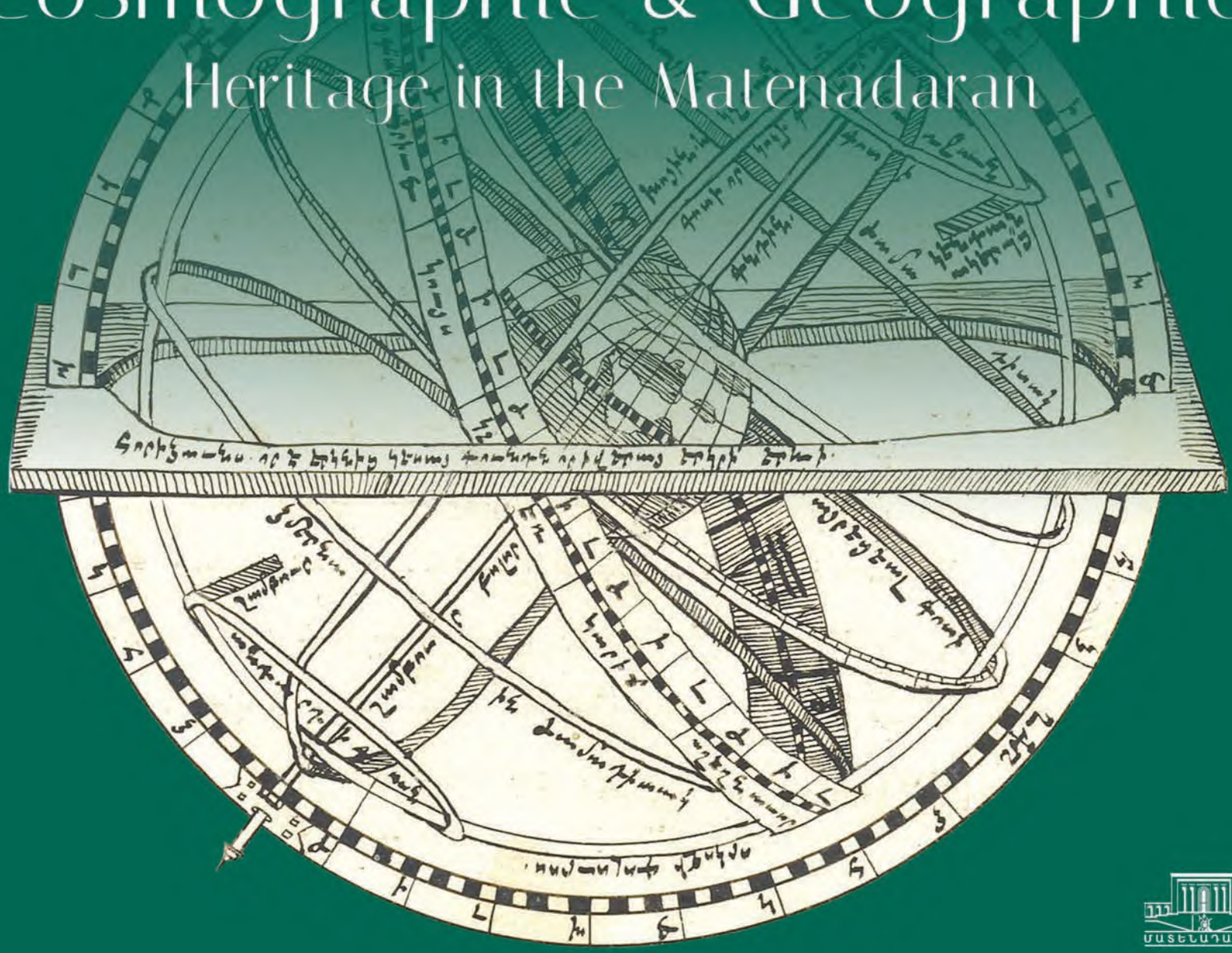
ROUBEN GALICHIAN

Cosmographic & Geographic

Heritage in the Matenadaran



ՄԱՏԵՆԱԴԱՐԱՆ


SCHWARZES MEER
MARMARA MEER
KONSTANTINOPEL
ADRIANOPEL
SALONIKI
CHALKIDIKE
SKUTARI
Nördl. Sporaden
Kykladen
KRETISCHES MEER
Südl. Sporaden
ANATOLIEN
KLEINASIEN
Angora
Konia
SMYRNA
ATHEN
Rhodos
Karpathos
Kreta
Cypern
Nicosia
Famagusta
Larnaka
Limassol
K. Andreas
K. Arnaud
K. Kormakiti
CYPERN
(Britisch)
MITTELLÄNDISCHES MEER
LEVANTISCHES MEER
Iskenderun
HALEB
Antakia
Idlib
Ma'arrat
Hama
Homs
Tarabolus
Ghasir
BEIRUT
Saida
DAMASKUS
Adana
Mersivan
Amasia
Nikser
Tokat
Siwas
Sile
Kastamuni
Bojabad
Sinope
Trapezunt
Ineboli
Safranbolu
Bartin
Kirschehir
Boghazlejan
Yozgad
Akdagh Maden
Arabkir
Divrik
Malatia
Albistan
Besni
Aintab
Biredjik
MARASCH
Hadjin
Bimbogha
Ewrenk
Newschehir
Indjesu
Aksaray
Karaman
Eregli
Tuzlu Gölü
Aksehir
Sandykly
Aidin
Samos
Nikaria
Andros
Tenos
Mykonos
Paros
Naxos
Amorgos
Astropalia
Syrina
Milos
Kasos
Karpathos
Rhodos
Kos
Golf v. Kos
Golf von Xeros (Saros)
Gallipoli
Lapsaki
Kum Kalesi
Seddul Bahr
Kilid Bahr
Küle Sultanie
Tekke Burun
Elles Burun
Sedil Bahr
Ari Burun
Kabatepé
Eski Kale
Troja
Tschanak Kalesi
DIE DARDANELLEN.
Maßstab 1:750.000
Von Italien besetzt
Map ref. RG-203


KAUKASUS
DAGHESTAN
TERSKGEBIET
GROSNYI
TIFLIS
ARMENIEN
KURDISTAN
MESOPOTAMIEN
PERSIEN
ARABISCHE WÜSTE
Meerbusen von Karabugas (Schwarzer Schluma)
KASPISCHES MEER
Krassnowodsk
BAKU
Elisabethpol
Erwan
Erserum
Tabris
Urmia See
Mosul (Ninive)
Kerkuk
Bagdad
Hamadan
Kermanschah
Sinna
Resecht
Kaswin
TEHERAN
Karaghan
Charkan
Mejadin
Ed-Der
Anah
Samarra
Hit
Rakka
Mardin
Midjat
Bitlis
Musch
Erzingan
Kamach
Rize
Batum
Kutais
Suchum
Wladikawkas
Derbent
Kuba
Schemacha
Gokschai
Kars
Alexandropol
Achalkalaki
Nachitschewan
Lenkoran
Ardabil
Astara
Barfrusch
Amol
Dudek
Kasbin
Sultanieh
Zenjan
Kifri
Tell Kef
Sindjar
Tell Afar
Harran
Urfa
Diarbekr
Mezere
Palu
Egin
Chozat
Khartput
Argni
Tschermuk
Süwerek
Sört
Midjat
Mardin
Nisibin
Djezireh
Ain Nahrein
Ain el Kom
Ed-Der
Mejadin
Anah
Samarra
Hit
Rakka
Kerkuk
Sinna
Hamadan
Kermanschah
Sahab
Bakuba
Baghdad
Resecht
Kaswin
Karaghan
Charkan
TEHERAN
Amol
Barfrusch
Dudek
Astara
Lenkoran
Ardabil
Tabris
Urmia See
Nachitschewan
Alexandropol
Kars
Erwan
Erserum
Erzingan
Kamach
Rize
Batum
Kutais
Suchum
Wladikawkas
Derbent
Kuba
Schemacha
Gokschai
Elisabethpol
Achalkalaki
TIFLIS
Gori
Pot
Kulais
Ardahan
Trapezund
Trebolu
Sotschi
Adler
Mtibrelien
Knabek
Signacha
Telawi
Dibrar
Kamburan
Apscheron
Swjatoi
O. Shilai
Sarsi Burun
K. Kuali
K. Tyschkie Sergie
Kap Kara Senger
Meerenge Karabugas
K. Sue
Kossa Kara Sukud
Tjuldjut Ata
R. Syngyrli
Ak. Tschoku
Karaul Igym
Igym Turuchan
Tomak
Kebachty
Bisch Ljur Ural
Alexander Peatschanyi
R. Rukuschetschnyi
K. Peatschanyi
Bisch Ouria
Ust-Urt
I. Tscheleken
Tschukry
I. Ogurtschinsk
Koschu Odek
I. Kamyssly Ada
K. Kufaldsha
Swinoi
K. Bjandowan
Kara
Lenkoran
Astara
Ardabil
Sawetan
Tabris
Urmia See
Resecht
Kaswin
Karaghan
Charkan
TEHERAN
Amol
Barfrusch
Dudek
Kasbin
Sultanieh
Zenjan
Kifri
Tell Kef
Sindjar
Tell Afar
Harran
Urfa
Diarbekr
Mezere
Palu
Egin
Chozat
Khartput
Argni
Tschermuk
Süwerek
Sört
Midjat
Mardin
Nisibin
Djezireh
Ain Nahrein
Ain el Kom
Ed-Der
Mejadin
Anah
Samarra
Hit
Rakka
Kerkuk
Sinna
Hamadan
Kermanschah
Sahab
Bakuba
Baghdad
Schwarzes Meer
Bosporus
Pyrgos
Therapia
Emirgian
Arnaudkoi
Bujukdere
Beikos
Kadikoi
Skutari
Konstantinopel
Stambul
Makri Koi
Sachra-idjendi
Der Bosporus

MATENADARAN

Mesrop Mashtots Institute of Ancient Manuscripts

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express their gratitude to

“JTI ARMENIA” CJSC

for supporting the publication of this album



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ՌՈՒԲԵՆ ԳԱԼԻՉՅԱՆ (ԳԱԼՉՅԱՆ)

Մատենադարանի տիեզերագիտական և քարտեզագրական ժառանգությունը

ԵՐԵՎԱՆ
2025

MESROP MASHTOTS MATENADARAN

ROUBEN GALICHIAN

Cosmographic & Geographic

Heritage in the Matenadaran

YEREVAN
2025

UDC 09

COSMOGRAPHIC & GEOGRAPHIC HERITAGE IN THE MATENADARAN. Information about the sources of astronomical, astrological, geographical and cartographical information kept in the manuscripts and archives of the Matenadaran / Rouben Galichian – Yerevan, Armenia, Matenadaran 2025, 160 pages.

The album has been prepared for the public at large, with special attention and basic information provided for scholars interested in the related subjects who would like to have some basic information about the wealth of medieval and old sources regarding geography, cartography as well as astronomy and astrology kept in the archives and manuscripts of the Matenadaran. For researchers this album could be an introductory source for the type and sort of information in the Matenadaran which is available to the public, which could be useful for further and wider studies and researches.

To be filed under the following categories: Geography, cartography, maps, atlases, astronomy, astrology, history, religion and Armenian manuscripts.

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Front cover image – Manuscript 1780 folio 307a, Fig. 1.28 of the Album, dated 1617.
Back cover image – Ebstorf Map, Fig. 2.03 of the Album, circa 1234.

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© Theo Maarten van Lint - 2025 (Preface only)

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The Reader of History's Diagrams

The history of the Matenadaran's collections is a story of steadfast individual efforts and personal devotion — an enduring testament to the profound consciousness of the preservation of cultural heritage. Throughout the years, these individuals have been held in special esteem, and today, their involvement in the Matenadaran's institutional mission is officially recognized as a priority. The exhibitions *Cherished Names: The Homecoming of Manuscripts* and *One Year's Eternity: Manuscript Replenishments of the Matenadaran*, held in 2023–2024, were conceived with this very purpose: to recognize and celebrate those individuals without whom the enrichment of the Matenadaran's collections would be unimaginable.

Undoubtedly, one of these devoted names is that of the geographer and cartographer Rouben Galichian, whose contribution to the collection, study, and popularization of Armenian cultural artifacts — particularly historical maps — is difficult to overestimate. Thanks to his research, we deepen and expand our understanding of Armenian history and Caucasian studies, gaining a solid foundation to counter the persistent distortion of historical facts. Rouben Galichian's response to such falsifications is the Fact itself — the maps preserved in medieval manuscripts and created across different historical periods—whose authenticity, at least by scholarly criteria, is indisputable.

This study presents Armenian manuscript heritage in a new light. The manuscript collection of the Matenadaran is primarily perceived by both the international scholarly community and the broader public as possessing exceptional textual and miniature artistic value. However, the maps, which are featured in this work, hold immeasurable historical significance. In the book, the author also introduces the invaluable cartographic collection donated to the Matenadaran.

In congratulating the author on this unique and important publication, I also express my gratitude for donating the cartographic collection to the Matenadaran, for being continuously involved in the institution's activities, and for the significant contribution to the public dissemination and internationalization of the collections.

Ara Khzmalyan
Director of the Matenadaran
Mesrop Mashtots Institute of Ancient Manuscripts
Yerevan

Author's Note

Some 25 years ago, during my researches in the Matenadaran for my book *Historic Maps of Armenia*, I also looked in the manuscript archives of the Matenadaran to find cartographical and geographical information available in the old manuscripts. I soon encountered many manuscripts which contained materials on cartographic, geographic, cosmographic, astronomic and astrological fields of knowledge, all coming from the medieval periods.

A few of these I used in my second book entitled *Countries South of the Caucasus in Medieval Maps*, 2007. However, the bulk of these materials still remain unpublished.

Some of these materials might well be interesting subjects for non-Armenian scholars, who are not aware of the existence of such materials in the Matenadaran. Usually, information about these manuscripts is only available locally, or through the digital archives which, again, are mainly in Armenian, therefore non-Armenians have little information about the existence of such materials kept in the Matenadaran.

Back in 2024 I was searching for a way to reveal the existence of these materials to an international audience, and therefore with English explanations for the benefit of non-Armenian scholars who might be interested in these subjects. The idea of preparing an album containing images and basic explanatory information about these manuscripts, as well as other cartographic material held in the Matenadaran, gradually developed.

I suggested the idea of preparing an illustrated album, presenting the images and some texts from the manuscripts, to Mr Khzmalyan, Director of the Matenadaran, who welcomed and approved the idea, encouraging me to begin working on the project.

For helping me during the preparatory stages of the work, I wish to thank all the Matenadaran management and employees, who did everything in their power to facilitate my work. Especially the colleagues in the Manuscript Department, who helped me in translating the Old Armenian texts, as well as those in the Scanning Department, who did their utmost to prepare high quality scans of all the materials chosen.

The album will be a guide for all non-Armenians to realise and actually see what geographic, cosmographic and cartographic information is available for in-depth study in the archives of the Matenadaran.

Rouben Galichian
April 2025, Yerevan

Preface

The Matenadaran, the Mesrop Mashtots Institute for Ancient Manuscripts, is home to the largest collection of Armenian manuscripts in the world. Over a long number of years, its treasures have been presented to the international community of scholars and the wider interested public in many often sumptuously illustrated books, in particular focusing on the rich tradition of Armenian manuscript illumination. The book the reader has just opened is different. Compiled by Dr Rouben Galichian on invitation of Mr Arayik Khzmalyan, Director of the Matenadaran, it presents to the public a series of the Matenadaran's collections centring on cartography, the depiction of heaven and earth and its many regions, through maps. With this book, the Matenadaran and Dr Galichian do the interested public a great service, disclosing the riches of representations in maps of Armenians' perception of geography and cosmography throughout the ages, spanning the seventh to the nineteenth centuries.

As is the case with manuscript illuminations - one of the enduring glories of Armenian culture - so also in geography, cosmography and its cartography, the Armenian mind and its genius did not work in isolation from the wider world, being well aware of the achievements of Egyptian, Mesopotamian and Greek antiquity, and of classical Roman insights. Making ample use of Islamic and Medieval European advancements in cartography, the Armenians produced a variety of maps over the centuries, in manuscripts, in printed works and as separate items.

Some examples may illustrate the variety and unexpected connections that Armenian cartography has to offer. Manuscript Matenadaran no. 5975, dates from 1467 and seeks to explain on folio 68^{v} the 'darkening of the sun', lasting for three hours, that the Gospels state accompanied the crucifixion of Christ (see fig. 1.14). It offers both a diagram as illustration of the relevant positions

of sun and moon over this period of time and an accompanying text, together explaining the phenomenon, taking into account scientific knowledge of the time. Since total solar eclipses last only minutes, the text stipulates that the moon orbited the earth not in twenty-four, but forty-eight hours; the explanation offered thus hovering between a scientific and a metaphysical one.

In the sample given on fol. 115^{v} from manuscript M1770, which was copied a century later, in 1589, the emphasis given is slightly different, while still based on a full solar eclipse (see fig. 1.16). A comparable diagram is offered, without inscribed text, but underneath it full attention is given to the role the extraordinary eclipse at Christ's crucifixion played in the conversion to Christianity of Dionysius the Areopagite, who witnessed it at Baalbek, where a famous temple dedicated to the sun stood and where astronomy was paramount. The phenomenon planted the seed for the Areopagite's conversion upon Paul's preaching in Athens, related in the Acts of the Apostles. With this first-century Dionysius are connected the mystical works of the anonymous, probably sixth-century author 'Dionysius the Areopagite', a central contributor to Christian mysticism. The author of this text is Yakob Ghrimetsi or James of Crimea (c. 1360 – 1426), author, among other works of treatises on the calendar.

As a final example an only slightly later manuscript, M1780, which was copied in 1617 (fol. 303^{r}, see fig. 1.25) gives an illustration of the eye beholding the stars in the night sky, together with a brief description "This is the likeness of cosmography, which is the description of heaven and earth," and "This is the likeness of geography, which is the description of the world of (this) earth". The text underneath refers for these definitions to the German mathematician, astronomer, and geographer Johannes Werner, Vernerus in Latin (1468 – 1522).

The section devoted to printed maps similarly presents a rich collection stretching over six centuries. These examples are a mere foretaste of things to come: they invite the reader to immerse themselves in this treasure-trove of a book.

Dr Galichian has been a discerning collector of maps throughout his life, and has authored a series of books based on his own collection as well as on those of the great depositories in the world. The donation of the result of his lifelong gathering to the Matenadaran is a significant addition to an already excellent collection.

This book brings together the riches of the Matenadaran's ever expanding treasure-house in order to offer a view of them under Dr Galichian's guidance. This richly illustrated work is not meant as a scholarly publication, but it does seek to acquaint the interested public, and there will be plenty of scholars among them, with the cartographic legacy of Armenia. May it serve to kindle the interest of those already interested in cartography, but unacquainted with Armenia's contribution to it in production and in inspiration, as well as new readers whose enthusiasm it will rouse more deeply to study this rich tradition.

Theo Maarten van Lint
Calouste Gulbenkian Professor of Armenian Studies
University of Oxford
April 2025

The Geographic and Cosmographic Heritage of the Matenadaran

In the multitude of manuscripts kept in the Matenadaran, there are scores containing cartographic, geographic, astronomic and astrological information, which are not well known to the world at large. The information is in written form, sketches, drawings and even maps, mostly included in various volumes. These may be in volumes dedicated to geography or in collections of diverse works, collated and bound in volumes in scriptoria – which could be works attributed to assorted writers and copies of these works. In such cases, where the manuscripts are contained in a book or collection of various articles, this information is very difficult and almost inaccessible for those researchers and scientists who do not have personal access to the Matenadaran and are based elsewhere in the world.

Of course the majority of the contents of the medieval manuscripts, like everywhere in the west, are religious in character, but there are other gems hidden in these volumes, which might be useful for some researchers. One such example is the oldest geographical work in Armenian, the famous *Ashkharhatsuyts* (Mirror of the World) penned during the sixth century, possibly by Anania Shirakatsi[1]. This geographical work lacks any maps, or at any rate, if the originals included maps, later copies that have reached us do not contain them. However, the information is there in detailed texts and descriptions.

The Matenadaran boasts a plethora of copies of this work, as well as other similar textual works penned by others.

The following copies of works entitled *Ashkharhatsuyts* kept in 2007 in the Matenadaran were as follows:

Shirakatsi (7th c.) – 35 copies of the short version
Tovmas of Cilicia (13th-14th cc.) – Two versions in rhyme
Vardan Areveltsi (1198-1271) – 70 copies
Karapet Baghshetsi (1475- c.1555) – 15 copies

1. Some historians claim that the work was penned by Movses Khorenatsi during the early fifth century. The present author has noted facts in the texts which relate to events in the sixth century, hence our belief is that the work was written by the polymath Anania Shirakatsi during the seventh century.

Some samples of the images in the above literature are reproduced in the concluding section of the next chapter, from Fig. 1.55 to 1.61.

In addition to the above *Ashkharhatsuyts* geographical works, there are many more manuscript texts on geography and astronomy, which are mainly from the late nineteenth century, and therefore are not included in these pages.

By chance, the author was on a visit to the Matenadaran when he noticed one of the old maps, actually the oldest existent map of the world in Armenian, on display in the general exhibition area, and he realised that this could be a most important cartographic discovery. During the Soviet era, in 1976, a geographer had noticed this map and had written an article in the *Journal of History of the Natural Sciences and Technology in Armenia*, entitled the "Medieval Armenian Oval Map", (Volume VI, 1976, pp. 213-239, published by the National Academy of Sciences of Armenia. It is also noticeable that the author of the article had not actually seen the original map, or he would have discovered that it was not oval but circular in shape, with a compass needle pinhole in the middle.

For a long time, isolated by the Iron Curtain, not much information in the technical and scientific world crossed to the west, and many research results never left the boundaries of the USSR. Some were considered to be secret, thus not to be shared with the rest of the world, while other, non-secret research did not have the ways and means to be distributed, mainly owing to language barriers. Such research was published mainly in Armenian and sometimes in Russian. Due to the same restrictions, not much scientific research done in the west reached scientists working in the USSR, and vice versa, of course excepting major discoveries or research and developments in the non-military fields. For the same reason of isolationism, the article about the oldest Armenian map remained unknown to the outside world. The problem of isolation becomes more acute when one considers that the full text of the article was in Armenian, meriting only a brief summary in Russian, but generally nothing was published in any other international language.

At the time, the author was doing research in the British Library's Maps department and in passing showed the image of the above small T-O shaped

map to one of the staff of Imago Mundi magazine. He was asked by the editor whether he could prepare an article about this unique map for publication in the magazine, which is the most important journal in the world of cartography. It took the best part of a year for the author to complete the article. The resultant article was published in 2008, in the Imago Mundi magazine, creating some interest in medieval Armenian cartography, which was completely unknown in the west.[2]

This episode was instrumental in driving the author towards the publication of the present volume. The aim was to expose the cartographic, astronomic and astrological wealth and information contained in the volumes of manuscripts in the Matenadaran in an illustrated English album and introduce it to scientists and the public all over the world.

In this part of the album, the author has tried to collate and show most of the important cartographic, geographic and astronomic, as well as astrological information, which at the time was considered to be directly related to the astronomy of the day.

As far as images are concerned, English translations are included of parts of the texts related to the images, translated from the original, classical Armenian (Grabar).

On many images and drawings the relationship between the parts of the human body and the signs of the Zodiac are quite apparent. Less frequently we see the relationship of the signs of the Zodiac on the human body with geographical toponyms of various peoples and/or countries.

On the subject of the relationship of the human body with geography, there are four images inserted towards the end of the next chapter. In Fig. 1.62 to 1.65, placed at the end of that chapter, these astrological figure images and some basic information taken from their texts can be seen, all taken from the manuscripts of the Matenadaran.

In the western literature one of the oldest references related to the relationship among the signs of the Zodiac and names of countries of the earth could be found in *Ptolemy's Tetrabiblos*, where the cross referencing of the countries with the signs of the Zodiac is somewhat different from those used in the Armenian manuscripts.[3]

The oldest Armenian language geographical works are the various versions of *Ashkharhatsuyts* (Mirror of the World). Although these works are devoid of maps, they still are important geographical works, therefore it was decided to reproduce some pages from various sources and versions of this work, to serve as basic information for prospective researchers. These images are at the end of the section on Manuscript Maps, after the images regarding the human body and geography.

The present album is only a guide to present the reader with the available information and items in the Matenadaran related to the subject of the album. Inevitably, there may well be other items in the Matenadaran manuscripts which could be of use to researchers, but the author believes that it simply is not possible to gather and publish all the existing data and information in one concise volume.

2. Rouben Galichian, *A Medieval Armenian T-O Map*, Imago Mundi, Vol.60 Part 1, 2008, 86-92 + Plate.

3. Claudius Ptolemaeus, *Ptolemy's Tetrabiblos*, translated by J. Ashmand, Book Three, Chapter III. USA: Pacific Publishing Studio, 2011, 45.

Maps and Drawings From the Manuscripts in the Matenadaran

Notes:

The symbols used in the Armenian texts:



Symbols used for the planets



Symbols used for the signs of the Zodiac

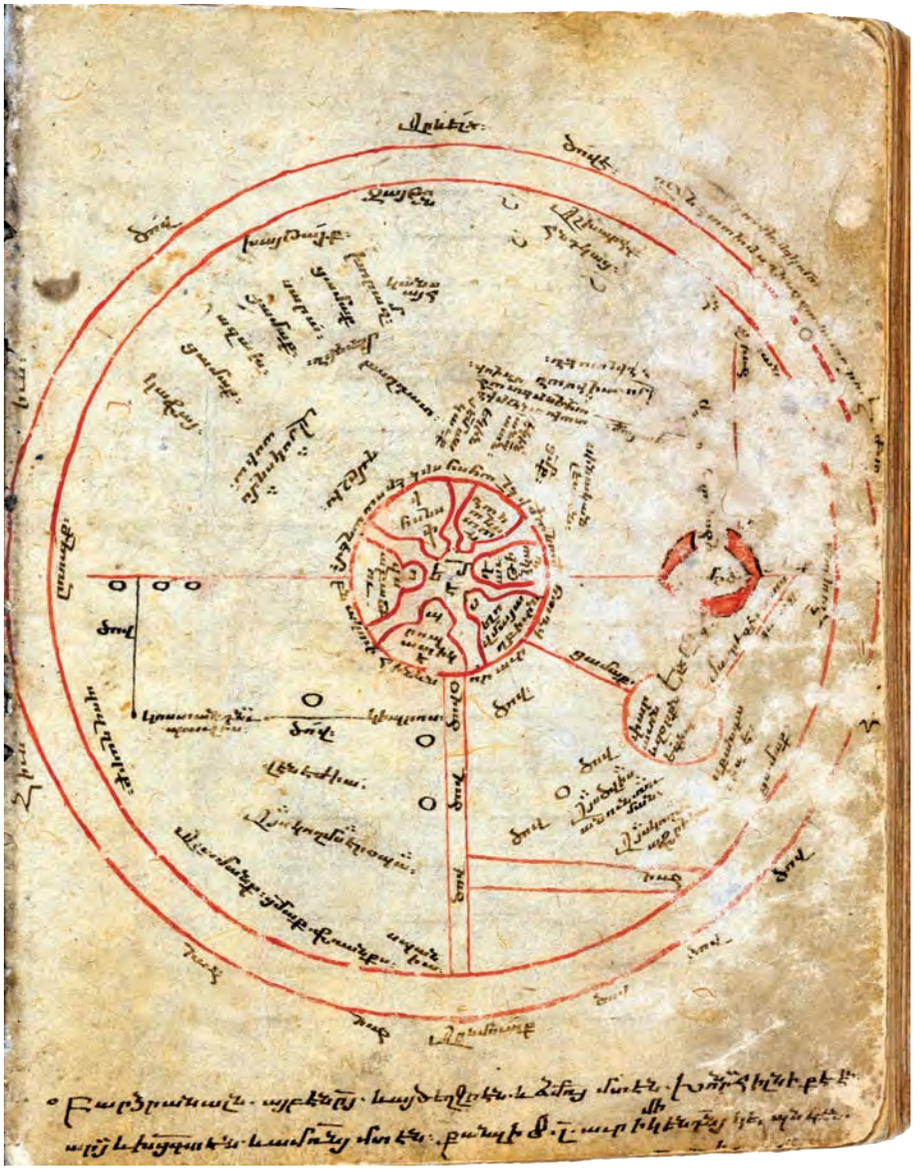


Fig. 1.01 – MM1242, 132a, 13-14th c.

Among the Matenadaran manuscripts, there is a small volume, numbered MM 1242, which is a collection of eighteen separate articles on religious, moral, mathematical and astronomical subjects, dating mainly from the thirteenth to the fifteenth centuries.

The manuscript was written in one of the Armenian scriptoria in Caffa (present-day Theodosia/Feodosia in the Crimea). On folio 132a, inserted between a circular 'diagram of the orbits' and Zodiac signs, and presented in an article on mathematical riddles, there is a circular world map which has no obvious relation to any of the articles in the volume. See also Fig.1.66 towards the end of this chapter.

This small map, made around the end of the thirteenth and the beginning of the fourteenth centuries, is the oldest Armenian language document that presents a map (Figure 1.01). The map is circular, with the external circle measuring 125mm in diameter. In cartographic terminology, these types of maps are known as T-O maps. As these types of maps are basically religious maps, the centre of the map is usually occupied by the Holy City of Jerusalem, here shown with its six gates, inscribed with their Armenian names. On these and other religious oriented maps, East is always at the top of the page. The reasoning is that the sun rises in the east and the Earthly Paradise is supposed to be in the east.

Two vertical parallel red lines (running from Jerusalem to the western edge of the map at the bottom) represent the unnamed Mediterranean Sea separating Africa, on the right, from Europe, on the left. In the centre, it reaches the river Tanais (the Don), which is a line drawn towards the left (north), the traditional divide between the two continents of Europe and Asia. The circular legend around the centrally located city of Jerusalem states, "The city of Jerusalem populated in ancient and recent times by the Israelites". The considerable prominence given to Jerusalem is explained by the fact that the Armenian Church had, and still has, close ties with the Holy City and is one of the four custodians of the Holy Sites, with a church, seminary and religious order active since the fifth century.

The inscription to the left of the stem of the "T", below the triangle formed by three dots, reads, *Ays koghms Eropa* (This side is Europe). Around the periphery are the names of three nations, those of *Bulgharq* (Bulgars), *Alamanq* (Germans), and *Franks* (French), and another country, *Spania* (Spain). Further from the ocean are two cities named *Kostandnupolis* (Constantinople) and *Venezhia* (Venice).

On this T-O type map, the Mediterranean Sea is indicated solely by the word *Tzov,* which in Armenian means "Sea". It contains four islands represented by small black circles. One circle, well to the north of the parallel lines is labelled *Kipros* (Cyprus).

In addition to Jerusalem, there are 27 other toponyms on the map as well as a number of descriptive legends inscribed outside and inside the map proper. Outside the double-circle frame of the map, we note the names of the four

cardinal directions as well as the legend "The all-encompassing ocean, which is in this shape".

The legend at the bottom right of the "T" reads *Ays koghms Afrika* (This side is Africa). Between this inscription and the Mediterranean, i.e. in Western Africa, the inscription reads *P'ar'avon yev zor'qn Yegipt'osi* (Pharaoh and the army of Egypt). To the right of this is the city of Alexandria (named *Skandar'ia*). The [Red] Sea (*[Kar'mir'] tzov*) is shown as a bold open circle on the borders of Africa and Asia.

In keeping with T-O maps in general, the greater part of the Armenian map is dedicated to Asia, inscribed *Ays koghms Asia* (This side is Asia). In the north, following the curve of the encircling ocean, and on the borders of Europe and Asia, *Rusq* (Russia) is shown. East of the toponym "Russia" a series of toponyms are inscribed at right-angles to the circle. These are *Kafa* (Caffa, the name given by the Italians to the Greek Crimean city of Theodosia), *Tsamaq* (Land), *Azach* (the city of Azov), *Tsamaq* (Land), *Sara* (Sarai), *Tsamaq* (Land), *Khorazm* (or Oxiana/ Khawrazm) and finally, placed horizontally near the top of the map, *Kansaih* (Khansai, a trading port-city in China). By adding the word 'Land' between the toponyms, the mapmaker has tried to show that on actual land, these towns are widely separated and distant from each other.

In the east, in the upper part of the map close to the ocean are the names *Khaytai* (China) and *Zaytun*, another Chinese trading port city, which was one of the starting points of the Silk Road.

Near the Chinese cities we see the inscription *Ashkhar'q Hndkats* (Lands of the Indians), followed well to the southeast by *Hndkast'an* (Hindustan, India). In the Middle Ages the designation 'India' was used loosely to refer to the lands east of Persia, Media and the Middle East, so here 'Lands of the Indians' most probably refers to the northern and western neighbours of India, such as Persia as well as its neighbouring countries while *Hndkast'an* "Hindustan/India" denotes India proper. The presence of these toponyms in the area between Europe and China bears witness to the importance of these towns and provinces in trade and commerce between East and West.

This fact is indicative of the period of the map's creation, which was during the peak of the trade on the Silk Road. This trade route may also explain the existence of the toponyms Caffa, Azov, Sarai, Zaytun and Khansai, found nowhere else in any other Christian T-O type maps. Finally, towards the centre of the map we see the cities of *Merdin* (Mardin), *Baghdat* (Baghdad) and *Dmshkh* (Damascus), all of which also were important trading centres in western Asia, also lying on the Silk Road, which further continued from Baghdad to Venice (on the map appearing as *Venezhia*), Genoa and beyond.

Dating of this map has been controversial. Caffa, the first town listed in the row of toponyms along the north-eastern periphery of the map, until the thirteenth century was only a small Crimean seaside town. It was only during the late thirteenth century, after the Genoese merchants leased the town from the Mongols, that the town transformed into a flourishing commercial centre, trading with the East and rivalling the Venetian-controlled city of Tanais on the Sea of Azov.

The earliest mention of Caffa in Armenian literature dates from the middle of the thirteenth century. By the middle of the fourteenth century, there were numerous monastic scriptoria in operation in the town – and the majority of Caffa's population of 70,000 was Armenian.[4] The presence of the city's name on the map is a strong indication that the map was made during the city's heyday, namely in the early fourteenth century. Such a date would fit the suggestion that the Armenian mapmaker, who was most likely a monk, was shown a contemporary Italian T-O map of the world in Caffa. This was a city not only administered by the Genoese, but also in all intents and purposes functioning as an Italian city, and had one of the most suitably located Armenian communities for cultural as well as commercial contacts with the West.[5]

4. *Soviet Armenian Encyclopaedia*, vol. 4 (Yerevan, 1978), 170 (in Armenian).

5. Vardges A. Mikayelyan, *Armenian-Italian Connections: Genoese Documents about the Armenians of Crimea.* Yerevan*:* 1974, 21–32 (in Armenian).

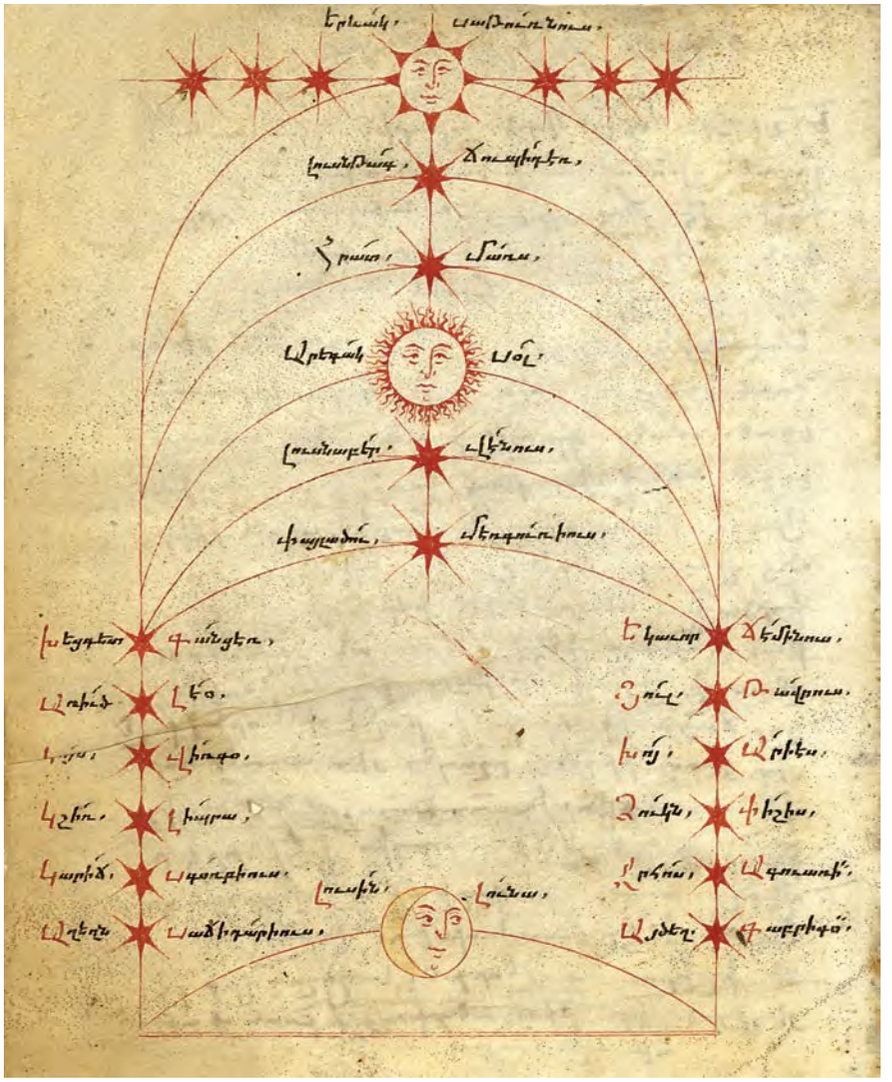


Fig. 1.02 – MM-8973, 001b. Solar orbits and the Zodiac.. 1445.

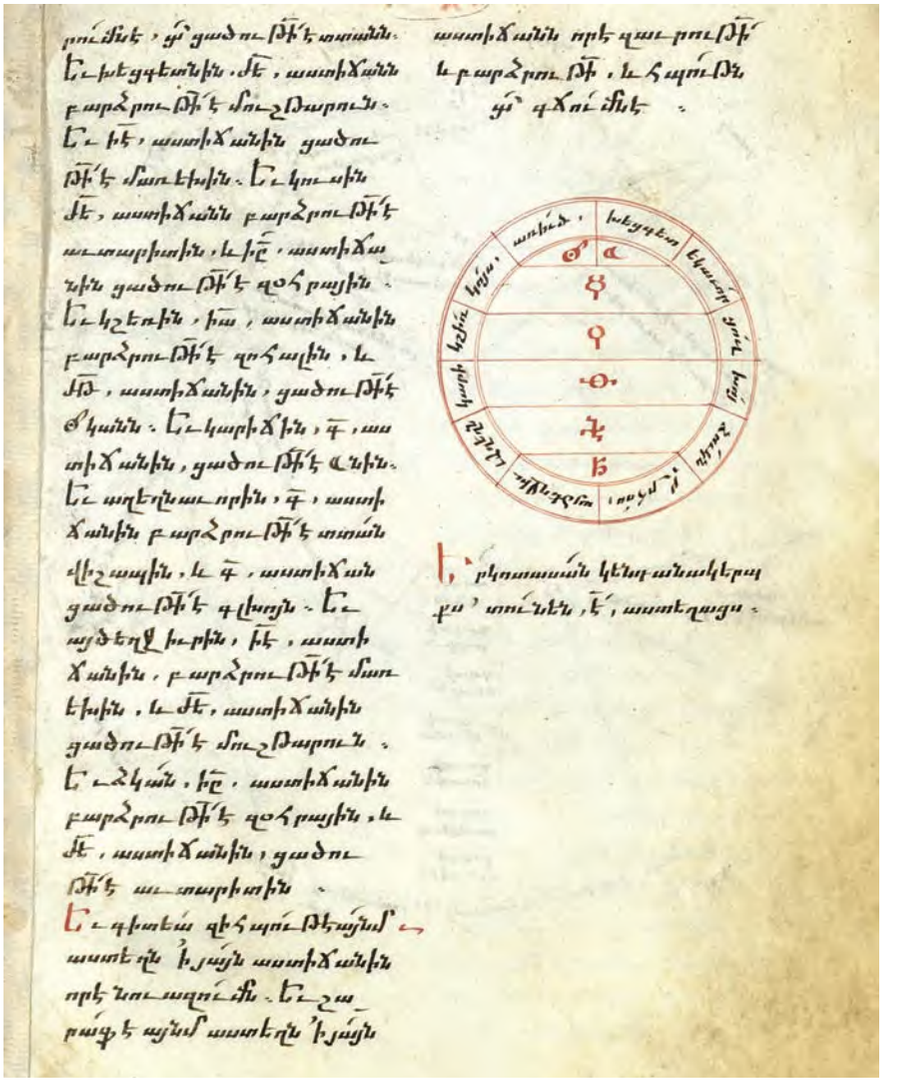


Fig. 1.03 – MM-8973, 013a. The planets and the Zodiac. 1445.

Manuscript 8973 is on vellum, containing astrological and astronomical subjects, multiplication tables, as well as a drawing of the Temple of Solomon.

Page 001b of the manuscript (shown in Fig. 1.02) presents the Zodiac and the planets in an unusual layout. The left and right vertical lines mark the names of the months of the Zodiac.

On the left in descending order are the following: Cancer, Leo, Virgo, Scorpio and Sagittarius. On the right side in descending order we see Gemini, Taurus, Aries, Pisces, Aquarius and Capricorn.

The central vertical line shows the planets in the following order, descending from the top: Uranus, followed by Jupiter, Mars, the Sun, Venus and Mercury.

Page 013a of the same manuscript, shown in Fig 1.03, shows the names of the Zodiac in the periphery of a circle. The horizontal bands in the circle, beginning with the Sun and the Moon in the top segment, are followed by the signs of the planets.

The text below the circle states the following.
The twelve zodiac signs, which are the home for the seven planets.

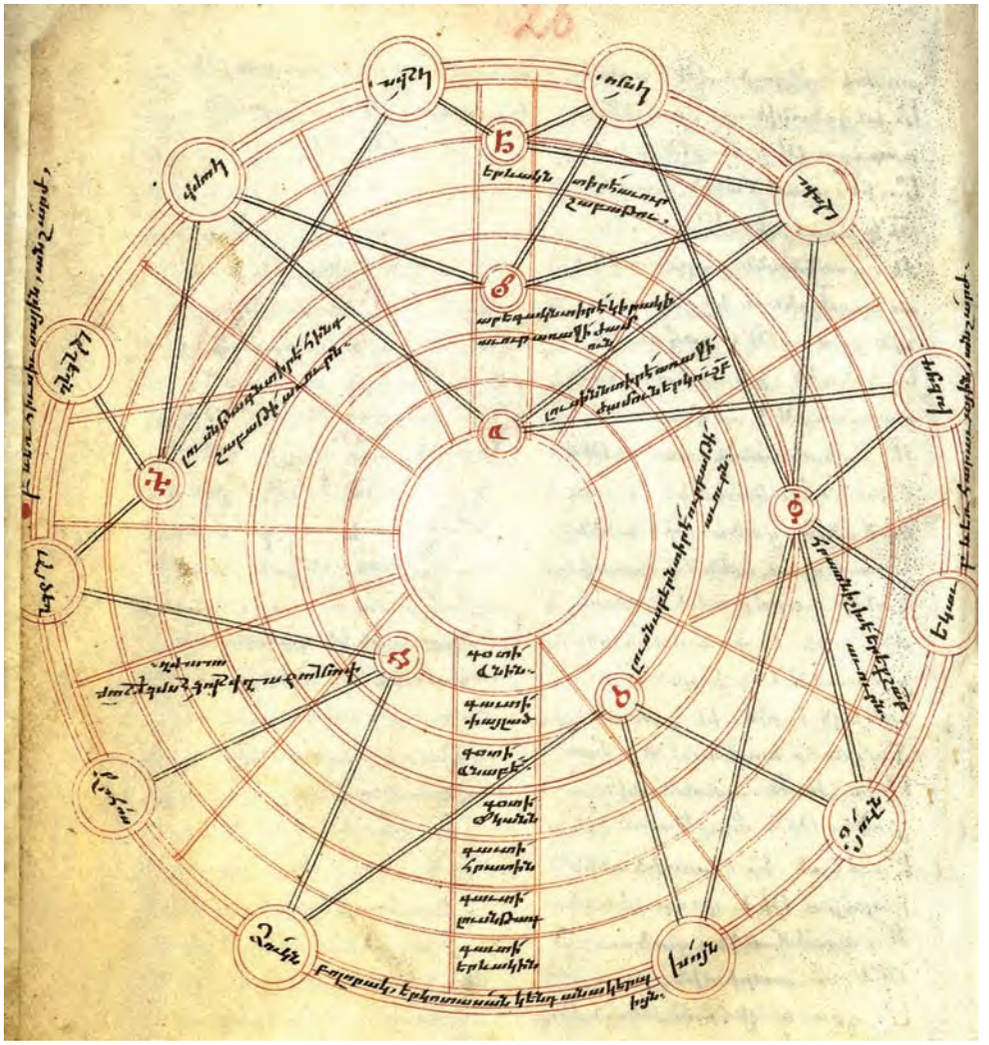


Fig. 1.04 – MM--8973, 013b. The planets and the Zodiac. 1445.



Fig. 1.05 – MM-8973, 032a. A partial Astrolabe. 1445.

Page 013b of the same manuscript (fig. 104) contains a drawing of concentric circles and thirteen radial divisions of the circles, representing signs of the Zodiac etc. The circles are named, starting from the bottom up, Saturn, Jupiter, Mars, the Sun, Venus, Mercury and the Moon. Names of the Zodiac have been linked with black lines to various planets on their orbit.

Fig. 1.05: the description in the centre of the circle on page 032a of the manuscript states: *Use the Astrolabe in the following manner. On the first circle are the 12 Zodiacs, the second one are segments, each covering 5 degrees. The third circle shows the days of the month and the fourth bears the Roman names of months. The sun is rising from Capricorn and setting at Cancer. The Sun rises 180 degrees and sets after 180 degrees.*

The text at the bottom of the circle states: *Start the Spring from the Cross, since according to Astrology, the Sun enters the constellation or sign of the Ram on the 12th of March, but on Leap years, it enters the Ram at noon on March 13th.*



Fig. 1.06 – MM-8973, 032b. The human body and the signs of Zodiac. 1445.

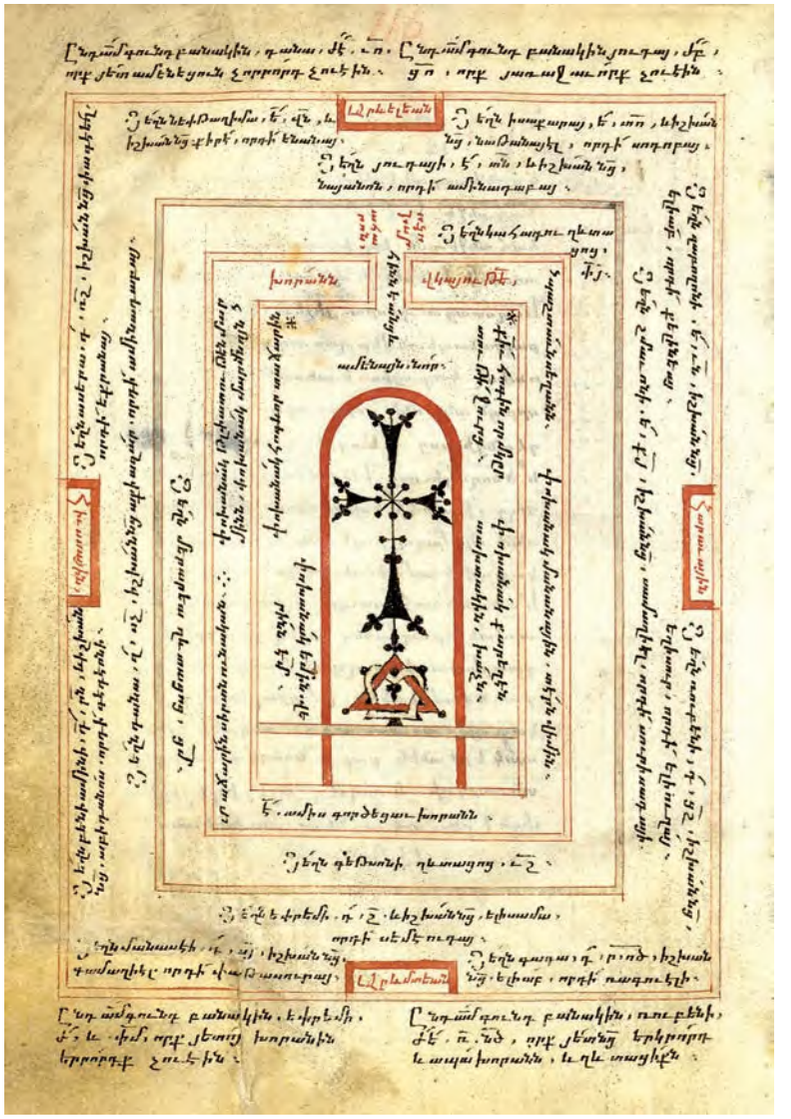


Fig. 1.07 – MM-8973, 058b. The Temple of Solomon. 1445.

The text explanation of the above image is as follows:

Whenever the Moon is in the sign of the Zodiac corresponding with the birth of a person, the particular part of that person's body indicated by the arrow would be in serious or even mortal danger. Any action during that particular time would be detrimental to the relevant body part, three of the causes are thought to be water related, three: earth related, three: wind related and three: caused by fire related events. Location is from head to toe and it is also important that the hour of the event should be taken into account.

The above image shows the plan of the Temple of Solomon. The main difference between the Hebrew vision of the Temple and the above drawing is in the insertion of a cross in the centre of the Temple.

Each one of the various tribes of Israel have a special named space inside the main Temple.

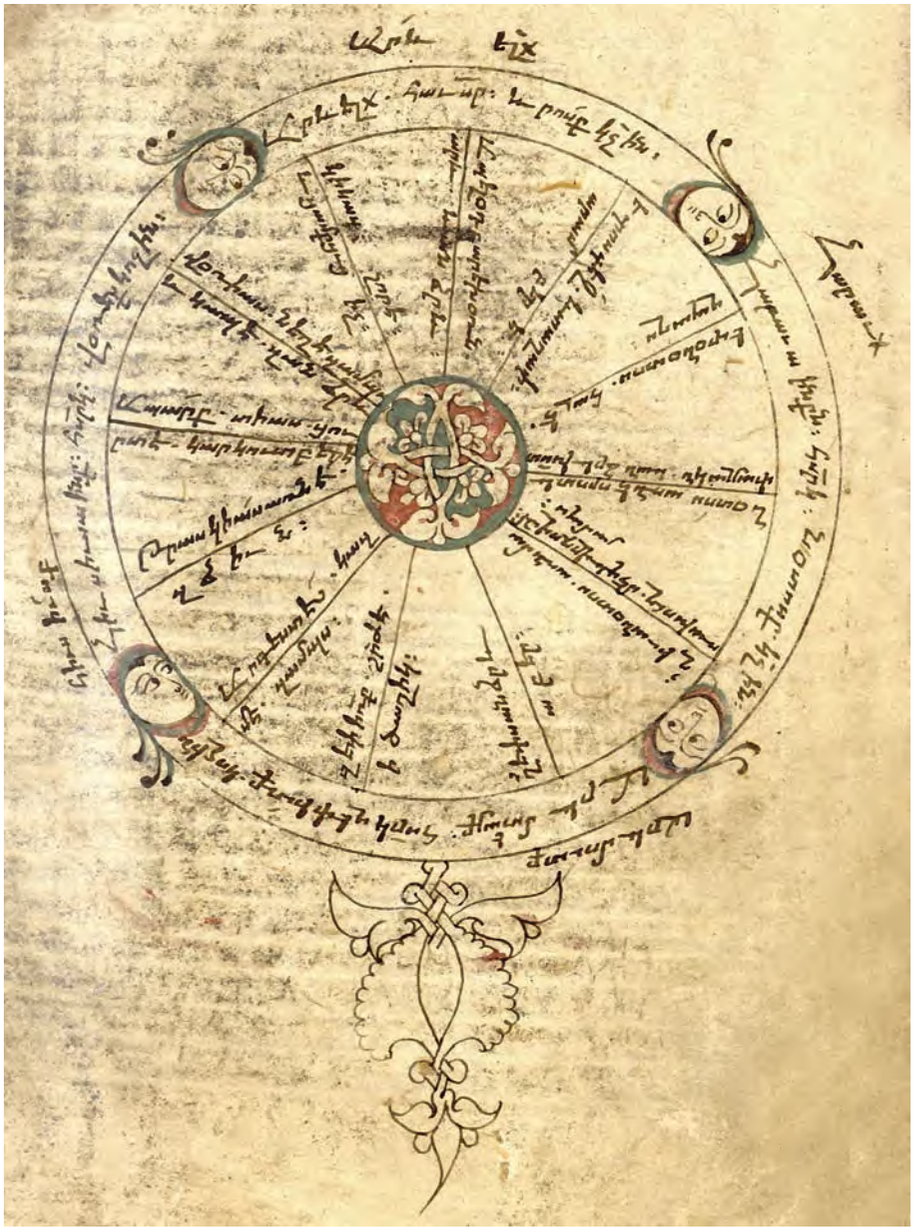


Fig. 1.08 – MM-1130, 121a. Wind rose. 1454.

