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UPPER MESOPOTAMIA AND THE CAUCASUS: AN ESSAY ON THE EVOLUTION OF ROUTES AND ROAD NETWORKS FROM THE OLD ASSYRIAN KINGDOM TO THE OTTOMAN EMPIRE[1]

Catherine MARRO

Archéorient
Environnements et sociétés de l'Orient ancien
C. N. R. S.
Maison de l'Orient Méditerranéen,
7 rue Raulin
F-69007 Lyon.
FRANCE

Fax: +33 1 4770 7386
E-mail: catherine.marro@mom.fr

A previous study on prehistoric routes between the north and the south of the Anti-Taurus led the author to conclude that the Euphrates river did not play a major part in connecting the Caucasus with Upper Mesopotamia during the fourth to second millennium B. C.[2] Rather, it seems that transport along the Euphrates valley or on the river itself was operated discontinuously in connection with other, shorter and safer routes. The question now arises as to the route pattern during later historical periods that is, from the second millennium B. C. to modern history. The contemporary road network will not be discussed here, but only referred to for the purpose of comparison.

In contrast with prehistoric times, the study of historical routes is greatly facilitated by the appearance of written archives, whether it be diplomatic or military documents relating to politics or warfare, economic documents relating to trade, travellers' accounts, geography or history works, old maps, milestones, *etc.* Still, if the documentation at hand is much larger than that available for periods preceding the second millennium B. C., the study of old routes and roads is subject to a number of limitations that I would like to sum up here.

First, the region under study, which extends approximately from the Caucasus to the Syrian-Iraqi border, and from eastern Anatolia to western Iran, has been the stage

[1] I would like to thank here warmly Olivier Casabonne (GRAECO, Toulouse), Bertrand Lafont (CNRS, Nanterre) Jean-Pierre Mahé (EHESS, Paris), Veli Sevin (Van University), Stéphane Yerasimos (Paris 8 University) for their help and advice. Special thanks too for Martin Sauvage (EPHE, Paris) who kindly provided the cartographic background on which the maps were subsequently drawn.

[2] Marro, in press.

of ceaseless struggle between western-focused and eastern-focused political entities since at least the foundation of the Seleucid Kingdom in 312 B. C. Occasionally, it has also been the stage of fierce conflict between southern-focused and northern focused polities, whether it be at the beginning of the first millennium B. C. between the Neo-Assyrian Empire and the Urartu Kingdom, or at the end of the first millennium A. D. between Byzantium and the Arab Caliphate.

The result is that the political status of the region is extremely unstable. The balance of power, and thus the region's centre of gravity was subject to constant change; it is therefore difficult within such a framework to reconstruct route and road networks which of course, are linked to the political equilibrium and economic needs of each polity. To this historical complexity one has to add historiographic difficulties in studying a region for which there is no satisfactory, comprehensive name as a whole: for historical complexity is matched by the multiplicity of academic fields. Thus, specialists of Ottoman studies, for example, will tend to restrict their analyses of this region within the boundaries of the Ottoman Empire, and rarely consider the data relating, say, to the areas under Safavid domination. Similarly a specialist of the Old Assyrian Kingdom will bestow little interest on the highlands north of the Oriental Taurus[3] at the same period. The result is that most studies are not comprehensive.

Second, as an echo of the situation prevailing during previous centuries, the present political situation of this region is fragmented, since it is divided among eight countries (Armenia, Azerbaidjan, Georgia, Iran, Iraq, the Russian Federation, Syria and Turkey), most of them characterised by quite distinct official languages. Therefore the available scientific literature is also extremely varied, which complicates access to the whole data.

The following analysis will be based on secondary sources only, that is using the studies conducted for each period by specialists of that field and era. The purpose of this article is to sketch the broad lines of the routes and possibly the road network from the Caucasus to Upper Mesopotamia, define its structure and main characteristics and trace its evolution over the last four millennia. This work may only be considered as a first step within a long research process, since there are many missing pieces in the documentation, especially for the earlier periods.

A brief presentation of the primary sources available, on which were based subsequent studies, reads as follows.

Studies on the second millennium B. C. were basically conducted using Old Assyrian, Old Babylonian archives,[4] and later, Hurrian, Middle Assyrian and Hittite

[3] The Oriental Taurus (comprising the *Doğu Toroslar* and the *Güney Doğu Toroslar*), runs in a semi-circular arc from K. Maraş (in the west) to Bitlis (in the east). It basically constitutes the frontier between the Syro-Mesopotamian world and the Anatolian highlands.

[4] Astour 1995; Joannès 1996; Michel 1996; Nashef 1987; Ogushi 1995.

archives.[5] The main difficulty in using these archives is to identify the names mentioned in the texts with actual places. This difficulty of course characterises all archives at least until the fifteenth century A. D., but the older the archives, the greater is the chance of finding all names changed or corrupted beyond recognition. As far as the second millennium B. C. toponymy is concerned, the state of knowledge is such that the actual geographical span covered by these archives is still very obscure and a matter of scientific debate. We know for certain that the geographical area referred to comprises Mesopotamia up to Carchemish, the western-most extension of their scope being Karum-Kanesh near Kayseri, and Hattusha, near Yozgat in Anatolia. Eastwards, the archives mention cities we recognise as far as Urbil (Erbil) and Shemshara. A number of lands and places are mentioned north of Carchemish, but it is quite impossible to know for the time being exactly where and how far north such countries are supposed to have extended. Consequently, we may say that the regions north of Carchemish and even more, north of the Oriental Taurus are virtually *terrae incognitae* as far as the toponymy and thus the route network is concerned.

