Caspian, the Volga River being the largest. A second affluent, the Ural River, flows in from the north, and the Kura River from the west. In the past, the Amu Darya (Oxus) of Central Asia in the east often changed course to empty into the Caspian through a now-desiccated riverbed called the Uzboy River, as did the Syr Darya farther north. The Caspian has several small islands, primarily located in the north with a collective land area of roughly 2,000 km2 (770 sq mi). Adjacent to the North Caspian is the Caspian Depression, a low-lying region 27 m (89 ft) below sea level. The Central Asian steppes stretch across the northeast coast, while the Caucasus mountains hug the western shore. The Caspian Sea has numerous islands near the coasts, but none in the deeper parts of the sea. Ogurja Ada is the largest island. The island is 37 km (23 mi) long, with gazelles roaming freely on it. In the North Caspian, the majority of the islands are small and uninhabited.