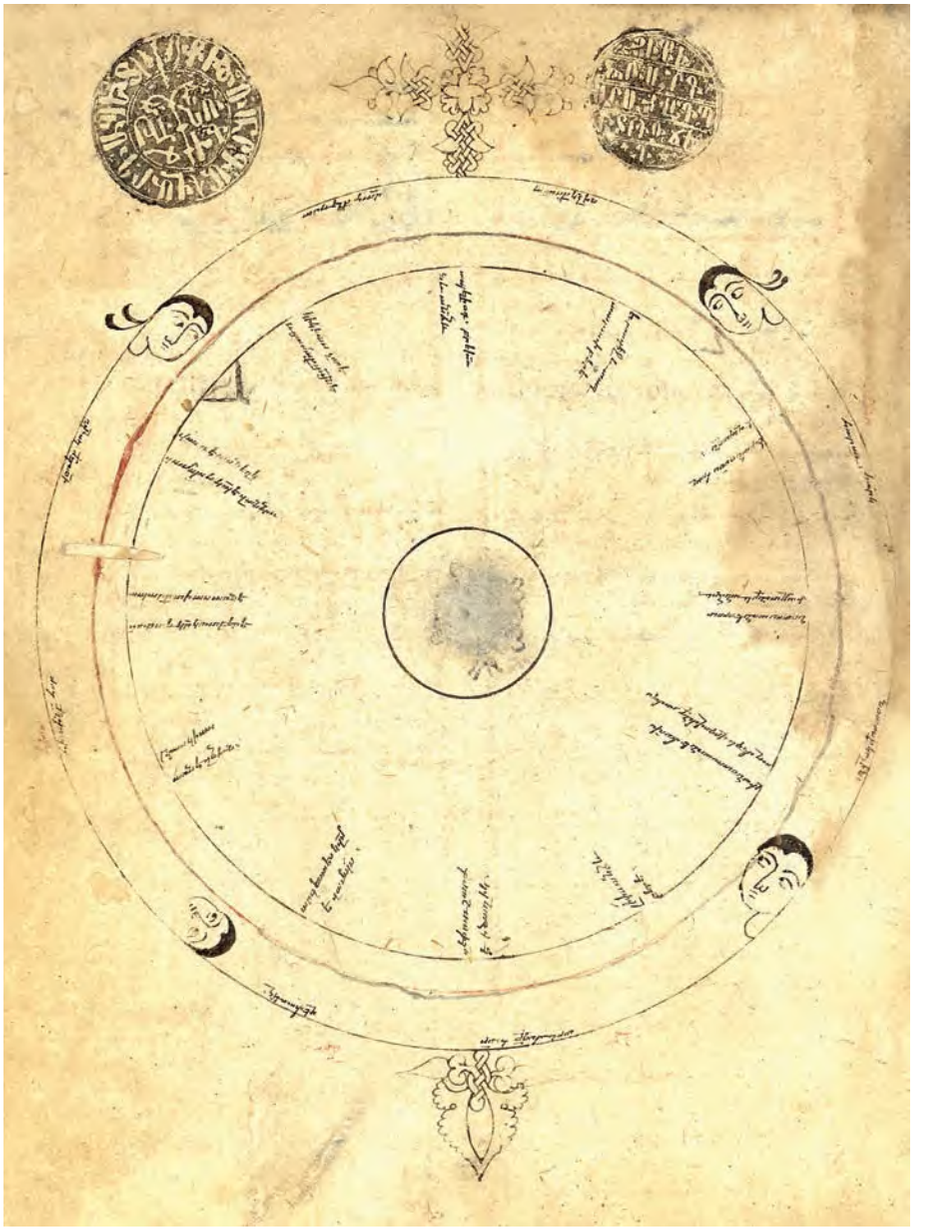


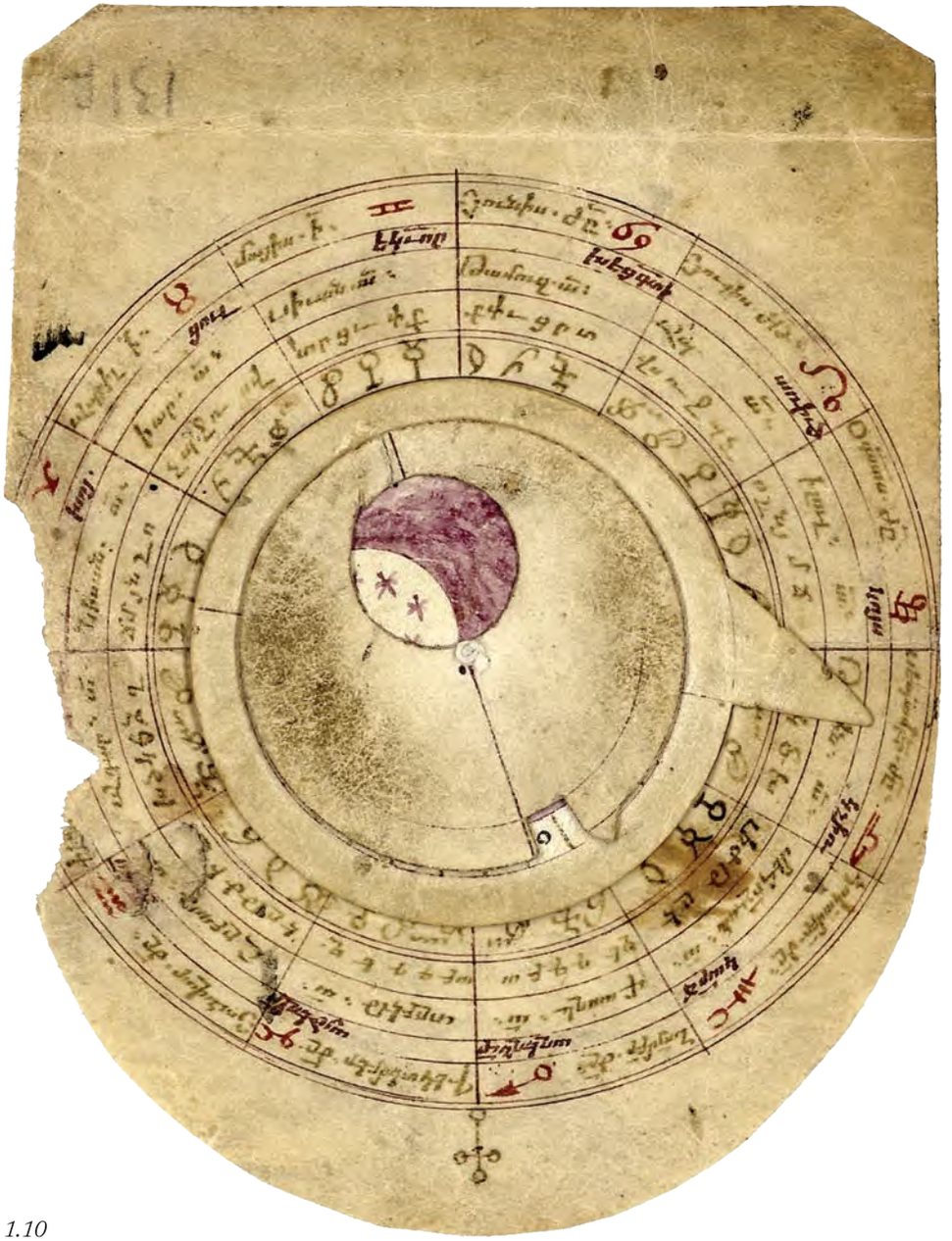
Fig. 1.09 – MM-1131, 064b. Wind rose. 1460s.

The manuscript Wind rose MM-1130 includes various interpretations of religious matters and each wind presented on the image.

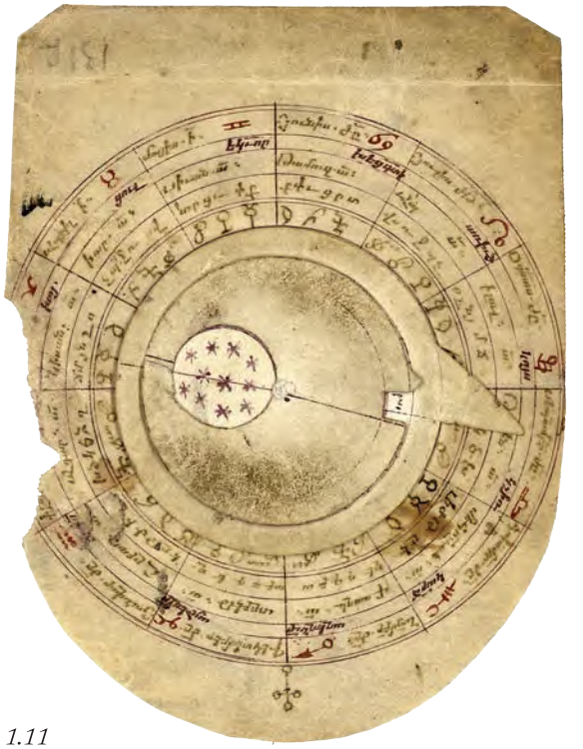
The wind rose image of Fig. 1.08 has the Earth at its centre, surrounded by the winds blowing from various directions. The names and the characteristics of the various winds appear written on the radial lines inside the second circle.

Manuscript MM-1131 is a collection of various interpretations of psalms and other religious matters, as well as a simple wind rose.

The image of Fig. 1.09 is a simplified version of the other wind rose, where once again the names of the winds and their characteristics are set out, distributed inside the middle circle.



1.10



1.11



1.12

Fig. 1.10, 1.11 & 1.12 – MM-3880, 001a, 002a & 003a. Lunar phases. Late 1400s

This volume includes only the three pages of the tables depicted here. These show three images of an instrument used for identifying the different stages of the lunar and stellar sky during various seasons as per the signs of the Zodiac. The usual symbols are used for the sun, moon and the planets.

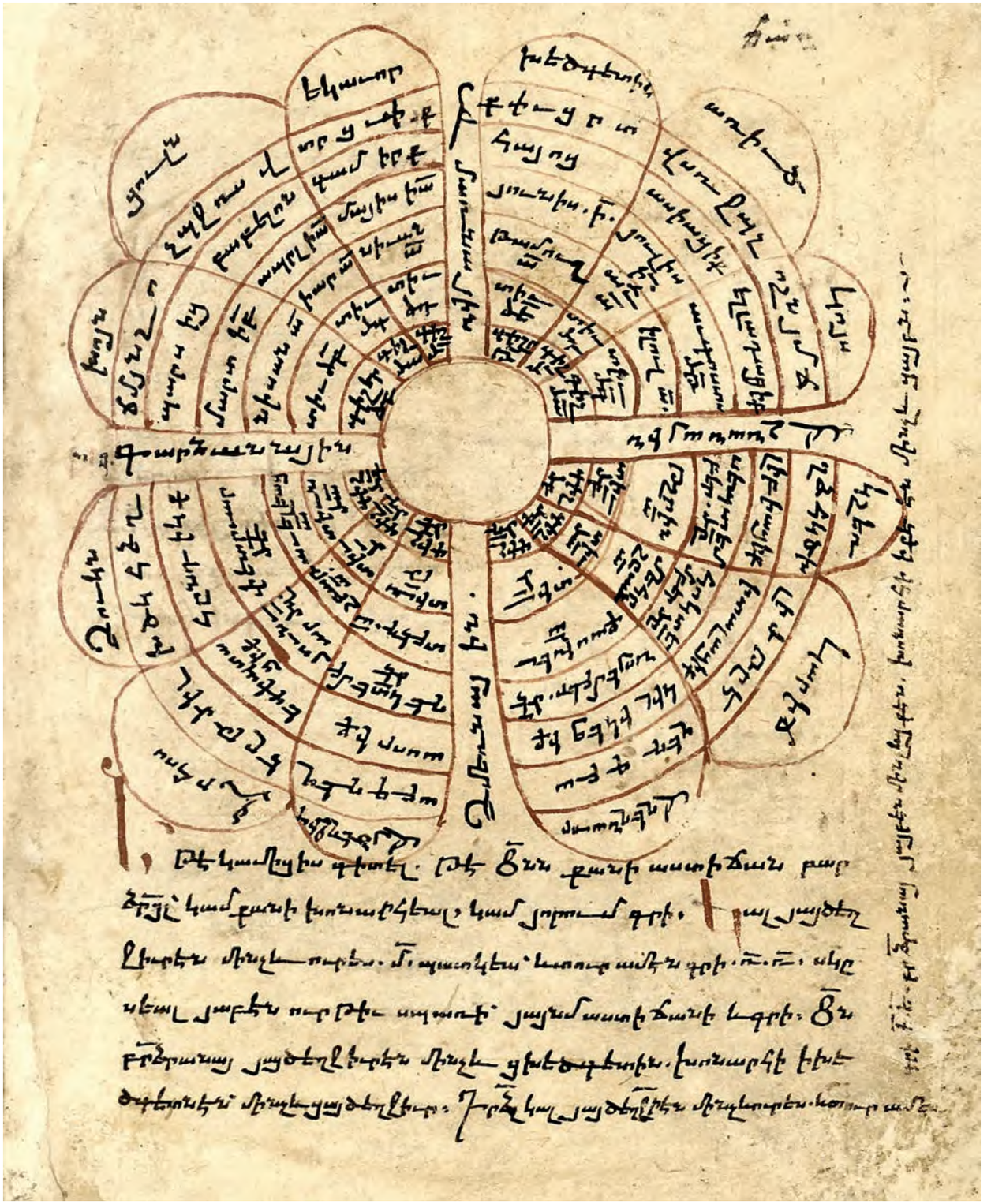


Fig. 1.13 – MM-5975, 041a. Relationship between the Zodiac, the months and nations. 1467.

This manuscript is a collection of various articles, particularly on the topic of calendars used by different peoples as well as on natural phenomena, astronomy and astrology.

The text inside the segments of the circle refers to the names of the months of the Zodiac and the seasons.

The text below the image reads as follows:

If you want to know how many degrees the sun has risen or fallen, and to which letter it is approaching, take the location in the sign of Capricorn, multiply it by two hundred and allocate progressively 1000s to each letter, beginning with A; wherever the number ends, this is the location of the sun. The sun rises from Capricorn to Cancer and then falls from Cancer to Capricorn.

Rising from Capricorn to Cancer and descending from Cancer to Capricorn.

Having said that, it is worth noting that a similar image, shown in Fig. 1.62 of this chapter, has another sort of description related to the image.

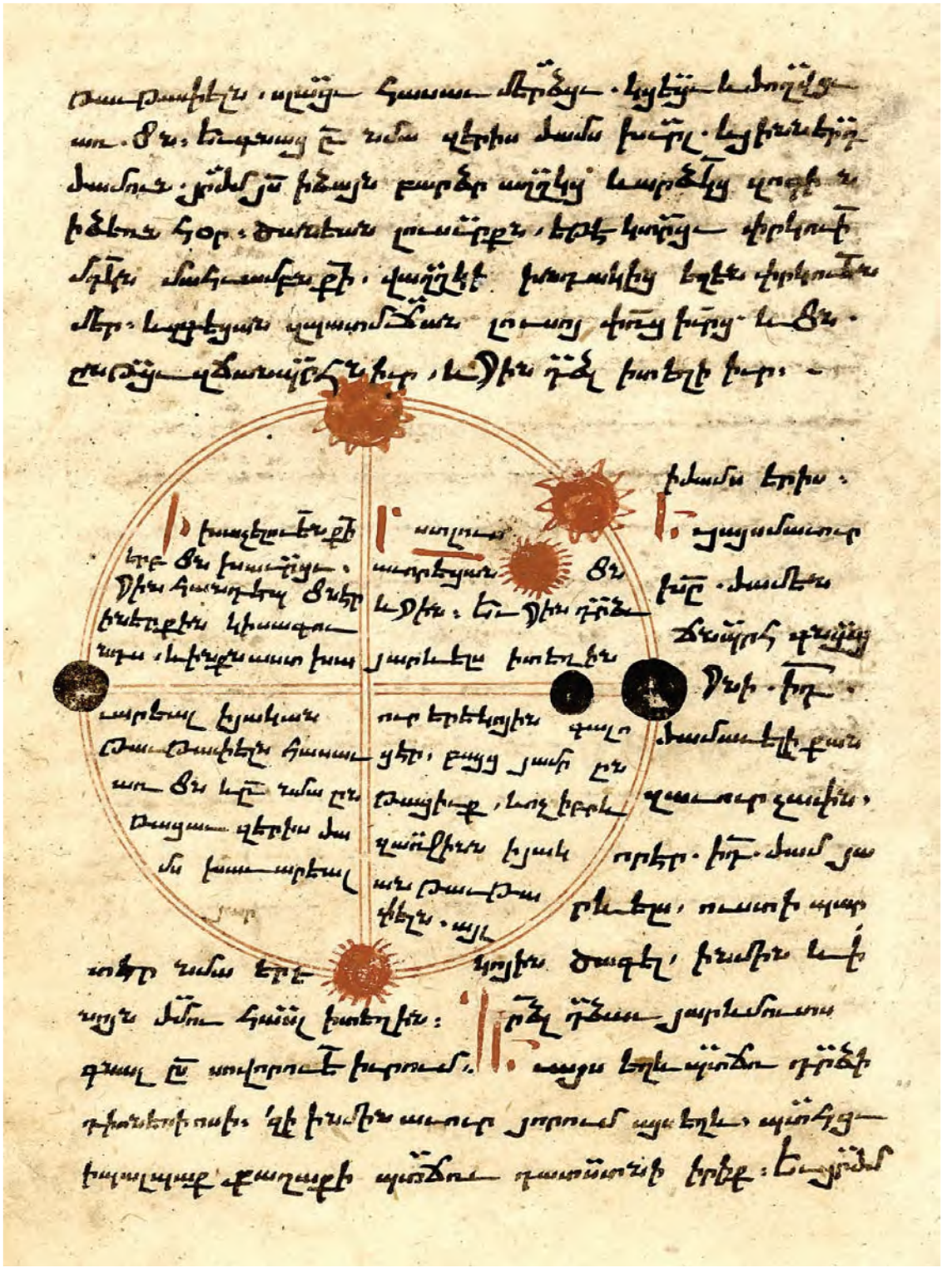


Fig. 1.14 – MM-5975 068b. The extraordinary eclipse of the Moon. 1467.

The main part of the text of this page, written around the image, has the following rough translation:

When the Sun eclipsed during the Crucifixion of Christ, the Moon was opposite the Sun, in the other hemisphere, [therefore it was full Moon]. Nevertheless, the Moon eclipsed and moved towards the Sun, with which it travelled for three hours, staying in eclipse all the time. Then, as depicted on the relevant sketch, both the Sun and the Moon were illuminated. The Moon moved east, where it was to be found during the evening, moving very slowly, taking three hours to reach it, instead of travelling at its usual speed.

During that particular day, the Moon travelled for 48 hours, which is 24 hours more than its regular daily travel time. It is due to this extra travel that it was possible for the Moon to return in time to its regular orbital location. Then it travelled west as before. And this was the reason for the conversion of Dionysius, since on that particular day when all this happened, he was a witness in the city of Baalbek.



Fig. 1.15 – MM-5975, 129b. Some sort of relationship between the planets and the Zodiac. 1467.

The circular image is surrounded by the names of the four cardinal directions of North, South, East and West.

At the centre of the main circle, which represents the World (today we understand it as the Universe), there is an oval shape inscribed as *Our Earth.*

The vertical belts, extending from east to west, are inscribed with the names of the signs of the Zodiac and include the shapes of the sun and the moon.

On the previous page of this manuscript, the description of the image includes the following:

The hidden movements of the Moon must also be considered. It is known that the tropic of Capricorn is born of the Sun, and after moving through the six Zodiac signs approaches the Gemini. Then, after another six signs it returns to the Sun. Thus Sagittarius completes the signs of the Zodiac.

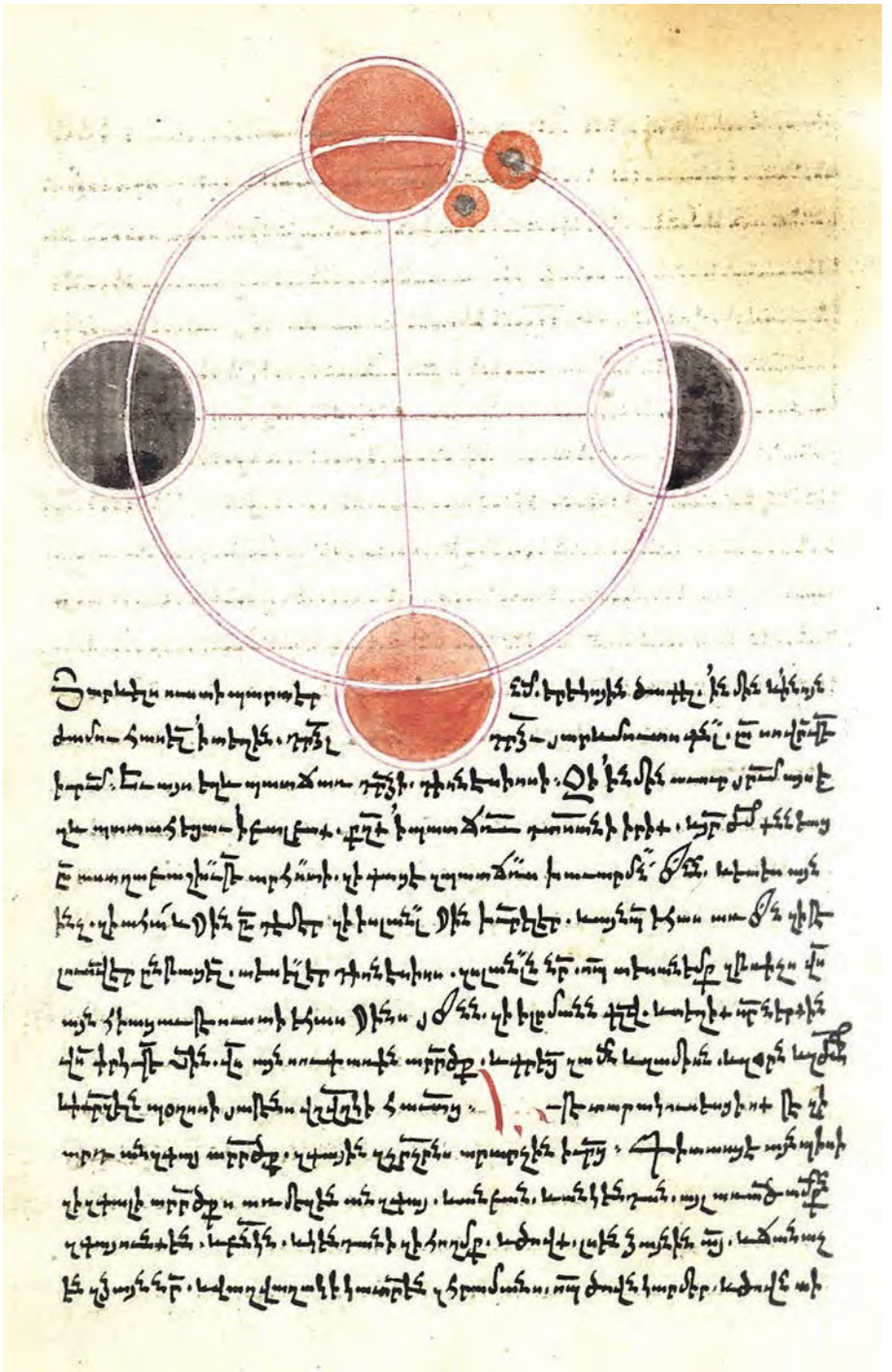


Fig. 1.16 – MM-1770, 115b. The extraordinary eclipse of the Moon. 1589.

MM-1770 consists of a collection of a number of works on varied subjects. These include a copy of the oldest Armenian geographical text, *Ashkharhatsuyts*, attributed by some to Movses Khorenatsi and more likely authored by Anania Shirakatsi, as well as other religious and secular articles. It also has images related to the Zodiac and astronomy, and measures about 15x21 cm.

Similar to the explanation of the eclipse set out in Fig. 1.14, the text on page 115b in Fig. 1.16 attempts to explain the extraordinary eclipse that happened at the time of the Crucifixion, in the following manner:

It is from the west that the Moon must have travelled east and then returned to its original place in the west. On the particular day [of the Crucifixion] Dionysius was in Baalbek, where he watched the phenomenon. He was unable to explain it through the accepted astronomical rules, as he tried to understand the unnatural eclipse of the sun, which he had observed himself.

The Moon was in front of him and it was eclipsed because of its movement. It had moved into the light and Dionysius saw its movement. When it approached the sun, the eclipse became complete, possibly in order to save the world. It was for this reason that all creatures were dumbstruck and the month, day, date and the time of the eclipse was recorded. This was the reason for the conversion of Dionysius.

In some aspects concerning the presence of Dionysius of Ariopagite in Baalbek, the above contradicts with other reports about his location, hence, where his conversion was recorded to have happened.

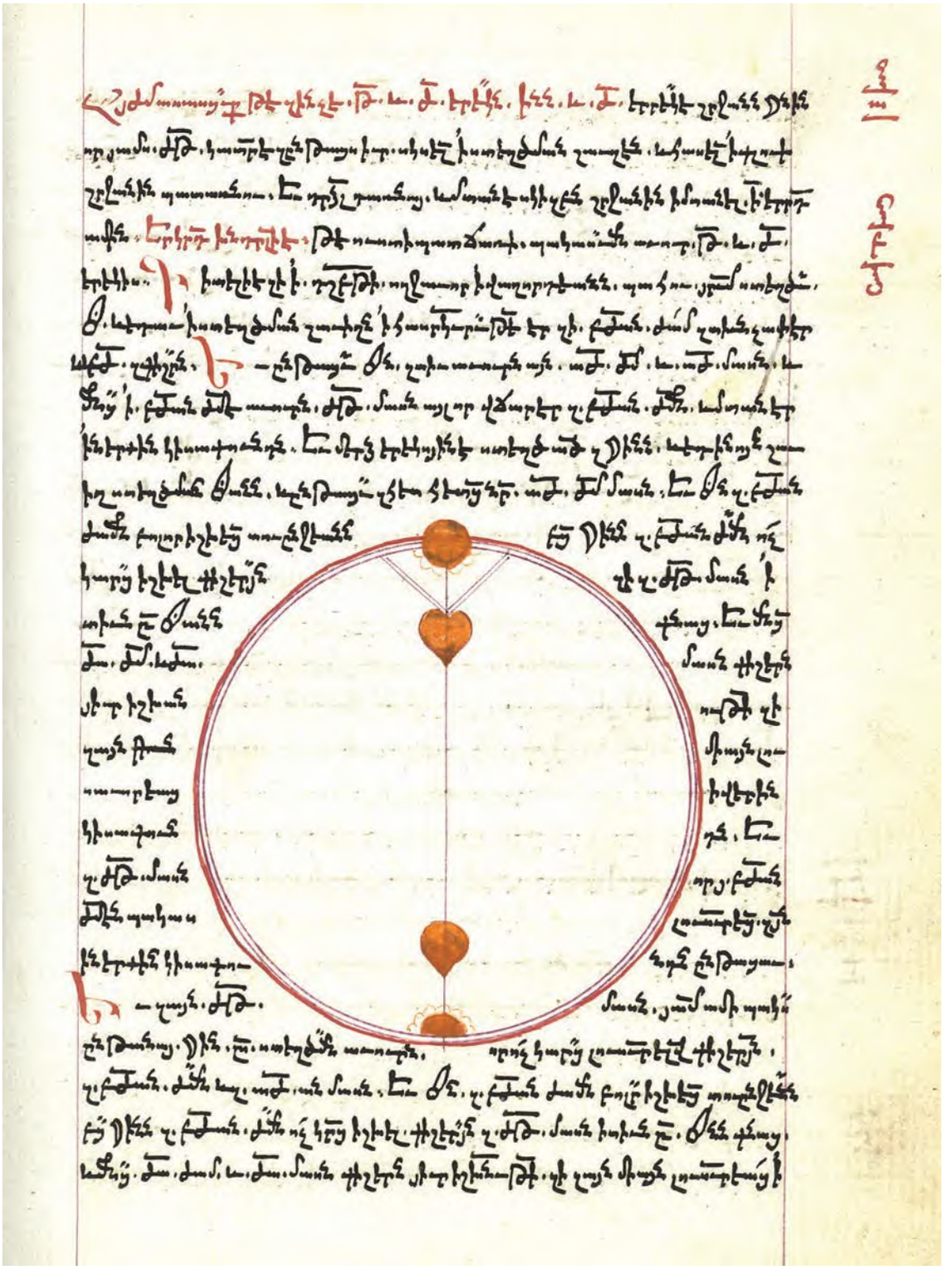


Fig. 1.17 – MM-1770, 129a. The eclipse of the Moon.1589.

The text of this page states:

Let us talk about the 9 and 10 year triad cycle, which is the cycle of the Moon. This cycle takes 19 years to complete from starting from the creation and restarts the new cycle from the beginning on the 20th year.

We must then consider why the days of the lunar cycle are reduced. We are aware that the Sun was created early on Wednesday morning. When it was created the radius of Creation was on the Equator, where for 12 hours it was day and the other 12 hours was night.

When the Sun moved towards the day for 11 hours and 11 parts, from the 12 hours only 19 parts were left before it entered the southern hemisphere.[6]

The Moon was created during the evening hours, and installed on the same orbit, following the Sun and lagging by 11 hours and 11 parts. At first the Sun was ruling the 12 hours of the day, but the Moon was unable to fill the 12 hours of the night completely, since the Sun had already taken the extra 11 parts from the Moon's share.

Therefore the Moon was able to illuminate the northern hemisphere for only 11 hours and 11 parts, while during the remaining 12 hours and 19 parts, it crosses over, illuminating the southern hemisphere.

6. The text infers that the unit "part" ("mas" in the Armenian) is 1/30th of the hour, i.e. each is 2 minutes long. This seems to be the only explanation which makes the text at least comprehensible!



Fig. 1.18 – MM-1770, 151a. Movements of the Moon. 1589.



Fig. 1.19 – MM-1770, 354b. Effects of the Zodiac on health. 1589.

The above image is surrounded by the names of the four cardinal directions of North, South, East and West. The text below it states:

One must consider the hidden movements of the Moon. It is known that the tropic of Capricorn is born of the Sun and after moving through the six Zodiac signs approaches Gemini. Then, after another six signs, it returns to the Sun. Thus, Sagittarius completes the signs of the Zodiac.

In line with the text of Fig. 1.06, this text states the following:

Let it be known, brother, that whenever the Moon is in the sign of the Zodiac, which corresponds with the birth of a certain person, the particular part of that person's body indicated by the arrows would be in serious or even mortal danger. Any action during that time would be detrimental to the relevant body parts, three of these would be through water related causes, three: earth related, three: wind related and three: by fire related causes. Location of points in the body extend from head to toe, and the hour should be taken into account.

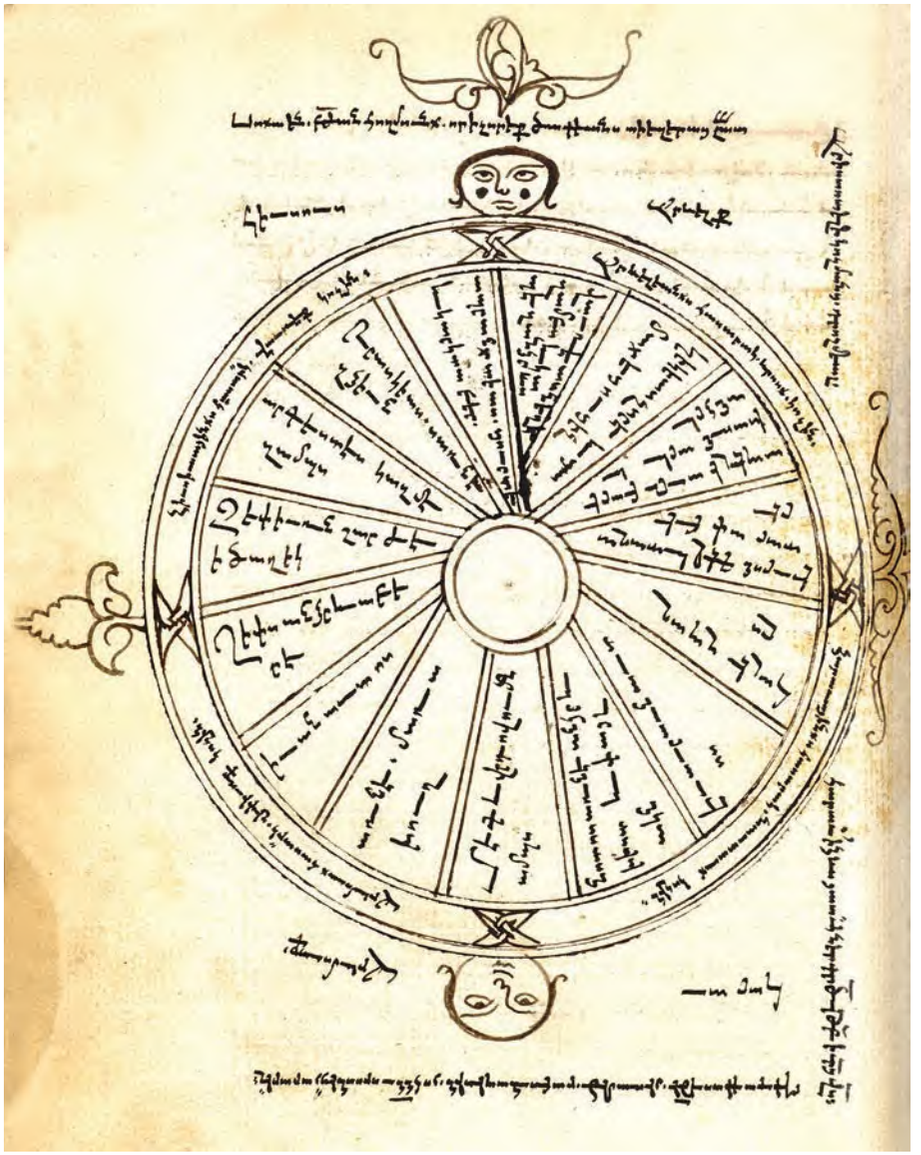


Fig. 1.20 – MM-1770, 388b. Wind rose. 1589.

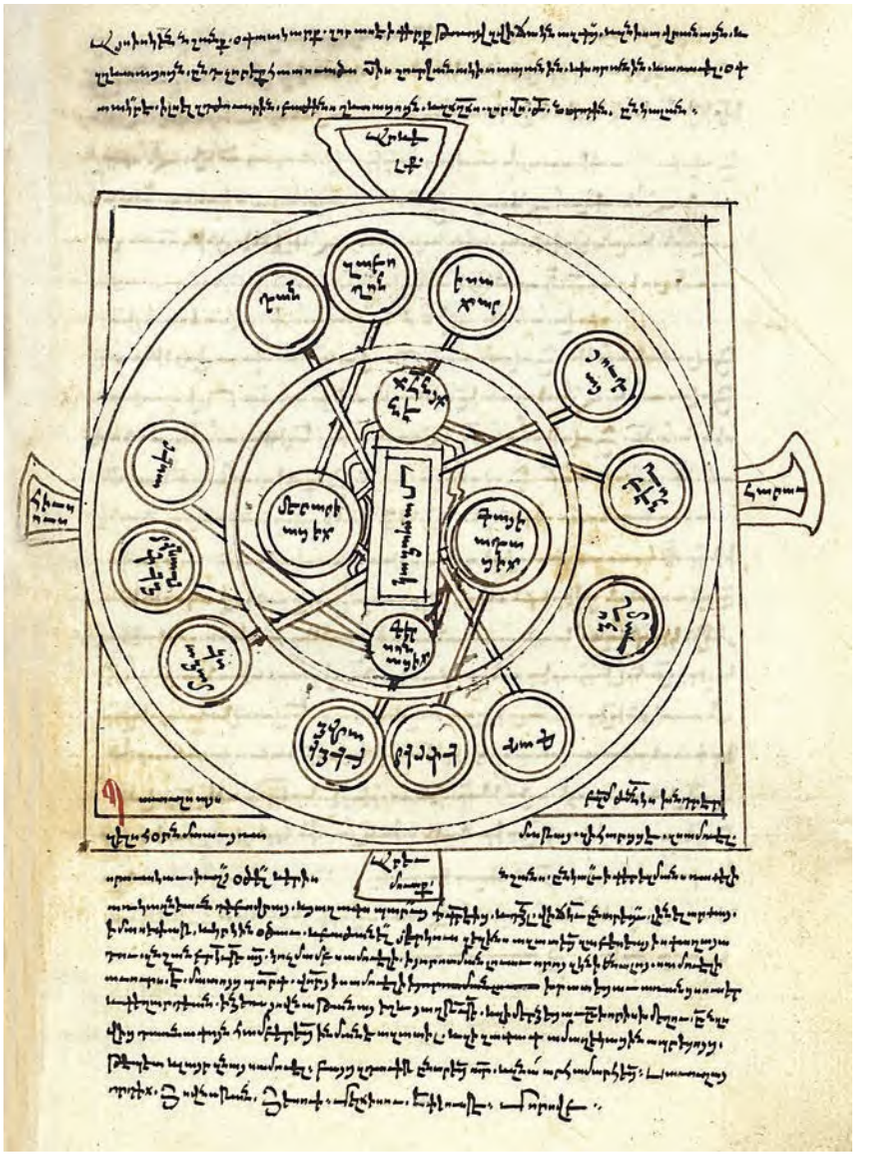


Fig. 1.21 – MM-1770, 391a. Ark of the Covenant. 1589.

This wind rose is shown with the directions of the four winds, their names and characteristics. The accompanying texts read as follows:

Top text, extending downward at the end*: According to Aristotle, these are the four important winds of the universe, as shown.*

Lower vertical text: - *The south is depicted in the manner seen.*

Lower horizontal text: *Made easy by the intervention of the Master Rabbi Johan of Voroten.*

The translation of the text in the above image is:

These are the important signs, written in the Book of Numbers: the situation of the nations, the location of their tents. The four parts of the world surrounding the Ark of the Covenant, and the Tabernacle, according to the Levites. It is important to know about the difficult journey of the Levites and the names of those cities which accepted the Son of God.

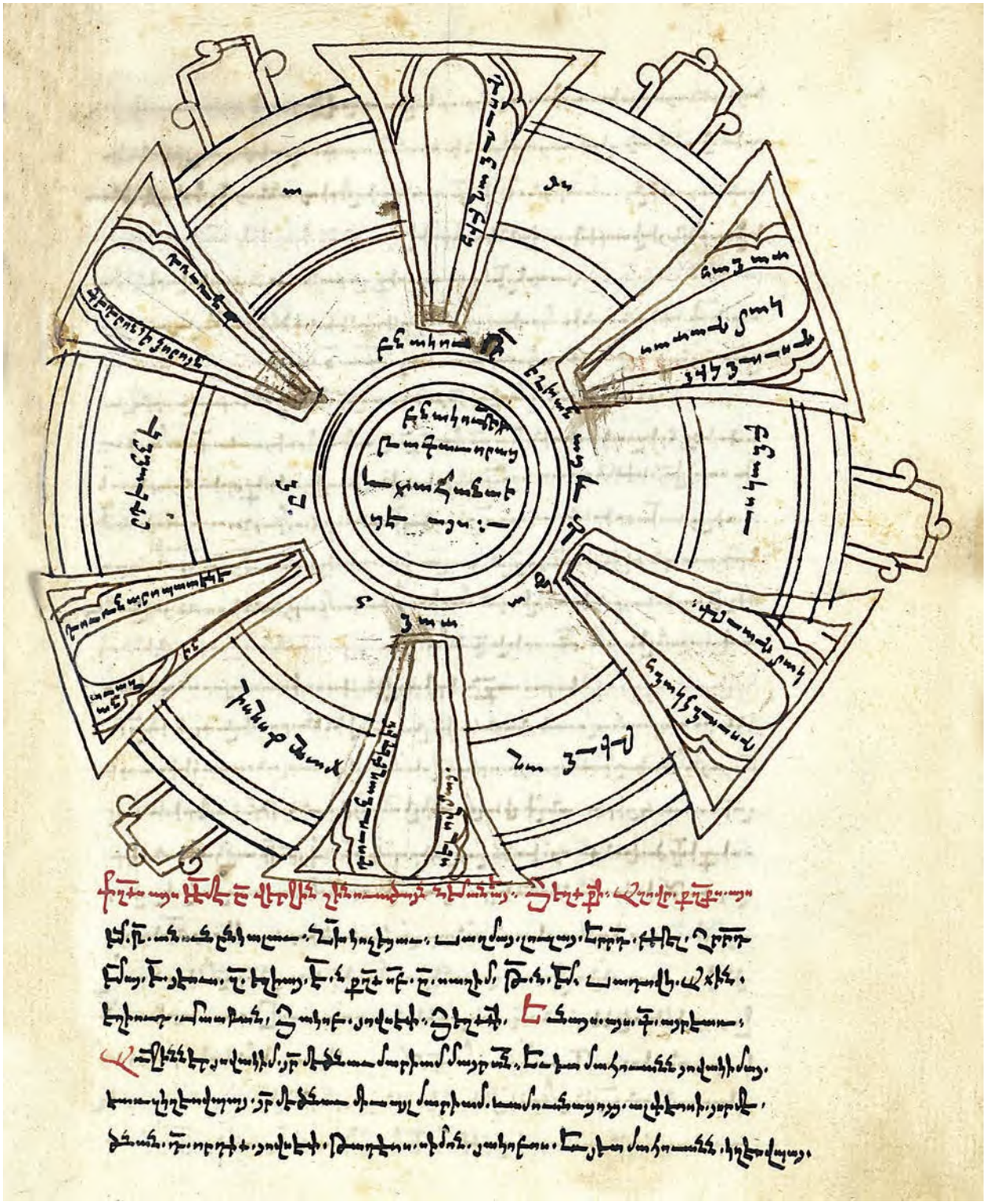


Fig. 1.22 – MM-1770, 392a. The gates of Jerusalem. 1589.

The image of Fig. 1.22 depicts the city of Jerusalem, with its six main gates, bearing their names.

The text below the map provides some historical knowledge about the past of the city. The translation reads:

According to Jesus's brothers in Azov, the city of Jerusalem was later reconstructed according to the plan provided by Himane.

Altogether, Jerusalem had had nine names. First it was named Salma, then Lusa, then Bethel, then Jerusalemma, the fifth name was Eus, the sixth: Elijah, the seventh: the Holy City, the eighth: Salem, and then Jerusalem.

The six brothers of Jesus were from three different fathers. The first was Joachim, during whose time Mary bore Jesus. After the death of Joachim, Mary married Cleopa and after him she married Alfeus, from whom Mary bore her other four sons.

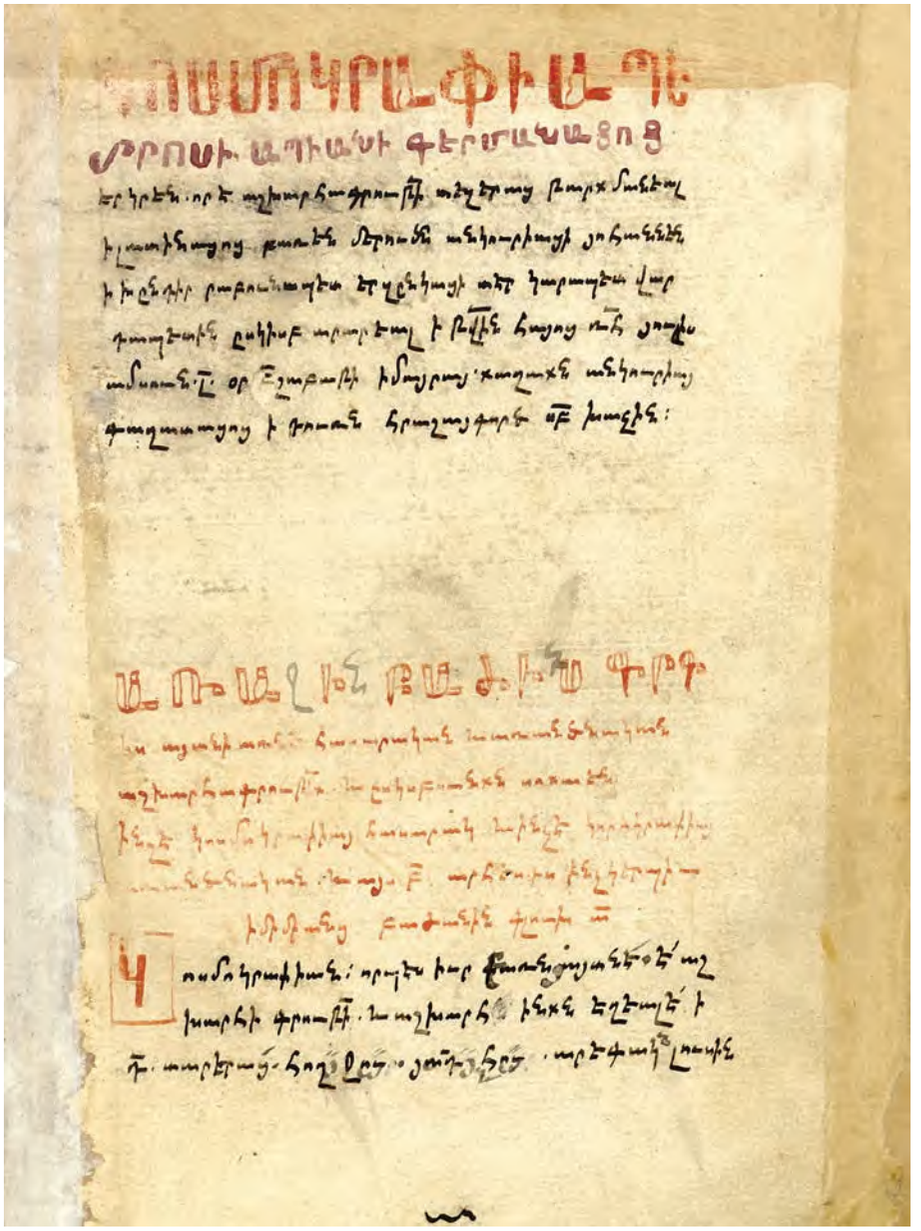


Fig. 1.23 – MM-1780, 302a. The title page of Cosmography. 1617.



Fig. 1.24 – Appianus' "Cosmographia", source of the MM-1780 manuscript.

Translation of the above title page is as follows:

This is the Cosmography of the German Petrus Appianus, which is the geography of the cosmos, translated from Latin to Armenian by Hovhannes Ankyuretsi, at the request of Father Karapet Yerznkatsi, on Monday the 30th of July 1621, in Ankyura, capital of the Galatians, in the Church of the Holy Cross.

The first part of the book is about general and specific geography, based on the principles of general and specific cosmographies and the differences between the two.

Chapter A – Cosmography (as the word specifies) is a writing about the world, which in turn has four constituent parts, these being the Earth, Air, Water and Fire, as well as the Sun and the Moon.

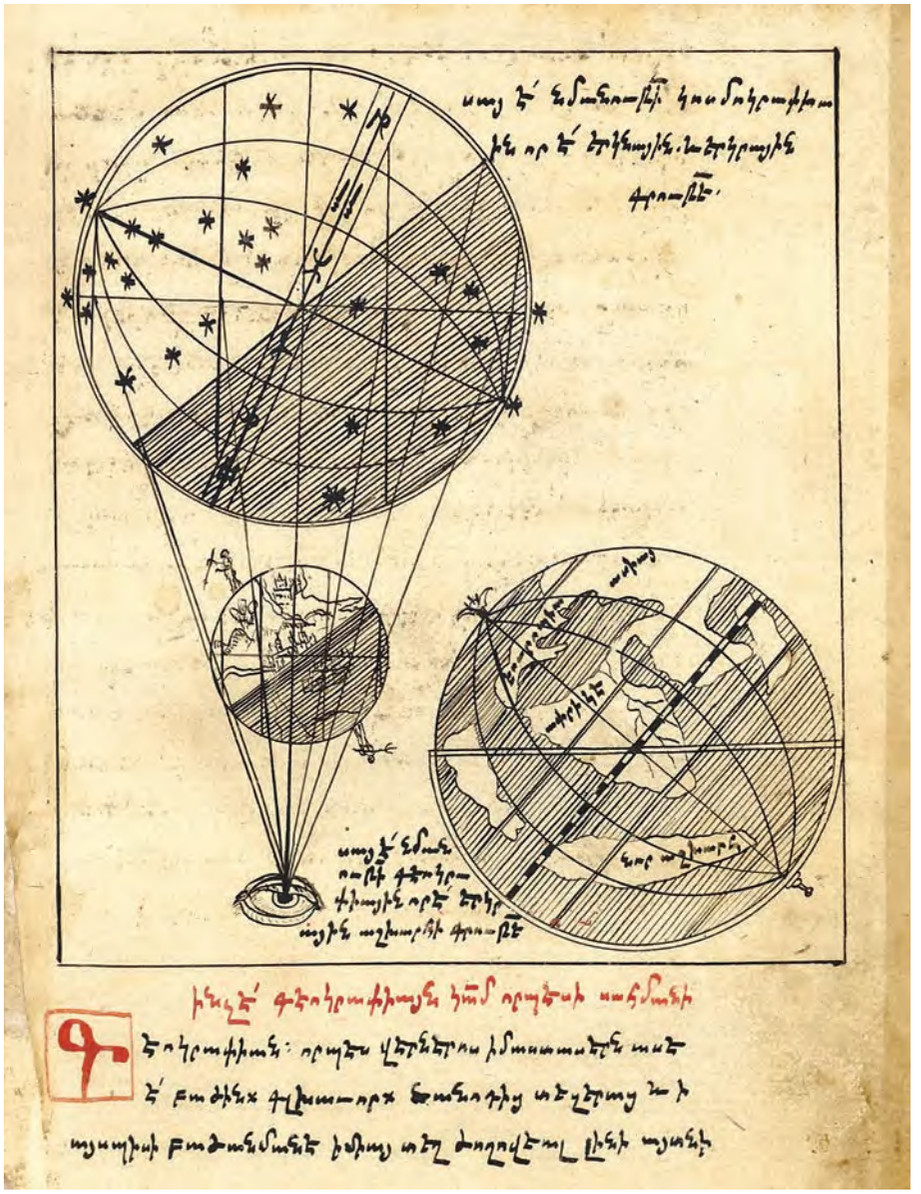


Fig. 1.25 – MM-1780, 303a. The positions of the stars in the heavens. 1617.

Top description inside the inner frame of Fig. 1.25, states:
This is cosmography, which is the earthly and heavenly knowledge of geography.

Bottom description inside the inner frame of Fig. 1.25 states:
This is the geographical presentation of the image of the earth and the world.



Fig. 1.26 – MM-1780, 303b. The earth and an onlooker. 1617.

The text below the image 1.26 states the following:
What is chorography which is but a sort of geography.

As claimed by Venerus, chorography of any chosen location explains in detail its place or location on the earth, which needs to be explained and perhaps shown by a drawing.

The text at the bottom of page 303b states the following :

[in red:] What is geography and what are its limitations?
As Venerus claims, Geography is the knowledge of the parts and regions of the universe, which is arranged such that on one image it represents the whole world and the lands thereon.