The study of the first millennium B. C. historical geography has more scope through Neo-Assyrian, Neo-Babylonian and Neo-Hittite texts, which basically deal with regions situated south or west of the Oriental Taurus. Urartian, Achaemenid and Greek sources are available, which cover regions situated north of the Oriental Taurus and east of the Zagros.[6] The coverage of the last two areas is rather sparse and discontinuous in time: they are covered by Urartian sources which are restricted to the first half of the first millennium B. C. (*ca.* 900–640 B. C.). Achaemenid sources, on the other hand, cover the *ca.* 580–330 B. C. time span, but they are limited to Iran, Syria, the southern Oriental Taurus and Anatolia.

As concerns the first millennium A. D., Roman, Byzantine, Armenian, Georgian and Arab archives are available, which offer an almost complete coverage of the region under consideration.[7] Still, not much information is available for the Caucasus proper, especially at the beginning of the period.

Last, during the second millennium A. D. the number of sources multiply and comprise Byzantine, Arab, Armenian, Georgian, European (especially Italian) and from the fourteenth century onwards, Ottoman and later Persian and Russian archives.[8] The geographical extent of this region is then entirely covered.

If one considers the Caucasus, Trans-Caucasia and Upper Mesopotamia as a whole, one deals with a highly diverse region divided between the lowlands of Upper

[5] Garstang 1943; Klengel 1979; Olmstead 1923.

[6] Birmingham 1961; Briant 1996; Graf 1994; Kessler 1980; Levine 1989; Oppenheim 1969; Russell 1984.

[7] Anderson 1897; Braund 1994; Brice 1982; Crow and French 1980 and 1981; Manandian 1965; Mitford 1980; Ramsay 1890; Salway 2001; Sinclair 1996–97.

[8] Kevorkian 1996; Taeschner 1924, 1926 and 1959; Tadjirian 1996; Yerasimos 1991.

Mesopotamia and the highlands of Trans-Caucasia and the Caucasus. The climate is contrasted accordingly: Upper Mesopotamia is characterised by a hot dry climate verging on desert under the 200 mm isohyet, whereas the Caucasian and Trans-Caucasian climate is continental, with extremely cold winters and hot summers. This definition does not apply, however, to the mild climate typical of the Black Sea and Caspian shores. This climatic and topographic division basically follows the piedmont line of the Oriental Taurus, which runs in a easterly direction from the south-west and defines the northern limit of what has been termed the 'Fertile Crescent'. To the east, the Oriental Taurus meets with the Zagros chain, which runs from the north-west to the south-east. To the north-west, the Trans-Caucasus meets with the Pontic mountains extending from the west to the north-east along the Turkish shore of the Black-Sea. In the highlands, three vast lakes, Lake Van, Lake Sevan and Lake Urmia, located nowadays respectively in Turkey, Armenia and Iran, constitute important reservoirs of water.[9]

Three main mountain ranges constitute obstacles to the traffic between the highlands and the lowlands: the Greater Caucasus range, the Lesser Caucasus range, also termed Trans-Caucasus, and the Oriental Taurus range. Nowadays, these mountainous obstacles are overcome by a limited number of asphalt roads. Only one main road runs through the Greater Caucasus[10] via the Darial Pass in Georgia (Bab al-Lan), two roads run though the Trans-Caucasus, through Dilijan and Gyumri in Armenia[11] and three roads run through the Oriental Taurus, via the Maden-Ergani Pass, the Lice-Genç Pass, and the Bitlis Pass, all situated in Turkey (**Map 7**).

Turning now to the question of old roads, I would like first to define briefly what is meant by the terms 'road' and 'route'. The term 'road' will be used here as a generic term applying to any kind of engineered line of communication. A road may be built and paved, or simply made of beaten earth, in any case it has to be regularly maintained. Road maintenance in most cases implies the existence of executive authorities, therefore, road engineering as well as road maintenance is likely to be associated with the development of state polities. For the definition of the different kinds of roads, according to their size and type of manufacture, I will use the terms defined by French.[12]

In the ideal case, roads, especially if they are paved, leave material traces (pavement, bridges, milestones, stations, cisterns, caravansarays, *etc.*) which may be brought to

[9] Note that the waters of Lake Van and Lake Urmiah are too saline to be drinkable.

[10] If one excludes the coastal roads which bypass the Caucasus, through Derbent in the East and Sokhumi in the West.

[11] If one excludes the eastern coastal road which bypasses the Lesser Caucasus via Baku.