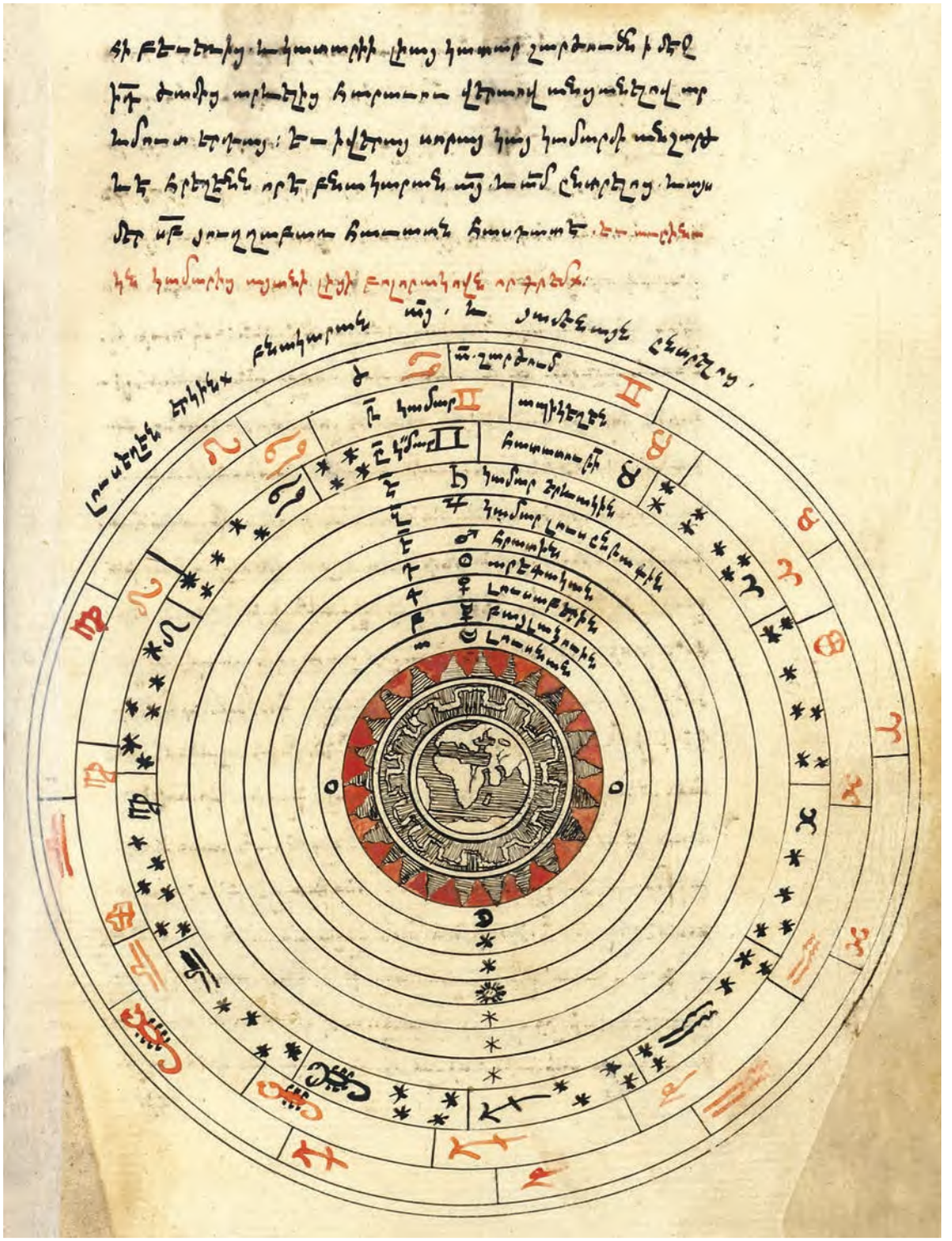


Fig. 1.27 – MM-1780, 305a. 1617. Orbits of the stars and the sky around the earth.

This is a sample of the known World [Universe] represented by the sky, in the shape of concentric circles.

The narrow inner orbits are those of the planets, including their signs, which, in the following sequence, are all shown to be in orbit around the Earth:

- *Earth, at the centre*
- *The Moon (innermost)*
- *Mercury*
- *Venus*
- *The Sun*
- *Mars*
- *Jupiter*
- *Saturn (outermost)*

The three outer circles of the image show the belt of the stars, a glass dome, and the signs of the Zodiac. Directly above the outer circle is the phrase: *illuminated sky, the abode of God and those chosen by Him.*

The text related to this map is mainly set out on the previous page but continues at the top of this page. It is translated as follows:

The circle outside Saturn contains the stars known as the "glass", watery sky. This is followed by the tenth arch, known as the First Movement, surrounding the World from all sides, completing its travel from east to west, via south, within a period of 24 hours. Outside all of these there exists a fixed fiery arch, which is the abode of God and all those chosen by Him. This is confirmed by our orthodox faith.

This is a Geocentric representation, implied by the scriptures and confirmed by the edicts and instructions of the holy fathers.

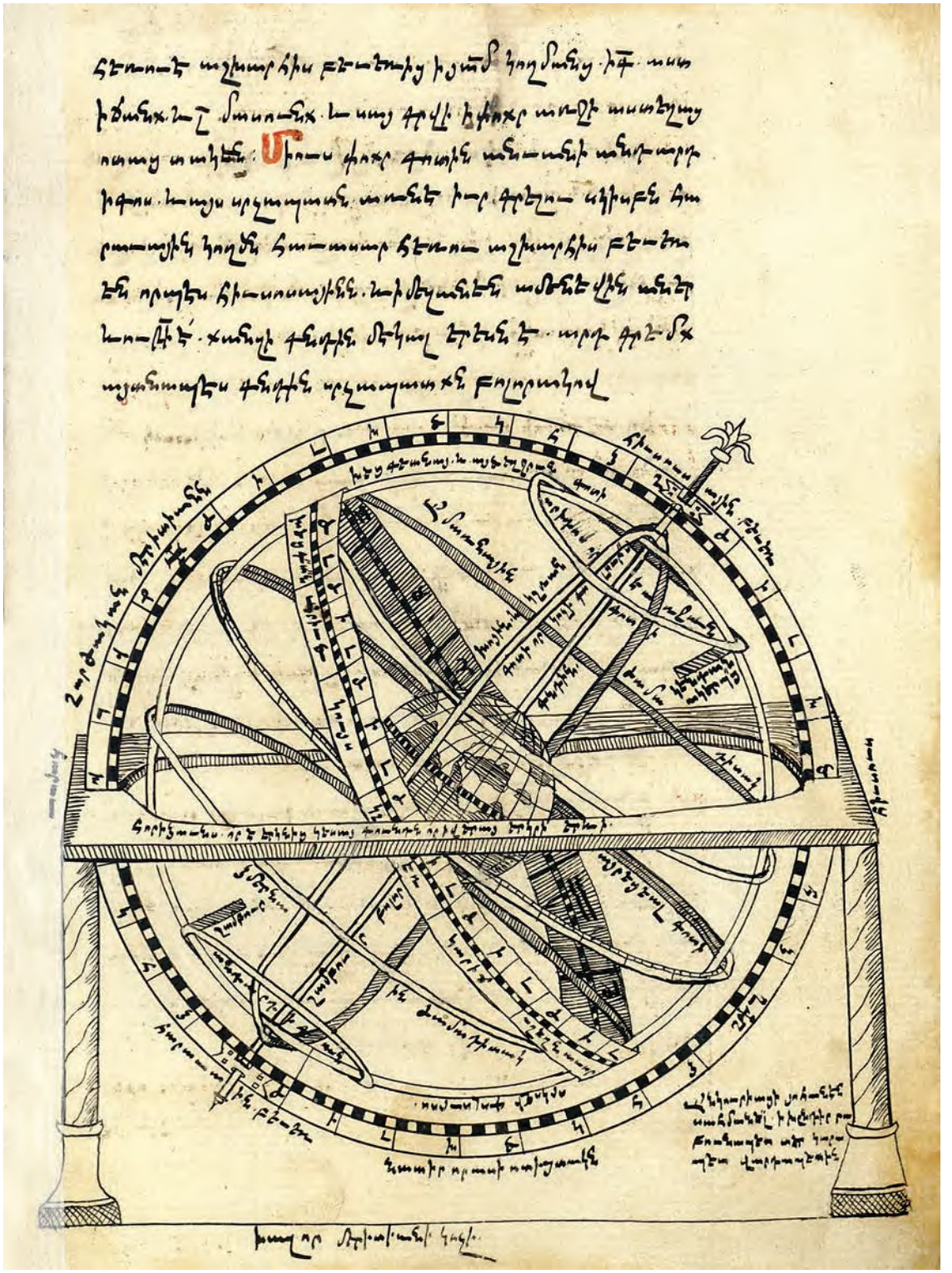


Fig. 1.28 – MM-1780, 307a. Model of the Universe. 1617.

On this image, the text above the presentation of the solar system is translated as follows:

The smaller belt is named Andardicos [Antarctica]. On the map this is shown next to the South Pole and is further away from the other, Northern Pole. On the image we are unable to see it, since it is located at the other side of the Globe of the Earth. Here we represent the real world, surrounding the Earth, accompanied by the description of the geographic cardinal directions and coordinates, climatic zones and other informative descriptions.

The text on the horizontal surface, with an oval shaped cut-out, into which the whole globe is inserted, states:

This line placed in the middle is called the Equator.

The text at the bottom right corner of the page says:

This arrangement has been set out by Johannes of Ankyura, as instructed by the Master Teacher Karapet Vartabed.

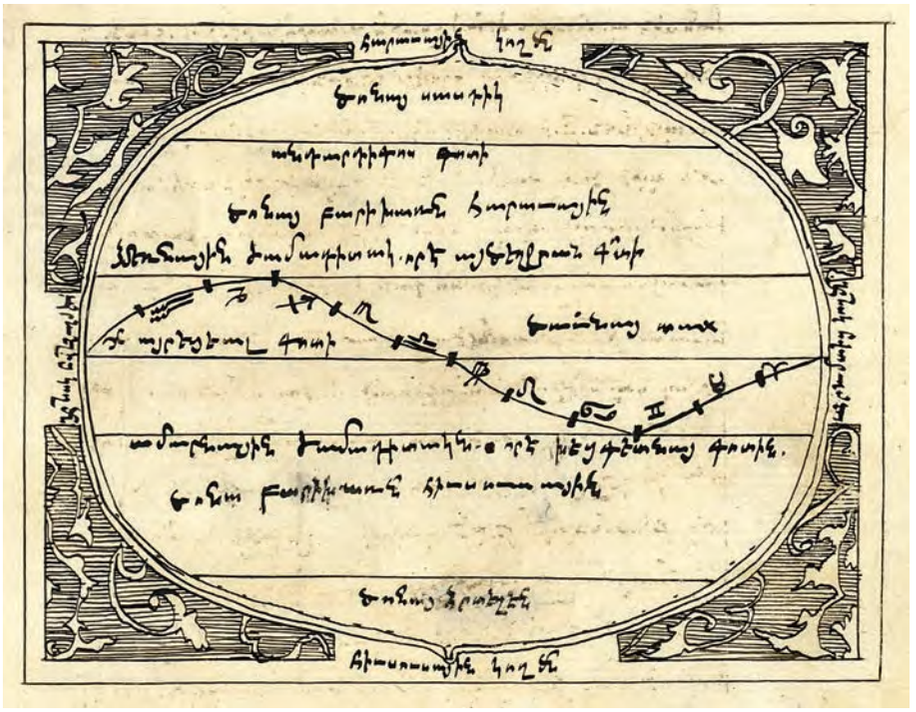


Fig. 1.29 – MM-1780, 308a. The five climatic zones. 1617.

Islamic cartography considers the climatic zones as important divisions of the world. These are generally divided into five, seven or even into nine zones. On these two maps, taken from the fifth century Roman historian Ambrosius Thedosius Macrobius' work *Strunalia,* five- and nine-zone alternatives are shown.

The first zonal map from the abovementioned manuscript can be seen in Fig. 1.28, where the world is shown with South at the top, divided into five climatic zones:

- *Southern Extreme (Antarctic)*
- *Southern Temperate Wintertime, zone of Capricorn*
- *Central Hot zone (scorched zone; the Equator divides it into two sub-divisions)*
- *Northern Temperate Summertime, zone of the Cancer*
- *Northern Frigid*

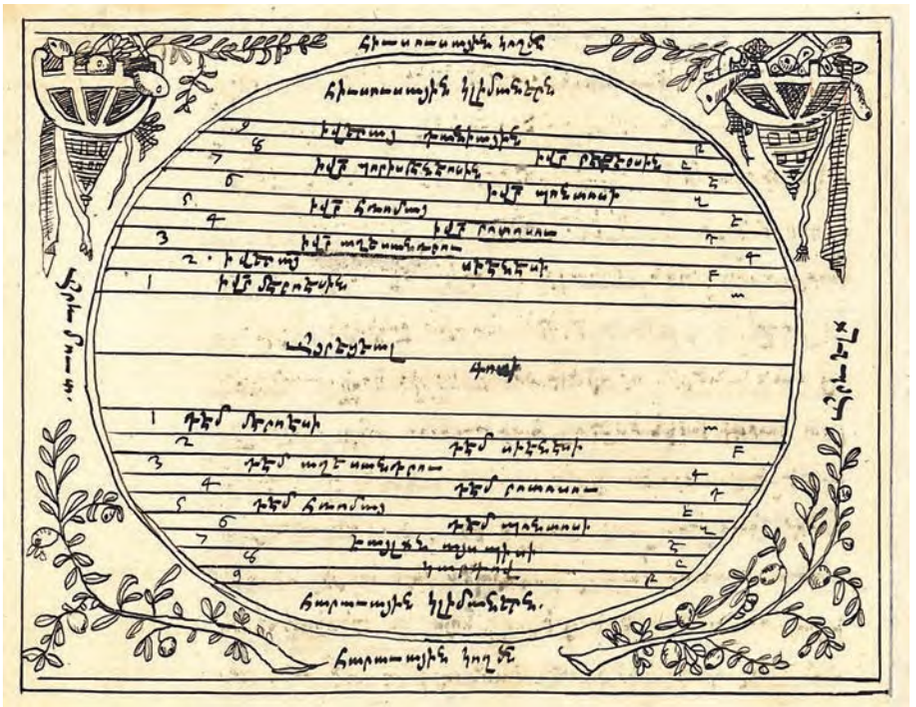


Fig. 1.30 – MM-1780, 310b. A map of the 2x9 climatic zones. 1617.

On this alternative, the zones are nine per hemisphere, repeated. Each has been given a geographic toponym. Here north is placed at the top of the map.

Septerio (North polar region)
9. *Daniae*
8. *Ripheos* (mountain range in north-east Russia)
7. *Boristhenes* (River Dnieper)
6. *Pontus* (Black Sea)
5. *Rhoma* (Rome)
4. *Rhodostus* (Rhodes)
3. *Alexandrias* (Alexandria)
2. *Seyene* (Aswan)
1. *Meroe* (an island in southern Nile)

Aequi Noctialis (central scorched zone, where night and day are of equal length).

These are repeated in the southern hemisphere in the lower half of the circle, ending with the Southern extreme climatic zone.

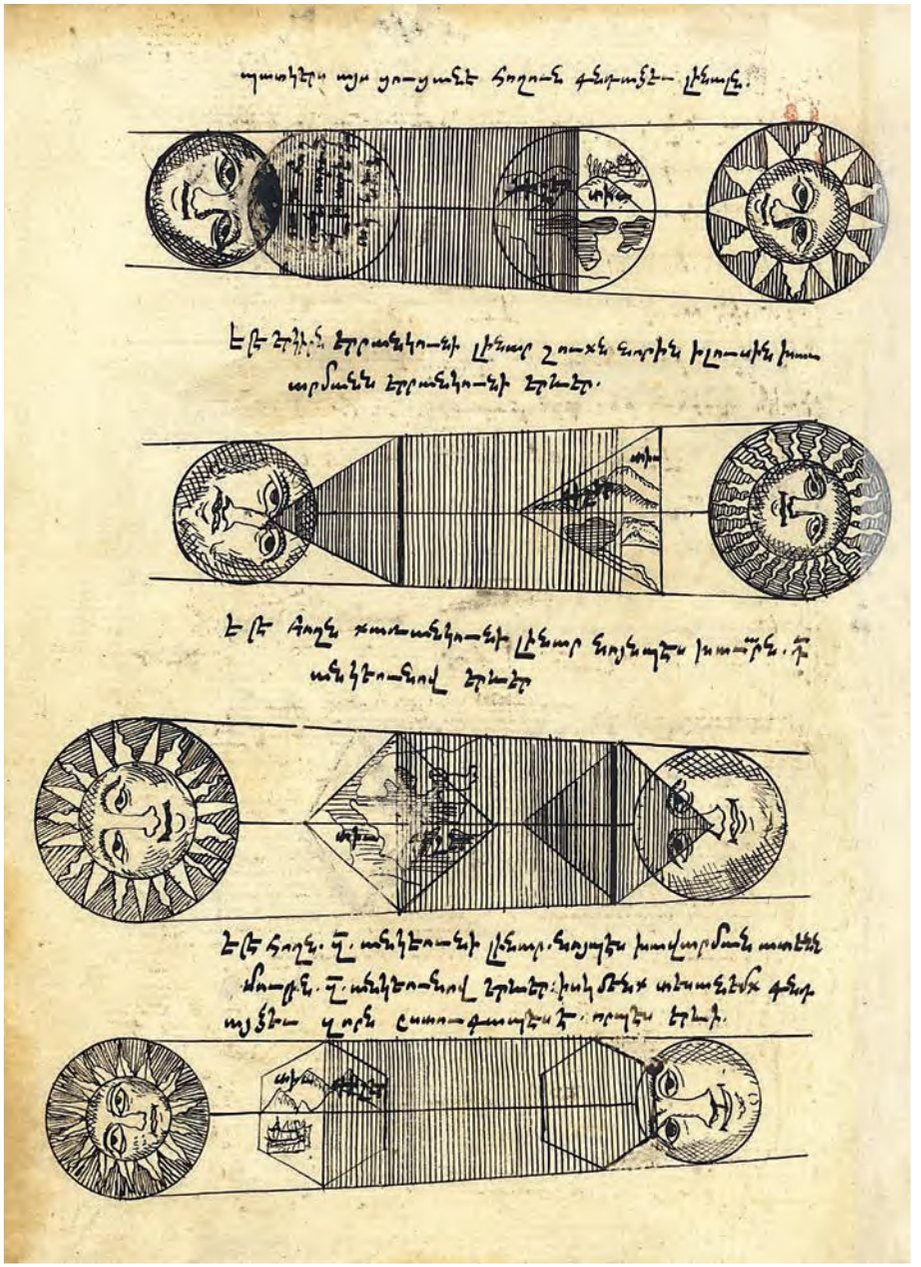


Fig. 1.31 – MM-1780, 308b. Shape of the earth confirmed by its shadows. 1617.

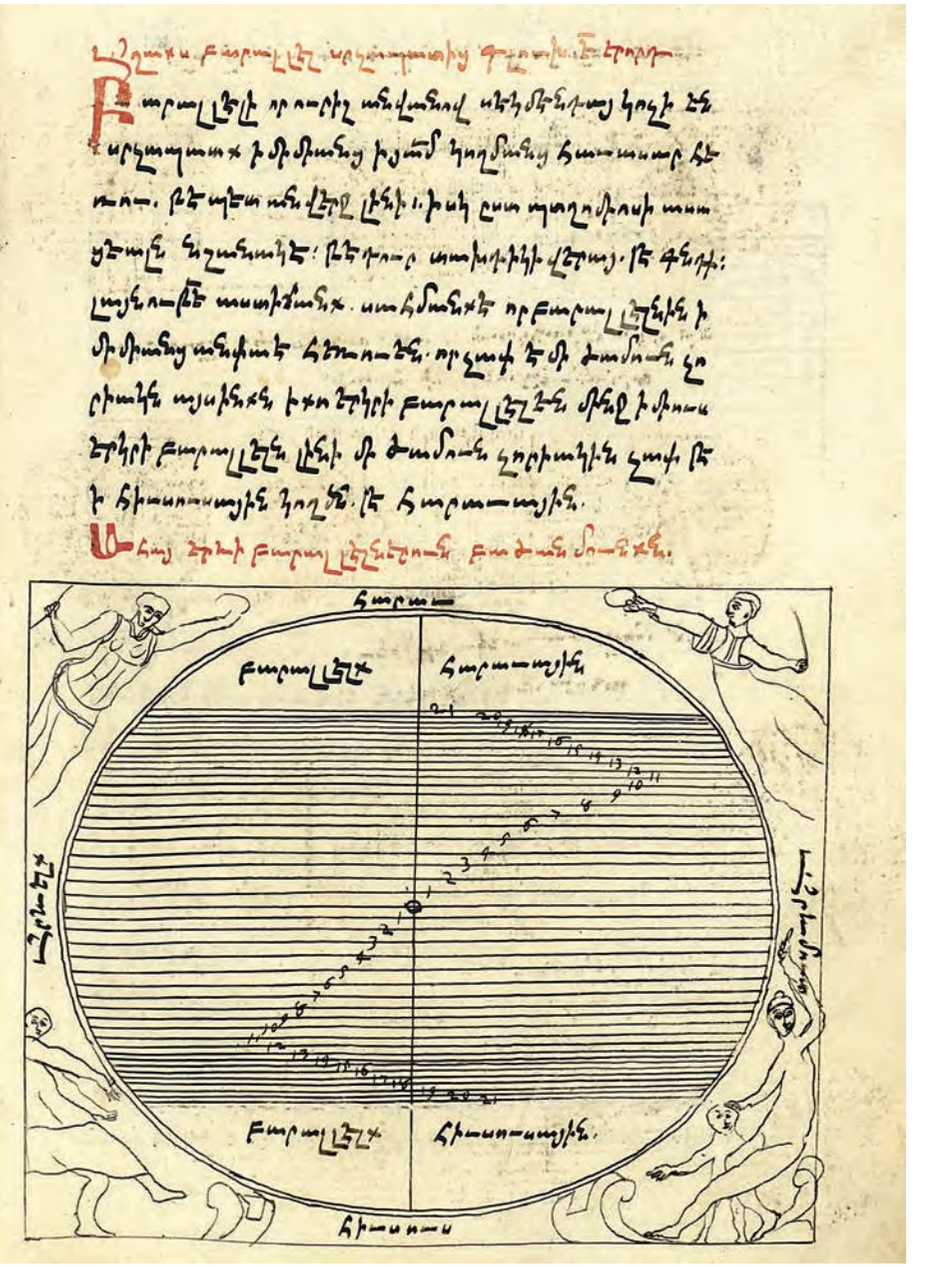


Fig. 1.32 – MM-1780, 309a. The earth divided by latitude lines. 1617.

The drawing of Fig. 1.31 indicates how the shadow of the Earth would appear on the Moon. If the Earth had different shapes such as triangular, square or hexagonal, then the shadow of the Earth on the moon would be in the shapes shown in the drawing. Thus concluding that the shadow of the Earth on the moon proves that the Earth could only be spherical.

The drawing on page 309a shows how equidistant parallel lines drawn on the spherical earth would appear when drawn on a flat sheet of paper. Although the parallel lines are equidistant, on flat paper these would be close to each other near the poles and wider apart in the central region of the map.

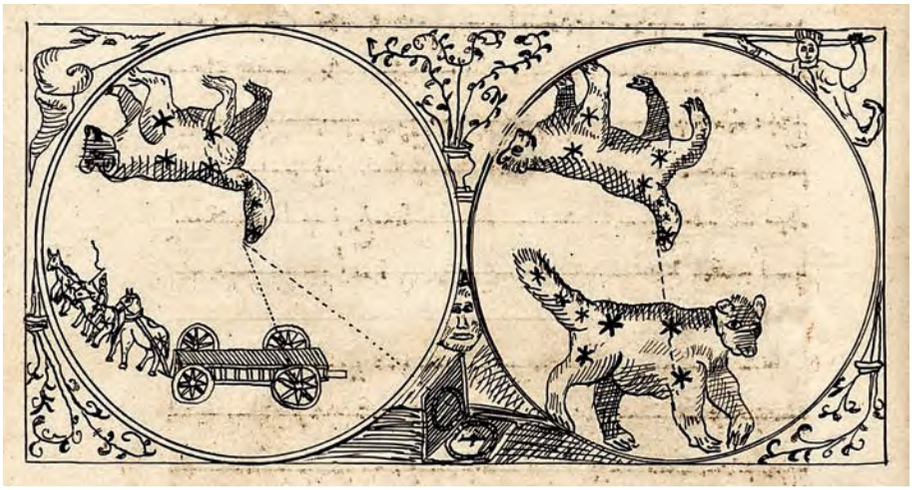


Fig. 1.33 – MM-1780, 315b. Ursa Major constellation. 1617.

The text on the following page describes how to locate Ursa Major and minor constellations, as well as the Northern Star.

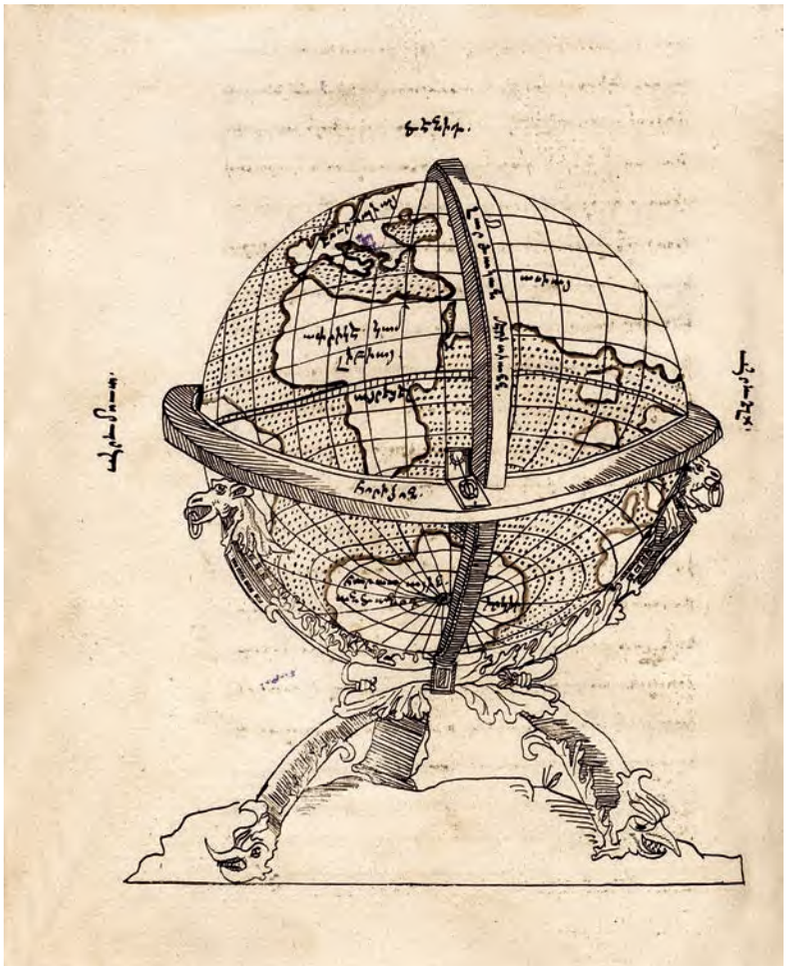


Fig. 1.34 - MM-1780, 330b. The globe, looking from the south. 1617.

This is the globe on a pedestal, as described and drawn by Appianus. The outline of South America can be seen on the left, but the territory was not yet fully explored.

The four cardinal directions are indicated, having north at the top.

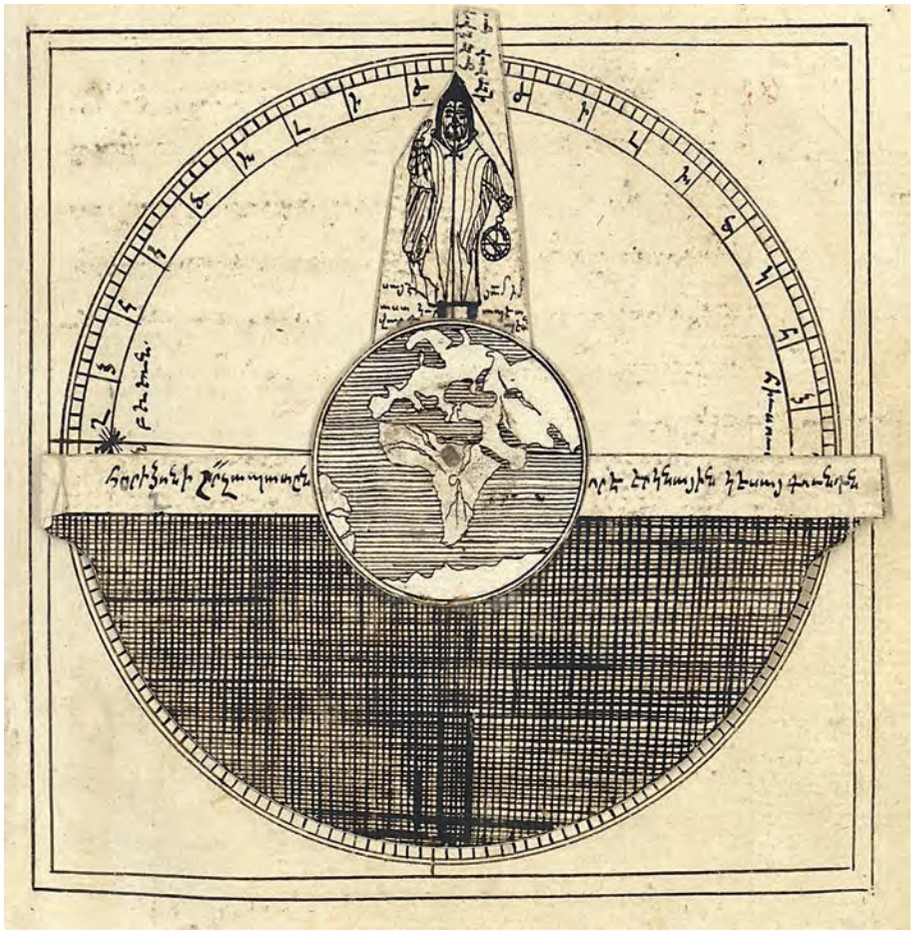


Fig. 1.35 – MM-1780, 317a. Angel measuring tool. 1617.

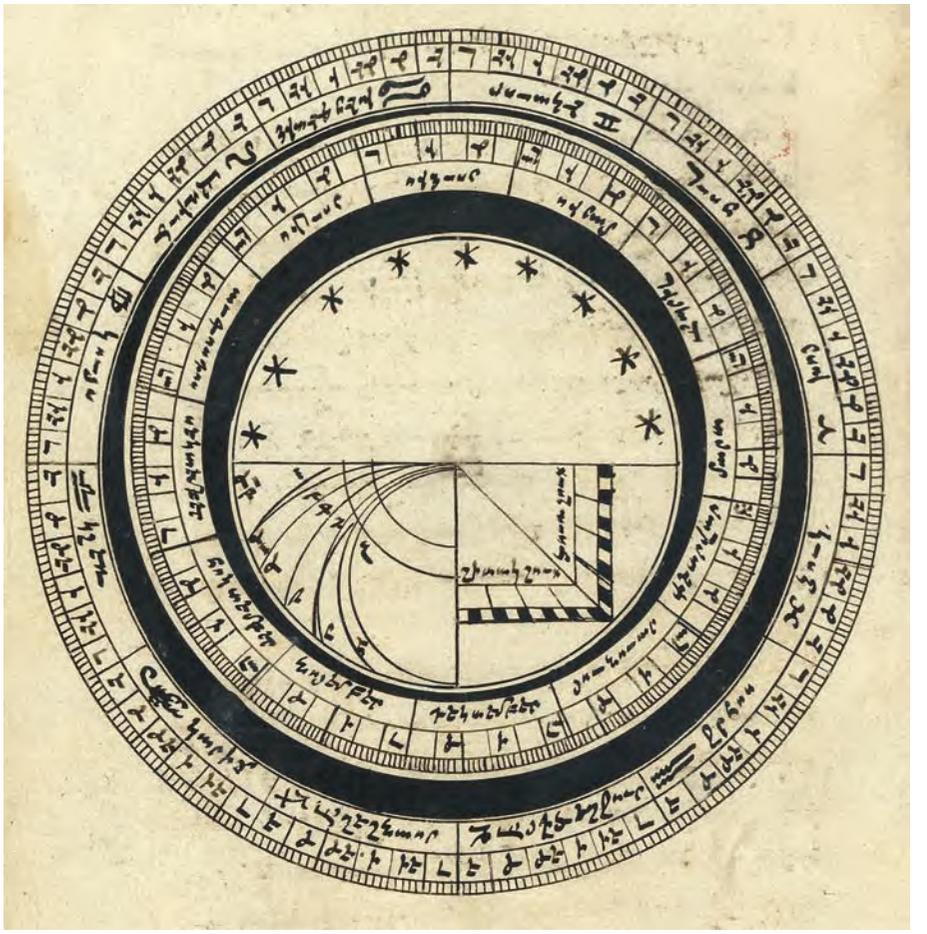


Fig. 1.36 – MM-1780, 314b. Lunar phase calculator. 1617.

In the image in Fig. 1.35 some sort of rotating horizon device is depicted, where the centre is occupied by the Earth and on it stands a priest, with an astrolabe in his hands. The semicircle is graduated with the letters of the Armenian alphabet, which denote the numbers 10, 20, 30 etc. up to 90. These letters appear on both sides of the vertical figure.



The priest standing on the North Pole appears to have some sort of astrolabe in his hand.

This inscription says: *This is the sage Karapet Vartabed.*

The inscription on page 314a (appearing on the page preceding the figure) states the following:

The circle in [Fig. 1.36] is said to be a lunar phase calculator. The outer circle is the annual calendar, with the months divided into 30 days indicated by the Armenian alphabet letters of ե, ժ, ժե, ի, իե and լ, representing the numbers 5, 10, 15, 20, 25 and 30. The next circle is occupied by the signs and symbols of the Zodiac. The circle inside the wider black belt is again the annual calendar with its 360 day divisions, again with the relevant letters in lieu of numbers. The smaller circle states the names of the months in Armenian.

The inner portion of the image is divided into an upper and lower section, representing the night and day sky. The day sky has been divided into the 12 hours of the day, highlighted by the shadow created by the Sun with arcs of circles.



Fig. 1.37 – MM-1780, 320a. Finding and measuring geographical coordinates. 1617.

In the centre of the image on the left, the *Fortunate islands* are shown in the middle of the Atlantic Ocean. On the island there is the miniature of a man who is measuring the angle between a star and the moon.

Below the main circle there is the drawing of a priest looking for the geographical coordinates of his location. Above the measuring instrument the text states:

This is the sage Karapet Vartabed.

Translation of the text at the bottom of the page is as follows:

If you want to know the longitude of a place or town which is unknown to you, first try to find it in the astrological tables, where you should find the correct path of the moon at the given time, or its correct elevation, as it is shown in the tables.

Alternatively, you should locate a known star, not very far from the Ecliptic line, which usually is near the orbit of the moon, either before or after it. Now you should try to find the distance between the moon's orbit and that of the known star. From this calculation, you should be able to find your location.

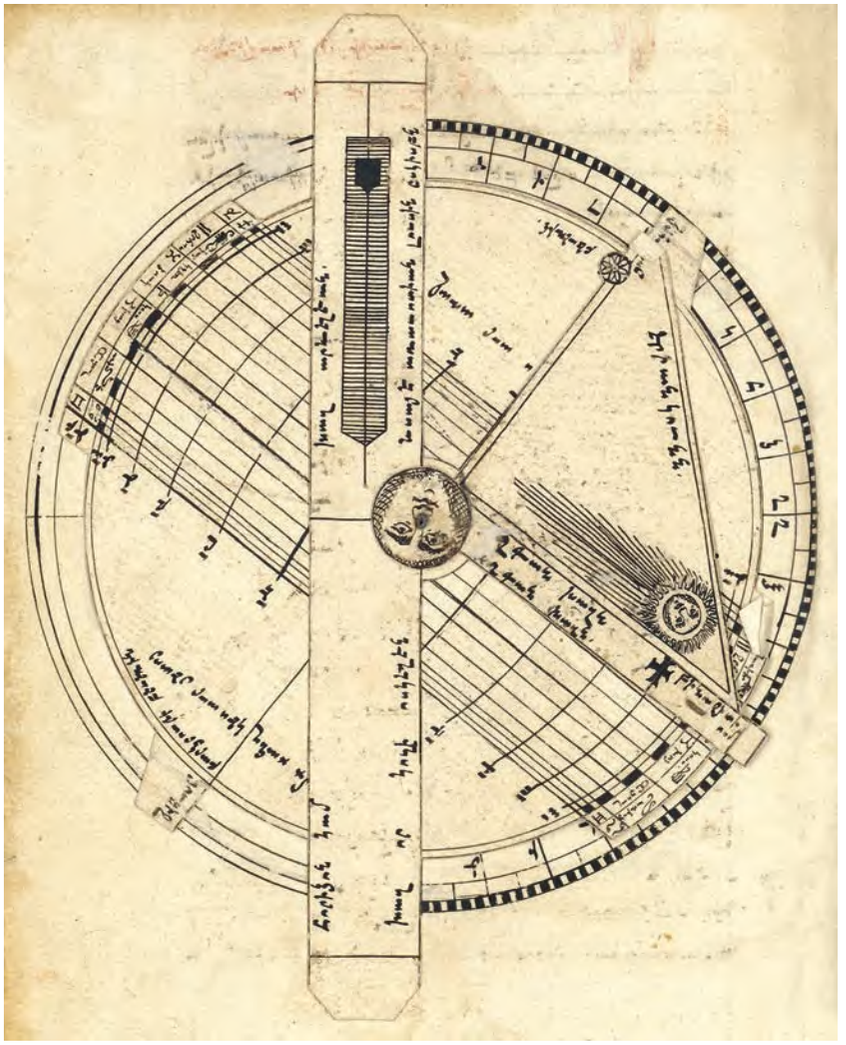


Fig. 1.38 – MM-1780, 317b. Simple Astrolabe 1617.



Fig. 1.39 – MM-1780, 323a. The eastern Hemisphere. 1617.

Fig. 1.38 seems to be a complicated calculation device, with rotating central ruler with a longitudinal parallel lines scale. The long vertical ruler, described as the *Eastern or Golden Line*, has a graduated lunar phase indicator. The region above the longitude lines indicates *today* and the region below is t*omorrow*.

The orb shown in Fig. 1.39 is the eastern hemisphere, with its three continents and the three main seas and oceans. The Mediterranean Sea here is named the *White Sea*, the Atlantic Ocean is named the *Ethiopian Ocean* and the eastern one is named the *Indian Ocean*.

The inscription on the top of the orb in Fig.1.39 states:
This is the 12th chapter, describing the area of the Earth.

The text below it states:
The whole circle of the world is 360 degrees, here each degree is 41 Italian miles, 17 in German and 12 in Swedish miles.

The inscription inside the outer circles states:
The whole of the periphery of the Earth measures 5400 German miles, and 41,600 Italian miles.

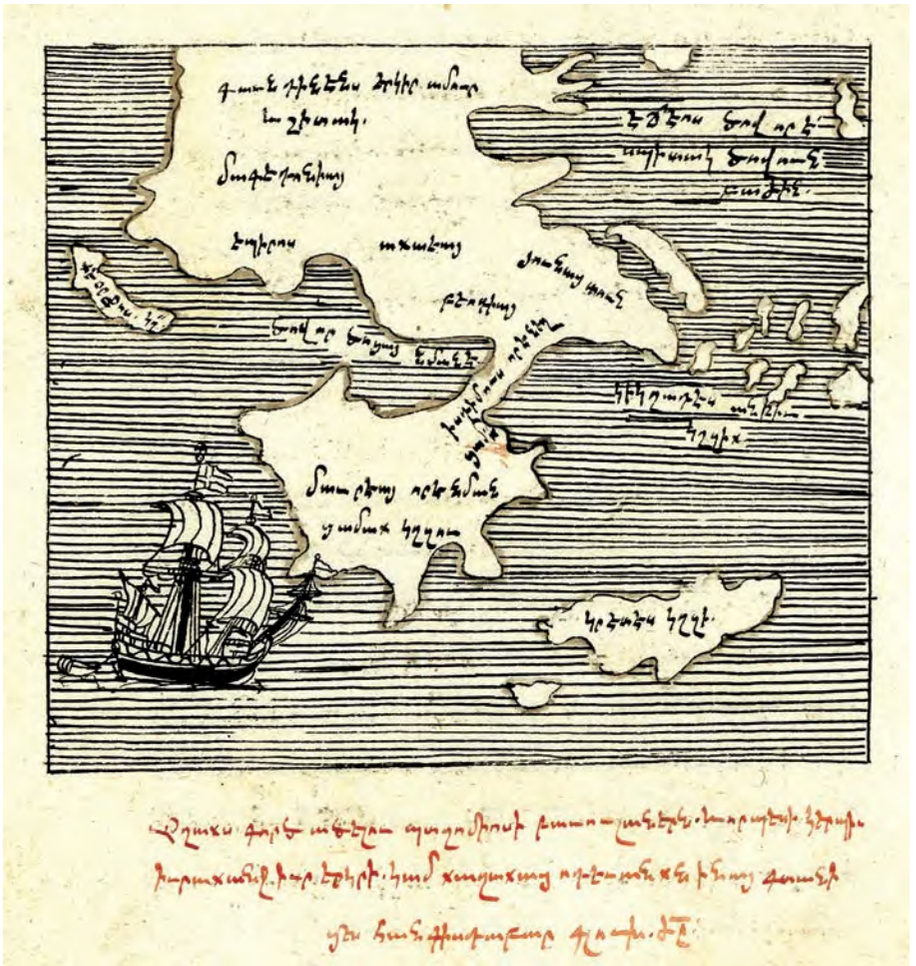


Fig. 1.40 – MM-1780, 340b. A typical map. 1617.

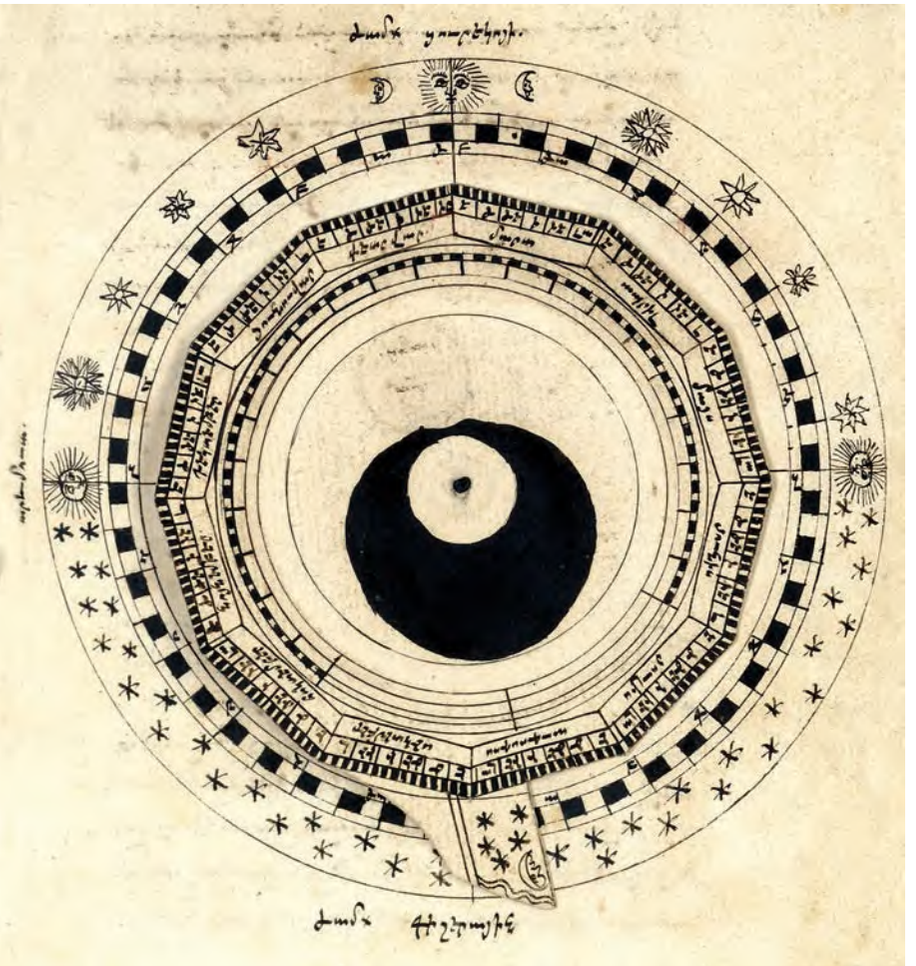


Fig. 1.41 – MM-1780, 394a. A lunar clock. 1617.

The figure presents an imaginary typical map. The text below the map refers to the tables which are in Ptolemy's *Geographia*. Its translation is as follows:

Ptolemy's tables of toponyms help to find the location of a given country or town on the maps.

The text below describes this particular device as follows:

How to find out the time during days with the moon. First, find out the position of the brightest moon in the sky, using a compass. Note the apparent size of the moon, while checking whether the sun positioned to the right or left of the moon. Then use the moon pointer of the set on the time indicated on the periphery.

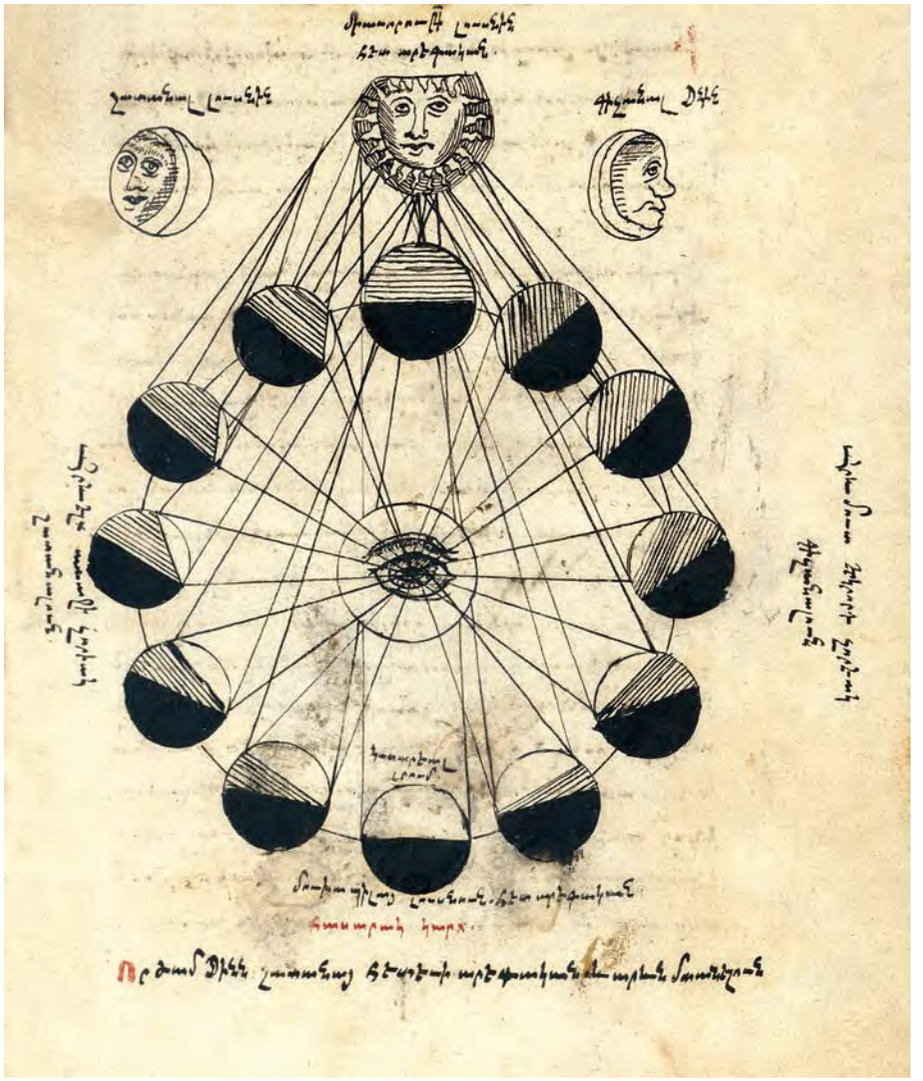


Fig. 1.42 – MM-1780, 395a. Phases of the moon. 1617.



Fig. 1.43 – MM-1780, 396a. Measuring angles. 1617.

In the centre of the Fig. 1.42 is the Earth and the multiple orbs represent the phases of the Moon as illuminated by the Sun. The clear areas on the Moon show the way it appears from the Earth.

The top image of Fig. 1.43 shows an angle-measuring device with a ratchet wheel, graduated with numbers in the Armenian alphabet. The image below it shows the detail of the ratchet wheel, used for measuring angles as shown in the image above.

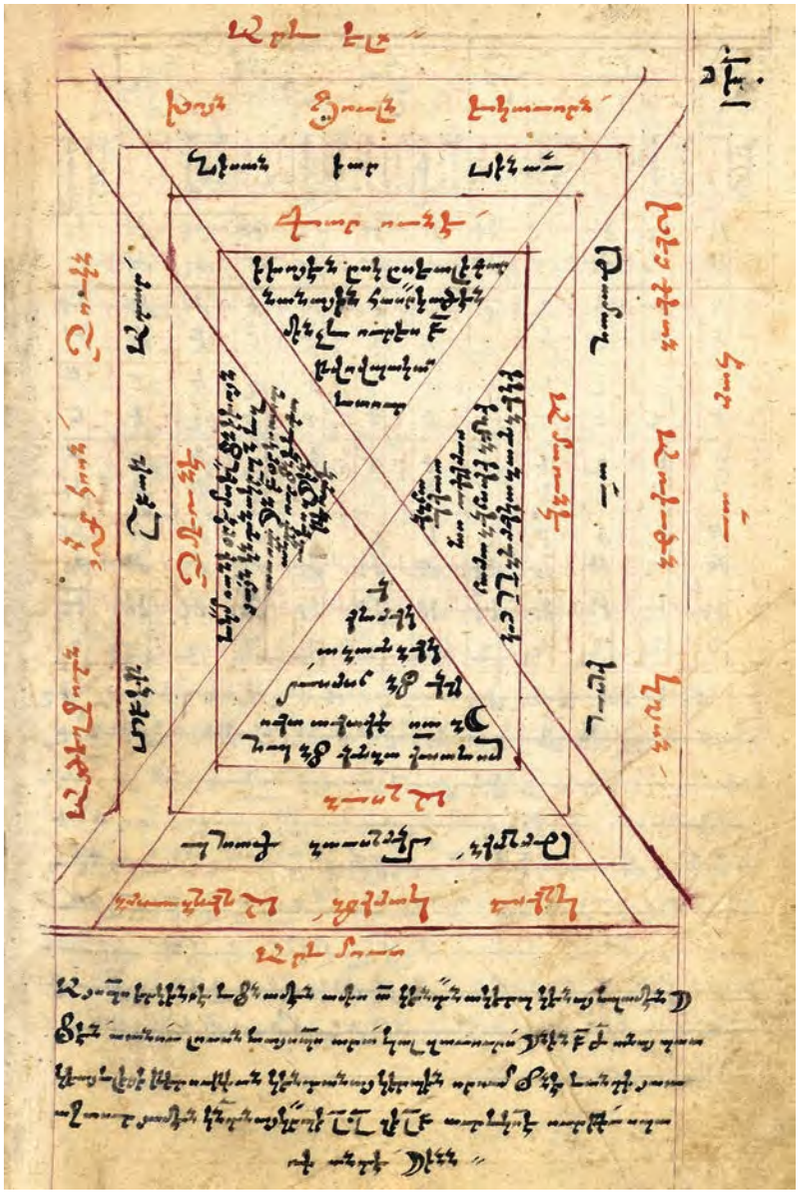


Fig. 1.44 – MM-8089, 140a. The Zodiac and the tribes. 1664.

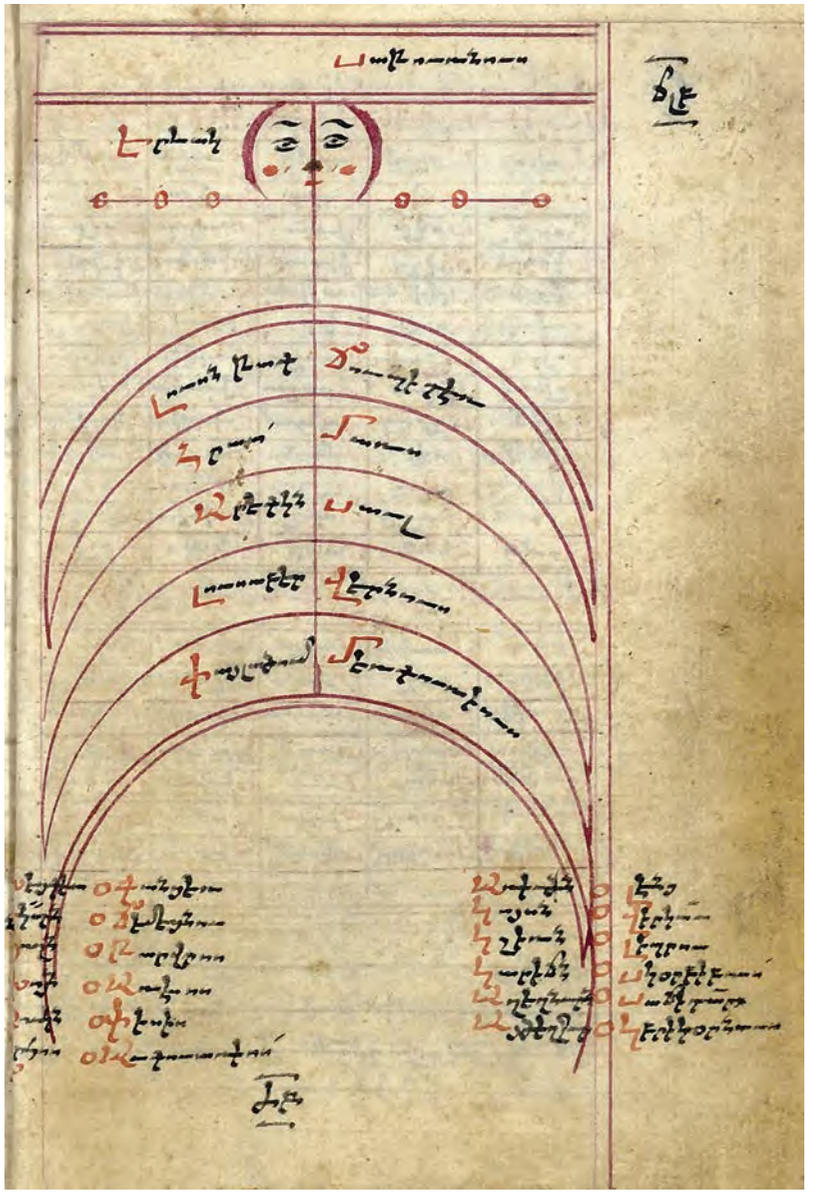


Fig. 1-45 – MM-8089, 132a. Planets and the Zodiac. 1664.

Manuscript MM-8089 is a collection of articles, calendars and geographical texts.

The text below the image of page 140a reads as follows:

This is how in the sky the Sun is found in one of the Zodiac signs and the Moon takes its light from the Sun. Take the lunar month, multiply by 12, and the signs shortcoming, where the sun revealed. Add 30 to the sign since it now is 32, the Moon is where the last digit indicates.

On page 132a above, we see a drawing depicting the signs of the Zodiac on vertical lines and the names of the planets on semicircles, both in Armenian and Latin. For details, see the text in Fig. 1.02.

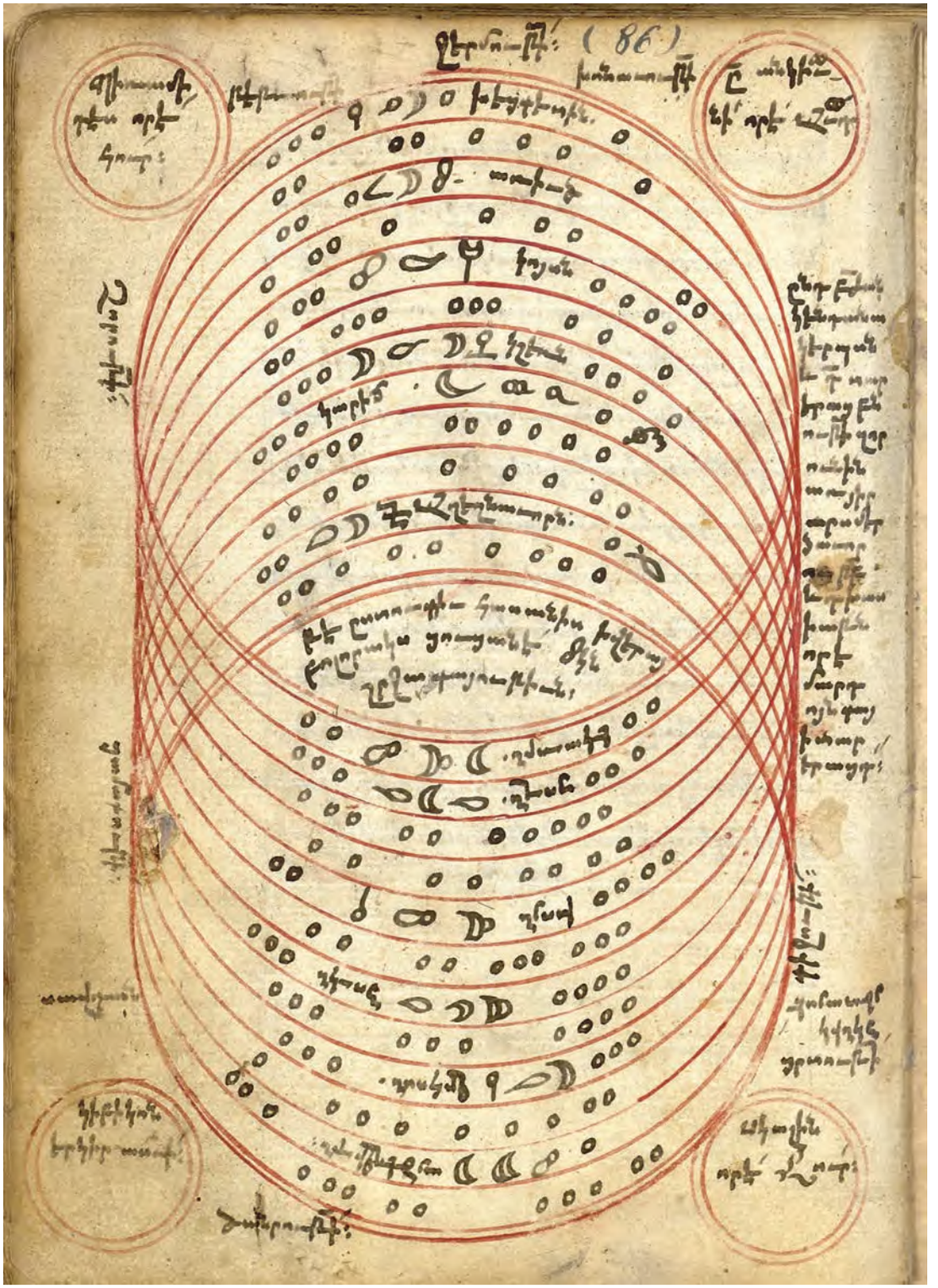


Fig. 1.46 – MM-6670, 043b. The Zodiac and the planets. 1671.

This manuscript includes articles on a variety of subjects, including a list of cities and an article on astronomy.

In the four corners we see the four basic elements as per the Greek mythology. These are at the top left: Fire, top right: Air, bottom left: Earth and bottom right: Water. These were considered to be the four basic elements of Greek belief, out of which everything in the world and the cosmos was made.

The cylindrical tube in the centre of the the drawing is divided into the 12 signs of the Zodiac, accompanied by the symbols of some stars, the planets, the Sun, presented as a circle with a touching ellipse, and the Moon, in the shape of a crescent.

The writing above and below the tube are the various natural extreme conditions, such as heat, humidity, lightness and weight. These conditions, together with the four basic elements, are supposed to form the four main characteristics of the human race.

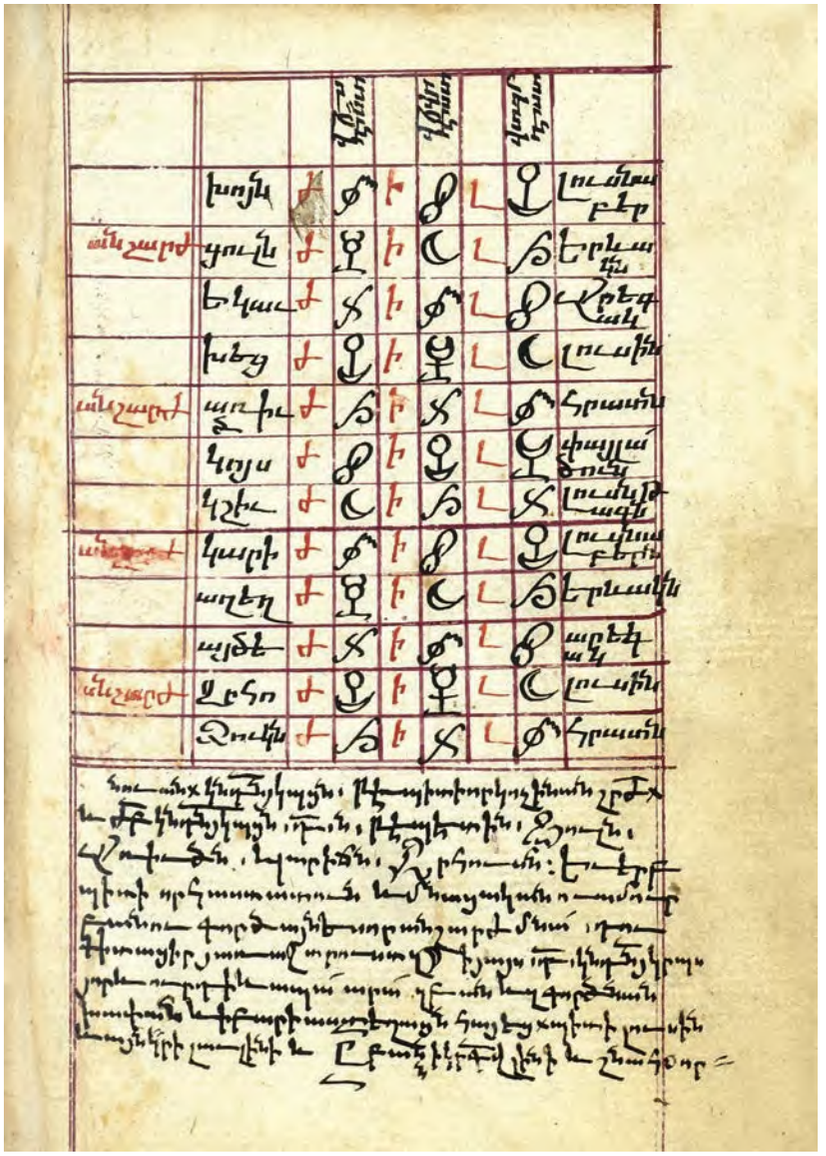


Fig. 1.47 – MM-1127, 105a, Table of Zodiac signs and the planets. Late 1600s.



Fig. 1.48 – MM-1127, 106a, Lunar eclipse table. Late 1600s.

The book contains various articles, including Areveltsi's Ashkharhatsuyts (Mirror of the World), an interpretation of the Psalms and a religious dictionary.

The description related to the table shown in Fig.1.47 translates as follows:

Some of the Zodiac signs are considered static. These are Taurus, Leo, Scorpio and Aquarius. If you want to start a successful and reliable career, note the positions of the signs of the Zodiac and the Moon. Only then take action watching the good stars and the Moon. Thus you will be successful.

Fig. 1.48 is a lunar eclipse calculator. The text reads:

Choose the segment showing the lunar eclipse. Take the year and deduct 761 from it and move the resulting figure to 12-12, leaving the first 12 behind. Start from Aries and see wherever the count stops. This is the actual date.

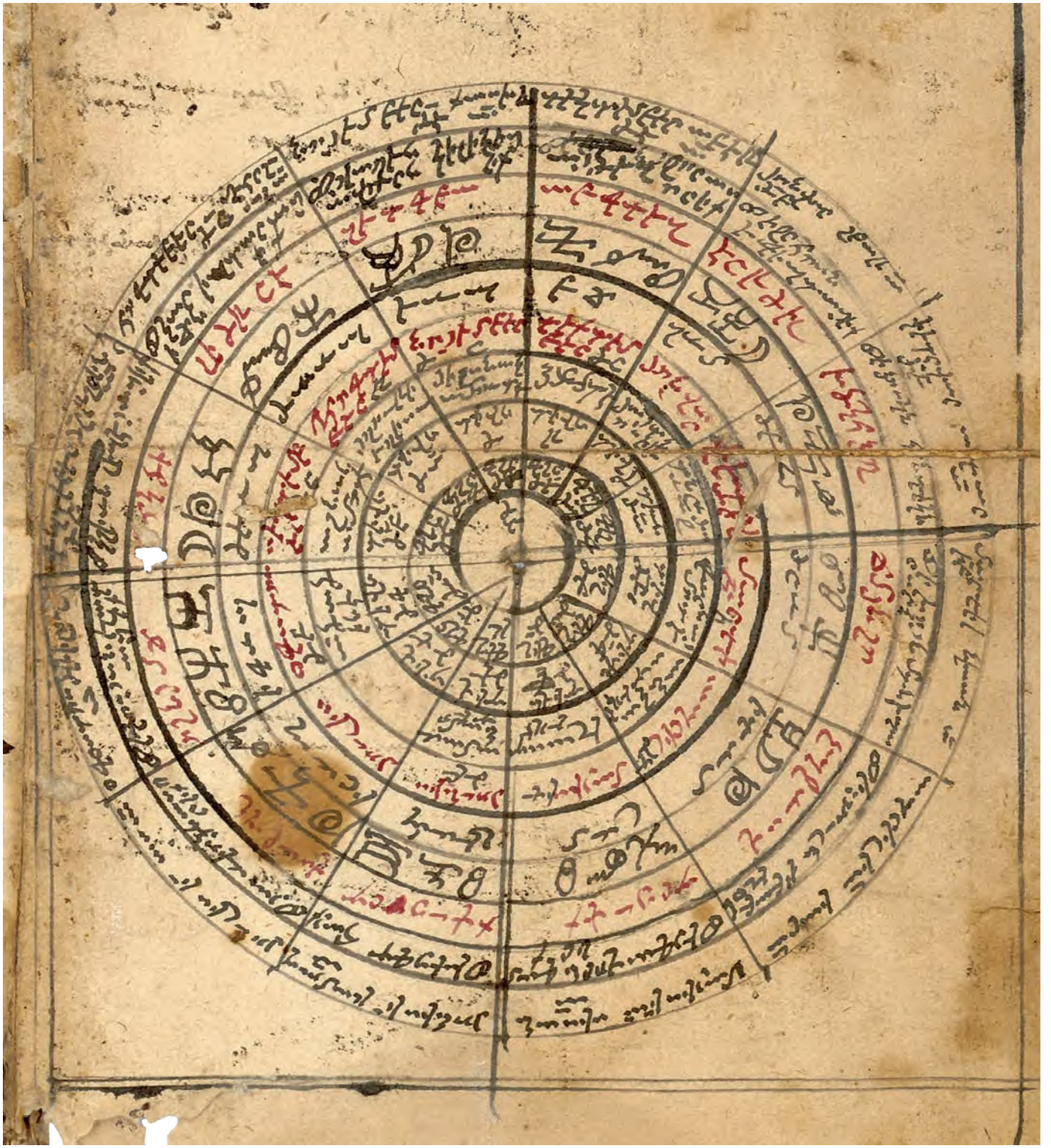


Fig. 1.49 - MM--9017, 185a. Circular table of astronomy. 1685.

The circle depicted in Fig.1.49 is an unusual one, and the texts on the previous five pages describe the conditions shown on the image and provide some information about them.

This manuscript contains many religious texts and speeches as well a singular chart with nine concentric circles, divided into segments.

The main circle contains nine concentric circles. The whole circle is then divided into twelve segments. Each segment has a title as shown below:

1. The outer circle is marked *Zodiac* (it shows the names of the months and their attributes).
2. The second circle is named *Degrees* (it shows some cities around the world).
3. The third circle is named *Parts* presented by figures denoted by the Armenian alphabet, as well as some symbols
4. The fourth circle is entitled *Belts*. (It contains signs of the planets.)
5. The fifth circle is named *Months*.
6. The sixth circle is named *Days* of the week, showing their divisions.
7. The seventh circle represents the *Moon hours during the day.*
8. The eighth circle shows the *hours of the Moon* at night.
9. The ninth circle is entitled *Parts*.

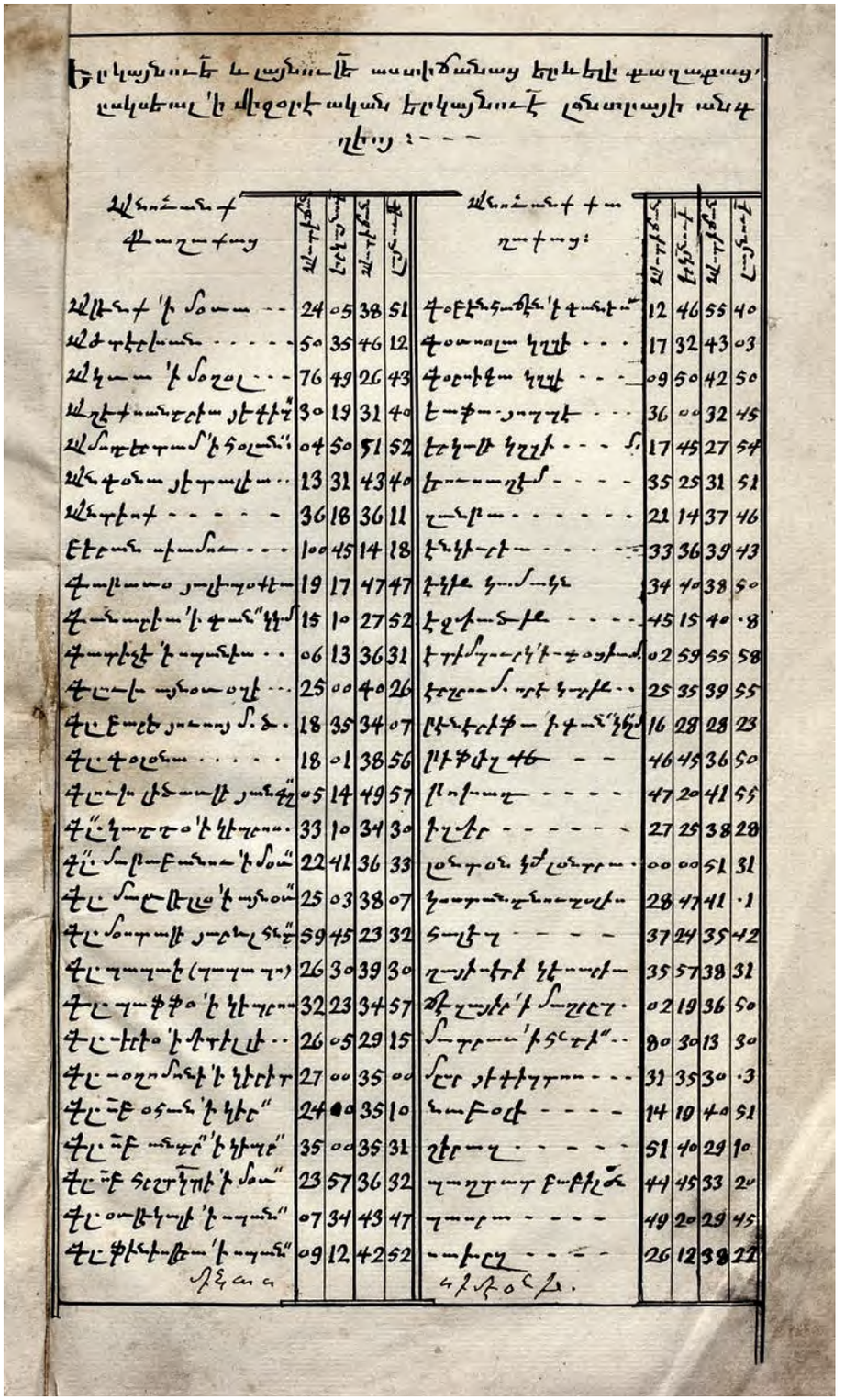


Fig. 1.50 – MM-9042, first page. Main cities and their coordinates. 1816.

This page lists the names of some of the most important cities in the world, as well as their geographical coordinates based on the zero meridian passing through the town of Greenwich, near London.

The rest of the book is a collection of tables and charts regarding the solar and lunar eclipses and other data.

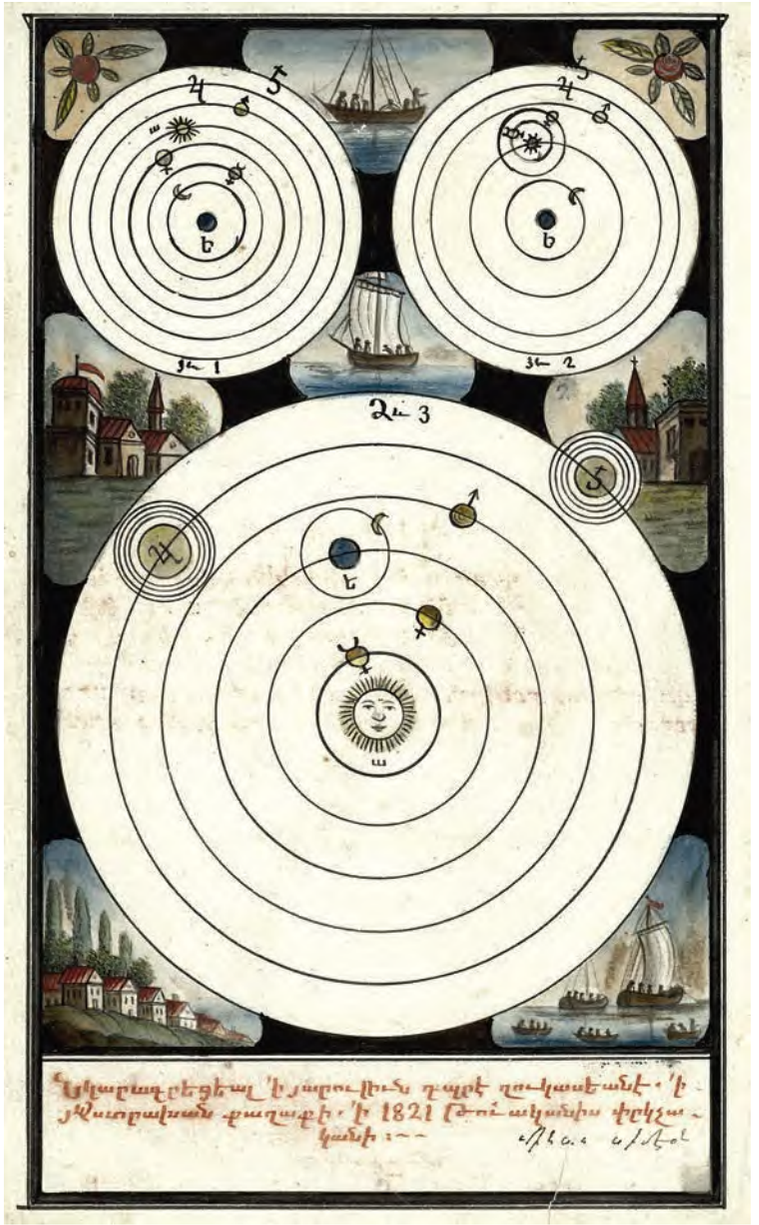


Fig. 1.51 – MM-9040, 001a. Cosmography, Cover page. 1821.



Fig. 1.52 – MM-9040, 002a Cosmography, Chapter A – Introduction. 1821.

The author of the above work is stated to be Harutun Ghukasian, of Astrakhan.

On page 001a the author shows various versions of our solar system. The two top circles are archaic geocentric systems, with alternative versions showing seven and five planets respectively.

At the beginning of the text, the author describes what is meant by geography and what information it incorporates.

The lower, larger circle of Fig.1.51 shows the modern, heliocentric system, including the planets Mercury, Venus, Earth and the Moon, Mars, Jupiter and Saturn.

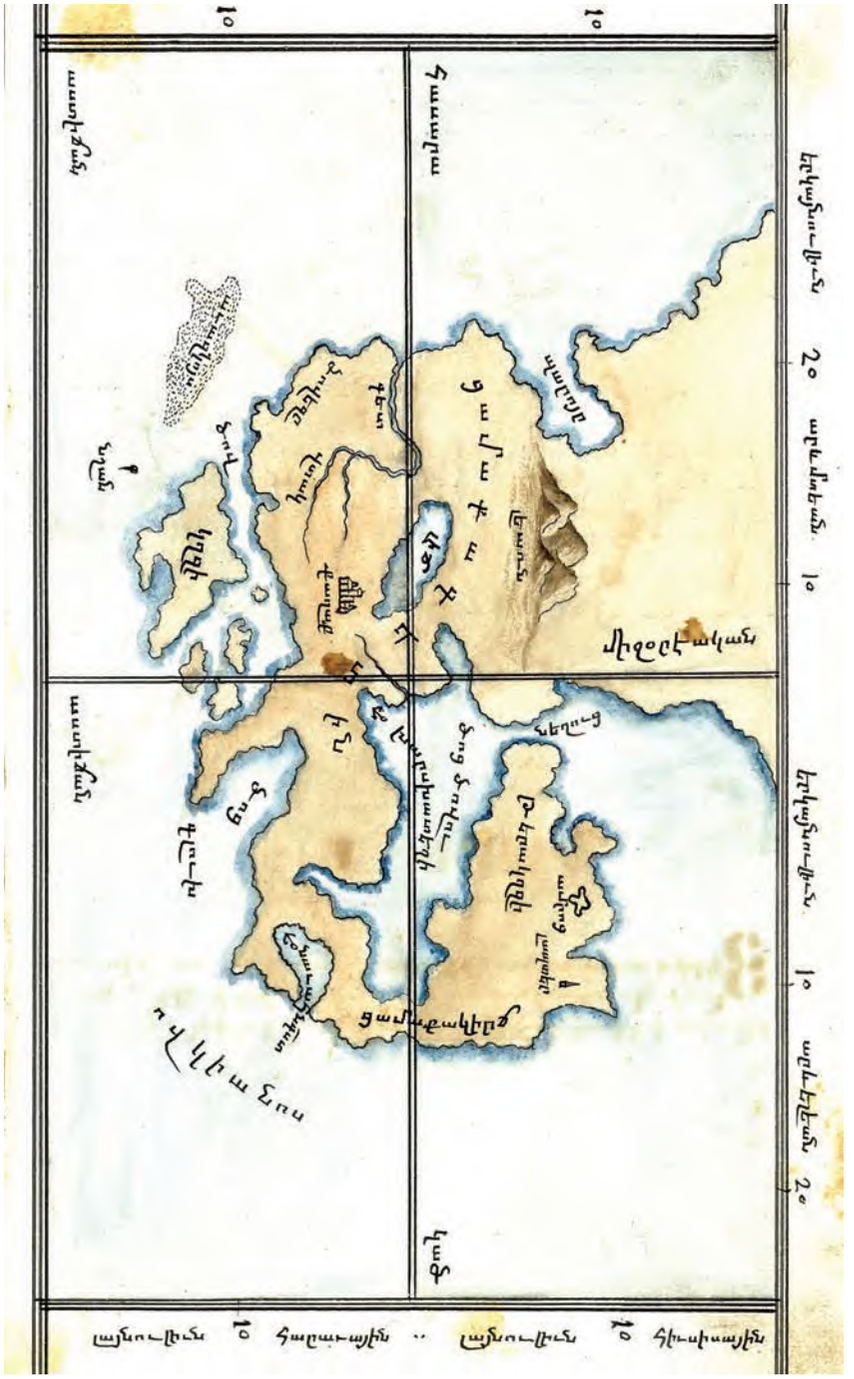


Fig. 1.53 – MM-9040, 008a. An imaginary map. 1821.



Fig. 1.54 – MM-9040, 008b. The lunar phases. 1821.

In Fig. 1.53 the intention of the mapmaker is to show the types of geographical names, as well as where and how they are represented on maps.

The text of Fig. 1.54 describes in detail how the different phases of the moon occur and are observed.

Fig. 1.55 to **1.61** show pages from various versions of the geographical work *Ashkharhatsuyts* ("Mirror of the World", the oldest geographical work composed in Armenian), albeit with no accompanying sketches or drawings. The pages of geographical works of other Armenian authors have been reproduced in the next pages, as samples of some of the works held in the Matenadaran, so that the reader can have an idea of their content.

The next seven figures are pages from various medieval geographers entitled Ashkharhatsuyts (Mirror of the World), with the English translations of a few paragraphs. These include the following:

Fig. 1.55 is the work of Thomas of Cilicia (fourteenth century), who has taken the section on Armenia from Shirakatsi's work and composed the part related to the Armenian Kingdom of Cilicia.

Fig. 1.56 and 1.57 on the next page are copies of the work of Anania Shirakatsi (circa 610-685 CE). Copied in 15th century and 1884 .

Shirakatsi's *Ashkharhatsuyts* is by far the most important geographical work in Armenian. In comparison with Ptolemy's *Geographia,* Shirakatsi's ouvre naturally includes much more detail about the region and his country, Armenia.

The works of the other geographers vary. Vardan Areveltsi's version (d. 1271), is a quite different work. It contains little about the world at large and is mainly concentrated on the regions of Armenia and its neighbours. Pages from Areveltsi's book are reproduced in Fig. 1.58 and 1.59.

Karapet Baghshetsi's (d. 1550) work is a relatively shorter version, composed in prose. These can be seen on Fig. 1.60 and 1.61.

* * *

Fig. 1.55 is the work of Thomas of Cilicia; the second and third paragraphs of the left column describe the Armenian provinces of Artsakh and Syuniq. For translations of samples from the manuscript, see below:

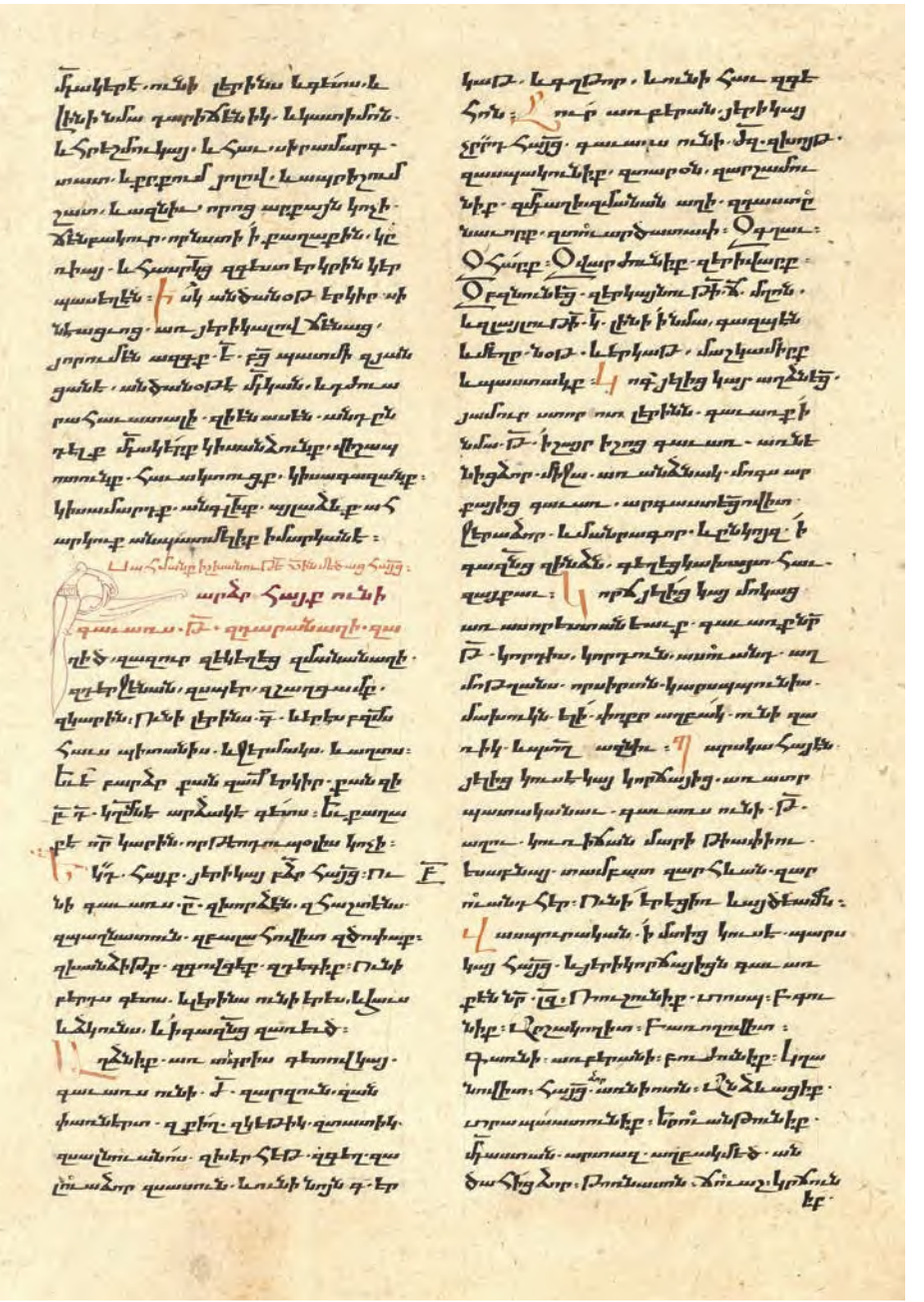


Fig. 1.55 – MS-1518, 164b. Page from a copy of Ashkharhatsuyts, of Thomas of Cilicia, made in 1594.

Limits of the borders of the Armenian principalities.

Artsakh is next to Syuniq; it has twelve regions, which are named [Caucasia] Albania. These are Hyuband, Vakuniq, Berdadzor, Matsiran, Metskvanq, Vopianq, Parskanq, Sisakanq, Kotayq, Qutiparnes and Koght, where incense grows.

Syuniq is found between Ayrarat and Yeraskh and has 12 regions: Yernjak, Jahuk, Vayots Dzor, Gerarquni where the lake is found, Kotayq, Aghahetj, Tghukq, Harband, Baghq, Dzorq, East Kusakan, where myrtle and pomegranate grow.

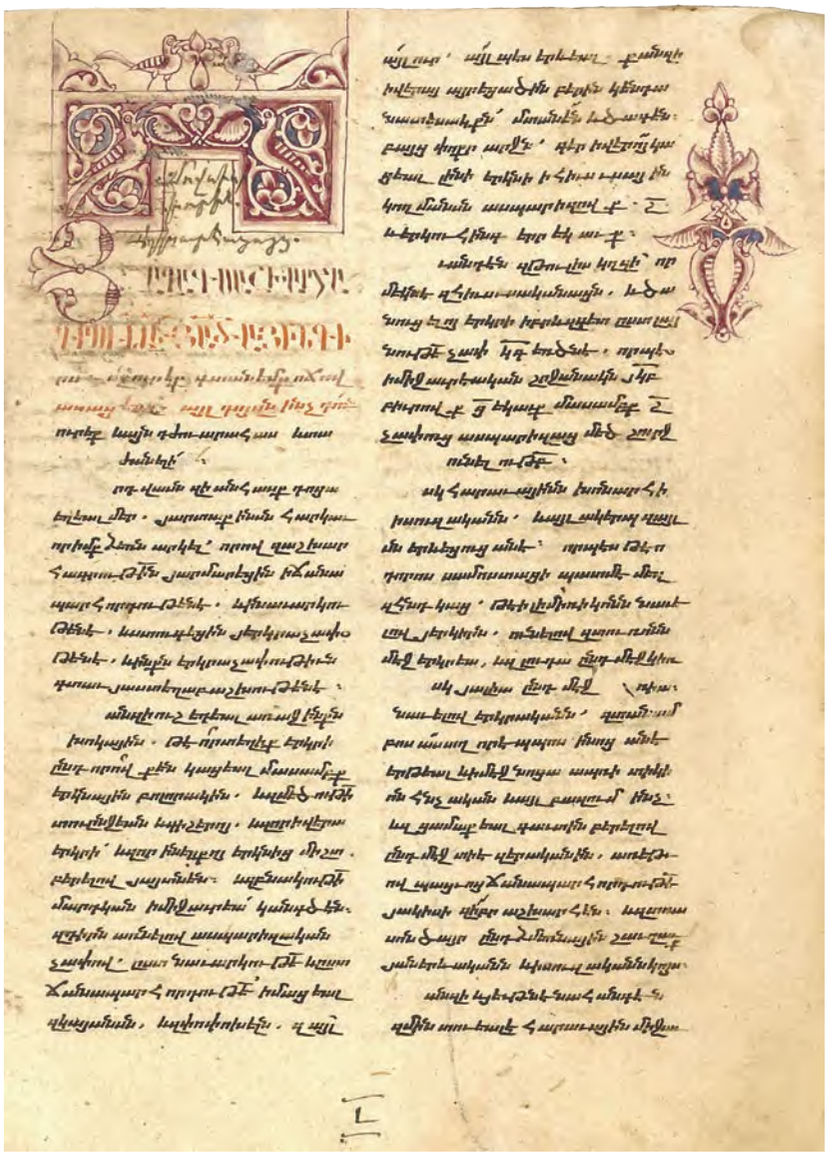


Fig. 1.56 – MM-1267, 352a. Anania Shirakatsi. Ashkharhatsuyts. 15th century copy.

The preamble of the work is as follows:

We could not find any information dictated by God about the subject of geography, and whatever we found, was beyond comprehension. As they are so difficult to understand and relate, we decided to do the obviously necessary regarding this matter.

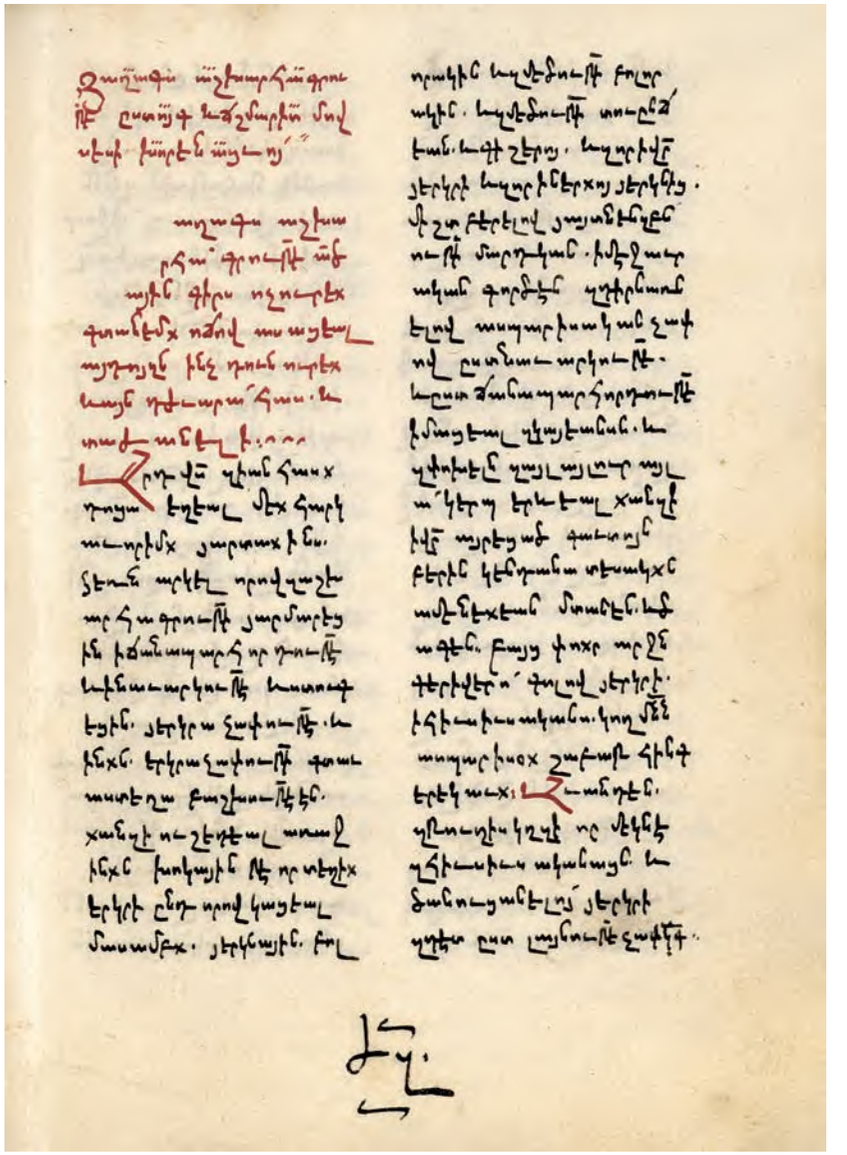


Fig.1.57 – MM-1717, 152a. Anania Shirakatsi, Ashkharhatsuyts. 1664 copy.

The top red text states that:

About the geographical work of Moses of Khoren [Movses Khorenatsi]*, which is correct and right.*

As in the previous Fig., there is a section of text, which translates as follows:

We could not find any information dictated by God about the subject of geography, and whatever we found, was beyond comprehension. As they are so difficult to understand and relate, we decided to do the obviously necessary regarding this matter.



Fig. 1.58 – MM-8076, 083a. Vardan Areveltsi, Ashkharhatsuyts. 17th century copy.

Translation of the beginning of the above text is:
Second work is the Ashkharhatsuyts of Vartan Vartapet, simple and brief.

The remainder of the text is the replica of the text in Fig. 1.59.

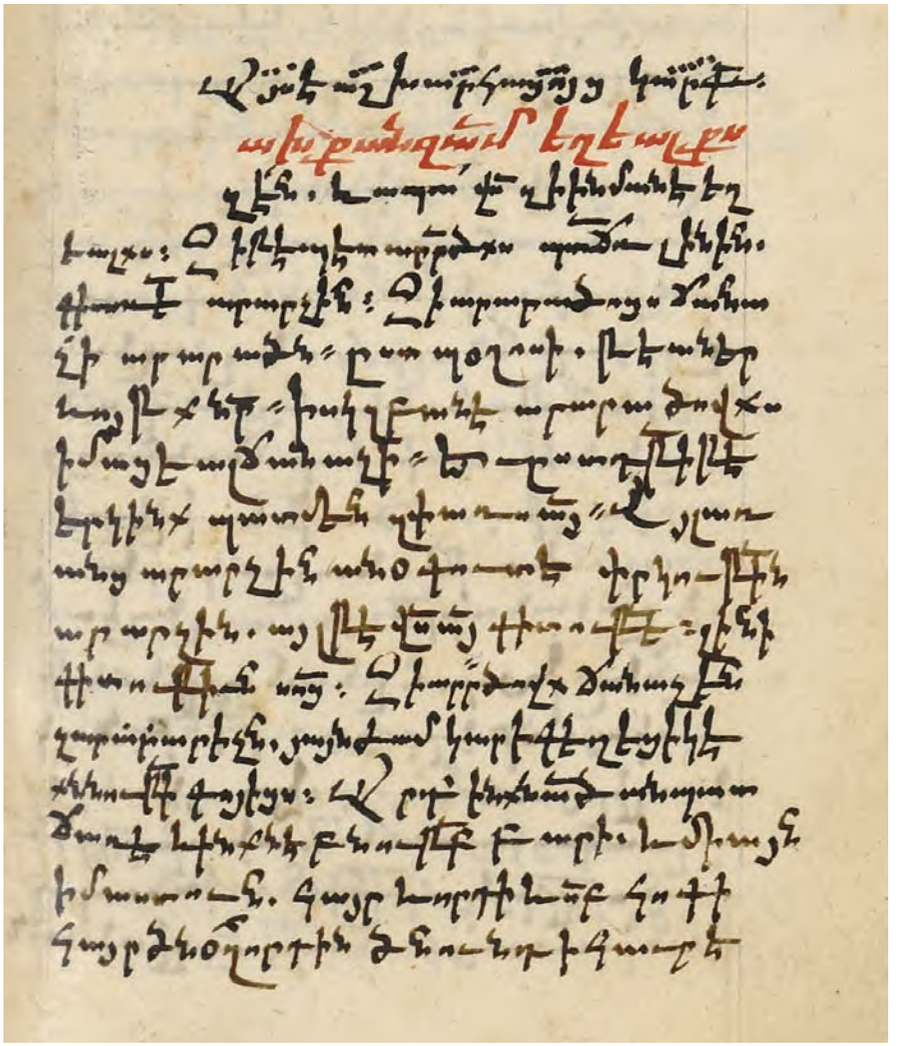


Fig. 1.59 – MM-1127, 205a. Vardan Areveltsi, Ashkharhatsuyts. 17th century copy.

The preamble of the above work is as follows:
This is the Mirror of the World, in its proper sequences.
We begin with the existence of undoubted and overall rule of God. With quotes from the Bible, according to which before the Creation there was only God, from whom every seen and unseen creature arose. Their actions are the work of the Almighty. Or alternatively, as David describes, the Heavens confirm the glory of God. Without the Creator there is no salvation, since creatures' wisdom and knowledge are the work of the Creator. God is known through His creations and thus the realization of the His existence becomes more beautiful.

Thus God's being is beyond doubt, full of kindness and wisdom.

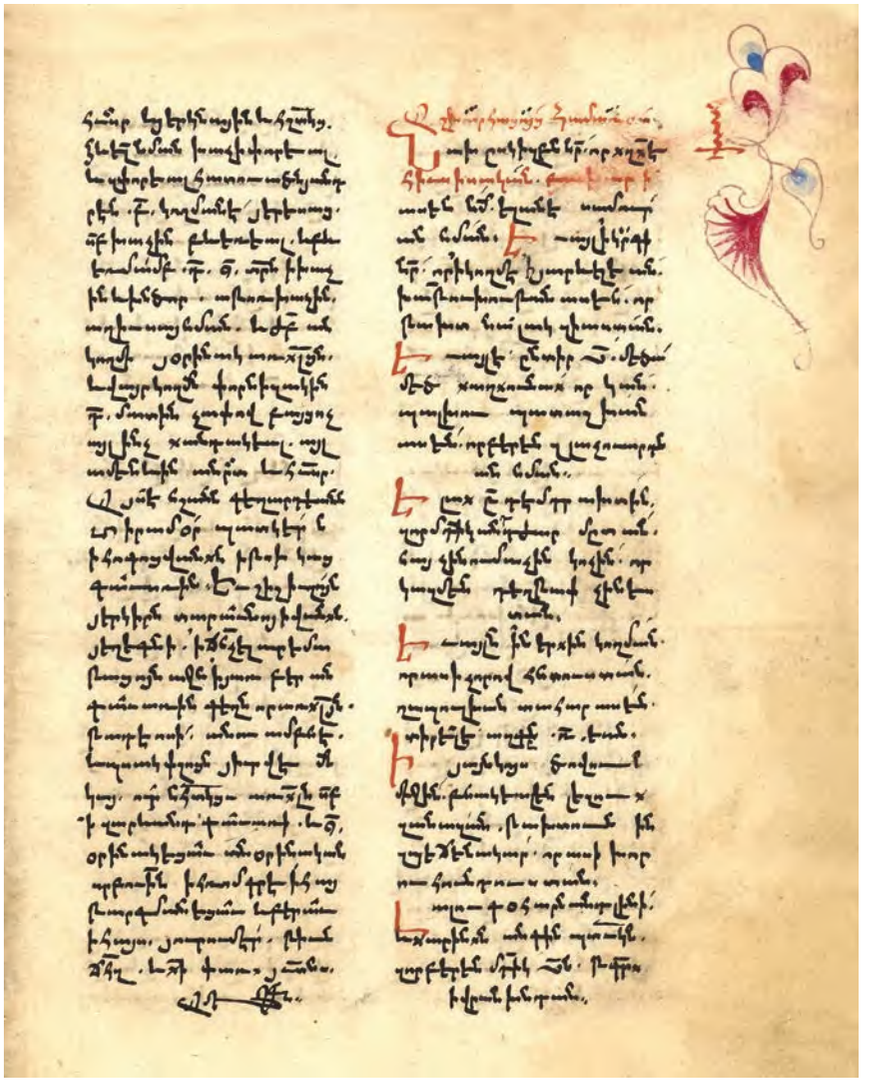


Fig. 1.60 – MM-8076, 094a. Karapet Baghshetsi, Ashkharhatsuyts. 17th century copy.

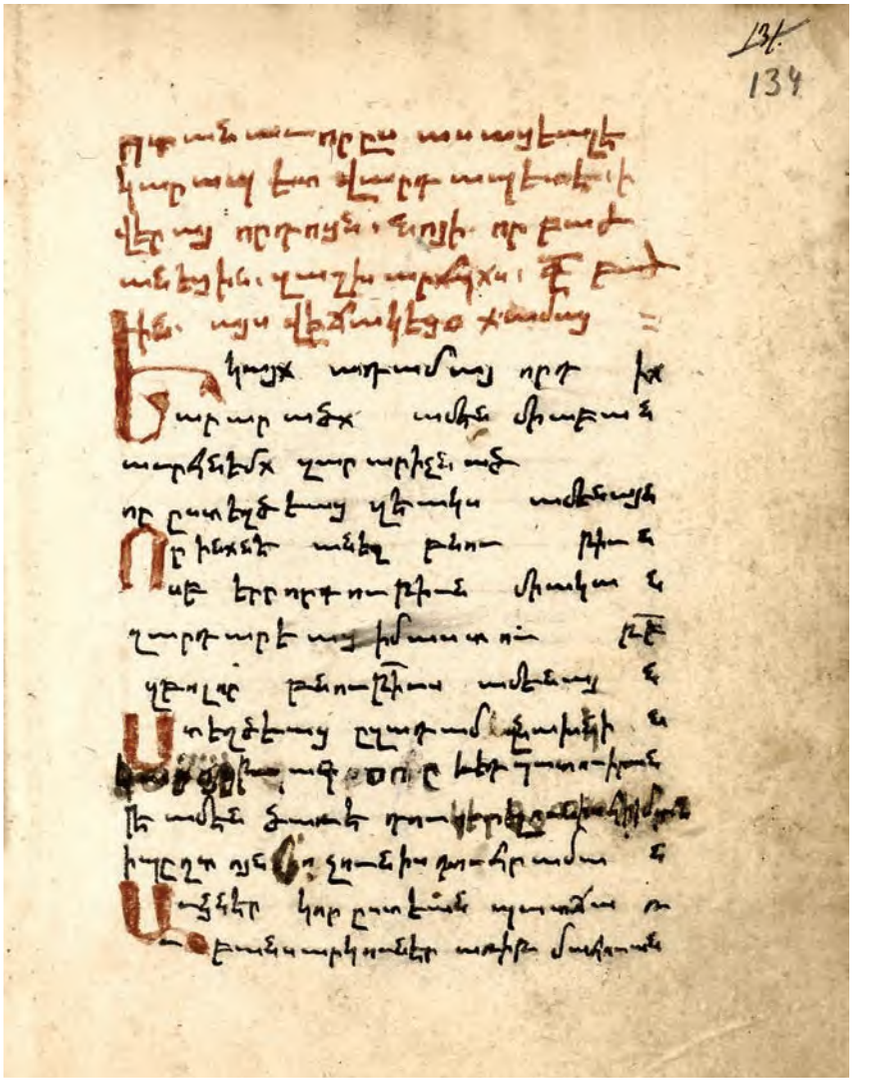


Fig. 1.61 - MM-33, 134a. Karapet Baghshetsi, Ashkharhatsuyts.16th century copy.

The text of the right column of the above page is the beginning of the main text by Baghshetsi:

Brief version of Ashkharhatsuyts.

First of all the beginning, they say that it begins in the northern city, from where the unparalleled sable and similar items are brought.[7] *In the east this is called Khatukhatun, from where a special liquid is imported with which wooden planks are covered. This is a fine world, containing many large cities, these are Balkh, Badakhshan from where a special blue colouring powder is brought.*

The translation of part of the text is shown below.

The prose written by Karapet vartapet, about Noah's sons, who divided the world into three parts. Here are the first two stances:

Come, sons of Adam, blessing the Creator of all things
Who is the uncreated being and singly presents the Holy Trinity
Who gracefully adorned nature and created all the beings.

7. Possibly referring to the region of Central Asia.

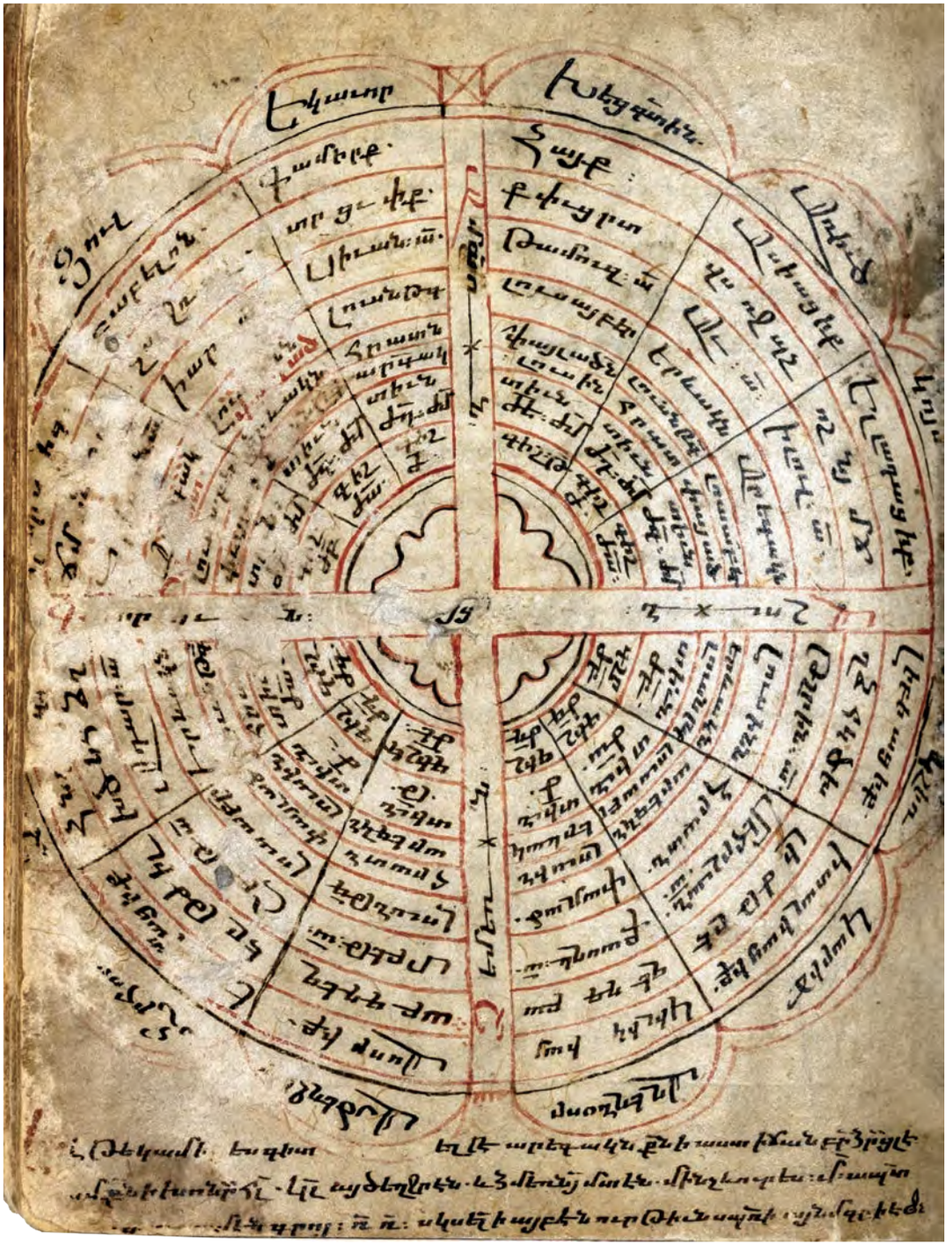


Fig. 1.62 – MM-1242, 131b. Concentric circles containing names from various astrological, astronomical and geographical fields. 13th-14th cc.