[12] French 1974, p. 144, "Highway, roadway: specific terms for built, engineered, paved and maintained lines of communication, either broad, *i.e* more than 2.5 m wide (highway) or narrow *i.e* less than 2.5m wide (roadway). Track: a specific term for a non-built, non-paved, but known, accepted and regularly used line of communication".

light with the help of archaeology. But this is not the case with routes, which are, according to French, "an intended line of communication by means of a roadway, a track or a path".[13] An old route is thus more difficult to trace, all the more so if the cities mentioned along that route have disappeared or have had their names changed radically through history. The identification of old routes is possible through military or travellers' accounts, such as merchants, pilgrims, missionaries, explorers or scholars. But the question then arises as to the representativeness of a route mentioned once in a clay tablet or a traveller's text. How many accounts do we need of a specific itinerary for it to become a route? As Yerasimos puts it, individual itineraries should not be considered as compulsory routes; on the other hand, a territory is not open land which may be crossed at will in every direction.[14] Of course, we possess a few old maps, the most famous of which is the Peutinger Table, which is dated to the second half of the fourth century A. D. This map, which gives an account of the Roman road network *ca.* second to third centuries A. D., may seem to give a good sketch of the routes used throughout the Roman Empire. Still, here again, it seems that this map is only a reflection of main routes among many, possible, others, which are not indicated for reasons unknown.[15]

To sum up, the difficulty with the establishment of routes is to grasp the importance they really had in the past in relationship with transport and economic activities. We may expect some written archives, especially maps, to reflect only major axes of communication and thus favour long-distance, interregional routes at the expense of local ones that may nonetheless be linked to significant activities. The same is true for roads, to some extent, although sometimes their size and type of manufacture (when paved or lined with stations for example) surely indicate the presence of an important axis.

In spite of the limitations implied by the nature and state of the data, I have tried to compare the results of scientific studies dealing with ancient means of communication in Upper Mesopotamia and the highlands for the past four millennia. I have reached two main conclusions:

First, with few exceptions, the road and route network is oriented throughout the period considered along a basically east-west axis. One of the exceptions is the road running along the Euphrates River during the second to fourth centuries A. D., which constituted the *limes* of the Roman Empire. This road, which notably connected Zeugma to Samsat, runs along a clear north-south axis.

[13] French 1974, p. 144.

[14] Yerasimos 1991, p. 88, "*S'il ne faut pas concevoir (les) itinéraires comme des trajectoires obligatoires, qu'on ne doit ou ne peut quitter, il ne faut pas non plus appréhender le territoire comme un espace complètement ouvert qu'on peut sillonner à volonté.*"

[15] Salway 2001, p. 27.

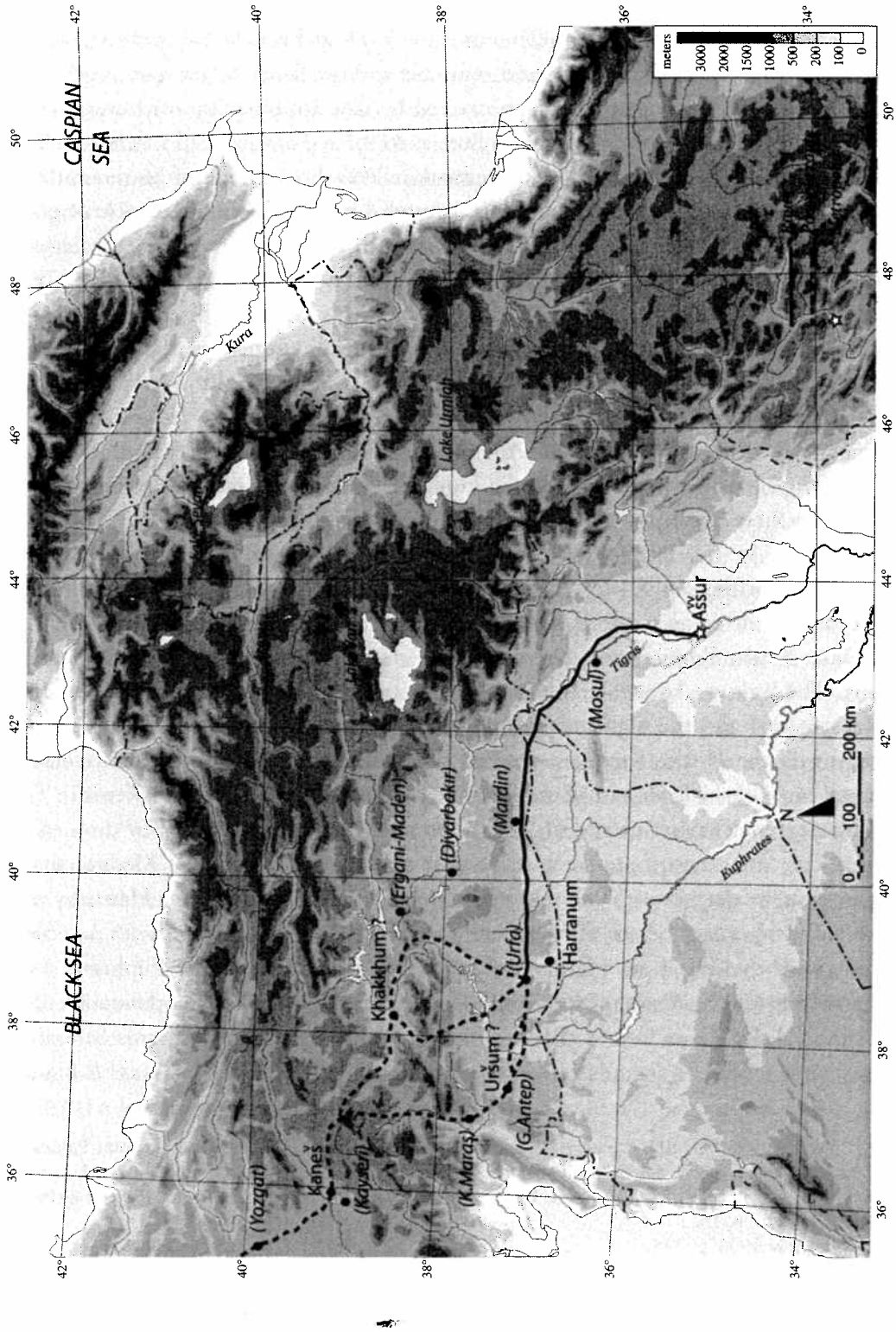
Second, the Euphrates River does not constitute a major north-south axis of circulation during historical times. Rather, it appears as an alternative, intensively used on certain parts only, mainly from Birecik downstream.

The east-west orientation of the communication network is obvious right from the beginning of the second millennium B. C. through the Old Assyrian archives found at Kültepe-Kanesh in central Anatolia (**Map 1**). These archives are of special significance: apart from being among the oldest texts on the subject (dated *ca.* nineteenth century B. C.), they also constitute rare private archives in contrast with the official character of the documentation usually at hand, mostly accounts of military campaigns led by Assyrian or Babylonian kings. The Kültepe tablets belonged to Assyrian merchants who had founded a permanent commercial colony (*karum*) in Kanesh and were trading goods between Upper Mesopotamia and Cappadocia. They sold tin from Elam and textiles and in exchange bought copper, most of which, according to the Anatolian archives, came from the Çankırı area in the Pontic region.[16]

The evidence given by the Kültepe archives show that Upper Mesopotamia and the Anatolian trading colonies were linked by at least two different routes,[17] The first one would go east from Kanesh towards the Upper Euphrates via the ancient city of Khakkhum, crossing the river at Kömürhan[18] or Samsat[19] and then run to the south-east towards Urfa and along the fringes of the Syrian desert down to Assur. The second route would also go east from Kanesh but then branched off at modern Gürün to the south through the Elbistan plain, via Maraş and Antep (possibly ancient Ursum). It crossed the Euphrates at Birecik[20] or Zeugma[21] and then ran to the south-east via Urfa, Viranşehir, Mardin, down to Assur. north of Kanesh, a route went to Hattusha (modern Boğazköy) and the copper mines of the Çankırı region.

As a matter of fact, the broad lines of these routes were first established by Goetze[22] but so far, none of them has been ascertained with precision, and many segments are still a matter of controversy.[23] Nonetheless, even if the detailed lines of the Old Assyrian routes remain unknown, its general orientation keeps to an east-west axis. It is quite possible that other trade routes linked the Assyrian city-states to copper–producing regions north of the Oriental Taurus, such as Ergani-Maden, which would

[16] Dercksen 1996, p. 16.
[17] Astour 1995, p. 1406.
[18] Astour 1995.
[19] Beitzel 1992.
[20] Beitzel 1992.
[21] Astour 1995.
[22] Goetze 1953.
[23] Astour 1995; Beitzel 1992; Ogushi 1999.



Map 1. Old Assyrian route network. Drawn after Astour (1995) and Beitzel (1992).

imply northbound routes from Upper Mesopotamia, but so far this hypothesis meets with the lack of both archaeological and epigraphic data.[24]

Slightly later in the second millennium, the royal archives found at Mari yielded plenty of evidence as to the trade and route network available *ca.* the eighteenth century B. C. Yet, the geographical span covered by this documentation focuses on the Middle Euphrates and gives almost no clues as to the regions situated north of Subat-Enlil, Carchemish and Harran.[25] The network reflects the situation of Mari, a capital-city located by the Euphrates river and surrounded by the desert. The centre of gravity of the Mari Kingdom being the Mari oasis itself together with the Habur region, the main route network is basically structured along a north-south axis, linking central with Upper Mesopotamia. However, in Upper-Mesopotamia itself, the old road running east-west along the Syrian desert fringes is still attested: starting in Assur it goes west according to Joannès[26] through Qattara, Subat-Enlil, Harran, Aleppo, Alalakh and Ugarit. There are also a number of transversal roads linking the Mari Kingdom with the Middle Tigris in the east and the Mediterranean coast in the west. To sum up, Mari lies at the centre of a kind of a spider web, focused on the Middle-Euphrates: it seems only marginally attracted to the northern highlands.

Later on in the second millennium B. C., the evidence becomes scanty. The archives from the capital-city of Hattusha (modern Boğazköy) give us some insight into the Hittite route network,[27] yet the Hittite Kingdom (*ca.*1680–1420 B. C.) and the later Hittite Empire (*ca.* 1420–1180) were focused on central and northern Anatolia. The little we know about this network is of marginal help as concerns Upper Mesopotamia and the highlands. During its maximum extent, however, the eastern frontier of the Hittite Kingdom reached the borders of the Euphrates and encompassed some of the lands east of the Euphrates such as Kumaha (modern Kemah). The Hittite network was of course structured around Hattusha and spread in three main directions: one main route went south-west via Sallapa towards the Mediterranean coast near modern Izmir. This route is attested in the archives from Hattusha and evidenced by a number of Hittite monuments located along its course.[28] A second route went due east from Hattusha via modern Sivas to the Upper Euphrates river near Malatya. A third route went south from Hattusha towards Mesopotamia, either via the Cilician Gates, or via Kanesh and Maraş, then turned east towards Samsat or south-east towards Kargamis (modern Carchemish) and Harana (Harran). A branch

[24] Astour 1995, p. 1409, actually suggests that the road from Kanesh via Khakkum went Eastwards to Ergani-Maden, where the Assyrian merchants bought copper, before heading to the south-east via Diyarbakır and Mardin down to Assur. But this hypothesis is not supported by the Kültepe archives; Dercksen 1996, p. 16.