As mentioned in the previous chapter, on many images and drawings found in the manuscripts of the Matenadaran the relationship between the parts of the human body and the signs of the Zodiac are often displayed. Less frequently, we see the relationship of the signs of the Zodiac on the human body with geographical names of various peoples and/or countries.

In this part of the album of manuscripts, the following images numbered from Fig. 1.62 to 1.65 are featured. On pages where this relationship is presented some basic information about the image is provided.

* * *

Inscribed under the arches surrounding the outer circle of Fig. 1.62 we see the names of the signs of the Zodiac.

The cross dividing the image represents the four seasons of the year.

Outside the main concentric circles, placed under twelve arches surrounding them are the names of the Zodiac appearing in sequence.

The following information can be seen in the seven concerentric belts of the circles:

1. The outermost belt contains the names of peoples or nations.
2. The inner next belt bears the letters of the Armenian alphabet in sequence. They run in two groups, one on the left and the other on the right, each group beginning from the centre of the image.
3. Names of the Hebrew months
4. Names of the planets
5. Another set of planet names
6. Length of the day in hours
7. Length of the night in hours.

On page 062a of the manuscript MM-1973 a similar image of concentric circles appears, where the months mentioned are those of the Julian calendar and the sequence of the belts' texts is slightly different.



Fig. 1.63 – MM-1770, 355a. The naked human body and its relationship with the Zodiac and nations of the world. 1589.

The texts and toponyms appearing on the human body are as follows:

Body parts	**Signs of the Zodiac**	**Nations**
Head	*Aries*	*Persians*
Neck	*Tauris*	*Babylonians*
Right chest	*Cancer*	*Armenians*
Left chest	*Leo*	*Asians*
Upper Abdomen	*Virgo*	*Ellada*
Lower chest	*Gemini*	*Greeks*
Upper Abdomen	*Libra*	*Cilicians*
Lower Abdomen	*Sagittarius*	*Italians, Cretans*
Crotch	*Scorpio*	*Italians, Arabs*
Limbs	*Capricorn*	*Assyrians*
Legs	*Aquarius*	*Libyans?*
Feet	*Pisces*	*Indians*

On the left of the naked human figure, there are the names of the months and events which occur during them.

The woman's figure is shown naked and the Zodiac months are represented by their miniature drawings drawn on the body.

The relationship between other naked bodies and the signs of the Zodiac, in medical/health matters, can be seen in Fig. 1.06 and 1.19 of this chapter.



Fig. 1.64 – MM-1973, 76b. The relationship of the clothed human body, depicted inside the globe, with the Zodiac and nations of the world. 1342.

The table below shows the location of the names of the Zodiac and the nations on the human body.

Body parts	**Signs of the Zodiac**	**Nations**
Head	Aries	Persians
Neck	Taurus	Babylonians
Shoulders and hands	Gemini	Gam?
Upper chest	Cancer	Armenians
Ribcage	Leo	Asians
Lower Abdomen	Virgo	Arabs
Shoulders	Libra	Libyans
		Kyurenisns
Abdomen	Sagittarius	Italians
Crotch	Scorpio	Cretans
Knees	Capricorn	Assyrians
Legs	Aquarius	Egyptians
Feet	Pisces	Indians

The above table is the tabulated format of the text described below the figure of the woman sitting in the globe.

A few additional country names also appear on the sketch of the body, which include *Macedonians, Europeans, Israelite* and *Pont,* names that do not appear in the text.



Fig. 1.65 – MM-1973, 77a. 1342. The human body and its relationship with geography and astrology.

The location of the names of the Zodiac and the nations on the human body is set out in the table below:

Body parts	**Signs of the Zodiac**	**Nations**
Head	Aries	Persians
Neck	Taurus	Babylonia
Shoulders and hands	Gemini	Greece
Upper chest	Cancer	Armenia
Ribcage	Leo	Asia?
Lower Abdomen	Virgo	Ellada
Abdomen	Libra	Libyans, Kyuregyans
Abdomen	Sagittarius	Cilicians, Ethiopians
Crotch	Scorpio	Italians, Arabs
Limbs	Capricorn	Assyrians
Legs	Aquarius	Romans
Feet	Pisces	Indians

The names of the seas surrounding the figure, who is wearing a red cloak, are:

At the top left: *Caspian Sea,* top right: *Indian Sea*
In the middle left: *Pontus* [Black Sea], middle right: *Red Sea*
Near the feet, on the left: *Northern ocean*
On the right: *Southern ocean*
The two circles at the top describe:
Left: *People of Tartarus to the north*
Right: *People of Hellfire to the south*

The inscription at the bottom states:
This map of Geography and Astronomy was taken from Plato's various works.

Printed Maps in the Matenadaran Collections

The printed maps in the Matenadaran collections are not extensive, however, they are accompanied with a large selection of books related to maps and mapping and related topics, from medieval times to the present. These include atlases, travel books, journals of travelling statesmen, merchants and geographers, books on particularly important maps or mapmakers, etc. Most of the books related to geographic and cartographic matters were part of the library of the author of this oeuvre, and were all used regularly during his studies of the subject.

Both the maps, as well as the related books presented in this chapter mostly concern the South Caucasus and the Middle East, where Armenia is located. However, this is not true of atlases and world maps, because of their wider scope. In these cases all the limitations are waived and the maps presented are based on their general value and importance in the world of cartography.

As it would be impossible to include all the printed maps and atlases in this small volume, the author has selected only maps that are of some cartographic importance, especially those which are related to the general region of historic, as well modern Armenia and its neighbours.

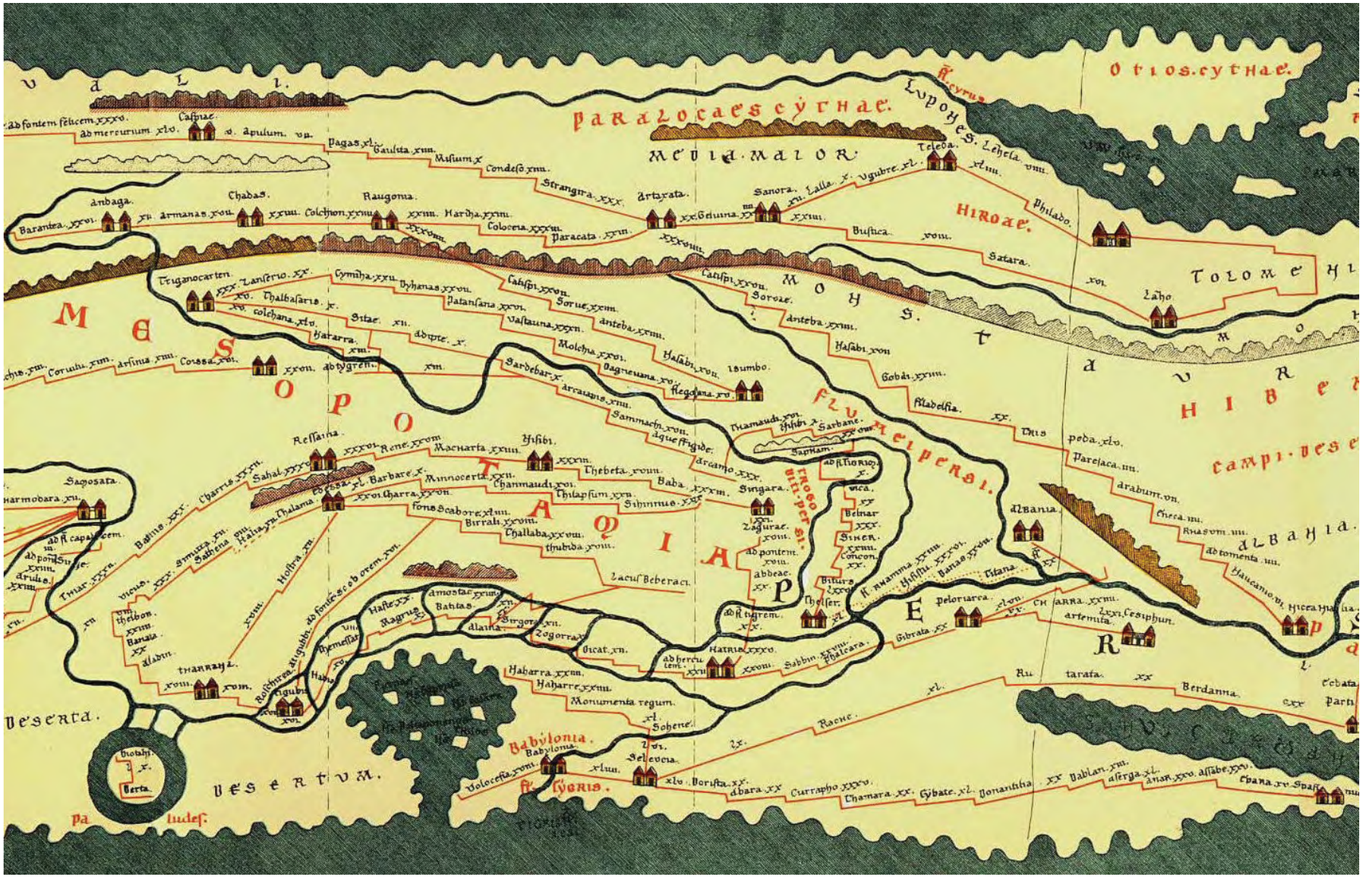
Regarding atlases, each contains many maps, in some cases one hundred or more maps, therefore it was decided to provide a complete list of the atlases that are kept in the Matenadaran. Accordingly, a list has been inserted at the end of this chapter, presenting the selected printed maps from the Matenadaran collections. The list does not provide any information about the details of their contents, since in most cases the title of the atlas itself gives some information on its content, or the geography of the presented locality.

Each map presented and reproduced in this chapter contains the minimum information and data regarding its source and subject. At the end of the volume, there is a list of all the maps reproduced herein, including those from the manuscripts discussed in the previous chapters.

Selection of Printed Maps and their Descriptions

Part 1

A selection of important maps
from the earliest period
to the end of the 17th century



Map 2.01 – This map is known as the "Peutinger Map". The copy in existence is a 12th century manuscript.

It is assumed that the above map's origin dates from the time of Marcus Vipsanius Agrippa, a military leader during the rule of Emperor Augustus, around the beginning of our era.

This map is a revision of the original map, which was drawn by a monk in the 4-5th centuries. When the original map was discovered, the above copy was created in 1265, measuring 6.5 x 0.35 metres.

A reduced image of the map exists in the Matenadaran, in a rolled format, and the section shown above covers the region of Mesopotamia and Armenia, where the names of Armenian cities of Tigranokerta, (Tigranakert) Artaxata (Artashat), Raugona (Bagrevand), Vaustana (Vostan) and others can be seen.

In the complete map Rome is located at the centre and the map shows all the roads leading out, into the corners of the Roman Empire. Each section of road is marked by the distance to the next point in Latin numerals.



Map 2.02. Idrissi's World Map of 1154. This is a partial print of the publication of the map reconstructed by Konrad Miller in 1928.

One of the originals of the book is kept in the Bodleian Library in Oxford. It contains one World Map as well as sets of climatic and regional detailed maps. Konrad Miller transliterated the Arabic names, publishing it as one map, size 195x92 cm. The above detail is taken from the map, showing the Middle East and South Caucasus part of the map. Here Aderbaigan is shown as a province of Iran, located south of the Arax River, while Armenia straddles the Arax and is mentioned three times, north and south of the Arax, stretching from Lake Van to the River Kura. Caucasian Albania is placed north of the River Kura.



Map 2.03 - Copy of the Ebstorf "World Map" of circa 1234. This is a reprint of the 1927 reproduction of the map by Konrad Miller. The original map was lost during the Second World War in the bombardment of Hanover, 1943, where it was kept. It measured 358x356 cm.

This huge map was named the Ebstorf Map, as it was discovered in the Monastery of Ebstorf and was possibly made circa 1234-1240 by Gervais of Ebstorf. The map presents the world, held in the hands of Christ, with stretched arms. Of course the map is prepared according to the ruling regulations and dogmas of the religious leaders, with Jerusalem in the centre, painted gold. North is to the left, with east at the top of the map, which was as per the normal practice of the time.

The detail shown in Map 2.03a shows Armenia with the twin peaks of Mount Ararat and Noah's Ark perched on top of the mountain. The buildings at the upper left of the Ark symbolise *Armenia*.

The two rivers above the Ark are the Tigris and Euphrates, flowing southwards. The third one, beginning from the top of the toponym *Armenia*, is the Arax River, flowing east towards the Caspian Sea.



Map 2.03a - Detail of the region of Armenia from Map 2.03.

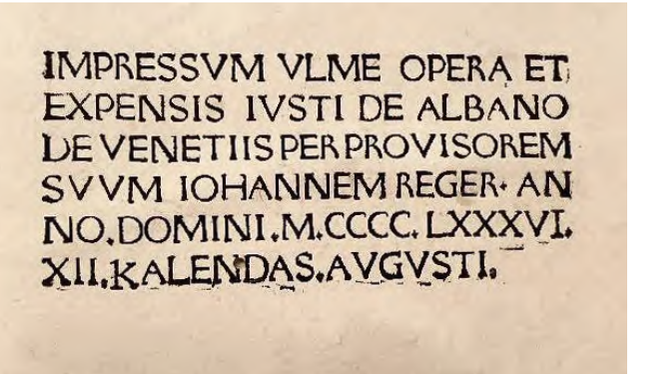
A copy of the reproduction is held in the Matenadaran.



Fig. 2.04 – Ptolemy's "World Map", from Ptolemy's atlas "Geographia", published in Ulm. 1486.



Map 2.05 – Detail of the South Caucasus, Asia Minor and Mesopotamia from Map 2.04.


IMPRESSVM VLME OPERA ET
EXPENSIS IVSTI DE ALBANO
DE VENETIIS PER PROVISOREM
SVVM IOHANNEM REGER· AN
NO.DOMINI.M.CCCC.LXXXVI.
XII.KALENDAS.AVGVSTI.

Colophon of the Atlas, stating that it was printed in Ulm on the 12th month of 1486 CE.

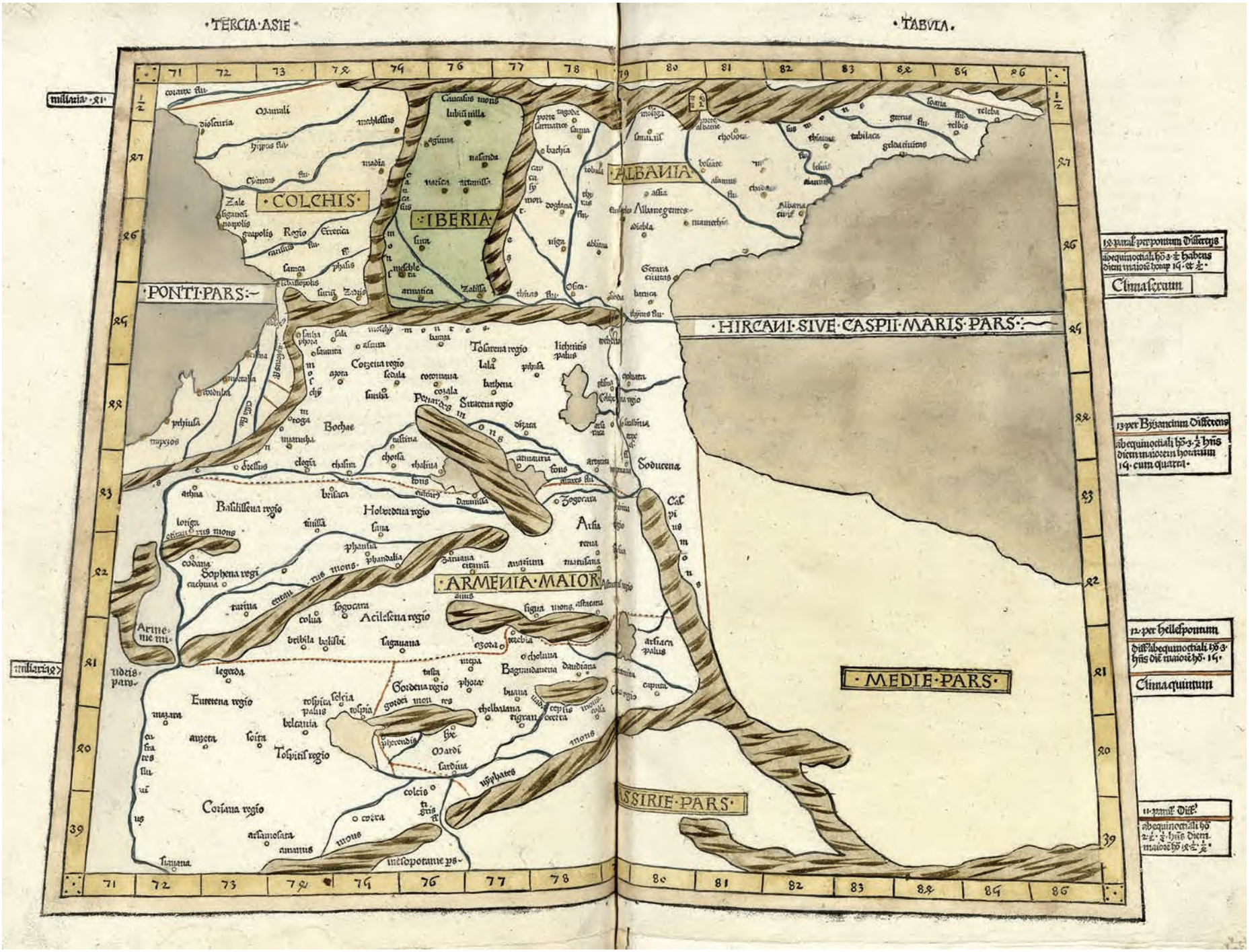
Claudius Ptolemaeus, commonly known as Ptolemy (c. 100-170 CE) was the founder of cartography, who in his book *Geographia* issued instructions on how to measure angles and distances and invented a type of geographical coordinates.

He was aware that at that time the knowledge about the world was not complete and there probably were areas which were completely unknown, therefore, he limited his maps by extending them only 180 degrees, i.e. a semicircle, leaving the eastern end of the known world free for future additions or new discoveries. His latitude lines were almost complete, extending some 63 degrees to the north and 24 degrees to south of the equator, which was not an equal division of the world between the northern and southern hemispheres.

Most of Ptolemy's cartographic instructions were in general use for almost 15 centuries. The Americas were not yet discovered, therefore Ptolemy's atlas contains only 27 regional maps of Asia, Europe and Africa, beginning with an all-encompassing World Map.

The detailed Map 2.05 provides a close-up of the South Caucasus and the Middle East regions, where the Caspian and Black seas are underlined in green. Armenia Major and Armenia Minor are underlined in red. Other countries such as Cappadocia, Colchis (Abkhazia), Iberia, Caucasian Albania, Persia, Assyria and Mesopotamia are all underlined in blue.

This Atlas is the most valuable cartographic item in the Matenadaran collections.



Map 2.06 – The Third Map of Asia from Ptolemy's "Geographia". Ulm, 1486.

ERTIA ASIE Tabu-
la continet colchidē Ibe
riā· albaniā:& maiorem
armeniā Paralellus ipsi?
ꝓportionē habet ad me
ridianū quā vndeci ad
quindeci Termīatur aūt tabula Ab ortu p
te caspij partis & medorū Ab austro assiria
& mesopotamia Ab occasu cappadocia &
pte euxini ponti Ab arcto sarmatia asiatica
COLCHIDIS CIVITATES INSIG·
Dioscurias maximā diē hēt horaꝝ 14 ½ ¼
& distat ab alexādria ūsus ortū hor 12 ⅓·
IBERIE CIVITATES INSIGNES·
Artanissa maximā diē hēt hora· 14 ⅓ & di
stat ab alexandria ūsus ortum horis 1 ⅓o·
Armattica maximā diē hēt horaꝝ 14 ½ fere
& distat ab alexādria versus ortū horis 1·
ALBANIE CIVITATES INSIGNE
Getara maximā diem hēt horaꝝ 14 ½ & di
stat ab alexādria versus ortum horis 1 ½·
Albana maximā diē hēt horaꝝ 14 ⅓ & di-
stat ab alexādria versus ortū horis 1 ⅓ 1o
ARMENIE MAIORIS CIVITATE·
Artaxata maximā diē hēt horaꝝ 14 ⅙ &
distat ab alexādria ūsus ortum horis 1 ⅙·
Armauria maximā diē hēt horaꝝ 14 ¼ fere
& distat ab alexandria ūsus ortū hor 1 1o
Thospia maximā diē hēt horaꝝ 14 ½ ¼ ¼·
& distat ab alexandria ūsus ortū hor 1 fere
Artemita maximā diem hēt horaꝝ 14 ½ ⅓
12 & distat ab alexādria ūsus ortū ho 1 ¼

The text on the back side of the "Third Map of Asia".

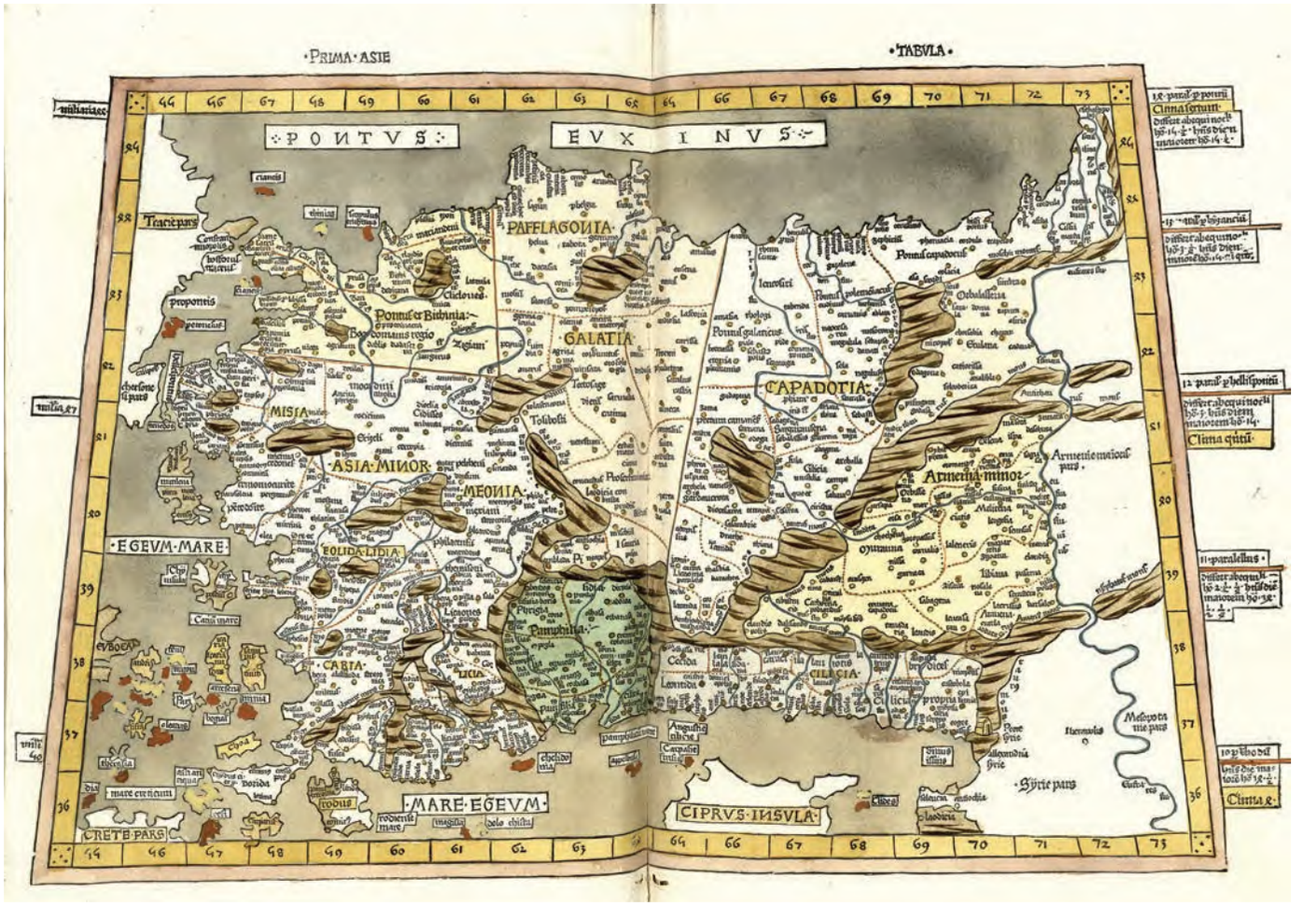


Fig. 2.07 - Asia Minor from Ptolemy's Geographia, 1486.

Map 2.06 shows the region of the *South Caucasus*, with Greater Armenia, *Colchis (Abkhazia), Iberia* and *Caucasian Albania* (present-day Republic of Azerbaijan). The neighbouring countries are *Media* to the east, *Assyria* to the South and Lesser Armenia (*Armenia minor*) to the west. The text describing the area appears at the back of the map, reproduced above left.

The region of northwestern Iran, south of the Arax River, at the time was named *Media*; this name was later changed to *Atropaten*, in honour of their military leader named Atropat, who defended his country from the attacks of Alexander the Great. After the Arab invasion, this toponym evolved, changing into Atorpbigan, Adorbigan, Adherbigan, Aderbaigan and finally *Azerbaijan*. Armenians call the region by its original name - Atrpatakan.

Map 2.07 is the region to the west of Map 2.06. At the east of the map we note the name of the country of *Armenia Minor (Lesser Armenia*), which appeared on the left border of Map 2.06. In this region, which represents the peninsula of Asia Minor, there are a multitude of countries, including *Cappadocia*, *Cilicia, Paflagonia, Galatia, Misia, Meonia, Lidia, Licia, Pamphilia* and others. The invasion of the Turkic tribes from Central Asia began in the eighth century. By the fourteenth century the ottoman tribes had gained control of Asia Minor and thus only in the 14th century did the name Turkey appear for the first time on European maps.



Map 2.08 – Macrobius's World, around 400 CE.

Roman philosopher and writer, Ambrosius Theodosius Macrobius (flourished around 400 CE), was best known for his work *Saturnalia*. He was an adherent of the theory of the spherical earth, divided into climatic zones.

His work *Saturnalia* contains a text entitled *Exposition in Somnium Scipionis ex Cicerone* (Commentary on Cicero's Dream of Scipio, or in short: "Scipio's Dream"), which was very popular in the medieval period. In the book Macrobius bases his ideas on the writings of Eratosthenes, Virgil and others, who were the proponents of the Zonal division of the spherical earth.

Publius Cornelius Scipio Maior (235-184 BCE), who was also known as Africanus, and his adopted grandson and namesake, Scipio Minor (185-129 BCE) were both politicians and generals in the Roman army, who fought against Carthage. The latter was instrumental in the final siege and sack of the city.

In Scipio Minor's dream, Africanus takes him to the heavens and shows him our globe. In his Saturnalia, Macrobius relates the following conversation, supposed to have taken place between the grandfather and grandson:

Look at all the different zones enveloping the earth; the two most widely separated from one another, at opposite poles of the heavens are fixed with an icy cold, while the midmost zone burns with the heat of the sun. Only the two zones between these extremes are habitable..... If you look at your own northern zone, you can't help but notice how small a section of this region could be regarded as yours. The territory you occupy, your vast Empire, is nothing more than a small island, narrow from north to south, a bit wider east to west, surrounded by the sea, which is known as the Atlantic.[8]

After the tripartite T-O type maps, the Zonal world maps were the most commonly used. According to the zonal theory, the earth was divided into five climatic zones, these being the two frigid, two temperate and one central torrid zone. In the Northern Temperate zone, which was supposed to be the only inhabited part of the world, Macrobius's landmasses are strikingly similar to those described by Ptolemy, complete with its seas, oceans, the continents and other geographical details.

Macrobius believed that the landmasses on the surface of the earth must be distributed such that their weights are balanced. In other words, the land mass of the Northern hemisphere must be balanced with an equal land mass in the Southern hemisphere; therefore if Europe, Asia and part of Africa were located in the north, then there must be another large land mass in the south to counterbalance the above. This imaginary continent is shown on all Macrobius's maps.

On Macrobius's World we see the climatic zones, while the top temperate zone, from right to left contains the names of the countries of *India, Armenia, Aetiopia Periusta, Galia, Hispania, Aphrica and Britania.*

* * *

Map 2.09 on the page opposite is another map of the South Caucasus, prepared by the mapmaker Sebastian Münster in 1540, based on Ptolemy's *Geographia*. The local countries of Armenia Maior (Greater Armenia), Colchis (Abkhazia), Iberia and Albania (Caucasian Albania – present day Azerbaijan) are included, surrounded by Media, Assyria, Armenia Minor and Cappadocia. Noah's Ark is shown floating in the Caspian Sea.

8. Macrobius, *Commentary on the Dream of Scipio*, Translated by W. Stahl, New York, 1952.



Map 2.09 – The "Third Map of Asia" from Ptolemy's "Geographia", as redrawn by Sebastian Münster (1489-1552), published in 1540.



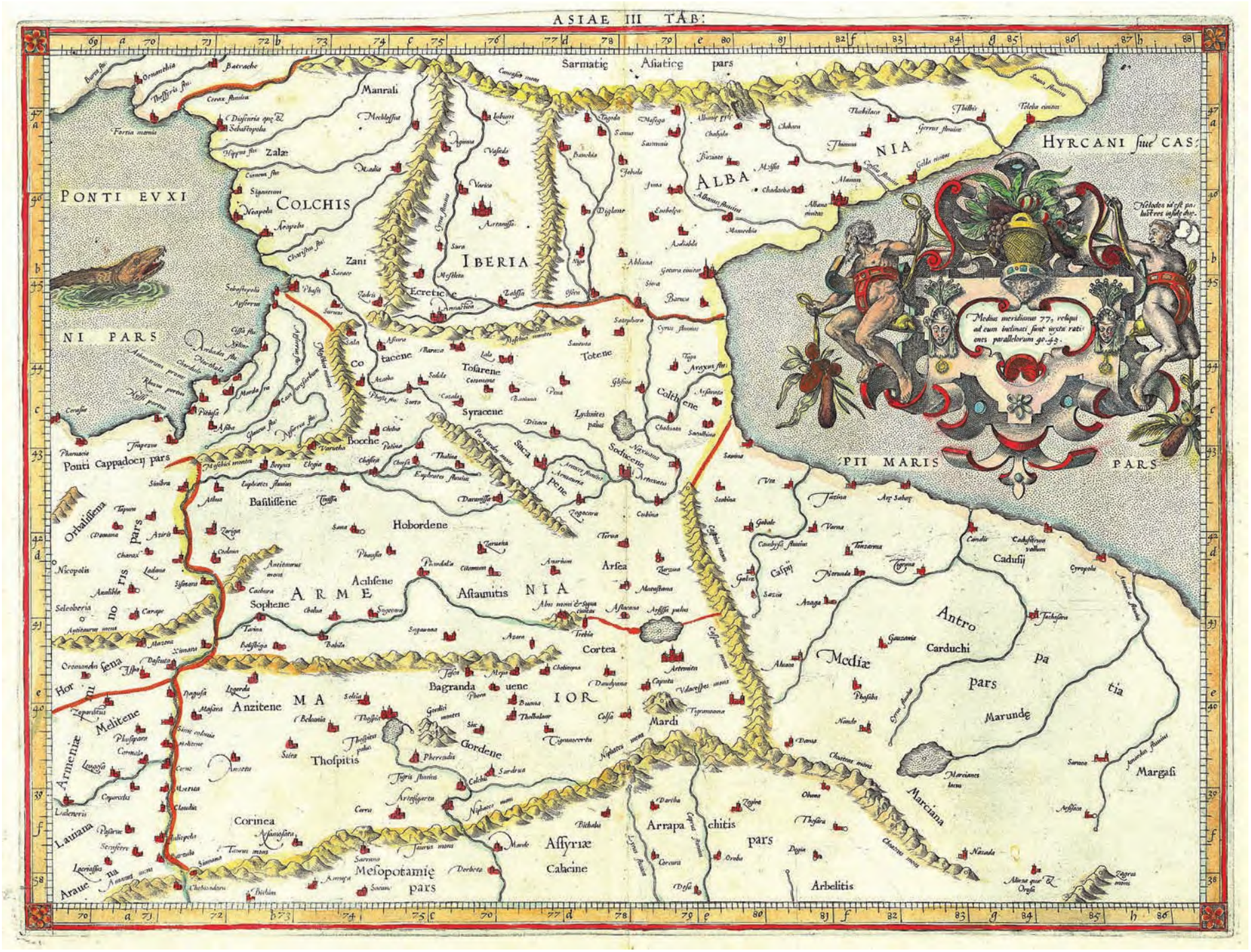
Map 2.10 – Region of "Tartaria" (South Russia) dated 1540, by Münster (1489-1552).



Map 2.11 – Map of Asia Minor by Münster, c. 1540.

Map 2.10 shows the region of Tartaria (South Russia) including the lands of Greater and Lesser Armenia, Albania, Colchis and Sarmatia.

Map 2.11 is yet another map made by Münster during the 16th century, where the region shown is Asia Minor, with a multitude of small kingdoms.



Map 2.12 – Another version of the "Third map of Asia", the South Caucasus, published by Gerardus Mercator (1512-1594) in 1578.

The map has a particularly elaborate cartouche, which was inserted in order to make the map more appealing to prospective customers.



Map 2.13 – Map of the "British Isles", drawn unusually with west at the top of the map, published by Abraham Ortelius in 1583.

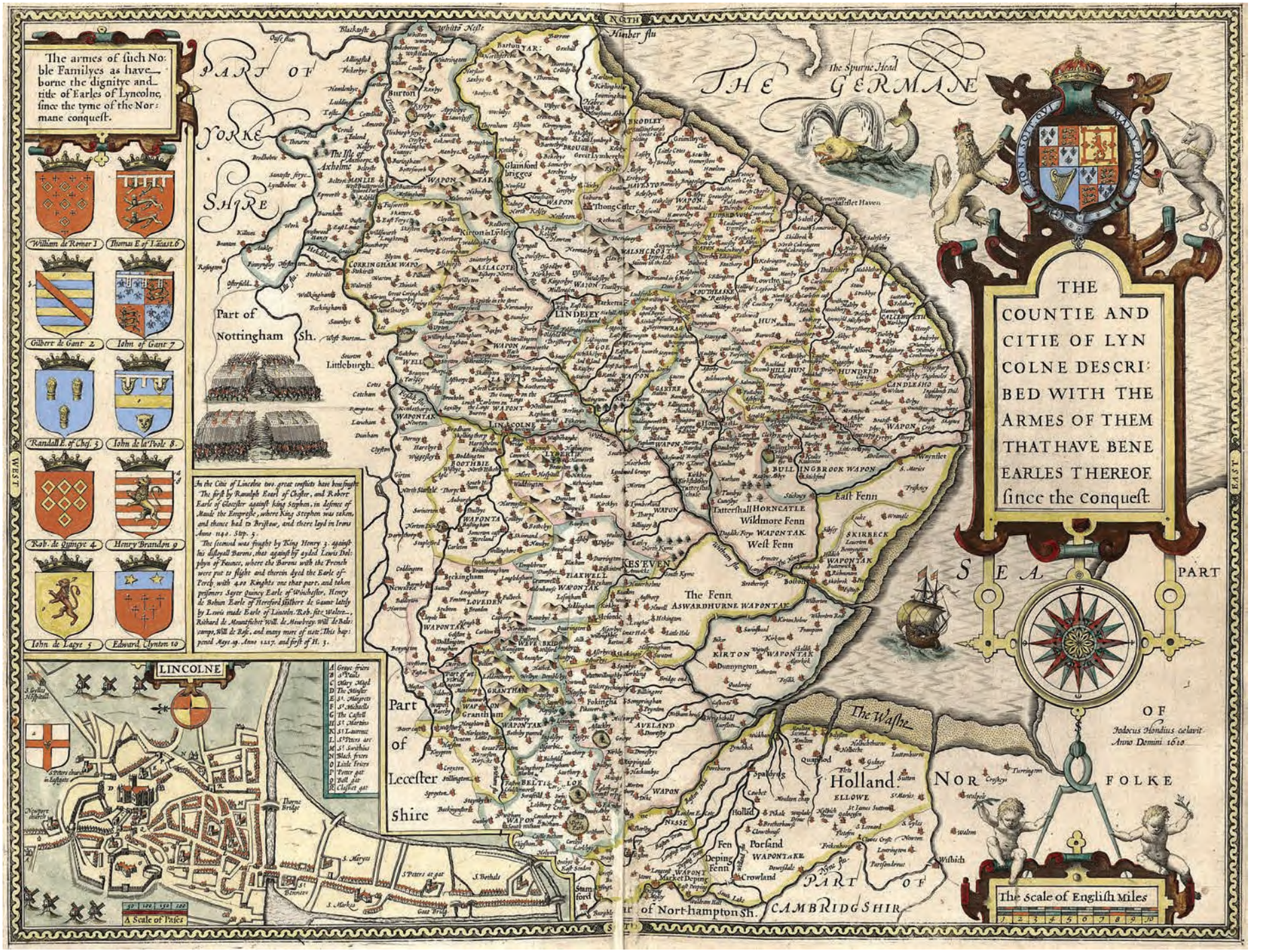
The above map is by the famous Dutch mapmaker and publisher Abraham Ortelius (1528-1598), whose atlases, along with those of his colleague Gerardus Mercator, were very much sought-after. Ortelius's cartouches were mostly surrounded with geometrically designed frames, while Mercator had a more elaborate and artistic approach for designing the decorations of the cartouches of his maps, aimed to improve their artistic appeal.



Map 2.14 – "Historic map of the Orient" by Pieter Keere (1571-1646), published around 1610.

Keere was a prolific mapmaker and this is his historic Middle East, prepared around 1610. The countries of Lesser and Greater Armenia are respectively located to the west and the east of Euphrates River. The name of Turkey is not mentioned, as it was not yet widely known.

Towards the south there are Syria, Mesopotamia, Assyria and Babylon. In Asia Minor we still see a multitude of smaller kingdoms, including Colchis, Cappadocia, Pontus, Paphlagonia, Pamphylia, Lydia, Bithynia and others.

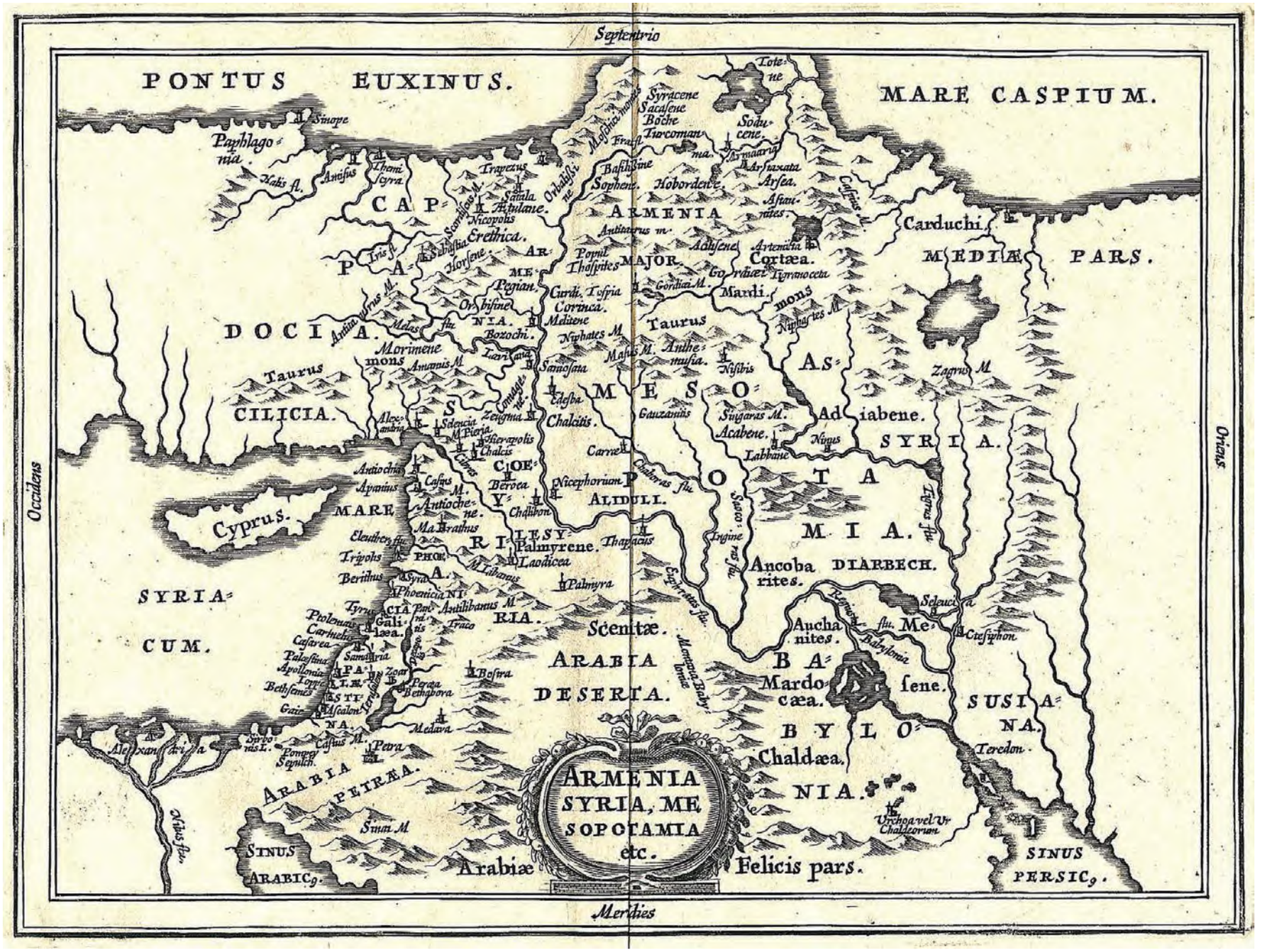


Map 2.15 – The British county of "Lincolnshire", according to John Speed (1552-1629), as printed by J, Hondius in 1640. The map also bears the Coats of Arms of famous local families.



Map 2.16 – Another map of Ptolemy, entitled "Third map of Asia", from the second century, Greece, published by Jodocus Hondius (1563-1612) in 1698.

The map shows the South Caucasus, with Greater Armenia occupying most of it. Other countries specified are Colchis (Abkhazia), Iberia, Caucasian Albania, as well as parts of Mesopotamia, Assyria, Aropatia (a Persian province, later came to be known as Azerbaijan) and Armenia Minor placed to the west of the Euphrates River.



Map 2.17 – This map is entitled "Armenia, Syria and Mesopotamia", printed in 1624, drawn by Philippe Cluverius (1580-1622).

In the centre of the map lies Armenia, surrounded by Cappadocia, Cilicia, Mesopotamia, Babylon and Syria. To its east is Media (the Persian province of Atropatia or Azerbaijan). At the top of the map, the southern ends of the Black and Caspian seas are visible. Greater and Lesser Armenia are both present on this map. Armenia Maior is located south of the Caucasus with the other [Lesser] Armenia situated west of the Euphrates River.



Map 2.18 – "The Kingdom of Persia", according to John Speed (1552-1629), printed around 1626.

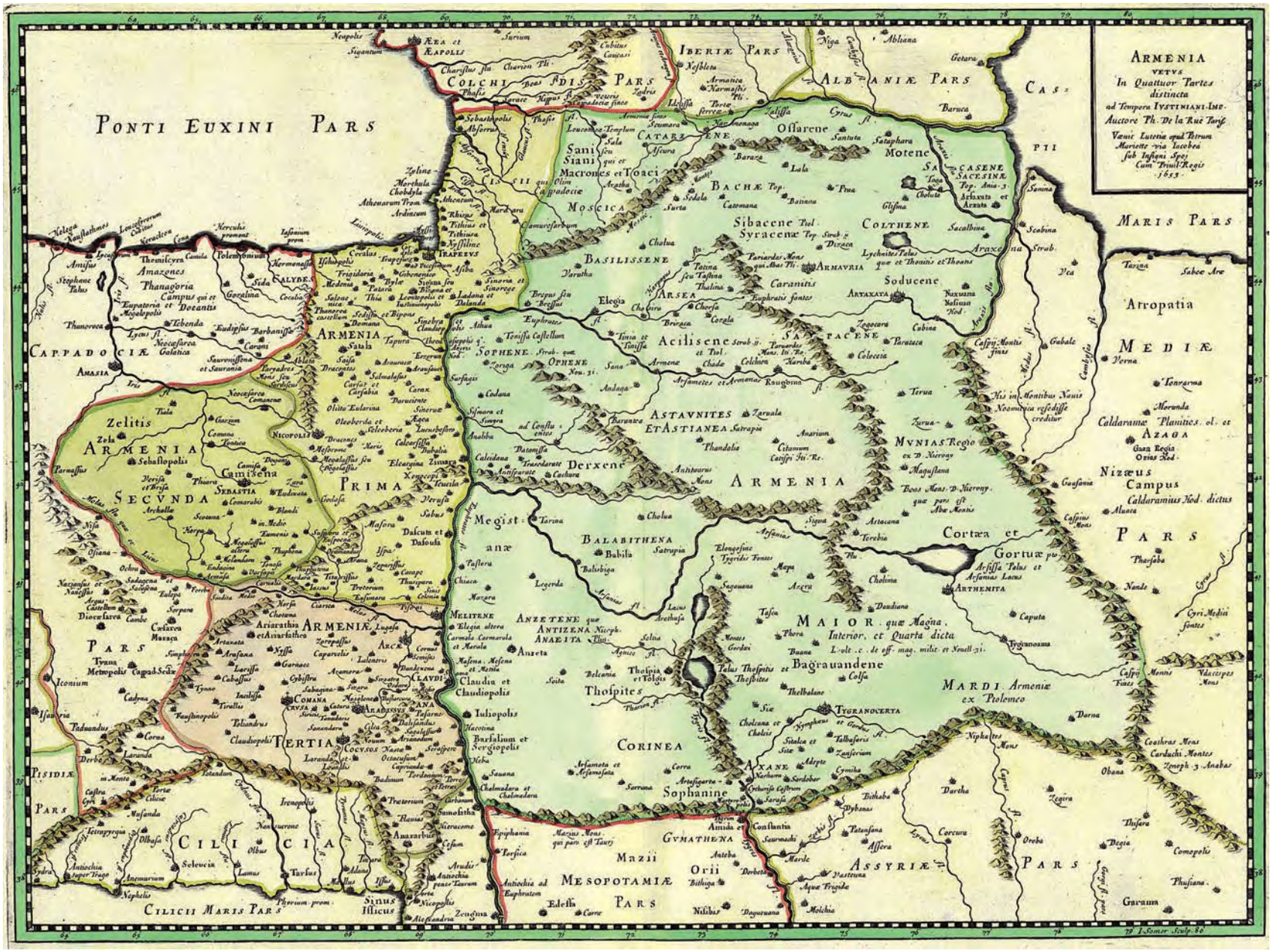
The map includes all the territories of Persia, with Shirvan at its north-western corner and with "Armenia" in large lettering placed further northeast. The map is surrounded by figures of Persian citizens in their varied attires and their spouses.



Map 2.19 – John Speed's map of "Herefordshire", dated around 1646. It includes the Coats of Arms of various local gentry.



Map 2.20 – The map of the "Turkish Empire", from Johannes Blaeu's "Alas Maior" dated 1664-1665. Bleau's (1596-1673) maps and atlases were world famous for their detail and accuracy.



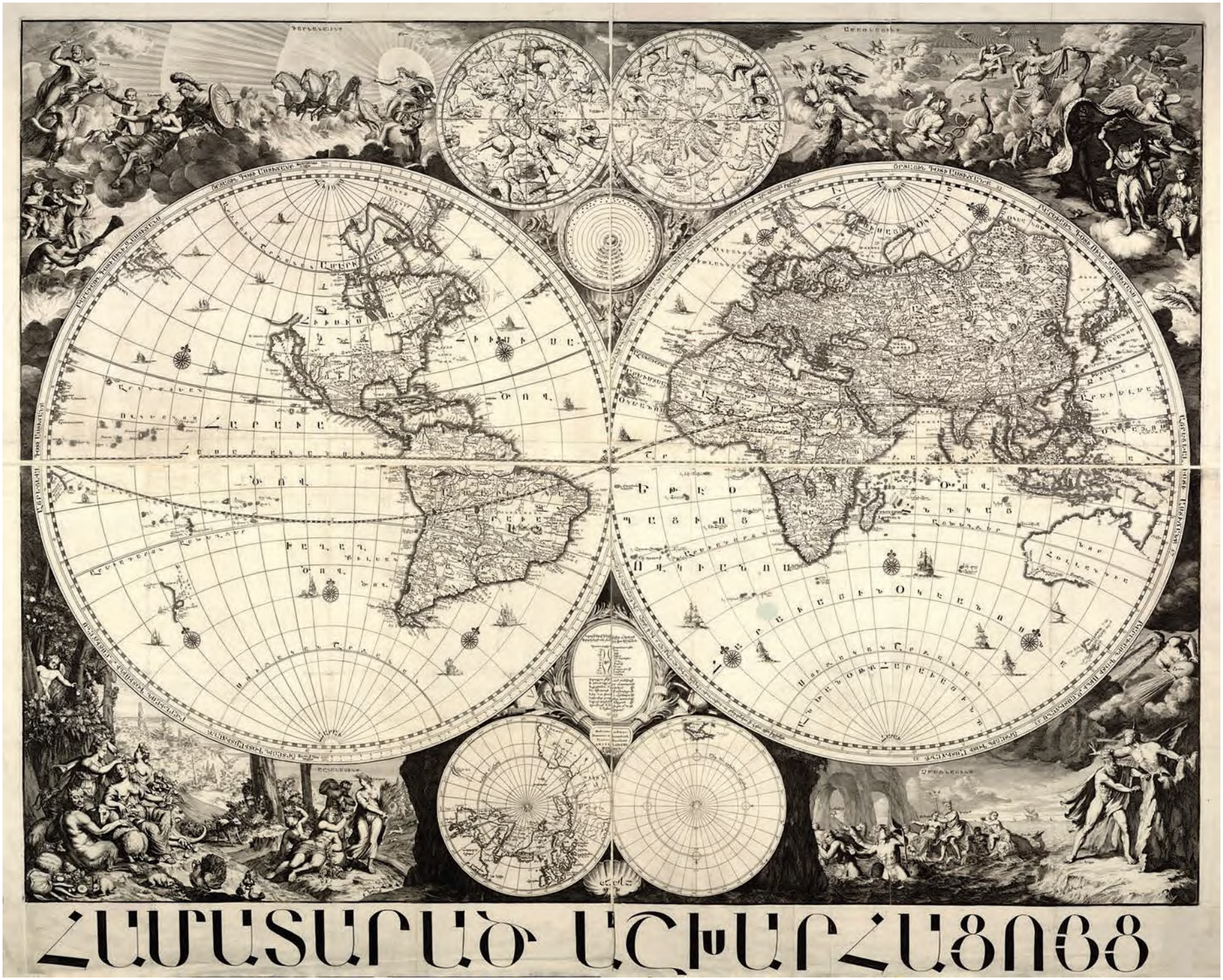
Map 2-21 – Philippe de la Rue's "Map of Armenia divided into four parts", during the rule of Emperor Justinian, prepared in 1653.