[25] Joannès 1996, p. 325.

[26] Joannès 1996.

[27] Garstang 1943.

[28] Garstang 1943, p. 36.

from Maraş also went further south to Halpa (modern Halep). This third route, notably its branch via Kargamis, basically followed the Old Assyrian route from Hattus (Hattusha) and Kanesh.

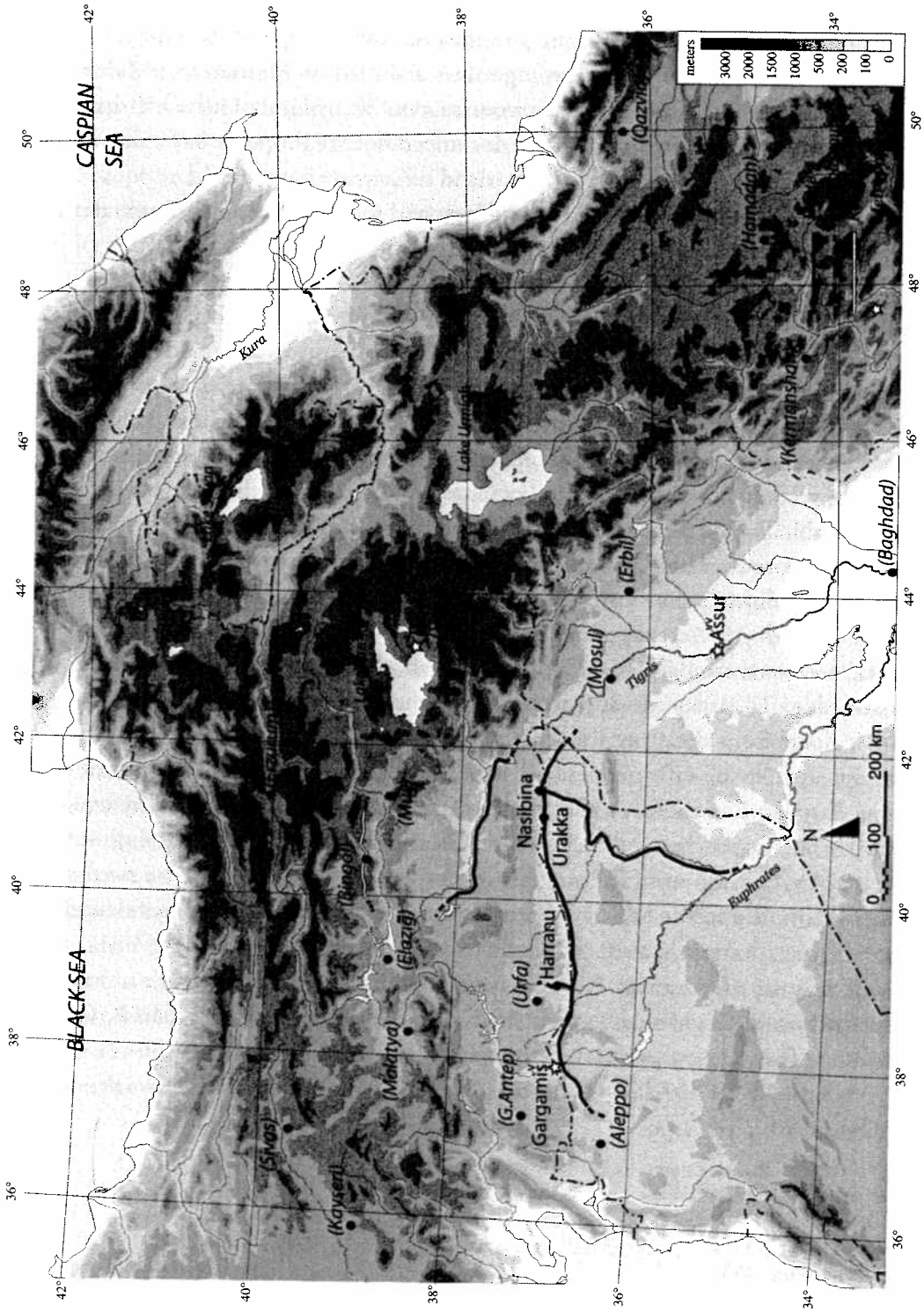
I found very little information concerning routes and roads in Hurrian and Middle Assyrian archives, nothing that allows the reconstruction of any kind of network on an interregional scale whatsoever. The Hurrian documentation might prove to be of special interest in the future, as the Hurrian heartland was situated around the regions of Van and Urmia, before Hurrian groups moved west and south to the Upper Euphrates and Upper Mesopotamia.

The documentation available for the first millennium B. C. is also very incomplete, but there again, whether it be a matter of chance or not, most of the evidence at hand shows that Upper Mesopotamia and the highlands were crossed by predominantly eastbound and westbound routes (**Map 2**).

The Neo-Assyrian archives found in the royal palaces of Niniveh and Nimrud reveal the existence of official roads throughout the empire, called 'royal roads' (*harran sarri*), which, according to Kessler[29] served military as well as administrative purposes for trade control. Two of them have had their itinerary reconstructed by Kessler: one coming from the south along the Habur river to Nasibina (modern Nusaybin), the other basically following the itineraries of the Old Assyrian and Babylonian roads along the desert fringes. According to Kessler, this route ran westwards through Nasibina, Urakka, crossed the Balih River south of Harran, then the Euphrates River south of Carchemish at Til Barsip. A short stretch along the Balih also connected this road to Harran. Apart from these royal roads, a number of plain roads have been traced down by Kessler, one of which runs along an east-west axis along the northern frontier of the Assyrian Empire.[30] Another route, detailed in a tablet from the Kuyunjik collection,[31] starts somewhere in the Lower Zab region, crosses the Zagros going east towards the Assyrian region of Zamua. Unfortunately, only three out of the twenty one places mentioned in the text have been identified with any degree of confidence, therefore the exact route described in that text is still a matter of guess work.[32]

Turning now to the Urartian Kingdom, we meet for the first time with a state entity focused on the highlands. In fact, the Urartian Kingdom (*ca.* 900–640 B. C.) constitutes the first state proper to develop north of the Anti-Taurus, some one thousand five hundred years after the emergence of the Akkadian Empire in the lowlands under the leadership of Sargon I.

[29] Kessler 1980, p. 183.
[30] Kessler 1980, p. 121.
[31] Levine 1989.
[32] Levine 1989, p. 83.



Map 2. Neo Assyrian and Urartian road and route network. Drawn after Kessler (1980) and Sevin (1988).

As for the documentation on routes and road network, again the evidence is rather poor, except for the discovery of a 100 km stretch of engineered highway (**Map 2**), running between Solhan and Bahçecik along the present Muş-Elazığ road in Turkey.[33] This road is probably one of the oldest found in western Asia so far, and it certainly is the oldest road found in the highlands. Its Urartian date is deduced from the remnants of at least three stage-posts of Urartian manufacture, situated some 28–30 km apart and associated with Urartian pottery sherds. The road itself measures some 5,40 m in width and is cobbled or at time paved with large slabs, a technique called in Turkish '*Arnavut kaldırım*' (Albanian causeway). Again, this road has a clear east-west orientation, and is believed by Sevin to go all the way from Lake Van to Elazığ, connecting the Urartian capital city of Tuspa to the land of Alzi in the plain of Altınova (now drowned by the waters of the Keban dam).

The fact that this road is cobbled, together with the presence of stage-posts, suggests that we may well be in presence of one of these 'royal roads' mentioned in many archives from the Old Babylonian Kingdom to the Achaemenid Empire. Most states developing during the second and first millennium B. C. seem to have built or at least maintained roads of such status: it seems plausible therefore, considering the political and administrative structures of that time, that royal roads may have existed in the Urartian Kingdom too.

As concerns the rest of the Urartian road infrastructure, we are confronted with a number of hypotheses that need to be supported by archaeological or textual evidence. Zimansky[34] has suggested an elaborate route network with indications of travelling times for the whole Urartu Kingdom, but his work takes as a primary basis the network belonging to the end of the nineteenth century A. D., described in Wilson's *Handbook for Travellers in Asia Minor* dated to 1895.[35] Although the Ottoman road network is certainly a very interesting basis for historical comparisons, it seems to me unwise to use it as a primary source for tracing the Urartian network.

To conclude, the evidence we possess, however scanty, emphasises the scarcity of north-south axes in the route pattern pertaining to the first half of the first millennium B. C. Again, this may be a matter of chance in the history of research. But this fact may also be explained by the political situation prevailing between the Neo-Assyrian empire and the Urartian Kingdom, which remained throughout the period on very hostile terms. The Assyrians tried to subjugate the Urartians a number of times; in 743 B. C., Tiglath-Pileser III managed to penetrate into Urartian land and even raided its capital Tushpa.

[33] Sevin 1988 and 1991. On the subject of Urartian roads, I was also informed of an unpublished Ph.D. thesis by Oktay Belli, which I could not access because the library of Istanbul University is currently in the process of refurbishment.

[34] Zimansky 1985, pp. 28–31, fig. 5.

[35] Zimansky, 1985, fn. 30.

But after that time, the Assyrian army never penetrated the Urartian territory again, and unlike most of their neighbours, Urartu managed to stay free from the Assyrian imperial yoke. According to several authors,[36] the Urartian State was saved from Assyrian subjection mostly owing to its climate and the ruggedness of the topography. The Urartian country looks from the lowlands like some kind of natural fortress protected by the Oriental Taurus range. There are only three passes, which lead north across the mountains up to the highlands (see above). For some reason, possibly due to topographic factors, Shalmaneser III in 853 B. C. chose to penetrate into Urartu land through the Ergani-Maden Pass, that is at the western-end of the kingdom, before marching to the royal city of Arzaskun.[37] This means that the Assyrian king choose to go to the extreme west of the Urartian Kingdom before marching to its extreme east. He then came back home via Lake Urmia and Erbil.[38] Whether this route was chosen for considerations of tactics, or convenience, it certainly shows that direct routes from the south into the Urartu Kingdom involved a number of considerable drawbacks that would prompt the king and his army to make such a long detour. To sum up, there are a number of elements in Urartian and Neo-Assyrian history that make it probable that no major north-south bound roads linking the two regions were in use during the first half of the first millennium B. C.

Moreover, according to Levine, the Urartu Kingdom and the Assyrian Empire were actually fighting over the routes leading to Iran so as gain control on the eastern trade. Much of their military effort seems to have been focused in the Zagros around the region of Kermanshah in order to take into their power the route going from Baghdad to Qazvin via Hamadan.[39] The focus of interest of both highland and Upper-Mesopotamian polities seems to have then lain primarily not in the northern, but in the eastern territories.