In this map, which refers to Justinian's rule during the late fifth and early sixth century, Armenia was divided into four main regions. The largest part, which is Greater Armenia, on the map is coloured green and named "Armenia Maior", shown under the suzerainty of the Persian Empire. The western limit of Greater Armenia is the Euphrates River, to the west of which the region is named Lesser Armenia, which is divided into three parts: First, Second and Third Armenia, from north to south.

In the south, Armenia Minor reaches the region of Cilicia, where from the 11th to the end of the fourteenth century the Armenian Kingdom of Cilicia ruled.



Map 2.22 – "Map of Persia, Armenia, Anatolia and Arabia" by Frederic de Wit (1512-1594). On this map the borders of Armenia have been enlarged to include Diarbekir as well as Chaldea.



Map 2.23 – The World Map prepared by Tovmas Vanadetsi (1617-1708), printed in Amsterdam in 1695, in the printing house established by him.

The is the first printed world map in the Armenian language, published by Tovmas Vanandetsi in Amsterdam, 1695, in the printing house that he had established in 1693.

The map engravers were the well-known Dutch brothers, the Schonebeeks, who utilised the most up-to-date cartographic and geographic information of the day in preparing the map. This is in large format (152-124cm) and today no more than ten copies have survived.

After the Amsterdam printing house closed down, the engraved copper plates of the map somehow reached Venice and later a few editions of the same map were published at the St Lazarus Monastery in Venice, starting from 1754, but their surviving numbers are very few.[9]

The map shows the two hemispheres, with the northwest of North America and parts of Australia (here named New Holland) remaining unexplored. In addition, there are the two polar and celestial maps, as well as the drawing of the geocentric system of the Earth, Sun and the planets. This is similar to most up-to-date Dutch maps of the day.

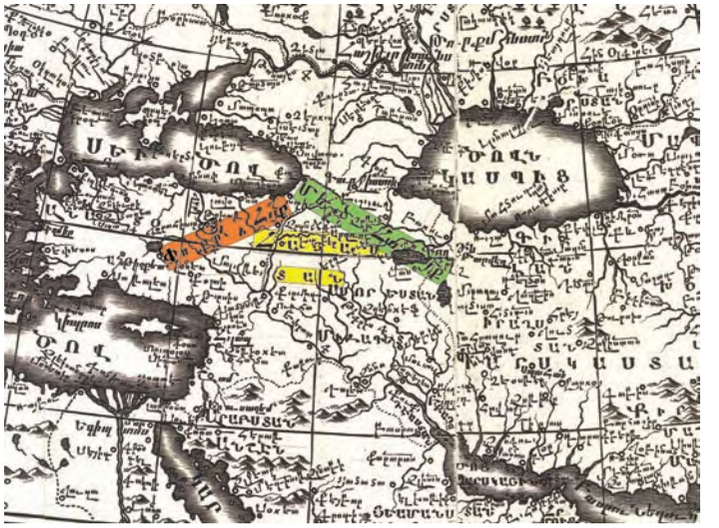
The decorations surrounding the main maps are once again typical of Dutch cartography of the period. The four corners of the map are full of mythical, astrological and traditional symbols relating to the four seasons. The main cartouche includes a list of abbreviations, also describing who the mapmakers were, praising their skill in verse.

The most important feature of the map is that all the toponyms and legends present in a modern European map have been translated and engraved in Armenian. This was most probably the responsibility of the four persons from the village of Vanand in Nakhijevan, who organised and operated the printing house in Amsterdam. For the first time all the geographical names appear in Armenian, creating a unique precedent.

On this map, as seen on the detail of Fig. 2.23a, the shape of the Caspian Sea is shown in oval outline, which was the ruling understanding of the shape of this lake, until Peter the Great, Tsar of Russia had it surveyed in the 1720s, after which its real shape began to appear on maps.

On Map 2.23a the region of the South Caucasus and the Middle East from the large map have been shown in detail. Greater and Lesser Armenia are shown located between the *Black* and *Caspian Seas*. Lesser Armenia is placed west of the *Euphrates River* (highlighted in red), while *Greater Armenia* (highlighted green) is shown east of the *Euphrates* extending to the Persian region of Atropaten.

The general name of the country, *Armenia*, covers both its constituent parts and is highlighted in yellow.



Map 2.23a – The region of South Caucasus and the Middle East from Map 2.23.

Soon after the publication of the *Hamataradz Ashkharhatsuyts*, a small volume, its companion-cum-guide entitled *The Key to the Recently Published World Map* was published in Venice in 1696. The booklet is a user manual for the map, describing its contents in detail. It provides the travelling tradesmen, who were at the time travelling to Europe and the Far East, with additional information about the cities where they were travelling to and trading with.[10] The booklet contains the following chapters, each describing the details of the given feature, presented as:

Prologue – General descriptions of the Zodiac, the Poles, the Meridians and other geographic basics

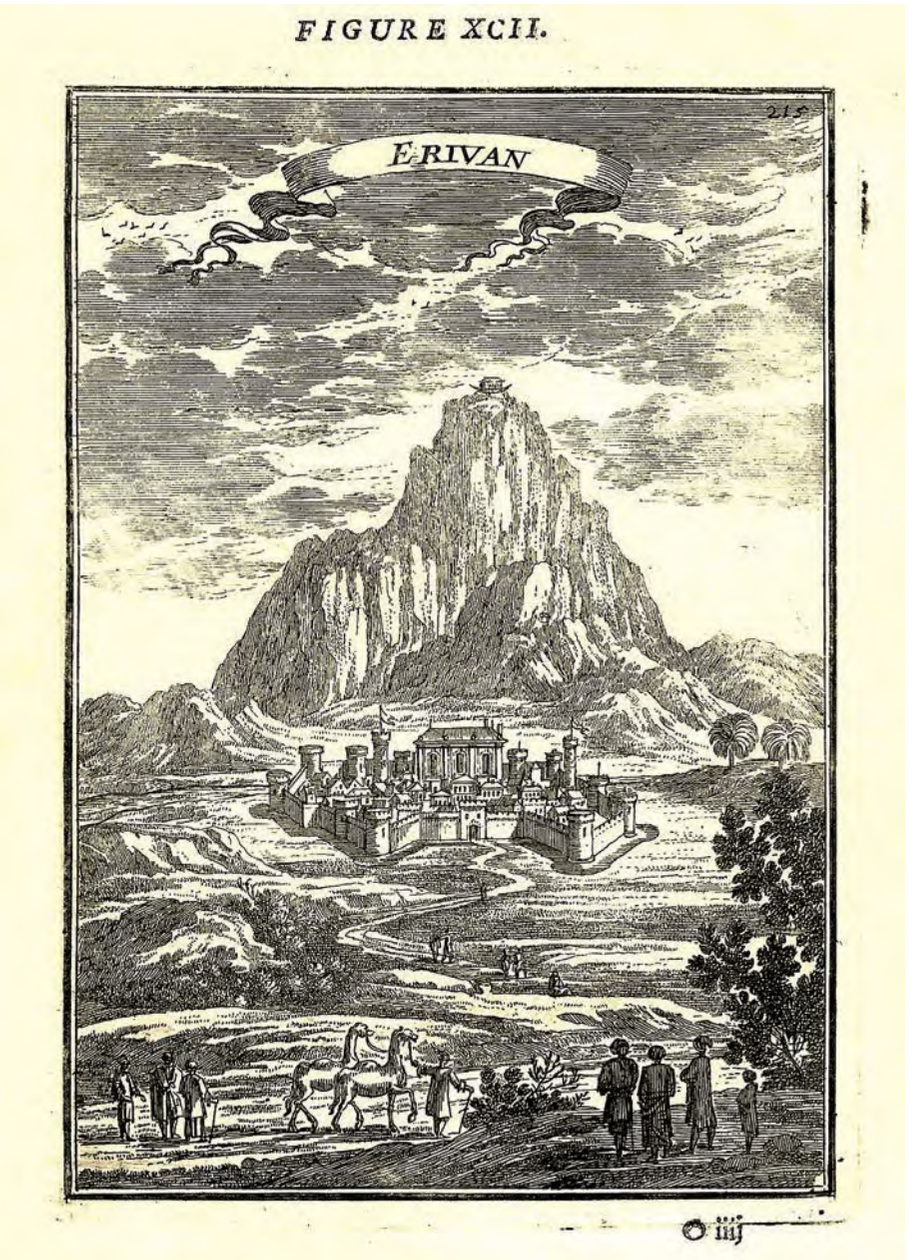
Chapter 1	The Equator
Chapter 2	Signs of the Zodiac
Chapter 3	The Meridian
Chapter 4	The two tropics
Chapter 5	The two poles
Chapter 6	The bands of the Earth
Chapter 7	Divisions & Climates
Chapter 8	Circle's degrees, the longitude and latitude of the places
Chapter 9	Measures used by the geographers
Chapter 10	Toponyms, climatic conditions, length of the day, longitude and latitude of the prime meridian.

9. For further details see R. Galichian, *The History of Armenian Cartography*, Bennett & Bloom, London, 2017, pp.29-41.

10. Lucas Vanandetsi, Key to our Recently Published World Map, Amsterdam 1696.



Map 2.24 – Map of "Armenia and Georgia", by Mallet, 1683.



Map 2.25 – The view of Yerevan by Mallet, 1683.

Allen Manneson Mallet (1630-1706) was a French cartographer who published geography books, containing many maps and views. Map 2.24 covers the South Caucasus region, including *Georgia* and *Armenia*, which sometimes is also called *Turcomania*, a name sometimes used to indicate Turkish controlled Armenia.

On map Fig. 2.24 *Anatolia* is the name given to the peninsula of Asia Minor, west of the Euphrates, this being the correct use of the same name.

On Map 2.25 the image shows the city of *Erivan* (Yerevan), capital of Armenia, located north of Mount Ararat, where we also see Noah's Ark, perched on its top.

Printed Maps in the Matenadaran Collections

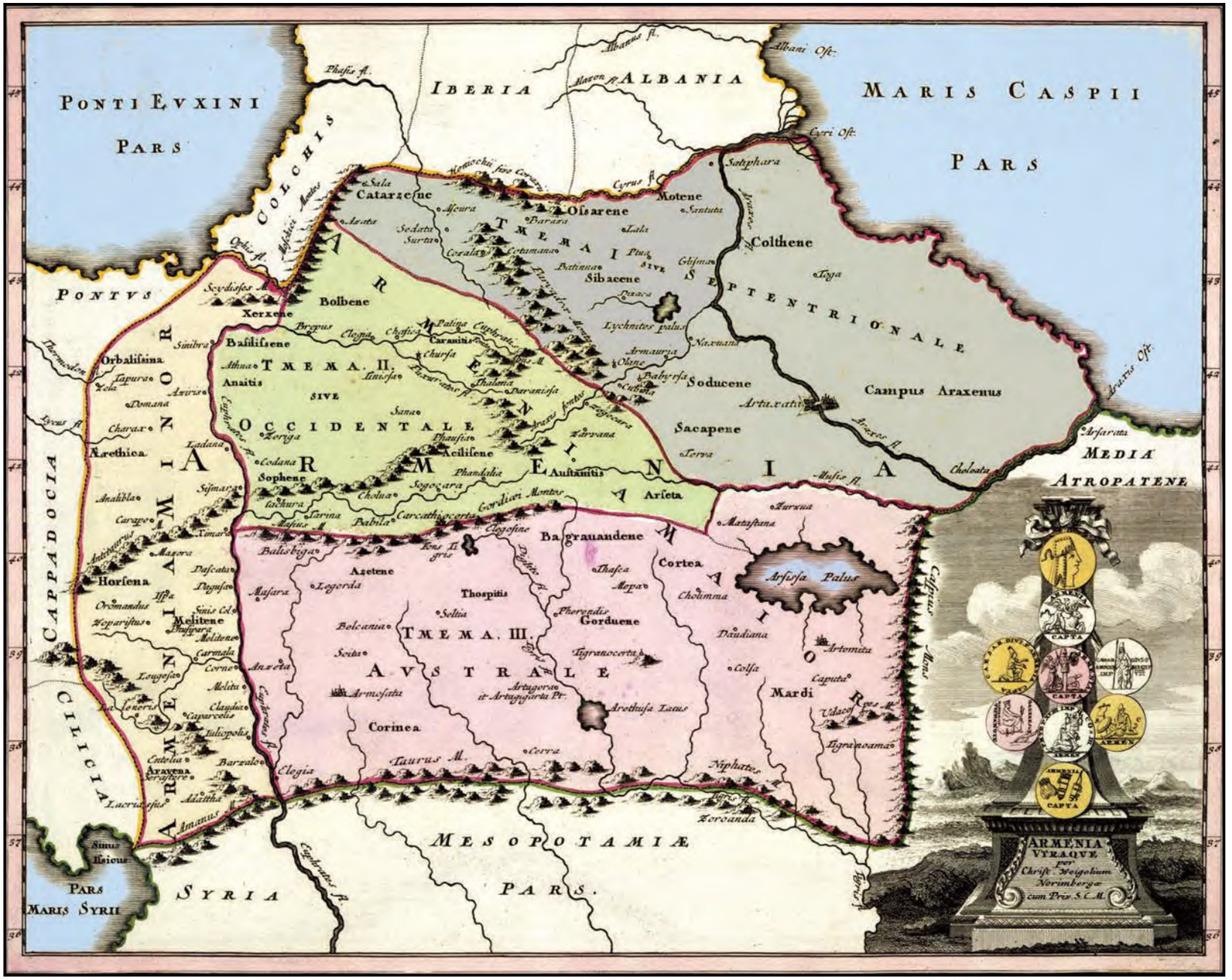
Part 2

A Selection of Maps
Printed During the 18th Century



Map 3.01 – Map of the "Locality of Tatars, Circassians, Mingrelians and Georgians up to the Crimea", prepared c. 1710 by Van der Aa (1659-1733).

The above is an almost ethnographic map, which shows the region of north and south Caucasus, with the name of the different races of peoples living in the areas of their homelands. The regions of *Circassia* and *Georgia* are indicated in larger script. South of the river *Cirus* (Kura), the region is named *Karasbag* (Karabakh), to the north of which is Derbent. The Caspian Lake (named Sea) is still shown in its medievally accepted and used oval shape, with some imaginary islands.



Map 3.02 – Map of "Both Armenias" taken from John David Koehler's "School and Travel Atlas" prepared by Christopher Weigel (1854-1725) of Nurnberg, printed in 1718.

The map shows *Armenia Maior* (Greater Armenia) on the right, divided into three regions of North (grey) West (green) and South (pink); *Armenia Minor* (Lesser Armenia) is on the left, west of the *Euphrates River*.

The Persian region of *Media* is shown east of *Northern Armenia* and south of the Caspian Sea entitled with its both old and new names of *Media and Atorpatene.* After the conquest of the Arabs, the name Atropatene gradually evolved, finally changing to Azerbaijan.



Map 3.03 – In 1722 R. Spofforth prepared a map of "Asia Minor – Syria, Armenia and Mesopotamia", dedicating it to His Highness Duke of Gloucester.

This map shows the eastern part of Asia Minor with the kingdoms of *Cappadocia, Pontus, Galatia, Cilicia and Lesser Armenia*, placed west of the *Euphrates* River. *Armenian Maior,* Greater Armenia, is shown south of the *Kura* River extending southwards to *Babylonia and Mesopotamia*.



Map 3.04 – "A New and Accurate Map of Persia" by Guillaume de L'Isle (1675-1726) dated 1724, printed in Amsterdam by Covens & Mortier.

At the time of the above map Persia had occupied almost all of the South Caucasus, including *Georgia, Eastern Armenia, Shirvan* (the region presently named Azerbaijan) and the eastern part of the Ottoman Empire, which included *Greater Armenia*. Therefore all of the South Caucasus was considered as Persian territory until 1813 and 1828, when it fell under Tsarist Russian rule.



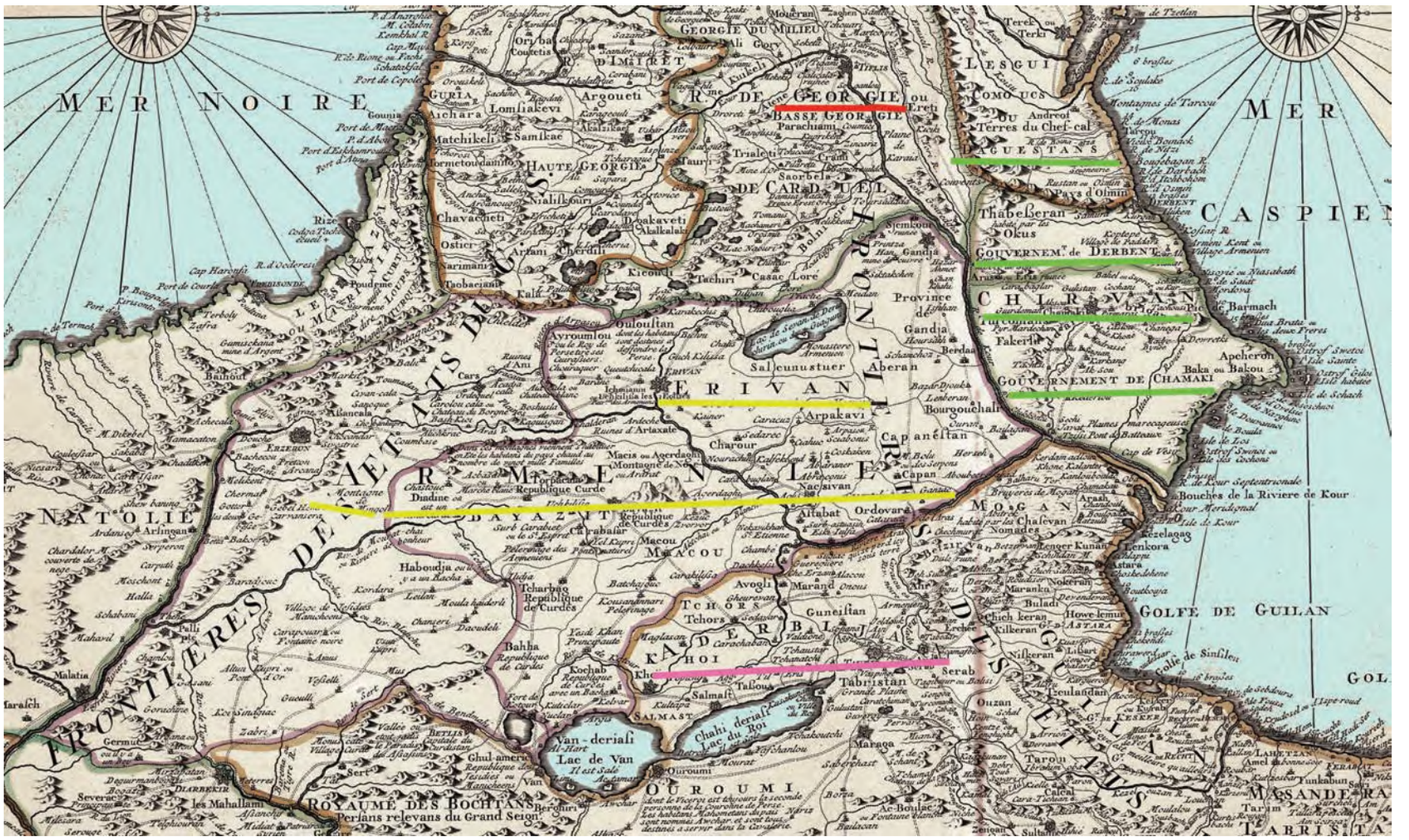
Map 3.05 – The map "Meer Caspiene" was drawn by Guillaume De L'Isle (1675-1726), depicting the Caucasus region during the early part of the 18th century.

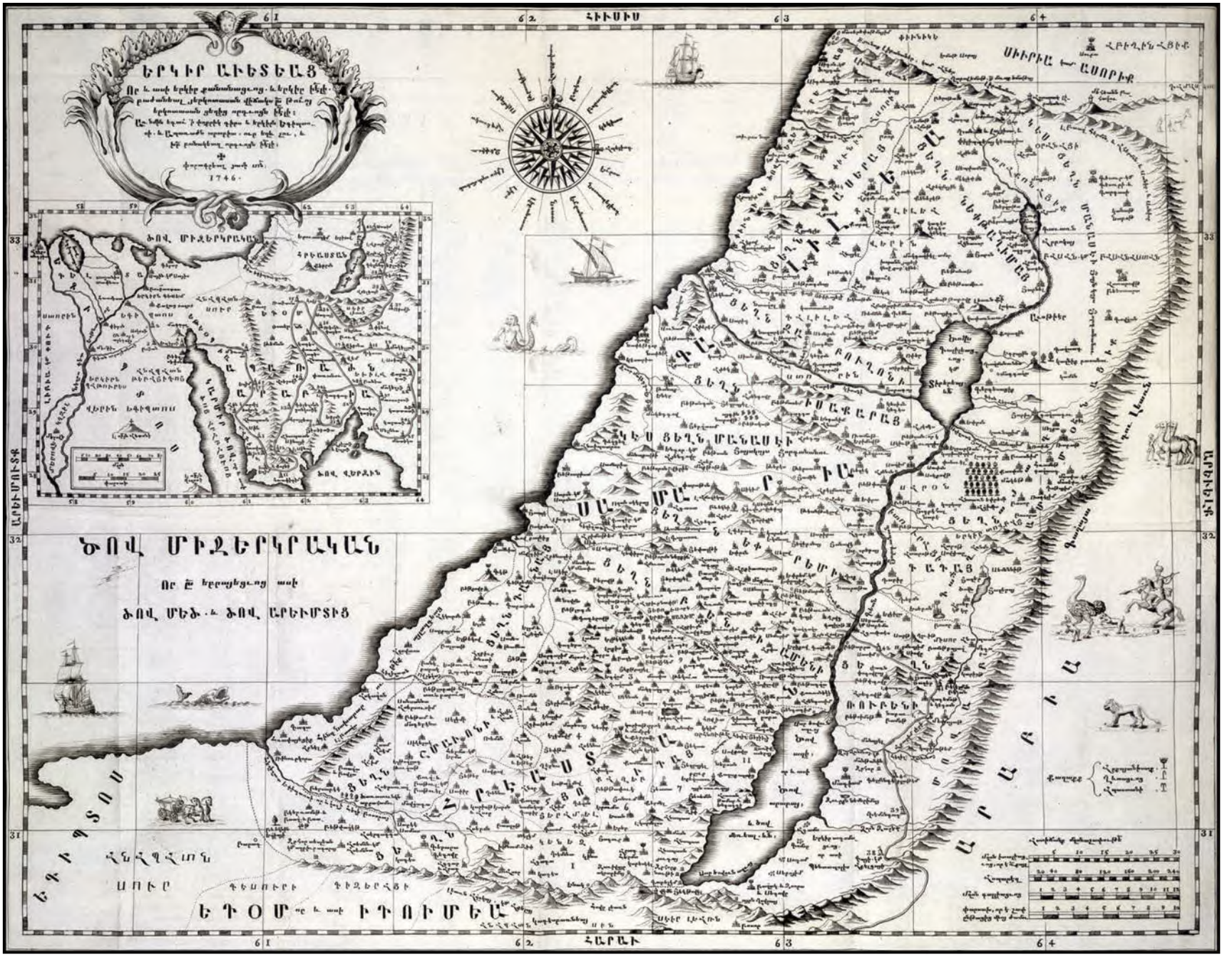
At described in the explanatory text for Map 3.04, at the time Persia had occupied all of the South Caucasus, and Russia had occupied the northern part of the Caucasus.

As seen on the detail of Map 3.05a the western shores of the *Caspian Sea*, north of the river Kura, are named *Daghestan, Government of Derbend, Shirvan and Government of Shamakhie.* These princedoms were ruled by various Khans of Turkish and Persian descent and paid tax to the Shah of Persia. These khanates are underlined in green. West of *Daghestan* the region is named *Georgia (underlined in red)*. South of Georgia is the region *Erivan*, (Yerevan) with the name *Armenia* in larger script, straddling the *Arax River* (underlined in yellow). Further south, on the southern shores of the *Arax River*, the region south of the river is named *Aderbijan*, which is a Persian north-western province, around the city of Tabriz, here shown as *Tauris*, underlined in maroon.

Since the whole of this region at the time was ruled by Persia, therefore vertically over the region the land has been given the title of *FRONTIERS OF PERSIA*.

The two lakes of the region, Lake Urmia and Lake Van both have salty waters, therefore the author of the map has assumed they must be interconnected. This incorrect assumption gave the false impression of them being inter-connected and lasted for the next, almost 35-40 years. By the 1790s the two lakes began to be shown as separate entities, with no connection whatsoever.


MER NOIRE
MER CASPIENNE
GEORGIE DU MILIEU
BASSE GEORGIE
HAUTE GEORGIE
DE CARTOUEL
ERIVAN
ARMENIE
CHIRVAN
DAGUESTANS
GOUVERNEMENT DE DERBENT
GOUVERNEMENT DE CHAMAKI
MOGAN
GOLFE DE GUILAN
FRONTIERES DE PERSE
ROYAUME DES BOCHTANS
Persans relevans du Grand Seign.
OUROUMI
Lac de Van
Chahi deriasi
Lac du Roi
Van - deriasi
Al-Hart
Il est Salé
Tauris
Erivan
Derbent
Baku ou Bakou
Tabriz
Salmast
Ourmi
Ordovar
Altabat
Nakchivan
Arpakavi
Erzeron
Bayazit
Macou
Tchors
Tchorbatou
Kaderchahoi
Salmast
Tabristan
Ouzan
Maragha
Ardebil
Serab
Kilkeran
Nikseran
Lesgui
Komoucs
Andreol
Terres du Chef-cal
Thabeberan
Okus
Fakeriel
Apcheron
Bourgouchali
Capanellan
Province de Gandia
Salcunustuer
Aberan
Ouloulian
Ayroumlou
Kicouri
Tachiri
Casac Lore
Chavacheti
Ostiet
Narimani
Tsobaciani
Artani
Cherdili
Drakaveti
Akalkalaki
Saorbela
Tsiaieti
Parachiami
Argoueti
Lomtiakevi
Achara
Matchikeli
Samtkae
Guria
Gouria
Rize
Cap Haronsi
Port de Courbe
Poudrme
Baibout
Cars
Ani
Ardahan
Kars
Alacaala
Erzeron
Chatoune
Diadine
Republique Curde
Haboudja
Bahha
Republique de Curdes
Tcharbao
Kochab
Malatia
Arlingan
Serpenon
Germuc
Ghul-amerie
Les Mahallami
Sert
Van
Berguri
Ac-Boulac
Sultanie
Tarom
Calcal
Cara-Tchoban
Tarum
Lahedjan
Amel
Kelkeran
Lenkoran
Astara
Salyan
Baku
Sabunchi
Surakhany
Mardakan
Pirallahi
Sangachal
Novkhany
Bilgah
Zagulba
Shamakhi
Gobustan
Ismayilli
Gabala
Oguz
Sheki
Zaqatala
Balakan
Qakh
Qusar
Khachmaz
Guba
Shabran
Siyazan
Quba
Derbent
Dagestan
Tarki
Terki
Kumukh
Avar
Andi
Gunib
Tsumada
Botlikh
Chunzakh
Gergebil
Untsukul
Khasavyurt
Kizlyar
Tarumovka
Makhachkala
Buynaksk
Kaspiysk
Izberbash
Derbent
Dagestanskiye Ogni
Sulak
Terek
Kuma
Manych
Kalmykia
Astrakhan
Volga
Caspian Sea
Black Sea
Sea of Azov
Crimea
Kerch
Taman
Novorossiysk
Tuapse
Sochi
Adler
Krasnaya Polyana
Gagra
Sukhumi
Ochamchire
Tkvarcheli
Gulripshi
Abkhazia
Georgia
Armenia
Azerbaijan
Russia
Turkey
Iran
Kura River
Araks River
Caucasus Mountains
Greater Caucasus
Lesser Caucasus
Elbrus
Kazbek
Dykh-Tau
Shkhara
Ushba
Tetnuldi
Janga
Pushkin Glacier
Bezingi Glacier
Adishi Glacier
Chalaadi Glacier
Lekhziri Glacier
Shkhelda Glacier
Mestiachala Glacier
Zemo Svaneti
Kvemo Svaneti
Racha
Lechkhumi
Imereti
Kakheti
Tbilisi
Mtskheta
Gori
Kutaisi
Batumi
Poti
Rioni River
Inguri River
Enguri
Khobi
Zugdidi
Senaki
Martvili
Samtredia
Lanchkhuti
Ozurgeti
Chokhatauri
Guria
Adjara
Batumi
Kobuleti
Khelvachauri
Shuakhevi
Keda
Khulo
Artvin
Yusufeli
Ardanuç
Şavşat
Borçka
Hopa
Arhavi
Fındıklı
Pazar
Ardeşen
Çamlıhemşin
Çayeli
Rize
Of
Sürmene
Akçaabat
Trabzon
Vakfıkebir
Tonya
Maçka
Düzköy
Şalpazarı
Beşikdüzü
Çarşıbaşı
Yomra
Araklı
Kalkandere
Çaykara
Uzungöl
Tortum
Çat
Pasinler
Hınıs
Tekman
Karayazı
Tutak
Horasan
Narman
Oltu
Olur
Şenkaya



Map 3.06 – Map of the "Promised Land, that of the people of Canaan and their twelve tribes". Prepared by the Mkhitarist Order of Venice, published in 1746.

This is the first Armenian language map published by the Mkhitarist Order of monks, who were given the lease of the island of San Lazzaro in the Venice Lagoon, where they established their library and religious centre. On this map, the Promised Land is divided into three parts: *Gallilea, Samaria* and *Israel*. Further regional divisions as well as names of the various towns and villages are marked.



Map 3.07 – Map of the night sky, published by the Mkhitarist Order of Venice in 1747.

The above mentioned World Map of the northern and southern skies was prepared in Venice to show the positions of stars and constellations in the night skies of the northern and southern hemispheres.

The very same map was used by the Mkhitarist Order of San Lazzaro in Volume 1 of *Dictionary of the Armenian Language* by Mkhitar Sebastatsi, printed in 1749, and can be found inserted between pages 500 and 501, with dimensions of 39 x 26cm.



Map 3.08 –"Map of the Known World". Mercator projection prepared by the French cartographer Jaques Nicholas Bellin (1703-1772) in 1748.



In the map 3.08 the regions of Australia and Alaska are still incomplete, but the shape of the Caspian Sea has already been corrected.

The detail in Fig. 3.08a depicts the South Caucasus region, *where Circassia, Georgie, Armenia, Syria, Persia* and *Asiatic Turkey* are depicted. Other regions, being small, have not merited mention on Bellin's World Map.

Map 3.08a - Detail of South Caucasus from the above map.



Map 3.09 – "Map of the world". The eastern and western hemispheres of the world, in reduced format. Mkhitarist Order. Venice, 1747.

This is a reduced version of the *Ashkharhatsuyts* (World Map), adopted from the original printed in Amsterdam in 1695. In this map the latest topographical information about the Caspian Sea has been used and its shape has been changed from oval to its realistic, elongated shape. However, the same cannot be said about the shape of Australia and Alaska, which are still shown incomplete.



Map 3.10 – "The map of Armenia According to Old and New Geographers". Mkhitarist Order. Venice, 1751.

The above map shows various provinces of the *Armenian kingdoms of Greater and Lesser Armenia,* called "ashkharh", which literally means "world". On this map Armenia is shown extending from the Armenian Highlands, beginning in the west roughly from the line connecting the towns of Malatia and Elazig in present-day Turkey to the confluence of the Arax and Kura rivers in the Southern Caucasus.

This map measures 51 x 38cm, engraved by Giuseppe Zucchi. The abovementioned World Map was used by the Mkhitarist Order of San Lazzaro in Part 1 of Volume 2 of *Dictionary of the Armenian Language* by Mkhitar Sebastatsi, printed in 1769, and can be found at the end of Part 1, on page 265.

Map 3.11 – "The Early Ages of the World", ecclesiastical geography of Asiatic Turkey and Persia, by Robert de Vaugundy (1688-1768) published in 1762.

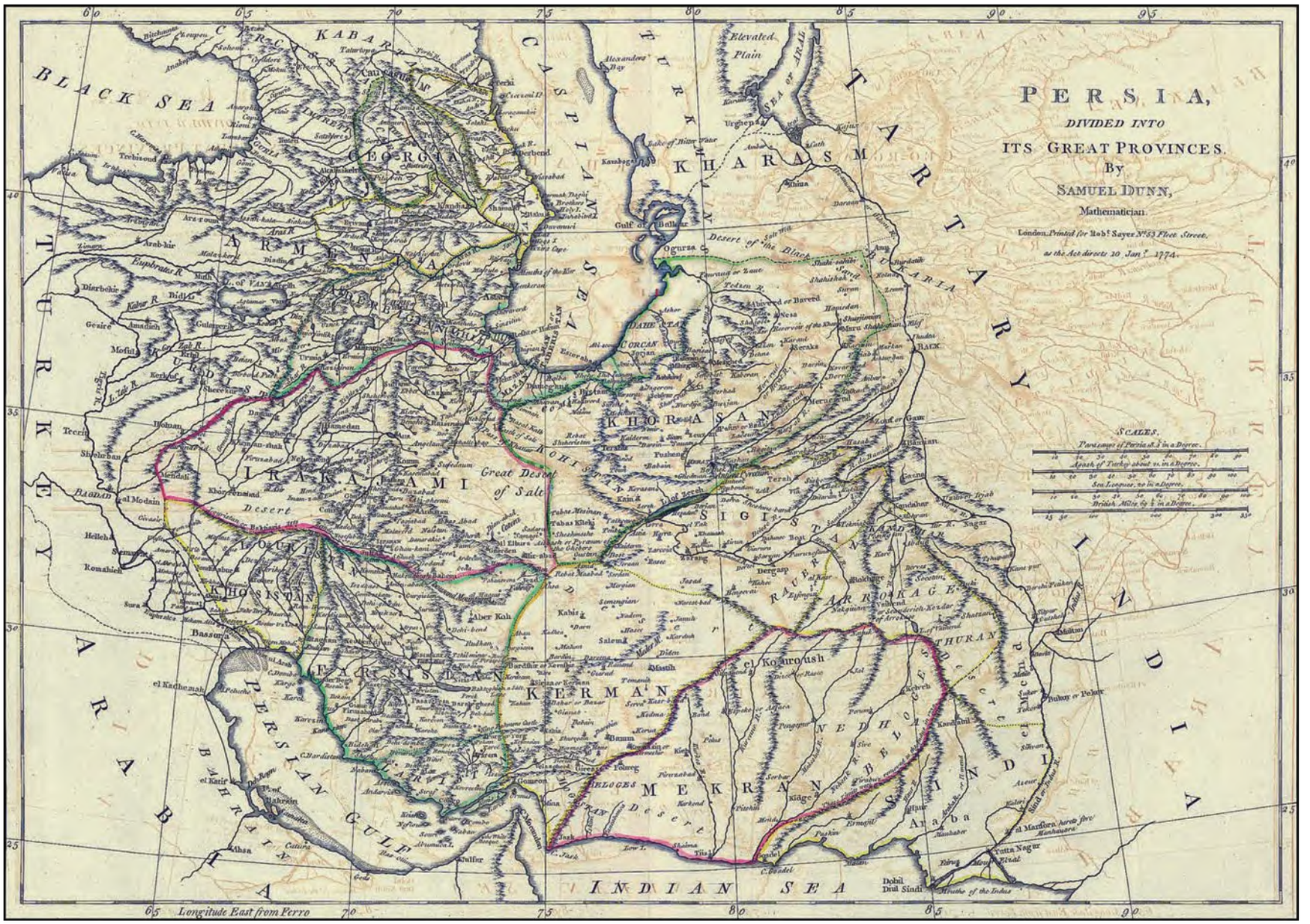


In the map of the ancient world the cartographer has presented *Armenia* in the centre, surrounded by *Persian Aderbijan, Assyria, Mesopotamia* and *Georgia* as well as small kingdoms in *Asia Minor*, found to its west. The *Earthly Paradise* (Eden) is placed inside the territory of *Armenia*.



The above map shows the Ottoman provinces and areas such as *Syria, Mesopotamia. Sham* and *Diyarbekir,* as well as *Armenia*, which are ruled by the Ottomans.

Map 3.12 – "Anatolia and Asia Minor" map by Emmanuel Bowen (fl. 1714-1767).



Map 3.13 – Map of "Persia divided into its Provinces", by Samuel Dunn (1723- 1794).

The above map was published in 1774 in London. It includes all the regions and local divisions of the territory of Persia (Iran). Some of the South Caucasus is still under Persian rule, including the countries of *Georgia* and *Armenia*.

Armenia is shown extending from the north of *Lake Van* eastwards, up to the confluence of the *Arax* and *Kura* rivers in Karabakh.

The Persian province of *Adherbaigan* (or Azerbaijan) is fully placed south of the Arax River, extending in the west from *Lake Urmia* to the Persian province of *Gilan* in the east.



Map 3.14 – Map of Turkey in Asia, by Nicholas Sanson (1600-1667), reissued in Paris, 1778.

The above map purports to show the Ottoman controlled territories, but the borders are not shown correctly. The Ottomans never captured *Ispahan*, capital of Safavid Persia, as falsely indicated on the map. The map layout is a variation of Ptolemaic maps and later editions.



Map 3.15 – "Map of the Eastern Part of the Ancient World" by Robert Vaugundy, published in 1779, Paris.

This map is entitled "Partie Orientale de la Carte des Anciennes Monarchies" (The Oriental Part of the Ancient Kingdoms) and was published in Paris in 1779. The map shows various ancient kingdoms including those of *Greater Armenia, Albania, Media, Persia, Parthia, Colchis* and *Iberia*, as well as *Media, Atropatena* (Adiabene), which is shown located south of the *River Arax*. In the World map inset, at the top of the page, the mapping of Australia is still incomplete.



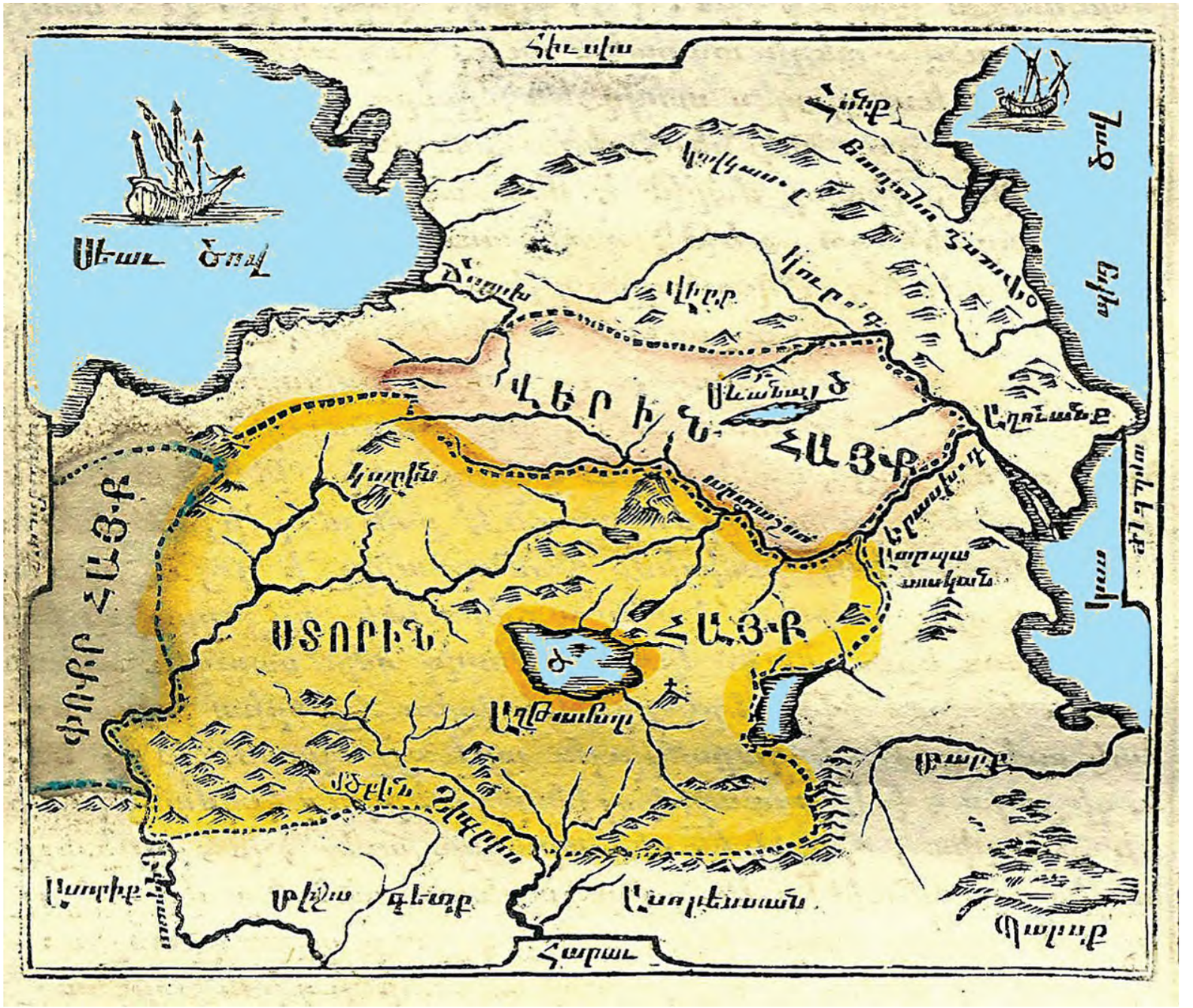
Map 3.16 - This curiosity map is entitled "A Map of the Terrestrial Paradise", i.e. the Garden of Eden, which was a common perception during the Middle Ages.

There are many similar versions of this map, including those of Moxon, Kircheri, Stackhouse, Vaugondy (Map 3.11), Buache and others. This version was prepared by Emmanuel Bowen (fl. 1714–67) and shows *Eden* located between the lakes of *Van* and *Urmia*, within the territory of historic or *Greater Armenia,* with Mount *Ararat* placed in the middle. The Rivers Euphrates, Arax and Tigris have their sources in this area. The map was published c. 1780.

This so-called 'curiosity' map is entitled "A Map of the Terrestrial Paradise", i.e. the Garden of Eden, which was a common perception of the area from the Middle Ages.

The same map also appears in Bowen's various atlases, dating from 1744 to the 1780s.

Map 3.17 - The regions of Armenia as presented in a small map, Venice 1784.

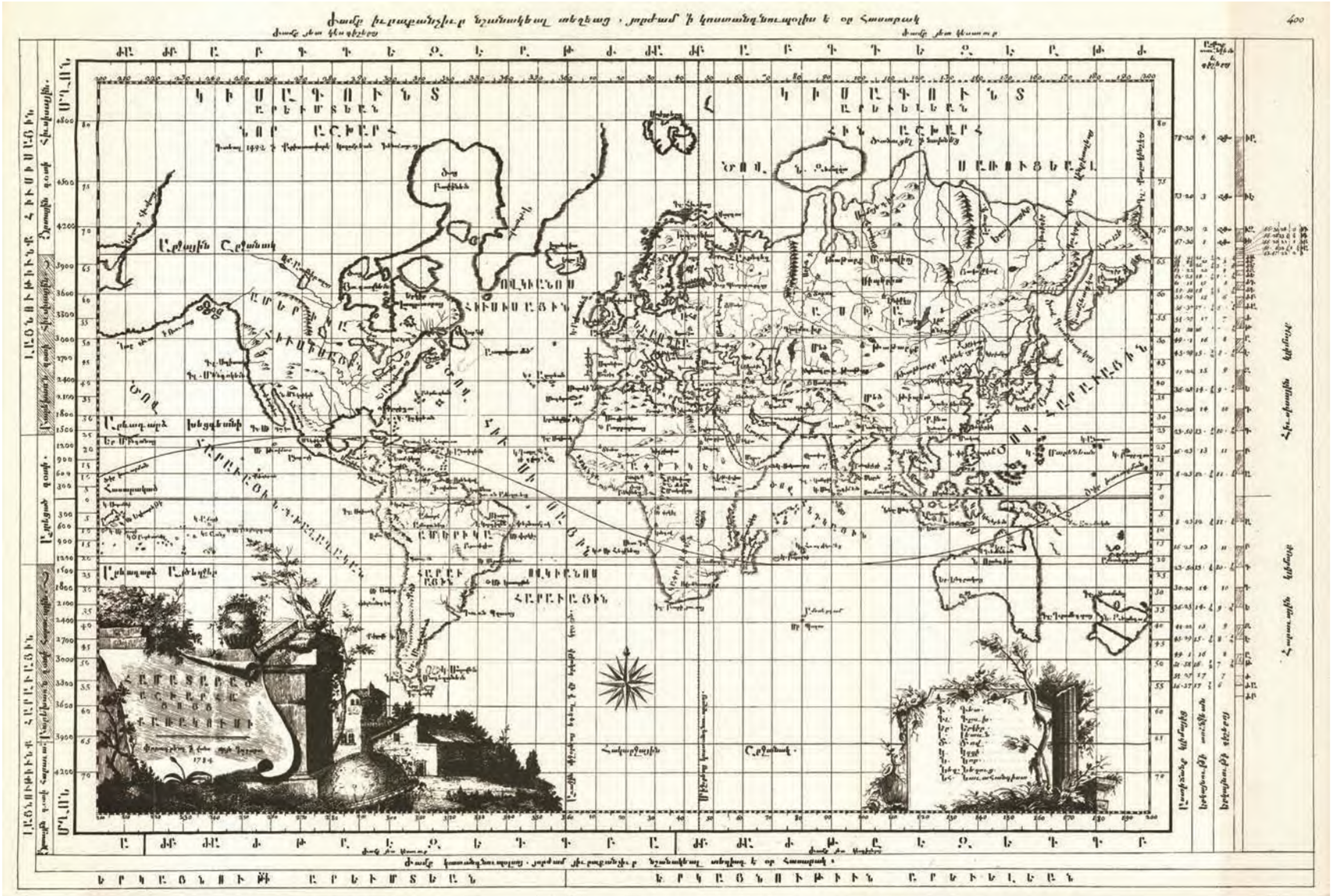


The map had been inserted in the book of *History of Armenia* by Mikael Chamchian, printed in 1784.

It presents Armenia in three parts, upper Armenia, which is almost the entire territory of Eastern Armenia, or present-day Armenia.

Greater Armenia here is named *Upper Armenia*.

Lower Armenia and *Lesser Armenia* are placed west of the *Euphrates* River, which is the historic location.



3.18 Rectangular World Map, Venice 1784.



3.18a - Detail from above map.

This is the first Armenian map using the Mercator projection to show the surface of the globe on a flat rectangular shape, together with its parabolic increase of errors in regions nearer the poles, inherent in this type of projection.

This small map also depicts the religious centre of the Armenians, the city of Echmiadzin, as well as Mount Ararat and the capital of ancient Armenia, Tigranakert, which appears on the map as an important Armenian landmark.

Map 3.19 – "Extended Ottoman Empire", published by San Lazzaro, Venice 1787.



This map shows territories occupied by the Ottomans in the year 1787.

All the toponyms have been translated into Armenian and some important ones use their Ottoman names in Armenian transliteration.



Map 3.20 - "The Ottoman or Turkish Empire in Europe and Asia", published in London in 1791 by J. Johnson, where Armenia is displayed prominently.

Printed Maps in the Matenadaran Collections

Part 3

A Selection of Maps
Printed During and After the 19th Century

Map 4.01 – "Overview of the Caucasian War", 1843, Schropp, Germany.

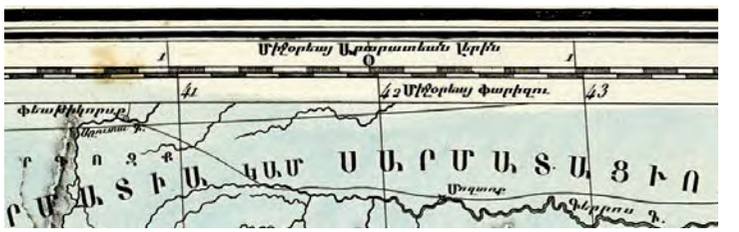


This map provides details of the Russian controlled Caucasus. It was prepared in order to show various provinces of Transcaucasia, as known then.

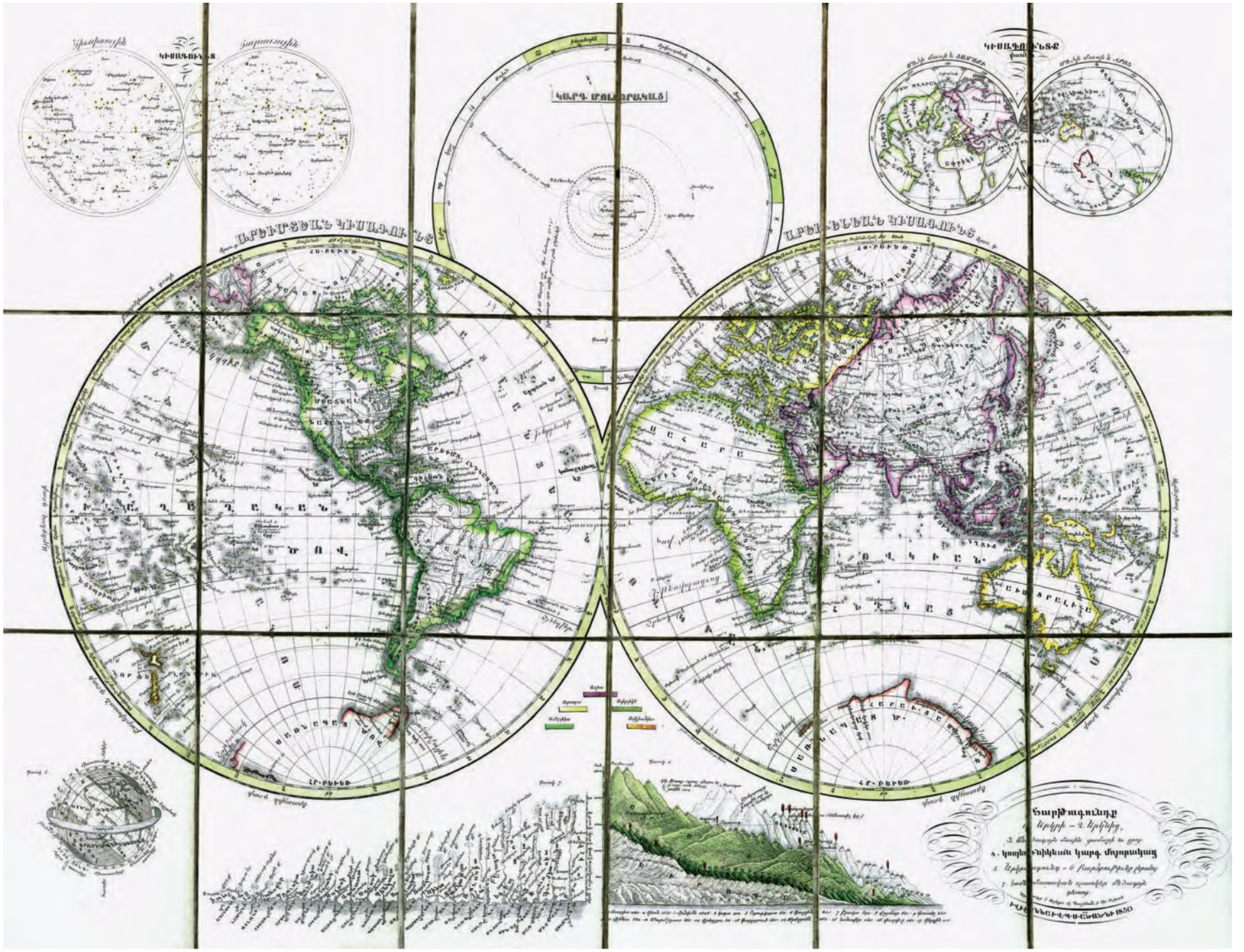
They *include Georgia (Grusien), Armenia* and *Karabakh*, as well as *Shaki, Shirvan* and *Kuba*. The last three are on the territory of what is now the Republic of Azerbaijan. In the shown region there is no country named Azerbaijan.

Map 4.02 – "Ancient Armenia" from Dadean's sponsored Atlas of 1849.

Map 4.02a



The above map was prepared in Paris for the Mkhitarist Order of Venice, sponsored by Hovhannes Amria Dadean. As seen on detail 4.02a, the map was drawn with an alternative for the Zero meridian, passing through the peak of Mount Ararat.



Map 4.03 – "The globe of the earth and sky", map prepared in 1850 by Father Alexander V. Paltejean of the Mkhitarist Order of Vienna.

The main features of the above map are the two hemispheres, surrounded by a number of insets, showing different aspects of the world that we live in.

The map also includes the following drawings and maps: the Copernican system of planets including orbits of three comets, Northern and Southern skies, a list of the tallest mountains and the longest rivers.