The situation prevailing during the Achaemenid Empire (560–330 B. C.) is quite different, as both Upper Mesopotamia and large regions of the highlands became parts of the Persian Empire, together with Anatolia, Syria, parts of Iran, central Asia and the Indus valley. Here again, the evidence is incomplete, coming mostly from the archives belonging to the Achaemenid administration, whether it is in Persepolis (specifically the Q series) or the provincial capitals. On the subject of roads, the most famous is of course the 'Royal Road' described by Herodotus that ran from Sardis in western Anatolia to the capitals of Susa and Persepolis. This royal road, whose actual route is still

[36] Russell 1984; Zimansky 1985.

[37] An inscription dated to the reign of Shalmaneser III has been found North of Zeugma; Comfort *et al.* 2000, p. 115, fig. 13, suggest that the Assyrian army did cross the Euphrates at that point, possibly during the campaign of 853.

[38] Russell 1984.

[39] Levine 1977, p. 183.

a matter of dispute,[40] is only one among many. A network of royal roads has been brought to light, by Graf[41] in western Syria and Palestine, for example.

The royal road linking Sardis to Susa is, of course, oriented along an east-west axis; but instead of going due east from Sardis, it makes a rather long and puzzling detour through northern Anatolia. Ramsay, having noticed that the Royal Road crossed a region "so far out of the direct lines of communication with the capitals of Assyrian or Persian power" guessed rightly indeed that the location of Bogazköy "must at one time have been the capital of an empire".[42] His hypothesis was that the curious line followed by the Persian royal road probably corresponded to the course of a more ancient road. I surmise it may possibly have been the old Hittite road running from Hattusha to the Mediterranean coast towards Izmir, which I have described above.

After leaving central Anatolia, the oriental segment of the Royal road is thought by Astour to have followed the Old Assyrian merchants' upper route, that is the route via Khakkhum in the Upper Euphrates.[43]

That the major roads running through Upper Mesopotamia and the highlands followed an east-west axis is here perfectly understandable as these regions constituted some kind of transit zone between two nexus of the Achaemenid Empire: the capitals cities in Persia and the west Anatolian satrapies. What would be interesting to know is whether royal roads also existed along a north-south axis, that is, linking the north with the south of the Oriental Taurus. The only written source that may give us some insight into that matter would be Xenophon's *Anabasis* narrating the retreat of Cyrus the Younger's army in 401 B. C., but as is well known, this army lost itself miserably in the highlands.[44] This implies that if there were major roads in that region, the army did not know them, or else, simply ignored them, as suggested by Joannès[45] probably in an attempt to escape from the control of the Persian authorities.

With the foundation of the Hellenistic kingdoms (*ca.* 312–301 B. C.) and the development of the Roman Empire, trade-relations established during the Achaemenid period with far-eastern regions such as India and central Asia gained momentum. And by the second century A. D., the strategic and economic importance of the highlands had changed completely. The highlands became a transit zone of primary importance for the goods coming from India and China that were being exported to large trade-cities located in the west, such as Ephesos, Miletus and Smyrna and of course Rome. Hence the numerous attempts of the Romans to extend their empire beyond the Euphrates River up to Trans-Caucasia and the Caucasus. Upper Mesopotamia, whose

[40] Briant 1996; Chaumont 1986–1987; Graf 1994.
[41] Graf 1993, 1994, p. 170.
[42] Ramsay 1890, p. 34.
[43] Astour 1995, p. 1418.
[44] See chapters by C. Sagona and M. Rothman in this volume (ed.)
[45] Joannès 1995, p. 197.