ANCIENT PERSIA
(ELAM)
WITH ADJACENT COUNTRIES
Illustrating the
CAPTIVITIES & PROPHECIES.
TOMB OF EZRA ON THE TIGRIS
Longitude East 50 from Greenwich
Published by D. Kray, 13 Gough Square, London.
Drawn & Engraved by I. Dower, Pentonville Hill, London.
SARMATIA
SCYTHIA
(HUNGARY)
R. Dannbe
R. Tanais (Don)
R. Rha (Volga)
Tanais
Hypanis
Caspian Sea or Hyrcanian Sea
Aral Sea
Massagetae
Gaza
Jaxartes
Immaus M.
(TARTARY)
Cyropolis
Charasmii
CASIO REGIO
SOGDIANA
Maracanda
Alexandria
Oxus
Oxiani
Aratha
Ochus
Antiochia
Bactra
BACTRIANA
Baxira
Aornos
Massaga
Caucasus M.
Rudera
Nicaea
Gauzaca
Alexandropolis
Prophthasia
Alexandria
Lottabara
Alexandria
Regio
Badara
Sogdorum
Oxiana
Ariaspe
Apamea
Pasargadae
Godana
Sidone
Harmuza
Sabis
Parsis
Arabis
Patala
Indus R.
ARACHOSIA
GEDROSIA
DRANGIANA
CARMANIA
Persian Gulf
ARABIAN SEA
Enxine or Black Sea
Byzantium (Constantinople)
Propontis
Hellespont
Mediterranean or Great Sea
Great Desert
Red Sea
Nile R.
ETHIOPIA
EGYPT
ARABIA
Memphis
Heracleopolis
Bubastis
Arsinoe
Petra
Ezion-geber
Antinoe
Hippos
Ptolemais Hermii
Myos Hormus
Coptos
Thebæ
Berenice
Leuce Come
Alexandria
Jerusalem
Damascus
Tadmor
Sidon
Tripolis
Riblah
Cyprus
Rhodus
Zanthus
Samosata
Seleucia
Laodicea
Smyrna
Sardis
Ephesus
Pergamus
Adramyttium
Troas
Abydus
Sestos
Thracia
Byzantium
Constantinople
Propontis
Hellespont
Hadrianopolis
Macedonia
Thessalonica
Philippi
Amphipolis
Dyrrachium
Apollonia
Epirus
Nicopolis
Actium
Corinth
Athens
Sparta
Argos
Patræ
Ionian Sea
Adriatic Sea
Sea of Marmora
Sea of Azof
Sea of Crete
Crete
Cyprus
Rhodes
Lesbos
Chios
Samos
Lemnos
Imbros
Tenedos
Troas
Mysia
Bithynia
Paphlagonia
Pontus
Cappadocia
Galatia
Lycaonia
Lycia
Pamphylia
Pisidia
Phrygia
Lydia
Caria
Cilicia
Armenia
Iberia
Albania
Colchis
Sinope
Amasia
Trapezus
Cerasus
Phasis
Dioscurias
Zela
Ancyra
Caesarea
Satala
Arae
Araxes
Cyrus
Mt. Ararat
Nakhchivan
Artaxata
Tigranocerta
Nisibis
Mesopotamia
Assyria
Nineveh
Arbela
Babylonia
Babylon
Is
Opis
Calneh
Ur
Susa
Susiana
Shushan
Ava
Choaspes R.
Tigris R.
Euphrates R.
Chaldæa
Ecbatana (Atropatene)
Ecbatana (Media)
Ecbatana (Achmetha)
Media
Atropatene
Hyrcania
Parthia
Apamea
Canatha
Calmana
Persepolis
Persis
Tiergis or Persia
Coromana
Susa
Habor
Rhagae
Semina
Susia
Barium
Margiana
Aria
Paropamisadæ
Elymandrus
Arius R.
Aretana
Zarangæ
Drangiana
Arachosia
Gedrosia
Carmania
Parsis
Ichthyophagi
Sabis
Badura
Mataua
Arbis
Patala
Indus R.
Oxiana
Sogdorum
Regio
Alexandria
Lottabara
Prophthasia
Alexandropolis
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Caucasus M.
Oxiani
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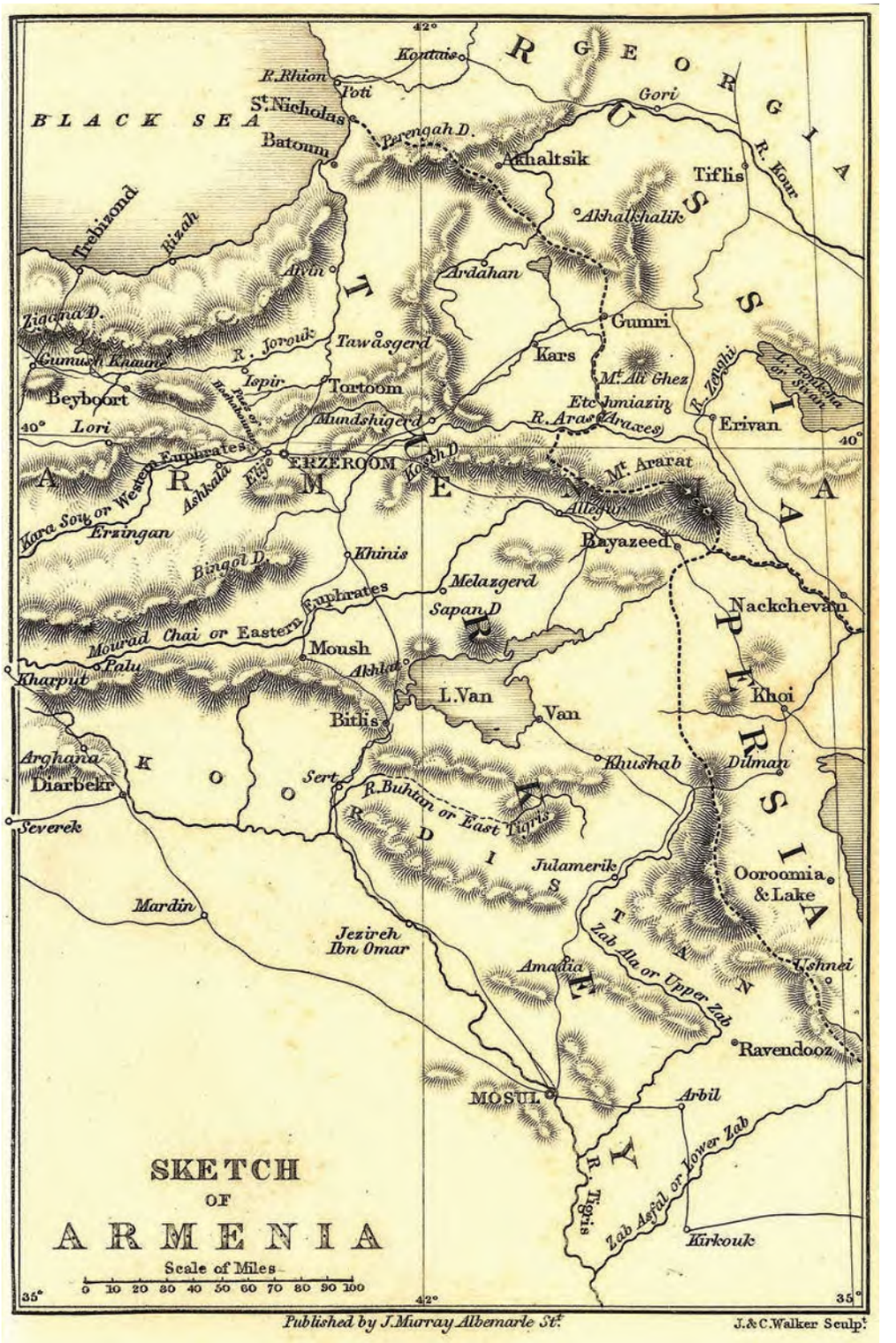
Cyropolis
Jaxartes
Gaza
Massagetae
Immaus M.
CASIO REGIO
Sogdiana
Charasmii
(Tartary)
Aral Sea
Caspian Sea or Hyrcanian Sea
Albania
Diri
Cambyses
Cyrus
Araxes
Araxes R.
Araxene
Sannina
Cyropolis
R. Gozan
Gaitara
Nakhchivan
Artaxata
Tigranocerta

Map 4.05 – Robert Curzon's "Sketch of Armenia", London, 1854.

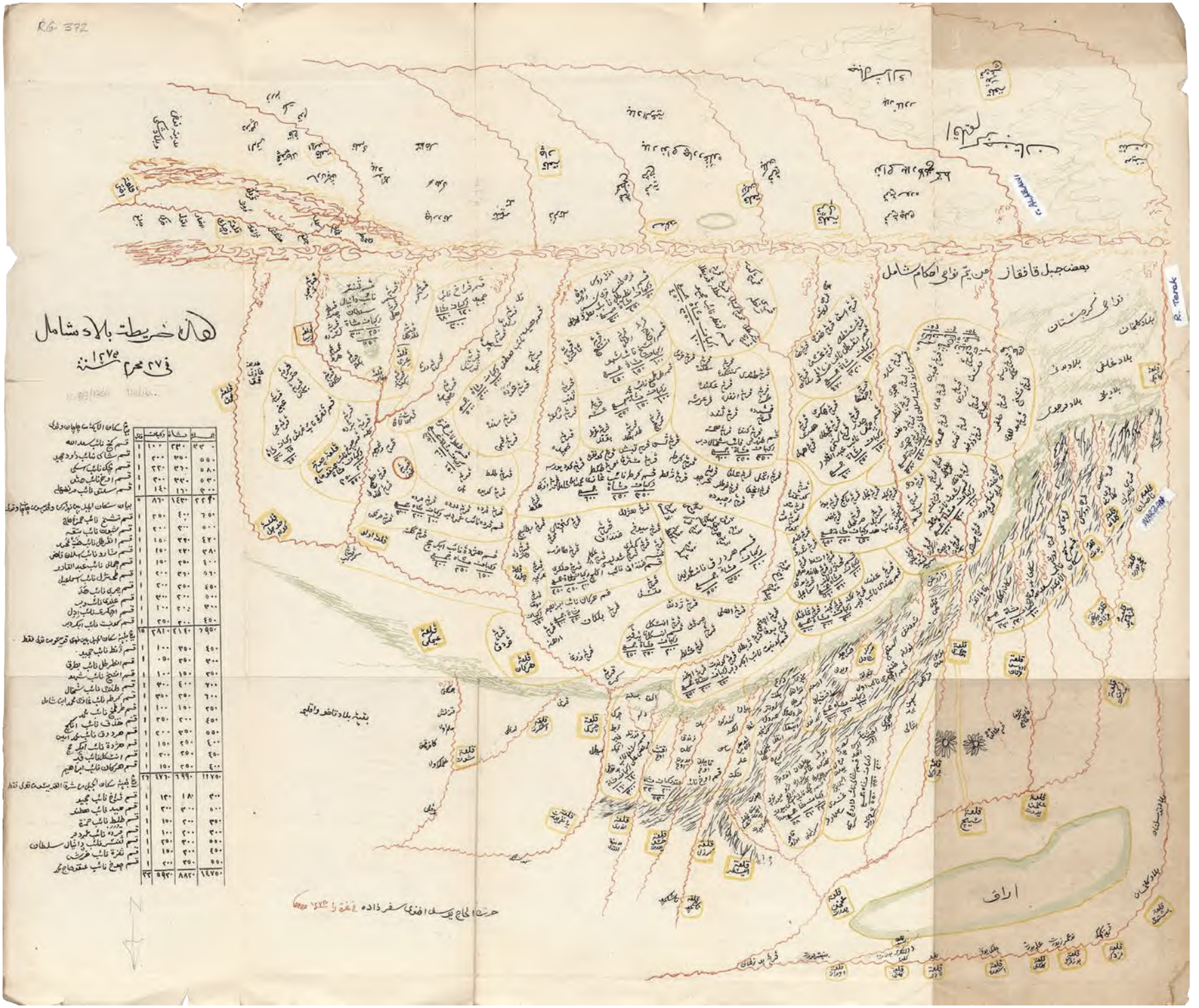


This map entitled *Sketch of Armenia* is taken from the British diplomat, traveller and author Rt. Hon. Robert Curzon's (1810–73) famous tome, *Armenia: A year at Erzeroum, and on the frontiers of Russia, Turkey, and Persia*, printed in London in 1854.

Curzon was working in the British Embassy in Constantinople. From 1843 he was a member of the team delimiting the Turko-Persian border.

The map, inserted at the back of the book, shows the area of Armenia, as it was known then, including the regions of *Van, Bitlis, Bayazid, Erzeroum, Moush, Bayburt, Kars, Ardahan, Erivan* and *Gyumri,* as well as the twin peaks of *Mount Ararat. Gyumri* and *Erivan* are shown in the territory under Russian rule, while the rest of the country is shown under Ottoman rule.

The Turkish-Persian border passes through the peaks of the two Ararat mountain peaks.



Map 4.06 – Part of the Caucasus under the control of Shamil in 1857, showing the villages and auls (mountain villages) with their Persian names, prepared for Haji Yusuf Efendi Safazadeh.



Map 4.07 – "Caucasus and Armenia" by Edward Weller (1819-1884), published in 1858.

The Russian gubernias or provinces displayed on the above map include Karabagh/Karabakh, Shirvan, Erivan and others. The toponym ARMENIA appears on the whole of the region extending from eastern Turkey to Karabakh.



Map 4.08 – "Armenia" from the 1860 Atlas printed in Vienna by the Mkhitarist Order.

This is one of the maps that appeared in an atlas published in Vienna. The volume was entitled "ATLAS or maps aimed for the use of national schools", published first in 1857 and reprinted in 1860. It contained six maps of the Continents as well as 15 individual country maps, including that of Armenia and the Ottoman Empire.



Map 4.09 – "The Ottoman State in Asia", another of the maps of the Atlas, as discussed in the previous page.



Map 4.10 – A map showing the South Caucasus in ancient times, by Karl von Spruner, from his "Atlas Antiquus" of 1855.

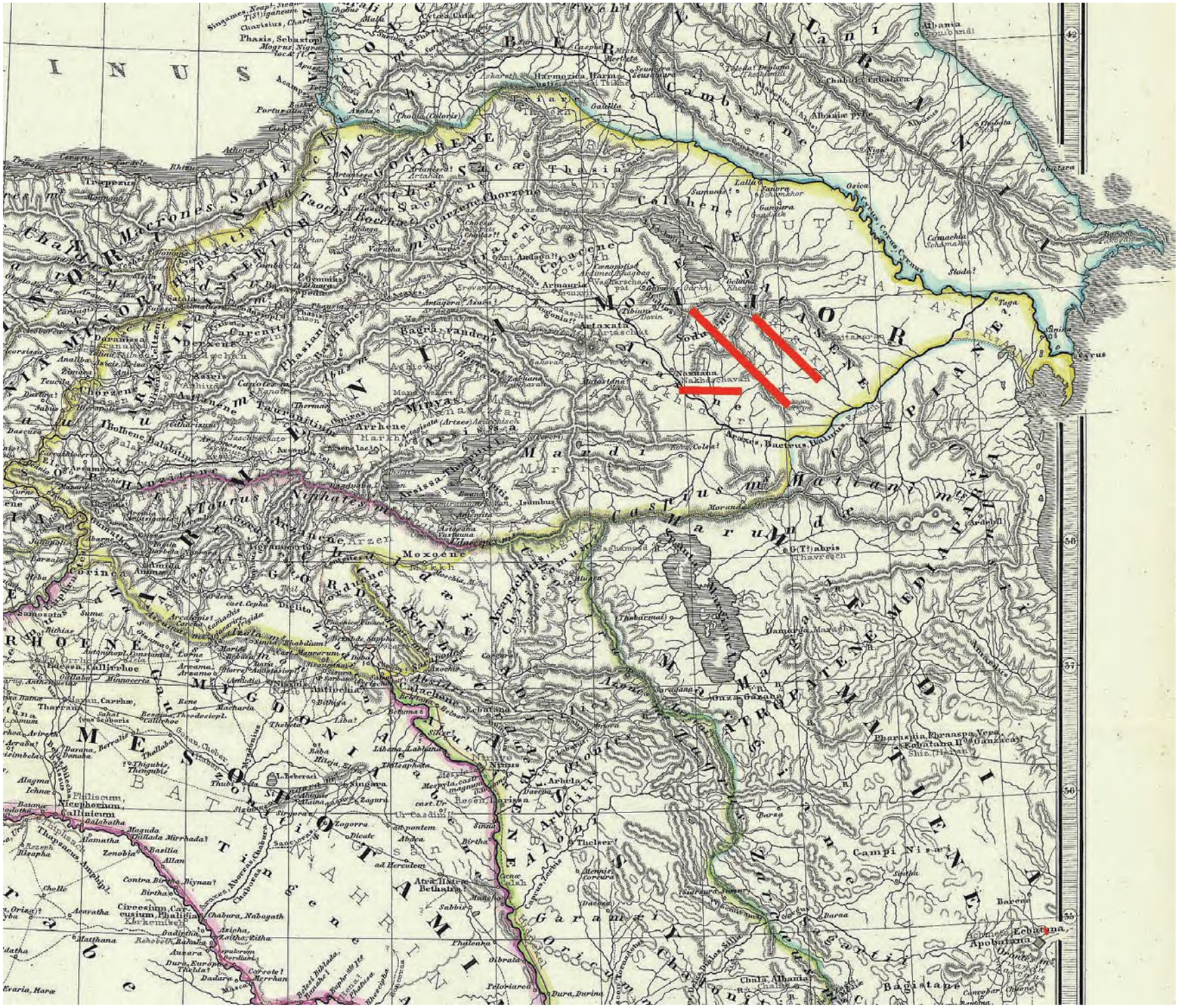
Map 4.10 is German geographer Karl von Spruner's "*Map of Armenia. Mesopotamia, Babylon, Assyria and Neighbouring Countries*" from his 1855 *Atlas Antiquus*.

In his map, Spruner indicates the ancient countries found in the region of the Middle East and South Caucasus. The toponyms shown on the map include the present names given to the regions, town and countries, as well as their original names in the local ethnic languages.

It shows the status of the region during the early ages of our history. Here we note *Asia Minor* with its multitude of countries, none of which presently exists. However, *Armenia* is still here, together with the Iranian province of *Atorpaten/Media,* situated south of the *River Arax*. The regions of *Artsakh, Siunik* and *Nakhijevan* are shown as parts of *Greater Armenia*.

On the map the above three Armenian provinces are also given their old Armenian names, which are *Artsakh, Syuniq* and *Utiq*.

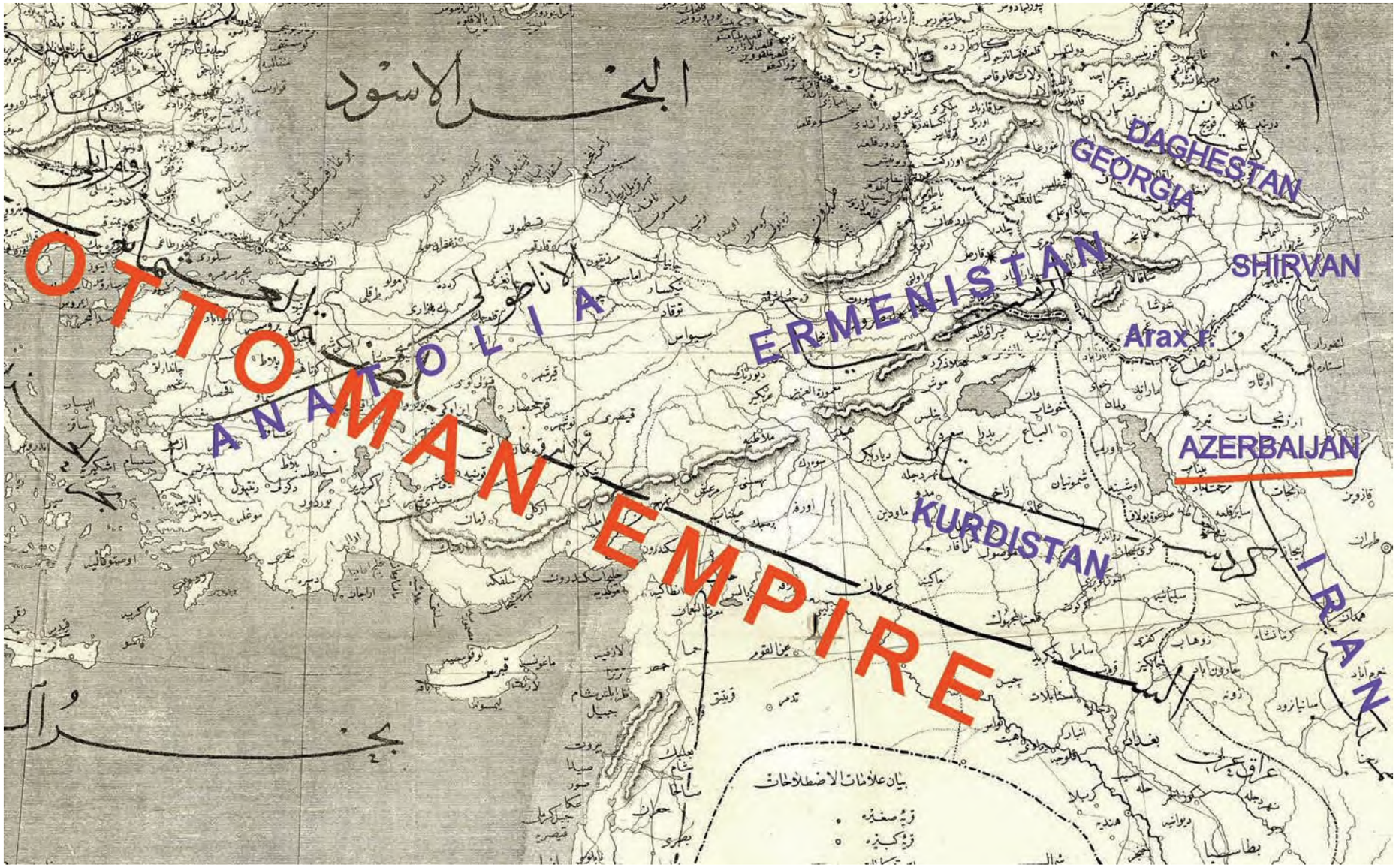
For details of Greater Armenia, see Map 4.10a, where the above three Armenian regions are underlined in red.



Map 4.10a – Detail from map 4.10, showing the region of Greater Armenia.



Map 4.11 – This map is entitled "Map of the War between the Ottoman Empire and Russia", printed in Istanbul in 1877.



Map 4.11a – A detail showing the South Caucasus from the Ottoman map of 1877, from Map 4.11.

This Ottoman map was compiled by the Empire's Ministry of War, in order to illustrate the situation of the war with Russia.

Here the name *Ermenistan/Armenia* is shown extending from Erzurum in the north, to the south of Lake Van and Bitlis, and in the west from Malatia, to Shirvan in the east. Azerbaijan, underlined in red, is shown as a province of Iran, located on the southern shore of the Arax River. Georgia is located north and northeast of Armenia with Daghestan to its north.

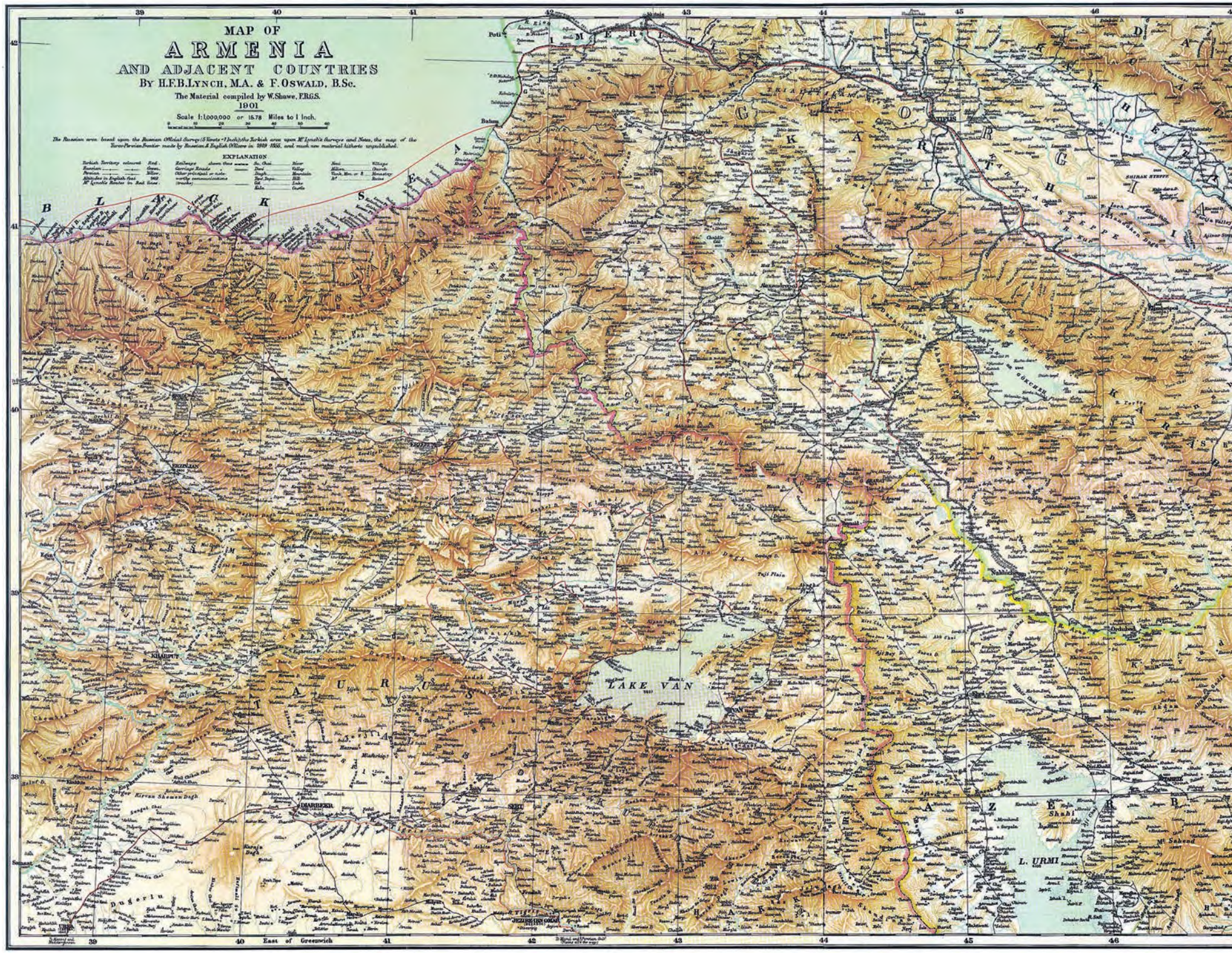
On the map the territory of the present-day Republic of Azerbaijan is named *Shirvan* and is located east of Armenia on the northern shores of the Arax River.

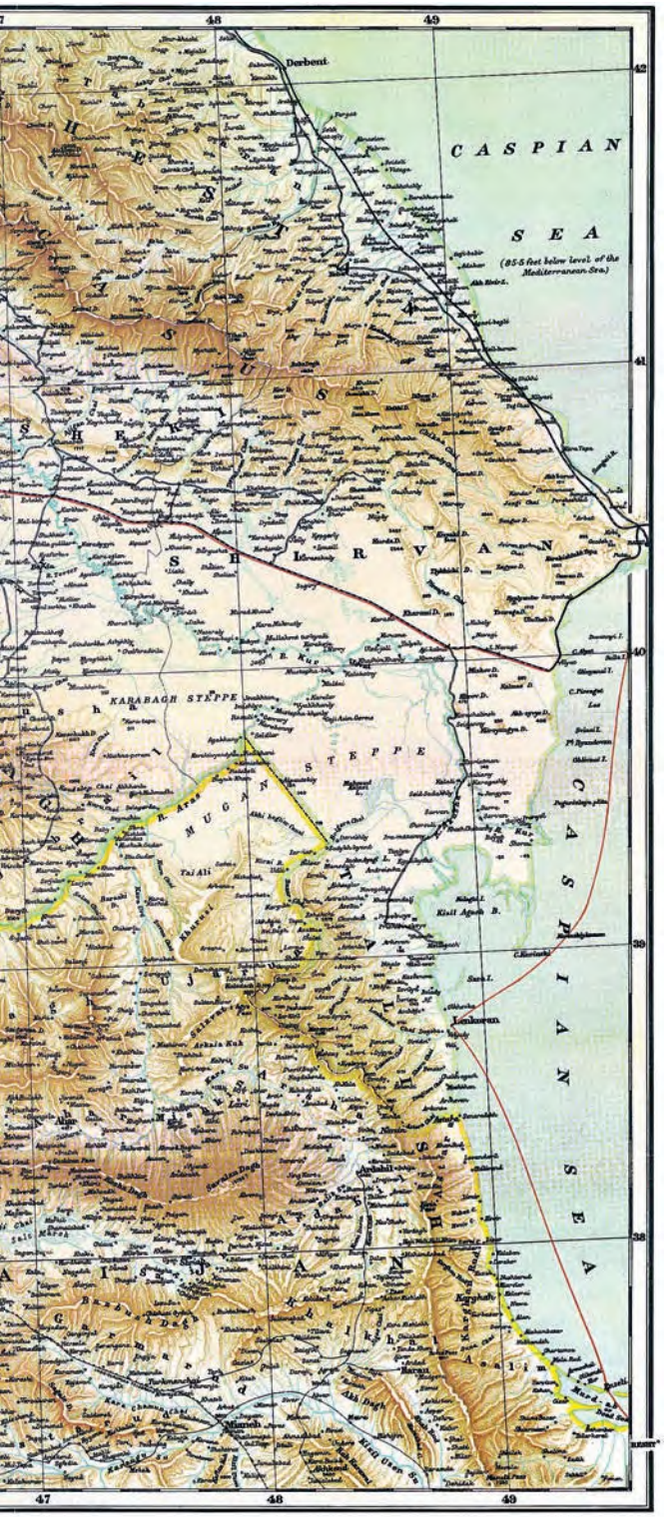


Map 4.12 – This map, entitled "Near East", was published by Kiepert in 1880 in Berlin. Here Armenia is shown prominently across the eastern part of the Ottoman Empire.



Map 4.13 – This map is entitled "Persian and Macedonian Empires" and was prepared by Kiepert, published in Berlin in 1880, with Armenia in between the Macedonian and Persian empires.


MAP OF
ARMENIA
AND ADJACENT COUNTRIES
By H.F.B.Lynch, M.A. & F.Oswald, B.Sc.
The Material compiled by W.Shawe, F.R.G.S.
1901
Scale 1:1,000,000 or 15.78 Miles to 1 Inch.
EXPLANATION
LAKE VAN
L. URMI
East of Greenwich



Map 4.14 - Map of "Armenia and Adjacent Countries", prepared by Lynch and Oswald, and published in 1901. The map accompanied Lynch's book "Armenia, Travel and Studies" as a large folded map inserted in a special pocket.

In 1901 the British author H. F. B. Lynch (1862-1913) published his famous two-volume book about his travels in Eastern Armenia and Western Armenia. The work was a detailed account of his visits to the Eastern (Russian-occupied) and Western (Ottoman-occupied) Armenia, with many photographic images of historic sites, cultural monuments, nature and peoples.

The book was accompanied by a large detailed folded map of the area, entitled *Map of Armenia and the Adjacent Countries*, prepared by Lynch and F. Oswald, in 1901. When the somewhat abridged Armenian edition of the volumes appeared, the original map was translated into Armenian, engraved by Meskhiev and published in Tiflis in 1915 for use with the book as an accompanying map.

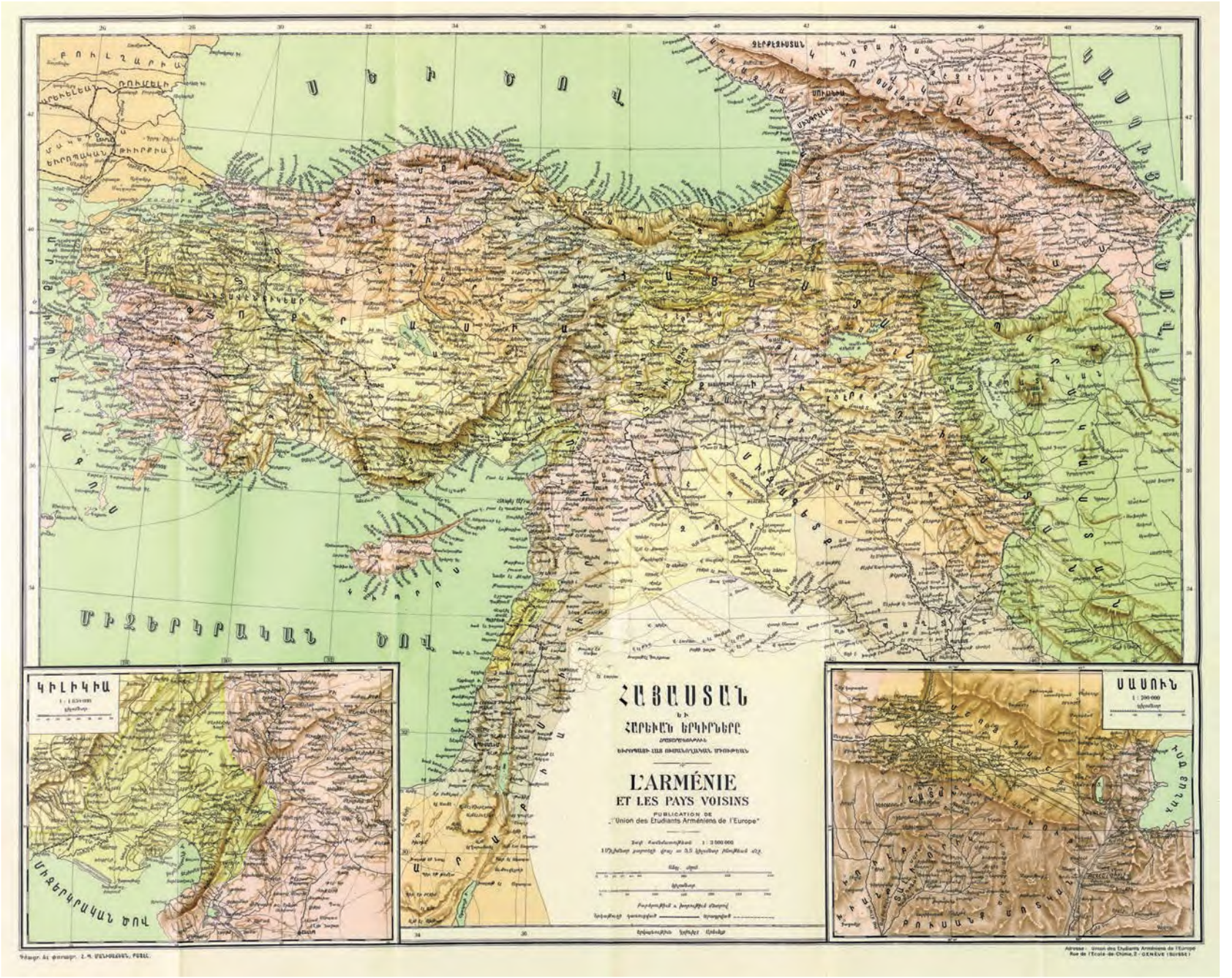
The Armenian language map measured 99 x 58cm, drawn to the scale of 1/1,000,000. The original is surrounded by various statistical tables dated 1915.

Abeghian's translation and printing of the map can be seen as Map 4.22 of this volume.



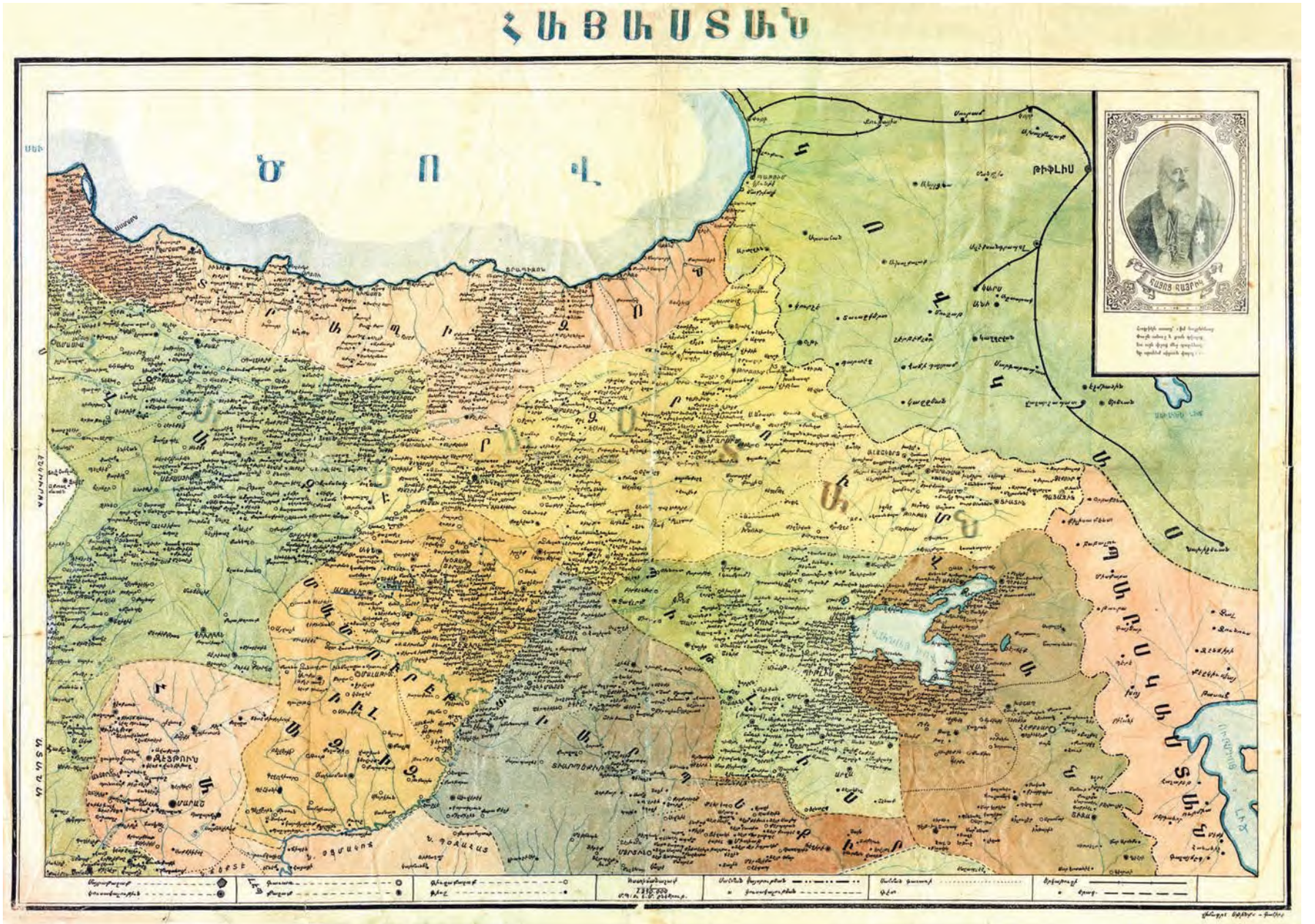
Map 4.15 – Map of the Caucasus from the German "Schott Atlas" of 1895.

Comparison of this map with that of Map 4.11 shows that the territory of Kars has been annexed by Russia. The Russian gubernias (provinces) of the South Caucasus on the map include those of Kars, Erivan (Yerevan), Karabagh, Elizavetpol, Baku, Shirvan, Daghestan, Kutais, Mengrelia, Tiflis etc.



Map 4.16 – "Armenia and Neighbouring Countries", published in Geneva, 1904. In the ensuing years many publications copied and reprinted this map in their name.

The Armenian Students Association of Geneva was an active cultural organisation in Switzerland. In 1904 it published a map entitled *Armenia and Neighbouring Countries* for the benefit of the local Armenian communities. The map was prepared with care and attention and was designed and engraved by H. P. Manisajean in Basel. The map scale is 1/3,500,000 and it measures 64 x 51cm.



Map 4.17 – "Armenia", published in Cairo in 1905.

The above reproduction is one of the few maps printed in Cairo, Egypt, by local Armenian organisations. The map is simply entitled *Armenia* and covers the region of historic *Greater Armenia* and *Lesser Armenia* occupied by the Ottoman Empire. However, the division of the territory displays the Ottoman vilayets as they were during the nineteenth century.

The map includes detailed toponyms of many towns and villages located in the territory of Greater and Lesser Armenia. It has been drawn with a scale of 1/1,250,000 and measures 72 x 51cm.



Map 4.18 – The plan of the city of Istanbul, as it stood in 1906. All the names are in Ottoman Turkish in Arabic script.



Map 4.19 – "Historic Armenia and Neighbouring Countries" by G. Vardanean. Tiflis 1910.



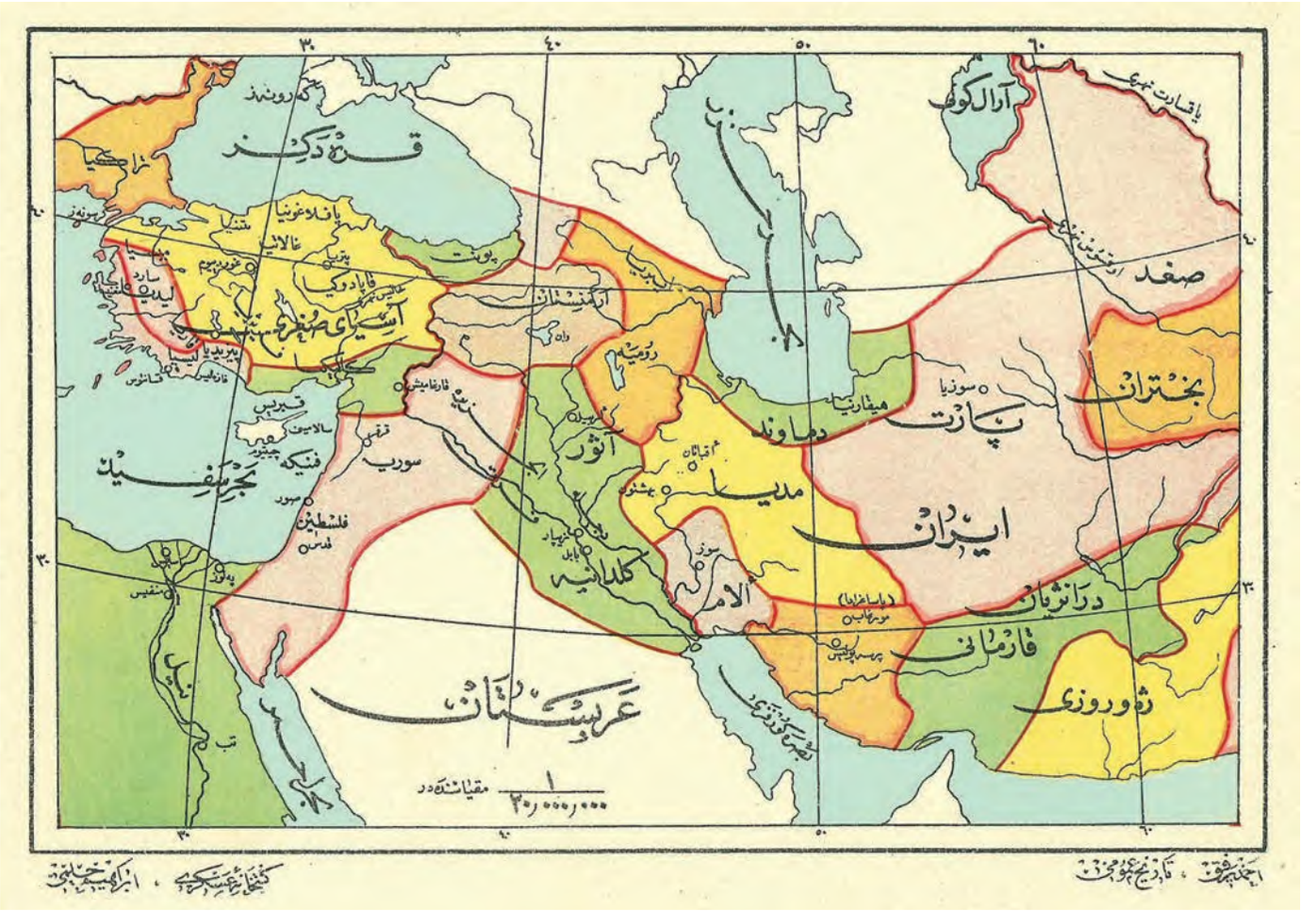
Map 4.19a

In 1910 in Tbilisi G. Vardanean published the above large map entitled *Historic Armenia and its Neighbouring Countries*. The map, engraved by G. Duisterdik, was printed in colour. This is a very large map, measuring some 193 x 107cm, which includes much topographic detail. It is the largest map printed in Armenian before the establishment of Soviet Armenia.

The two small insets on the map display countries which had existed in earlier times on the territories of Iran and Asia Minor.

The enlarged detail of Map 4.19a shows the wealth of detail in the map.

Map 4.20 – Map of the "Middle East in Ancient Times" from "General History" book published in Turkey around 1910. Cartographer is Ibrahim Hilmi.



Map 4.20a – In this translation of the map 4.20 we note that Armenia features prominently, but there is no Azerbaijan on the map prepared by their present-day ally, Turkiye, even though Azerbaijan claims to have 3000 years of statehood.



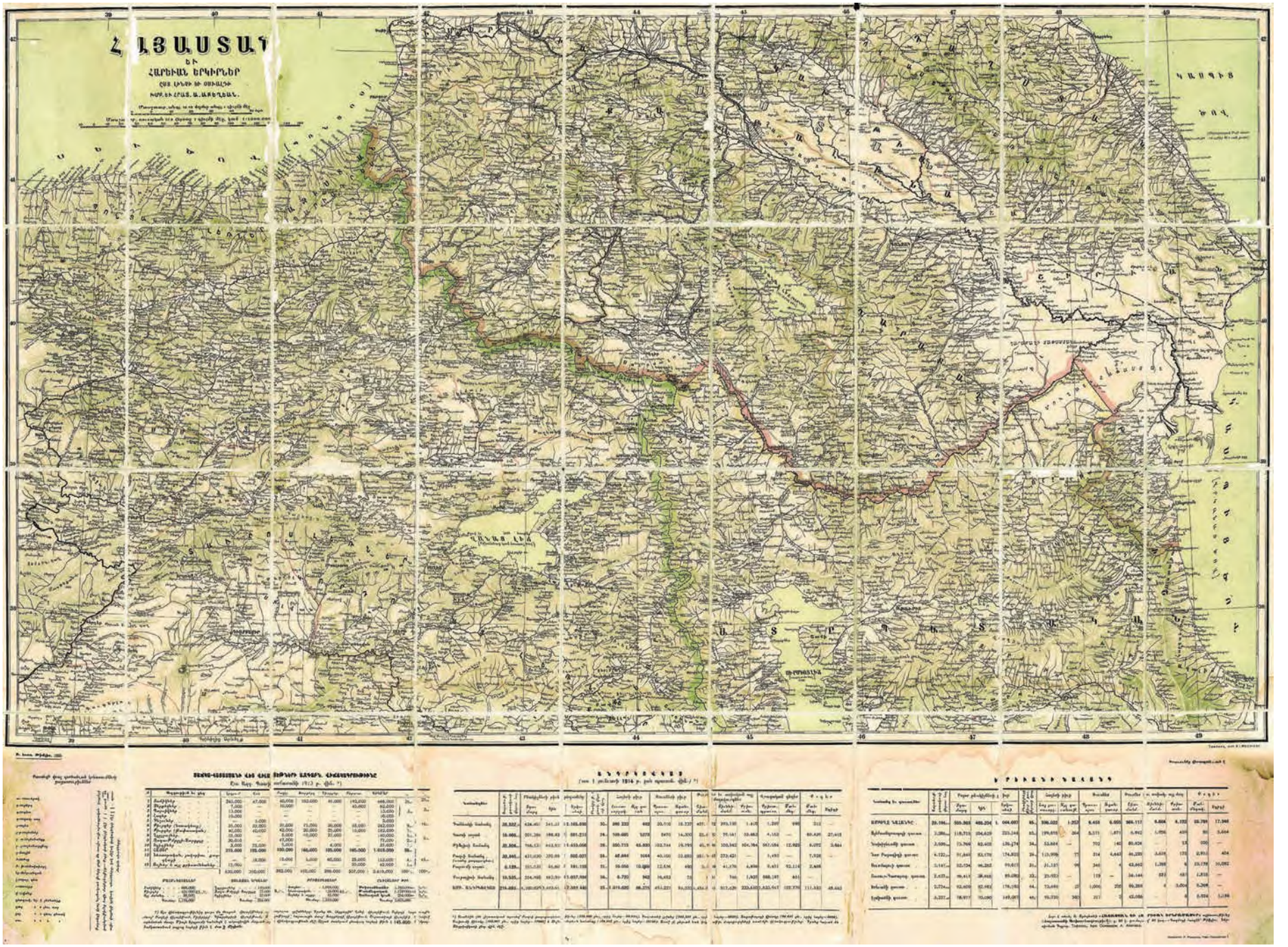


Map 4.21 – A map of the escape route of ten thousand, from Xenophone's described route. The map was prepared by Hofmeister and printed in 1913 in Constantinople.

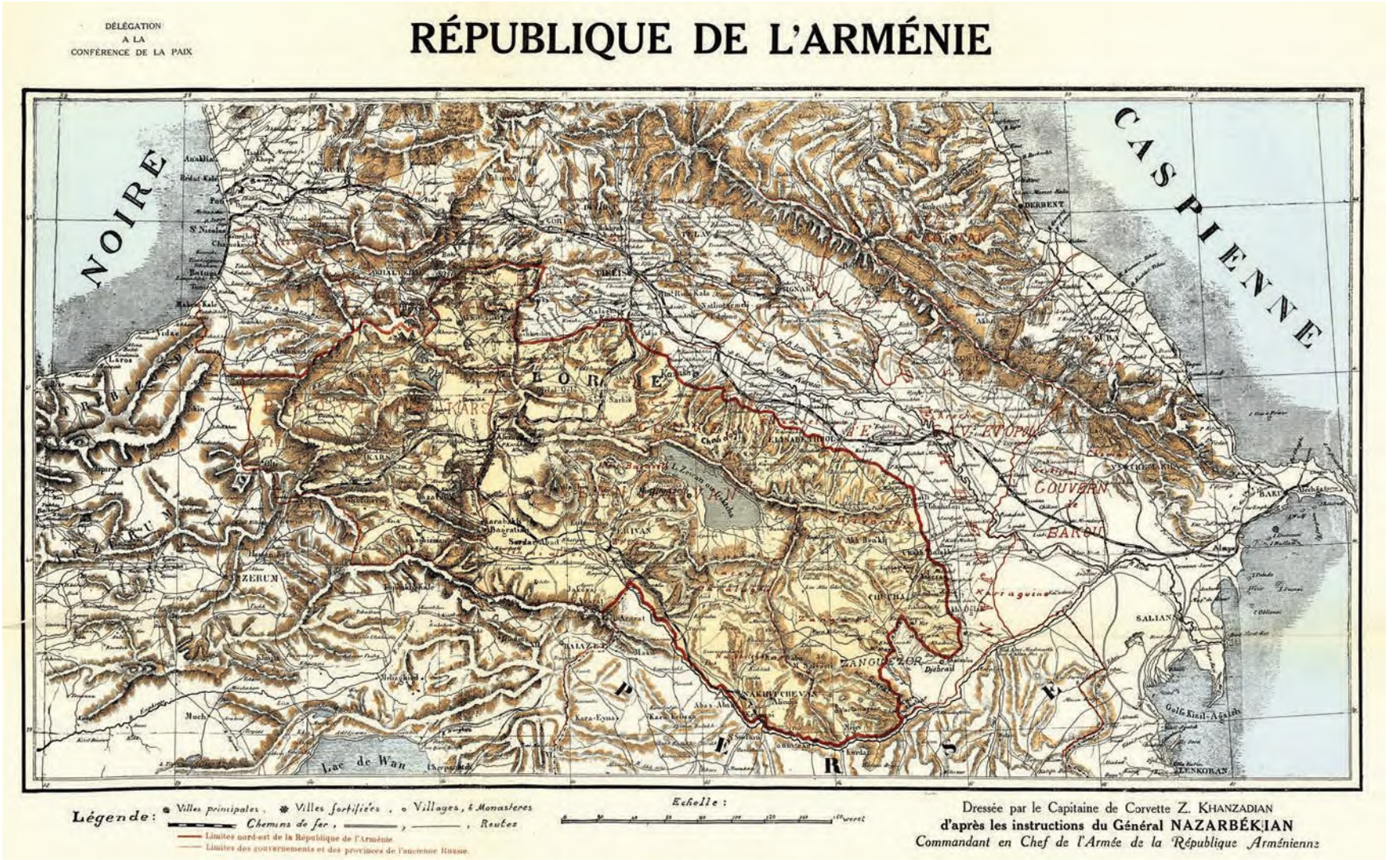
In early 1910s there was a plethora of Armenian language maps published in Constantinople and elsewhere. One of the maps was the *Route of the Retreat of the Ten Thousand*, from the historical account by Xenophon, translated from the original German version entitled *Durch Armenien, Eine Wanderung und der Zug Xenophons bis zum Schwarzen Meere. Eine militär-geographische Studie* (*Through Armenia. A Military-Geographical Study of Xenophon's Wonderings and Travels on His Way to the Black Sea*).

The original book was published in Leipzig in 1911. In 1913 it was translated into Armenian and published in Constantinople by K'eoshkerean as Volume 17 of his *Gutenberg* series.

The book includes two maps, one of which is reproduced here. The map shows the route travelled by the ten thousand Greeks who passed through Armenia on their way to the Black Sea.



Map 4.22 – The Armenian translation of Lynch's "Map of Armenia", with later added ethnographic tables. It refers to Lynch as the author of the map.



Map 4.23 –Eastern and northern borders of Armenia, to be used in the Peace Conference.

This map was prepared by Zadig Khanzadian, for use during the negotiations and finalization of the territorial question of Armenia in the Paris Peace Conference of January 1919. The border between Armenia and Turkey was prepared by US President Wilson, therefore the western part is not covered by this map.

The map highlights the borders between the newly established republics of *Armenia, Georgia* and *Azerbaijan* and its purpose was to show that, within the proposed borders of the First Republic of Armenia, the majority of the population was ethnically Armenian.

The booklet accompanying the map specifies the ethnic populations within the boundaries of Armenia as:

Armenians	1,293,000	59.87%
Turks, Turkomans & Tartars	588,000	27.22%
Kurds	82,000	3.79%
Yezidis	50,000	2.31%
Russian, Greeks, Georgians	123,000	5.70%
Gypsies	24,000	1.11%



Map 4.24 – Borders of Soviet Armenia on April 1, 1926. Map from "Great Soviet Encyclopaedia - Vol.3". Map authorised by the NKVD.

In the Soviet Union, if a map was printed then it must have had the approval of several ministries. The above map also bears the names of the approving authority, which is the Ministry of Security. Therefore, as far as practically possible, the map shows Armenia's true and actual borders during April of 1926.

It must be mentioned that on the map Armenia and Artsakh have a common border, since only the Hagari or Aghavno River separates them. This point is marked blue on the map. The border, however, was changed at a later date, with Azerbaijan appropriating further territories from Artsakh, thus cutting it off from Armenia.

The map contains no enclaves, and the territory of Armenia is 30,948 sq.km., which is over 1200 sq.km. more than it is today.



Map 4.25 – The black line denotes the borders of the Armenian SSR in 1925, which was changed in late 1929 and in the 1930s, to the one shown with the red line.

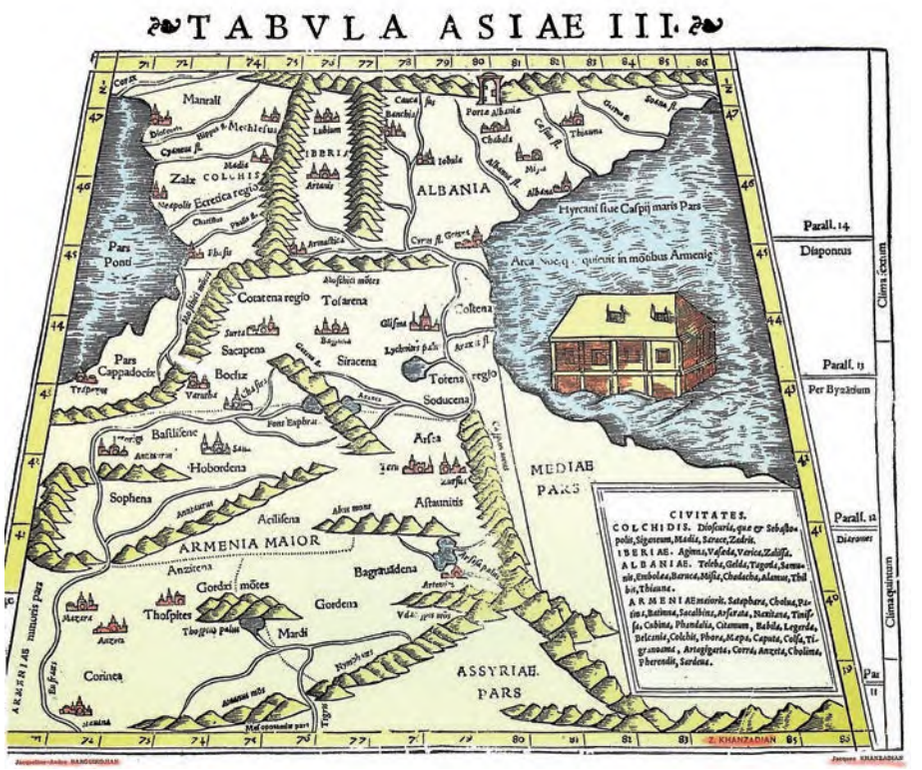
The above map shows the official version of the borders of Armenia as they stood in 1925.



Fig. 4.26 – Zadig Khanzadian's folder of Historic Maps of Armenia.

Zadig Khanzadian was one of the important cartographers of the 20th century. He was a military cartographer in France and produced many maps. His most important volume was the *Atlas Historique de l'Armenie*, published in France in 1960.

This is a leather-bound box of 100 sheets, each measuring 35x50 cm and printed with two or more maps per sheet. The maps are redrawings from original maps prepared in a variety of famous Western, Greco-Roman and Islamic cartographic works related to the region of Armenia.



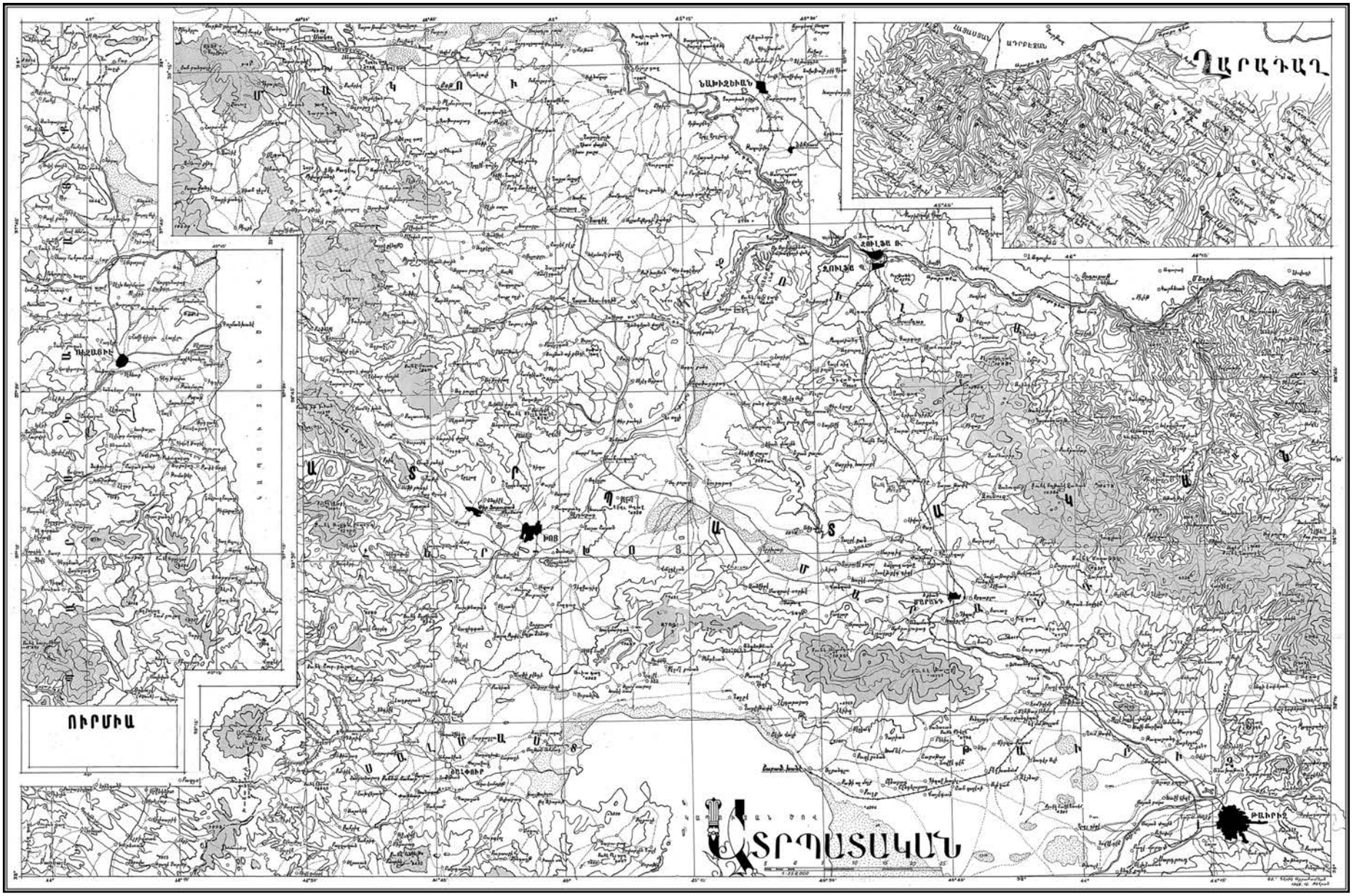
Map 4.27 – A Ptolemaic map of Armenia from the album drawn & signed by Z.Khanzadian. The original is by Sebastian Münster, dated 1540, Basel. See Map 2.09.

To prepare the collection, Mr Khanzadian took the original maps and redrew them either himself or had them redrawn by his co-workers. He then signed them all with the name of the copier as well as *Z. Khanzadian,* and presented them in the box for the reader.

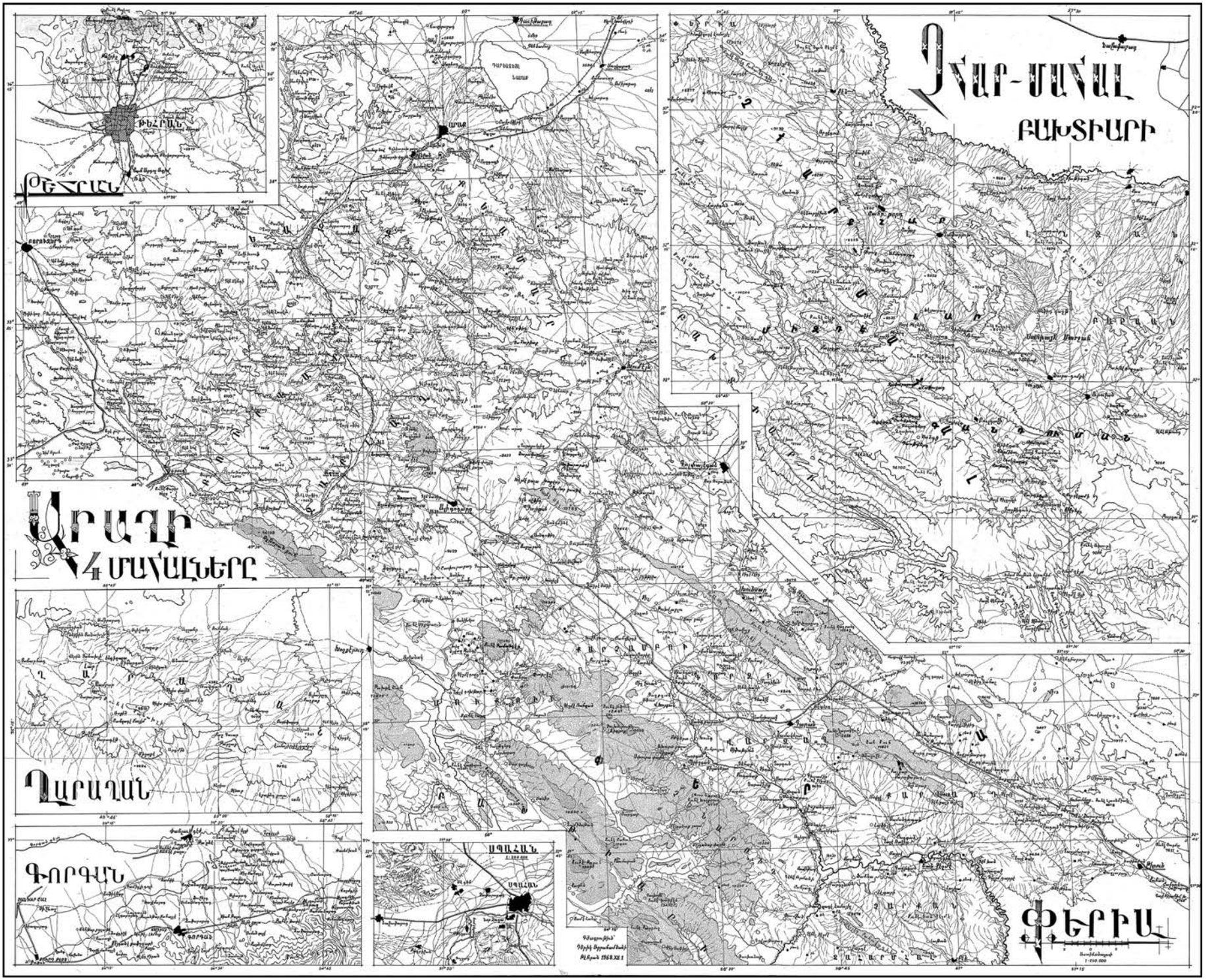
The main value of this collection is to guide and inform interested parties about the existence of such documentation and maps.

This volume is a source of information about the existence of the original maps, but having said that, since all the maps in the folder are reprints of the drawings, made by Zadig Khanzadian and his cartographers, and are duly signed as such, they can hardly be considered as true and reliable documentation.

Regrettably, save in a few cases, where the name of the library or the sources are mentioned, the relevant texts provide no references related to the custodians of the originals or their shelfmarks.



Map 4.28 – Armenian populated areas of Northwest Iran. Manuscript map prepared in 1968 by D. Abrahamian in Tehran.



Map 4.29 – Armenian populated areas of Centrl Iran. Manuscript map prepared in 1968 by D. Abrahamian in Tehran.

Please note that the map collections of the Matenadaran contain many other printed maps as well as many travelers' accounts, which include a variety of large and small maps and sketches of the region of Armenia, which could not be included in this limited volume.

Therefore those interested in the maps or geographical information of the geo-political region of the Middle East and Southern Caucasus are advised to refer to the list of maps and books in the general collections as well as in the collections of Rouben Galichian, now in the Matenadaran.

One of the most prolific informative handbooks for medieval voyages is that published in 1903 by the Hakluyt Society entitled *Principal Navigations Voyages Traffiques & Discoveries of the English Nation*. This 12 volume set contains copies of various voyage reports and related maps.

List of Atlases

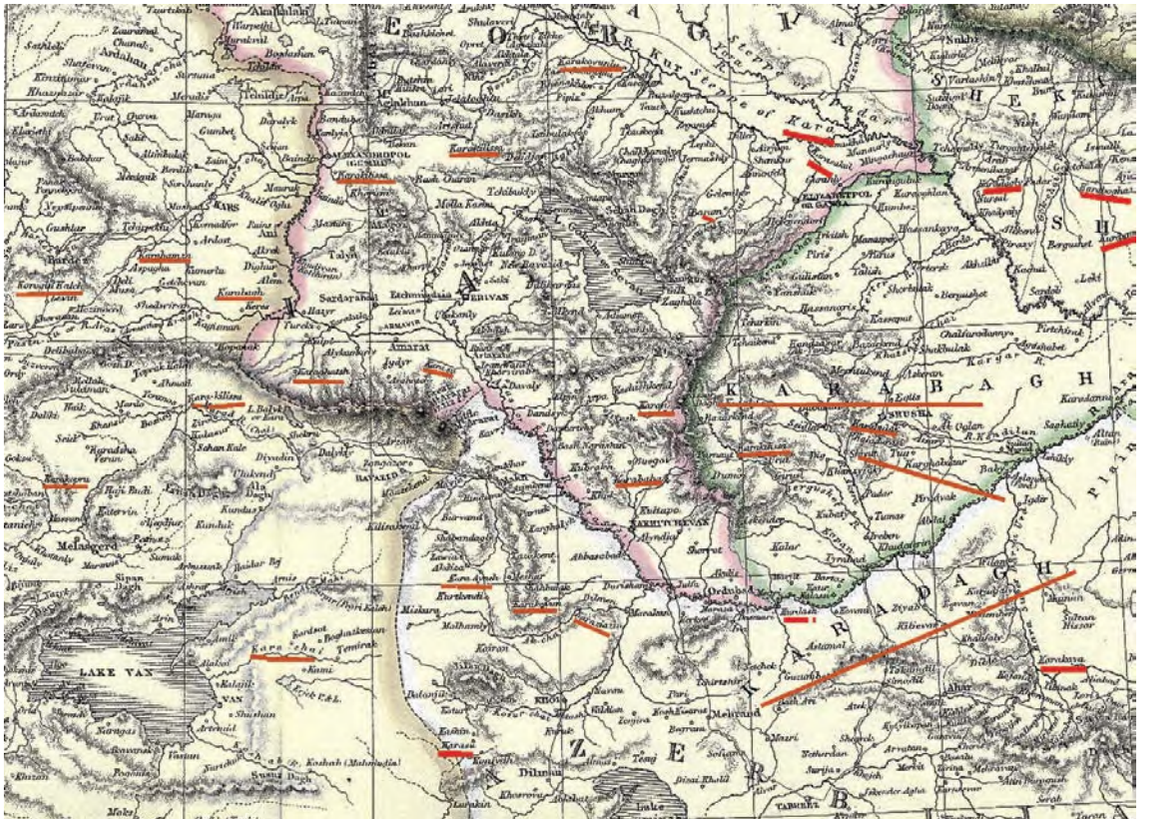
All Atlases
in the Matenadaran Collections

TITLE	AUTHOR	PUBLISHER/PLACE	DATE	SIZE (CM.)	NOTES
Geographia (Latin)	C. Ptolemy	Ulm	1486	39x42	Bound volume, complete
Atlas of the World (Latin)	G. Mercator	Walburg Ptres	1569/2012	36x50	Facsimile of the original
Mercator Atlas of Europe (Latin)	G. Mercator	Antwerp	1570/1997	28x41	Facsimile of the original
Theatrum Orbis Terrarum (Latin)	A. Ortelius	Antwerp	1570/1964	30x42	Facsimile of the original in box
Mercator Atlas of the World (Latin)	G. Merc./Hondius	Walburg	1579/2012	36x50	Facsimile of the original
Mercator-Hondius - Atlas, in 2 volumes (English)	Mercator/Hondus.	Hondius & Jonsson, Amsterdam	1636/1968	32x47	Facsimile of the original
Bleau's Grand Atlas of the World	J. Bleau	Amsterdam	1660/1990	29x39	Partial reproductions of Atlas
Atlas Maior	J. Bleau	Taschen/Germany	1665/2005	30x45	Facsimile of the original
Theatre of the most Famous Parts of the Empire of GB	J. Speed	Potter/Drayton Man.	1665/1991	30x45	Facsimile of the original
The Counties of Britain. A Tudor Atlas	J. Speed	British Library/London	1676/1991	43x53	Facsimile of the original
The atlas of Siberia by Semyon Remezov	L. Bagrov ed.	Mouton and Co.	1697/1958	30x22	Facsimile of the original
Atlas Antiquus (German)	K. Spruner	Gotha/Germany	1855	25x38	Binding loose
Atlas de Geographie (French)	Delamarche	Paris	1858	26x34	
Smith's Atlas of Ancient Geography	Ch. Mùller	John Murray/London	1875	35x50	
Atlas or World Maps (Armenian)	Various	Mkhitarists/Vienna	1860	22x30	With 21 double page maps
School Atlas (Russian)	Petri	Marx/Petersburg	1880	18x28	
Droysens Historische Handatlas (German)	Dr. R. Andree	Velhagen/Leipzig	1886	30x43	
The Times Atlas	Various	Times/London	1895	30x43	
Atlas Antiquus (German)	H. Kiepert	RGS London/Berlin	1898	27x37	
Stieler's Hand-Atlas (German)	Various	Gotha/Germany	1905	40x48	
Handatlas (German)	Dr. Ambrosius	Verhagen/Klasing	1922	31x45	
Andrees Verdensatlas (Danish)	Dr. Ambrosius	Koppel/Copenhagen	1923	c.30x42	Sahakian Collection
Atlas of the World	Various	Funk &Wagnall	1925	16x24	
Atlas of Ancient and Classical Geography	Various	Dent/London	1933	12x18	
The Pictorial Atlas of the World	J. Potter	Odhams/London	1934	18x26	
Atlas of the World (Russian)	Various	Moscow/USSR	1940	11x18	
World Geographic Atlas	Various	Container Corp of USA	1953	29x40	
Atlas of the Seas (Russian)	I. Isakov (editor)	General Naval Staff/ USSR	1950	38x51	Collection of sea maps
Geographic Atlas (Russian)	Various	Geodesy/USSR	1955	28x38	
World Atlas	Various	Encyclopaedia Britannica	1960	29x38	
Atlas of the Armenian SSR (Armenian)	Various	Yerevan	1961	35x34	
Complete Atlas of the British Isles	Various	Readers Digest/London	1965	28x40	
The International Atlas	Various	Rand McNally	1974	29x38	
Facsimile-Atlas of the Early History of Cartography	C. Ptolemy	Dover/NY	1973	28x41	Includes facsimile maps

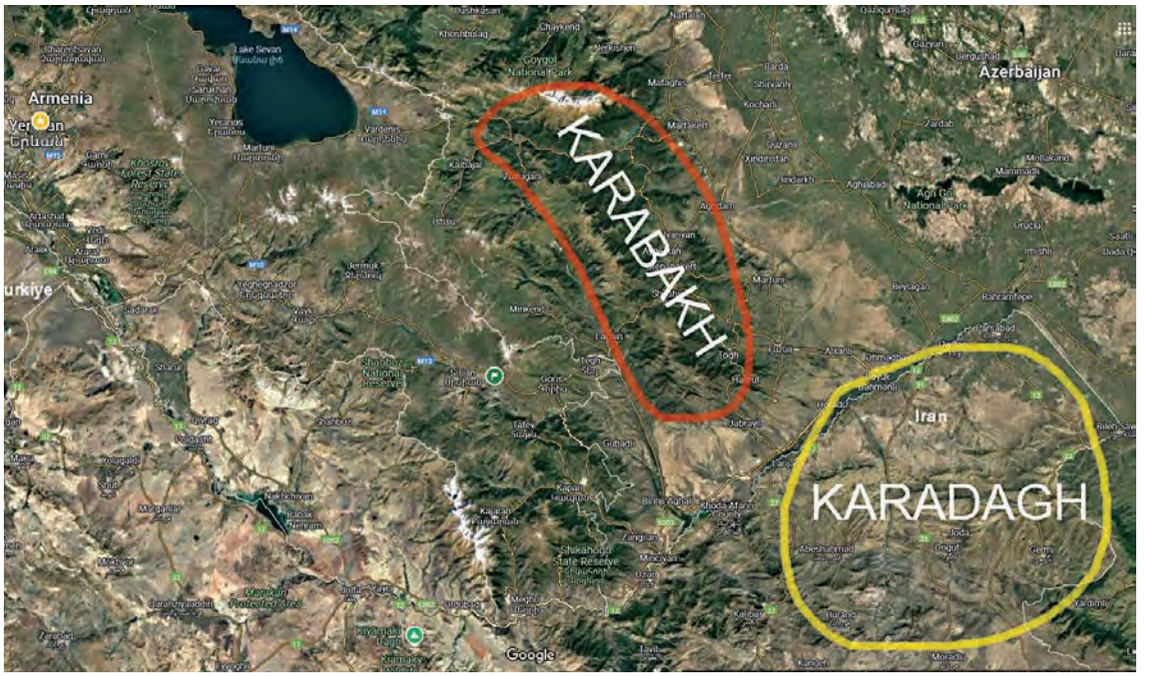
TITLE	AUTHOR	PUBLISHER/PLACE	DATE	SIZE (CM.)	NOTES
Geographical Atlas (Russian)	Various	Geodesy/Moscow	1981	27x38	
Atlas of the USSR (Russian)	Various	Moscow/USSR	1984	29x40	
Historical Atlas of Armenia	C. Armen	Arm. Educational Fnd.	1987	34x22	Maps indicating old borders
Atlas of the USSR (Russian)	Various	Moscow	1988	20x13	
Atlas of the World pa (Russian)	Various	Geodesy USSR	1990	24x34	
Historical Atlas of the Medieval World AD 600-1492	G. Haywood	MeroBoos/NY	2000	24x30	
Pictorial Documents of Iranian Cities	Shahid Beheshti	Iranian Cultural Heritage	2000	30x43	Maps and plans cities in the Qajar Period
Atlas Historique de l'Armenie (French)	C. Mutafian	Autrment/Paris	2001	25x17	
An Historical Atlas of Central Asia	Y. Bregel	Brill/Leidan	2003	29x38	
Geographic Atlas of Armenia and the World (Armenian)	L. Valesyan	McMillan/Yerevan	2004	23x30	
Aerial Atlas of the World	Various	Wissen Verlag/Munchen	2004-6	27x37	GeoEye and WorldSat
Atlas of the History of Armenia, Part A (Armenian)	B. Harutiunyan	Yerevan	2005	23x30	
School Atlas (Armenian)	R. Hovhannisyan	Yerevan	2006	20x29	
Atlas of Tartary – Eurasia in old maps (Russian)	I. Fomenko (editor)	Desian & Info/Kazan	2006	25x35	Contains maps & images
Small Atlas of the World (Russian)	Various	Extent/Moscow	2006	15x20	
National Atlas of Armenia Volume 1 (Armenian)	Various	Yerevan	2007	33x43	
Ethnographic Atlas of the Caucasus (Russian)	A. Tsutsiev	Evropa/Moscow	2007	27x22	
National Atlas of Armenia Volume 2 (Armenian)	Various	Yerevan	2008	33x43	
Atlas of History of Armenia, Part B (Armenian)	B. Harutiunyan	Yerevan	2009	23x30	
Atlas of the Republic of Mountainous Karabakh (Armenian)	Various	Yerevan	2009	26x34	
Atlas of History of Armenia, Part C (Armenian)	B.Harutiunyan	Yerevan	2012	23x30	
Azerbaijan National Atlas	Various	Baku	2014	40x50	
Atlas of the Ethno-Political History of the Caucasus	A. Tsutsiev	Yale Univ./Yale	2014	36x29	Translated from Russian
Great Maps. World Masterpieces Explored and Explained	J, Brotton	DK/London	2014	26x31	Maps and their details
Maps and their Untold Stories	National Archives	Bloomsbury/London	2014	29x29	Unusual maps
National Atlas of Armenia Volume 1	Various	Yerevan	2015	33x43	
National Atlas of Armenia Volume 2	Various	Yerevan	2017	33x43	
Atlas of History of Armenia (Armenian)	C. Mutafian	Yerevan	2017	29x20`	Translation of the French Atlas
Great Atlas of Iran and the World	M. Sahab	Huber/Germany	2017	27x36	
Atlas of Armenia	S. Hovhannisian	Nahapet/Yerevan	2019	24x33	A general guidebook
Atlas of Armenia and Neighbours Volume A (Armenian)	G. Beglarian	Collage/Yerevan	2020	30x21	
Armenia. A Historical Atlas	R. Hewsen	University of Chicago	2001	45x29	
Armenie, un Atlass Historique (French)	M. Yavadian	Fond. d'Olivier	2024	21x30	
Armenia. A Historical Atlas	M. Yavadian	Fond. d'Olivier	2024	21x30	English translation of above

Appendix A

THE MEANING OF “KARA” OR “GHARA” PREFIX IN THE TOPONYMS



Map 5.01 – Detail from Edward Weller's map "Caucasus and Armenia" shown complete on Map 4.07 of this volume. In the small geographical area selected from the main map, there appear about 30 toponyms with the "kara" prefix, underlined in red. In contrast, in the same area there are only two toponyms with the prefix of "agh" ("white")!



Map 5.02 – Image of the region of Karabakh and Karadagh showing the former as a wooded area and the latter as a mountainous and arid area. The aerial photograph clearly shows the type of terrain that they have.

During cartographic researches in the region between northwestern Iran, southern Armenia and eastern Turkiye the author has encountered an unusually large number of toponyms beginning with old Azeri (pre-Turkish) prefix "kara", which in the modern Azeri and Turkish languages means "black". These names are underlined in red on Map 5.01.

In addition to those marked on the map, inside Iran and in the territory of the Iranian province of Azerbaijan there stands the large Armenian monastery of *St Thaddeus* (Karakelisseh – "black church") and a shallow, but wide river, the *Karasou* ("black water") and many other unmarked toponyms bearing the same prefix.

This unusually recurring use of the prefix kara/black seems illogical, as in contrast there are few agh/white prefixes in use. It should be noted that from the Middle Ages until the 15-16th centuries the languages spoken by the local Muslims in north-western Iran were some dialects of the old Persian, Pehlevi, an Indo-European language. In some remote villages of Iranian Azerbaijan, this language is still in use.

Most striking of these misnomers are *Karabakh* (Black Garden) and *Karadagh* (Black Mountain). These names do not seem logical, since *Karabagh* north of the Arax River is a lush and green region, and *Karadagh* is the arid and mainly uninhabited mountainous region south of the Arax River (see Map 5.02). These two regions, one green and the other mountainous, are not black, but huge masses of woodland and mountains respectively. Therefore rightfully should not they have been named "Large Garden" and "Large Mountain"?

Also it is noteworthy that the monastery of *Karakelisseh* (in Armenian: the monastery of St. Thaddeus) is not black, but a large cathedral of white marble, with a few darker strips of stones on the rotunda of its smaller church.

To understand these anomalies, further serious research is required, which, so far, some Iranian scholars and researchers have partially done, raising the matter in their papers and articles. Their researches confirm that the word "kara" is derived from the old Azeri language, a language which had been superseded by the ruling elite's Turkic language between the fifteenth and sixteenth centuries, completely replacing it. The change happened since the local language did not have a written base and form[11].

According to the book entitled *Tati and Harzani: Two Ancient Dialects of the Azeri Language* by the Iranian linguist Abdolali Karang (see Karang, Tabriz, 1954), the word "kara" is a derivative of "kaleh" or "kala", which in the old Harzani language (a dialect of the Pahlavi language spoken in Iranian Azerbaijan until around the 15th century), means "large, huge, big".

In the local dialect of the present-day Iranian-Azeri village of *Gelin-Ghieh*, the word used for large is "kala", and even in Persian the world "kalan" means large, excessive or huge, which could have been derived from the same root.

This correct interpretation could well explain and clarify the meaning of the above toponyms, *Karabakh* becomes Large Garden, and it does look like a huge garden. *Karadagh* means Large Mountain, as this is a mountainous region with many large and small mountains. Furthermore *Karakelisseh* would mean Large Church, which indeed is the largest religious complex in the region, while *Karasou* would be Large River, being a very wide and shallow river.

Furthermore, the largest and oldest tree in Tabriz, the old capital of the Iranian Province of Azerbaijan, was called Kara-Aghaj ("aghaj" in Turkish means "tree"), thus it would mean Large Tree (which indeed it was), not Black Tree.

In Syuniq province of Armenia, there are two lakes on the Azerbaijani border, named *Sev Lich* (Black lake in Armenian) and Janlich (Jan Lake in Armenian). The Azeris call the large lake *Kara Gyol*, and the smaller one is *Janlich Gyol*. The Azeri name of the large *Kara Gyol* was translated to Armenian as *Sev* (black) Lake, relying on the present-day Turkish meaning of the world "kara". When looking at the two lakes one cannot miss the fact that one is much larger than the other, therefore it is only logical to call it "Large Lake", which was the name given to it in the middle ages , when in the local language of the time, the word "kara" meant "large".

When the author mentioned the above to an Iranian Azeri friend, he flinched and said that his grandfather was over two meters tall, and was known by family and friends as *Kara-Agha*. He said that he now realizes that the name was not because of his dark complexion, but because he was a huge and tall man.

The Iranian historian Ahmad Kasravi (*Lectures*, Tehran, 2536, pp. 365-431) and the Armenian historian Bagrat Ulubabyan (*History of the Principality of Khachen*, Yerevan, 1975, p.2) also remark that the translation of "kara" should be "large", not "black". Other Iranian and Iranian-Azerbaijani specialists have also written in support of the above explanation, including Hosseyn Katebi, Dr. Enayatollah Reza, Mohammad Ali Riahi-Khoyi, Dr. Pour Davoud, Reza Shoar and many others.

11. This is similar to the present day language spoken in the Philippines, Mexico and much of South America, where Spanish replaced the local languages not having a written base. Iranian historian Ahmad Kasravi says that in the area of Iranian Azerbaijan there was a large Armenian presence, who kept their language and culture. Their language did not change due to the fact that it did have a written script and base.

Maps and Images Presented in the Album

Maps and drawings from the Manuscripts in the Matenadaran

NO.	DESCRIPTION	MS. REF.	FOLIO *	DATE	TOPIC/GEOGRAPHICAL AREA	LOCATION
1.01	T-O type map of the world	1242	132a	13-14 c	The world	MSD
1.02	Solar orbits and the Zodiac	8973	001b	1445	Planets and Zodiac	MSD
1.03	The planets and the Zodiac	8973	013a	1445	Planets and Zodiac	MSD
1.04	The planets and the Zodiac	8973	013b	1445	Planets and Zodiac	MSD
1.05	A partial Astrolabe	8973	032a	1445	-	MSD
1.06	The human body and the signs of the Zodiac	8973	032b	1445	Zodiac's medical effects	MSD
1.07	The Temple of Solomon	8973	058b	1445	Plan	MSD
1.08	Wind rose	1130	121a	1454	Wind directions	MSD
1.09	Wind rose	1131	064b	1460s	Wind directions	MSD
1.10	Lunar cycles	3880	001a	1400s	Type of astrolabe	MSD
1.11	Lunar cycles	3880	002a	1400s	Type of astrolabe	MSD
1.12	Lunar cycles	3880	003a	1400s	Type of astrolabe	MSD
1.13	Relationship between the signs of the Zodiac	5975	041a	1467	Description of seasons and Zodiac	MSD
1.14	The extraordinary eclipse of the Moon	5975	068b	1467	Eclipse during the Crucifixion	MSD
1.15	Zodiac and planet relationship	5975	129b	1467	Zodiac and planets	MSD
1.16	Extraordinary lunar eclipse	1770	115b	1589	Eclipse during the Crucifixion	MSD
1.17	Eclipse of the Moon	1770	129a	1589	-	MSD
1.18	Movements of the Moon	1770	151a	1589	Lunar movements	MSD
1.19	Effects of the Zodiac on health	1770	354b	1589	Zodiac's medical effects	MSD
1.20	Wind rose	1770	388b	1589	Wind names and directions	MSD
1.21	Ark of the Covenant	1770	391a	1589	Relationship of clans and the Tabernacle	MSD
1.22	Gates of Jerusalem	1770	392a	1589	Old names of the city etc.	MSD
1.23	Appianus Cosmography, title page	1780	302a	1617	Armenian translation cover page	MSD
1.24	Appianus Cosmography – Original	-	-	1584	Cover of the Appianus original work	MSD
1.25	Position of stars in the Heaven	1780	303a	1617	Layout of the sun and the earth	MSD
1.26	View of the Earth	1780	303b	1617	Description of chorography	MSD
1.27	Orbits of the planets	1780	305a	1617	Planets and the Zodiac	MSD
1.28	Model of the Universe	1780	307a	1617	Descriptions of orbits	MSD
1.29	The 5 climatic zones	1780	308a	1617	Macrobius and the 5 climates	MSD
1.30	The 9 climatic zones	1780	310b	1617	Macrobius and the 9 climates	MSD
1.31	Shape of the Earth	1780	308b	1617	Proving the shape	MSD
1.32	The earth divided by latitude lines	1780	309a	1617	Spacing of parallel lines	MSD
1.33	Ursa Maior constellation	1780	317a	1617	Constellations	MSD
1.34	The globe on a pedestal	1780	330b	1617	The globe looking from the south	MSD
1.35	Angle measuring device	1780	317a	1617	Shape of the device	MSD
1.36	Lunar phase finder	1780	314b	1617	-	MSD

NO.	DESCRIPTION	MS. REF.	FOLIO *	DATE	TOPIC/GEOGRAPHICAL AREA	LOCATION
1.37	Measuring latitude	1780	320a	1617	How to use the instruments	MSD
1.38	Measuring device	1780	317b	1617	-	MSD
1.39	The Eastern hemisphere	1780	323a	1617	Shape of the Earth	MSD
1.40	Typical map	1780	340b	1617	Geographical feature names	MSD
1.41	Basic astrolabe; lunar clock	1780	394a	1617	-	MSD
1.42	Lunar phases	1780	395a	1617	How phases occur	MSD
1.43	Measuring an angle	1780	396a	1617	Instructions for measuring	MSD
1.44	Zodiac and the tribes	8089	140a	1664	-	MSD
1.45	Planets and the Zodiac	8089	132a	1664	Sequence of Zodiac signs etc.	MSD
1.46	The Zodiac, planets and stars	6670	043b	1671	Basic elements and the human character	MSD
1.47	Signs of Zodiac and their positions	1127	105a	1600s	Relative positions	MSD
1.48	Lunar eclipse calculator	1127	106a	1600s	Eclipse and its phases	MSD
1.49	Relationship between the Zodiac and planets	9017	185a	1685	Position calculator	MSD
1.50	Main cities and their coordinates	9042	001a	1816	List of important cities and coordinates	MSD
1.51	Cosmography	9040	001a	1821	Planets and their orbits	MSD
1.52	Chapter 1 of Geography book	9040	0012a	1821	Introduction to cosmography	MSD
1.53	Typical map and names of geo features	9040	008a	1921	Guide for the readers	MSD
1.54	Chapter 2 of Geography book	8040	008b	1821	Description of the eclipse of the Moon	MSD
1.55	Ashkharhatsuyts by Thomas of Cilicia	1518	164b	1597	Description of the world	MSD
1.56	Ashkharhatsuyts by Anania Shirakatsi	1267	352a	15th c.	Description of the world	MSD
1.57	Ashkharhatsuyts by Anania Shirakatsi	1717	152a	1664	Description of the world	MSD
1.58	Ashkharhatsuyts by Vardan Areveltsi	8076	085a	17th c.	Description of the world	MSD
1.59	Ashkharhatsuyts by Vardan Areveltsi	1127	205a	17th c.	Description of the world	MSD
1.60	Ashkharhatsuyts by Karapet Baghshetsi	8076	094a	17th c.	Description of the world	MSD
1.61	Ashkharhatsuyts by Karapet Baghshetsi	33	134a	16th c.	Description of the world	MSD
1.62	Concentric circles of Zodiac, nations etc.	1242	131b	14th c.	Zodiac, the human body and related nations	MSD
1.63	Human body, its relationship with Zodiac etc.	1770	355a	1589	Zodiac, the human body and related nations	MSD
1.64	Human body, its relationship with Zodiac etc.	1973	76b	1342	Zodiac, the human body and related nations	MSD
1.65	Human body, its relationship with Zodiac etc.	1973	77a	1342	Zodiac, the human body and related nations	MSD

* In the manuscript pages the letter (a) means “recto” and the letter (b) means “verso”,

Selection of Printed Maps up to the end of the 17th century

NO.	DESCRIPTION	AUTHOR	DATE/PLACE	GEOGRAPHIC AREA	SIZE CM	LOCATION
2.01	Tabula Peutengeriana. Reduced facsimile of 12 c. map	Unknown	2004 Reprint	Reduced copy of reconstructed map	600x19	RG-270
2.02	Idrissi World Map from Miller's book	K. Miller	1972 Reprint	Middle part of 3 part World map of Idrissi	195x88	RG-Book
2.03	Ebstorf World Map. Original of map is lost.	Unknown	2004 Reprint	Facsimile of the reconstructed map of 1232	360x360	RG-187
2.04	World Map, from Geographia	C. Ptolemy	1486 Ulm	World	78X42	MO-1072
2.05	Detail from the World Map of Ptolemy	C. Ptolemy	1486 Ulm	World	-	MO-1072
2.06	First Map of Asia, from Geographia	C. Ptolemy	1486 Ulm	Asia Minor	78X42	MO-1072
2.07	Third Map of Asia, from Geographia	C .Ptolemy	1486 Ulm	South Caucasus	78X42	MO-1072
2.08	Theatro del Cielo	A. Macrobius	1528 Italy	The World	6x6	RG-145
2.09	Third Map of Asia	S. Münster	1540 Basel	South Caucasus	34x27	RG-02
2.10	Sarmatia Asiatica	S. Münster	1544 Basle	Caucasus and Russia	18x33	RG-01
2.11	From the Lands of Asia	S. Münster	1558 Basle	Asia Minor	18x14	RG-180
2.12	Third Map of Asia, based on Ptolemy	G. Mercator	1578	South Caucasus	6x35	RG--29
2.13	The British Isles	A. Ortelius	1583	Great Britain & Ireland	50x35	RG -22
2.14	Historic Map of the Orient	P. Keere	1610	Middle East	47x38	RG-169
2.15	Lincolnshire, England	J. Speed	1612	County of Lincolnshire	51x38	RG-20
2.16	Third Map of Asia, according to Ptolemy	G. Mercator	1619	South Caucasus	46x34	RG-28
2.17	Armenia, Syria and Mesopotamia	P. Cluverius	1624	Middle East	20x15	RG-15
2.18	The Kingdom of Persia	J. Speed	1626 London	Iran	51x39	RG-37
2.19	The County of Hereford	J. Speed	1646 London	County of Herefordshire	50x41	RG-21
2.21	Four Parts of Armenia during Justinian's Rule	P. De la Rue	1653 Paris	Greater and Lesser Armenia	52x38	RG-28
2.20	The Turkish Empire	J. Bleau	1664	Ottoman Empire	47x37	RG-36
2.22	Persia, Armenia, Anatolia and Arabia	F. De Witt	1670	Middle East	56x47	RG16
2.23	Mirror of the World (in Armenian)	T. Vanandetsi	1695 Amsterdam	The two hemispheres	158x124	M
2.23a	Detail of Armenia from the above World Map	T. Vanandetsi	1695 Amsterdam	Region of the Middle East and Armenia	-	M
2.24	Georgia and Armenia	A. Mallet	1683-1719	South Caucasus	10x15	RG-03
2.25	Erivan, with Noah's Ark	A. Mallet	1683-1719	Mount Ararat and the city of Yerevan	10x15	RG -77

Selection of Maps published during the 18th century

NO.	DESCRIPTION	AUTHOR	DATE/PLACE	GEOGRAPHIC AREA	SIZE CM	LOCATION
3.01	Tartarie, Circassia, Mingrelia, Georgia	P. van der Aa	1707 Leiden	North and South Caucasus	24x21	RG-94
3.02	Armenia Utraquem, from School Atlas	J.D. Koehler	1718 Nurnberg	Armenia and its divisions	43x35	RG-101
3.03	Eastern Asia Minor, Syria, Armenia, Mesopotamia	R. Spofforth	1722 London	Middle East	48x36	RG-09
3.04	Map of Persia	G. De L'Isle	1724 Amsterdam	Persian Empire	62x49	RG-23
3.05	Map of the Caspian Sea	G. De L'Isle	1730 Paris	Mainly South Caucasus	63x54	RG-62

NO.	DESCRIPTION	AUTHOR	DATE/PLACE	GEOGRAPHIC AREA	SIZE CM	LOCATION
3.05a	Detail of the South Caucasus from above map	G. De L'Isle	1730 Paris	South Caucasus	-	RG-62
3.06	The Promised Land, from Armenian Dictionary	Mkhitarists	1746 Venice	Palestine	49x38	M-Book
3.07	Starry Heavens from Armenian Dictionary	Mkhitarists	1747 Venice	Night sky (in Armenian)	39x26	M-Book
3.08	The World	J. Bellin	1748 Paris	World	70x50	RG-35
3.08a	Detail of the South Caucasus from above map	J. Bellin	1748 Paris	Caucasus	=-	RG-35
3.09	The two hemispheres, from Armenian Dictionary	Mkhitarists	1751 Venice	World	38x24	M-Book
3.10	Armenia according to old and new sources	Mkhitarists	1751 Venice	Historic Armenia	51x38	M-Book
3.11	The World during the Early Ages	R. Vaugondy	1762 Paris	Middle East	25x24	RG-13
3.12	Anatolia or Asia Minor	E. Bowen	1766 London	Region of Asia Minor	42x34	RG-100
3.13	Persia divided into its Great Provinces	R. Dunn	1774 London	Persia	44x31	RG-47
3.14	Turkey in Asia	N. Sanson	1778 Paris	Middle East	17x13	RG-121
3.15	The Old Monarchies	R. Vaugondy	1779 Paris	Asia Minor & Middle East	66x51	RG-24
3.16	Map of the Terrestrial Paradise	E. Bowen	1780 London	Region of Armenia and Persia	20x23	RG-31
3.17	Armenia, from Armenian Dictionary	Mkhitarists	1784 Venice	Small-scale map of Armenia	10x8.5	M-Book
3.18	Square World Map	Mkhitarists	1784 Venice	World with Mercator projection	43x29	ALP
3.19	The Extended Ottoman Empire (in Armenian)	Mkhitarists	1787 Venice	Area occupied by the Ottoman Empire	26x27	RG-375
3.20	The Ottoman, Othman or Turkish Empire	J. Johnson	1791 London	Ottoman Empire and surrounding regions	37x36	RG-124

Selection of Maps published from 19th century onward

NO.	DESCRIPTION	AUTHOR	DATE/PLACE	GEOGRAPHIC AREA	SIZE CM	LOCATION
4.01	Overview of the War in Caucasus	S. Shropp	1843 Berlin	South Caucasus and Turkish Border	60x46	RG-88
4.02	Map of Historic Armenia	Mkhitarists	1849 Venice	Map of Armenia from Dadian's atlas	81x57	RG--80
4,02a	Detail from the above map	Mkhitarists	1849 Venice	Detail of geographic coordinates of the map	-	RG-80
4.03	The two Hemispheres	Mkhitarists	1850 Vienna	Two hemispheres and added info	63x49	ALP
4.04	Ancient Persia	J. Dower	1850 London	Region of Iran and the Middle East	22x16	RG-11
4.05	Sketch of Armenia	Robert Curzon	1854 London	Map from Curzon's book Armenia...	10x15	RG-Book
4.06	Shamil's Caucasus – Arabic script	For Safarzadeh	1857	Villages and auls in the Caucasus	70x59	RG-372
4.07	Caucasus and Armenia	E, Weller	1858 London	Caucasus with Russian Gubernias	50x34	RG--55
4.08	The Ottoman Empire from an atlas	Mkhitarists	1860 Vienna	Extent of the Ottoman Empire	33x25	RG148/20
4.09	Armenia	Mkhitarists	1860 Vienna	Historic Armenia from the above atlas	33x25	RG148/21
4.10	Armenia, Mesopotamia, Babylonia et Assyria	K. Spruner	1865 Gotha	Map of the region from his Atlas Antiquus	35x41	RG-33
4.10a	Detail from Map 4.10	K. Spruner	1865 Gotha	Detail of Greater Armenia	-	RG-33
4.11	Map of the 1877 Russo-Turkish war (in Turkish)	Min. of War	1877 Istanbul	Map of Turkey and the Caucasus	56x4-0	RG-191
4.11a	Detail of Russian-Ottoman border in 1877	Min. of War	1877 Istanbul	Detail of border area from the above map	-	RG-191
4.12	Asia Citerior	H. Kiepert	1880 Berlin	Asia Minor and the Middle East	45x36	RG-86
4.13	Empires of Persia and Macedonia	H. Kiepert	1880 Berlin	Middle East and beyond the east	45x36	RG-85
4.14	Caucasus	Time atlas	1895 London	Caucasus page from the atlas	41x27	RG--346

NO.	DESCRIPTION	AUTHOR	DATE/PLACE	GEOGRAPHIC AREA	SIZE CM	LOCATION
4.15	Armenia & Neighbouring Countries	H.F.B. Lynch	1901 London	Historic Armenia and its neighbouring area	97x57	RG-81/82
4.16	Armenia & Neighbouring Countries (in Armenian)	H. Manisajian	1904 Geneva	Area of Asia Minor and the Middle East	64x51	RG-76
4.17	Armenia (in Armenian)	Unknown	1905 Cairo	Historic Armenia with many toponyms	72x51	ALP
4.18	Plan of Istanbul	Unknown	1906 Istanbul	Detailed city plan in Turkish	93x68	RG-136
4.19	Historic Armenia and its Neighbours (in Armenian)	G. Vardanian	1910 Tbilisi	Armenian Highlands and eastern Armenia	193x107	RG-123
4.19a	Detail from the above map	G. Vardanian	1910 Tbilisi	Detail of eastern Armenia from the above map	-	RG-123
4.20	The Middle East in Ancient Times	Ibrahim Hilmi	1910 Istanbul	Middle East and the South Caucasus	20x13	RG-127
4.20a	Latin translation of the above map	Ibrahim Hilmi	1910 Istanbul	Middle East and the South Caucasus	20x13	RG-1127
4.21	Hofmeister's Map of Xenophone's Campaign (Arm.)	E. Hofmeister	1913 Istanbul	Asia Minor, Armenia and the Middle East	34x28	RG-Book
4.22	Armenia & Neighbouring Countries (in Armenian)	A. Abeghian	1913 Tiflis	Copy of Lynch's map, 4.15 in Armenian	97x57	RG-269
4.23	Republic of Armenia for Paris Peace Conference	Z. Khanzadian	1919 Paris	Eastern and Northern borders: as proposal	49x26	RG-117
4.24	Borders of Armenian SSR on 1 April, 1926	NKVD-USSR	1926 Moscow	Armenian SSR official borders in 1926	???	MO
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4.26	Cartographic Atlas of Historic Armenia (French)	Z. Khanzadian	1960 Paris	Khanzadian's copies of original historic maps	35X50	M-Folder
4.27*	Armenian populated areas in Northwest Iran	D. Abrahamian	1968 Tehran	Manuscript map of northwest Iran	84x60	RG-162
4.28*	Armenian populated areas in Central Iran	D. Abrahamian	1968 Tehran	Manuscript map of central Iran	120x84	RG-163

Appendix

5.01	Caucasus & Armenia	E. Weller	1858 London	Detail of corner of Iran-Turkey-Armenia	-	RG-55
5.02	Google Image of Karabakh and Iran	Google Image	2024	Detail of Karabakh and Karadagh	-	-

(*) These are the original unique manuscript maps made by Derik Abrahamian in Tehran on transparent drawing sheets.

Sources as shown on the list

M	Matenadaran Archives, general collection
MO	Matenadaran Open Shelf or On display
MSD	Matenadaran Manuscript Depository
RG	Rouben Galichian collection in the Matenadaran and map reference number
ALP	Alpoyajian collection in the Matenadaran

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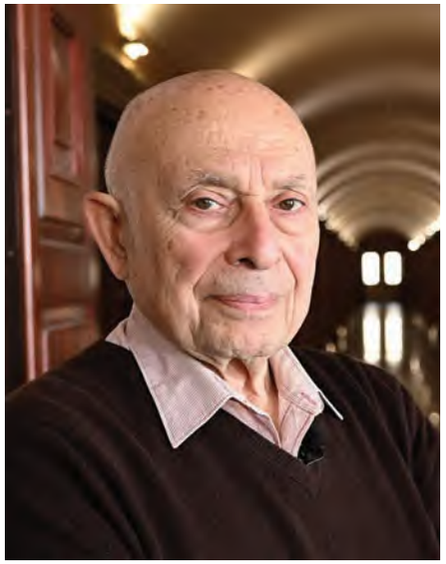

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He has so far published twelve titles on the cartography of Armenia, as well as the historical, cultural and geographical falsifications of Azerbaijan regarding Armenia and the Armenians. For his contributions to Armenian cartography, in 2008 he received an Honorary Doctorate from the National Academy of Sciences of Armenia, and in 2013 he was the recipient of the "Movses Khorenatsi" presidential medal.

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- Armenia and its Borders, Antares, Yerevan: 2024. Second, revised edition, Yerevan: 2025.

All books are available for free download from the author's website **www.roubengalichian.com**

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Rouben Galichian is researcher of the cartography of the region of Caucasus and the Middle East, whose focus is on the territories and borders of historical and present day Armenia as well as cartographic and cosmographic material existing in Armenian.

The Yerevan Manuscript Depository named after Mesrop Mashtots (inventor if the Armenian alphabet), holds the largest collection of Armenian manuscript in the world. These manuscripts are about variety of subjects, simply because scriptoria were mainly in monasteries, therefore the subject of the majority of the manuscripts are religious.

The present album offers basic information on the manuscripts kept in Matenadaran on geographical and cosmographical subjects, as well as other cartographic material and maps kept in various collections in Matenadaran.

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