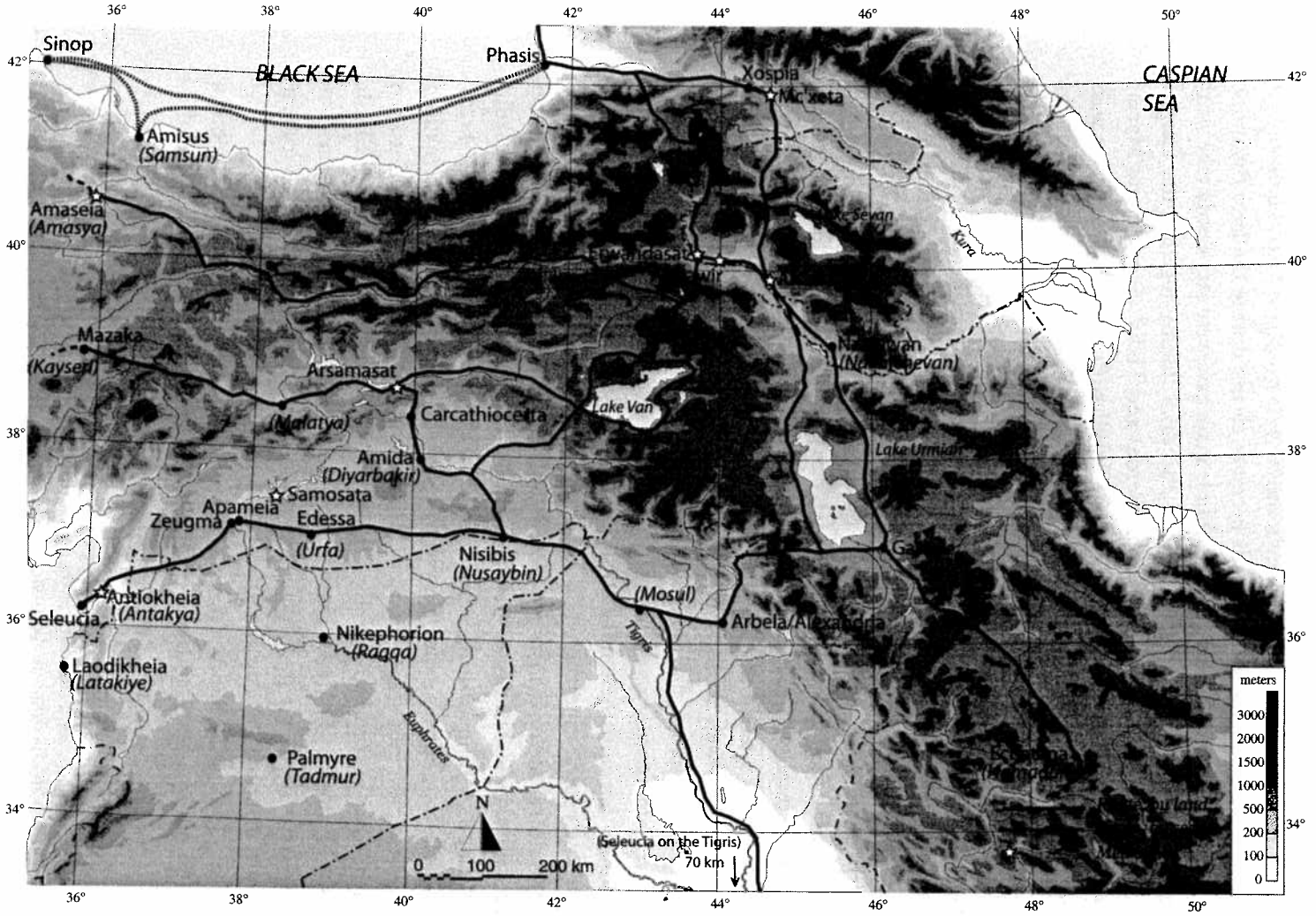
importance in interregional trade within the Near East had been great since at least the fourth millennium B. C., became even more important as it was now part of a Mesopotamian and long-distance commercial network. Routes such as the one which linked the Euphrates river across the Syrian desert with the Mediterranean coast, attested from the Mari period onwards, became major trading-axes, specially with the use of the camel as a pack-animal on a common basis.[46] Desert cities such as Palmyra (modern Tadmur) became very active commercial centres from the second century A. D. onwards.

Thus, a number of new cities were founded and important routes crossing the highlands start to be mentioned in the documentation; they linked trade-cities of Anatolia and the Black Sea with Persia and India.

In the Hellenistic period, the best documented route is yet again the east-west axis running along northern Mesopotamia (**Map 3**), linking together the cities founded by Seleucos Nicator (305–281 B. C.): Seleucia Pieria, Antiokheia, Apamea, Seleucia on the Tigris. But another east-west oriented route linked together the capitals of Orontid Armenia, which came under Seleucid domination at the end of the third century B. C.: Arsamasat, Erwandasat and Armawir.[47] Apart from these two axes, a few important north-south routes linked Media Atropatene via Trans-Caucasia to the Pontus, from which commercial goods could be transported further west by sea. According to Manandian, a route linked Ecbatana through Ganjak to the Armenian capital of Artaxata. From Artaxata, transit goods were seemingly sent to the southern ports of the Black Sea, mainly to Amisus (Samsun) and Sinop.[48] Another route, called by Manandian the 'Maeotid-Colchidian highway,' linked Ecbatana to Tanaïs on the Black Sea via Artaxata, Phasis and Dioscurias. By the end of the third century B. C., "Greater Armenia and Sophene (had been) drawn into the circle of international commercial relations."[49]

As concerns the Roman period, apart from the Euphrates *limes*, which will be discussed below, not many routes have been traced with certainty in that region. The reason is that Roman roads in eastern Anatolia do not seem to have been paved,[50] as elsewhere in the Roman Empire, or if they were, the slabs must have been removed during later periods in order to facilitate pack-animal transport.[51] As for textual evidence, the

[46] Bulliet 1975.
[47] Hewsen 2001, pl. 19.
[48] Manandian 1965, pp. 50–51.
[49] Manandian 1965, p. 38.
[50] A few exceptions are attested, such as the paved roads around Malatya or South of the Oriental Taurus in the Middle Euphrates region; Sinclair 1987, p. 21.
[51] Comfort *et al.* 2000, p. 113. Historical evidence shows that the use of wheeled vehicles gradually disappeared in Eastern Anatolia, Persia and Syria from the third century A. D. onwards (Bulliet 1975, pp. 14–15) to be replaced by pack-animals. Since it is much more convenient for animals and riders to follow dirt-roads than paved roads, this may be one the reasons for the removal of slabs along Roman paved roads.



Map 3. Hellenistic route network. Drawn using the work of Hewsen (2001) and Manandian (1965). The reconstruction by Hewsen of a land route following the Turkish Black Sea shore has not been endorsed here, as the existence of this route at such an early date seems to me questionable considering [1] the nature of the terrain (rugged and thickly wooded). [2] the absence of such a route in later route networks. The actual asphalt road was only constructed 30 years ago. I prefer to follow Manandian's suggestion that trade between Northern Trans-Caucasia and the West was sea-borne.

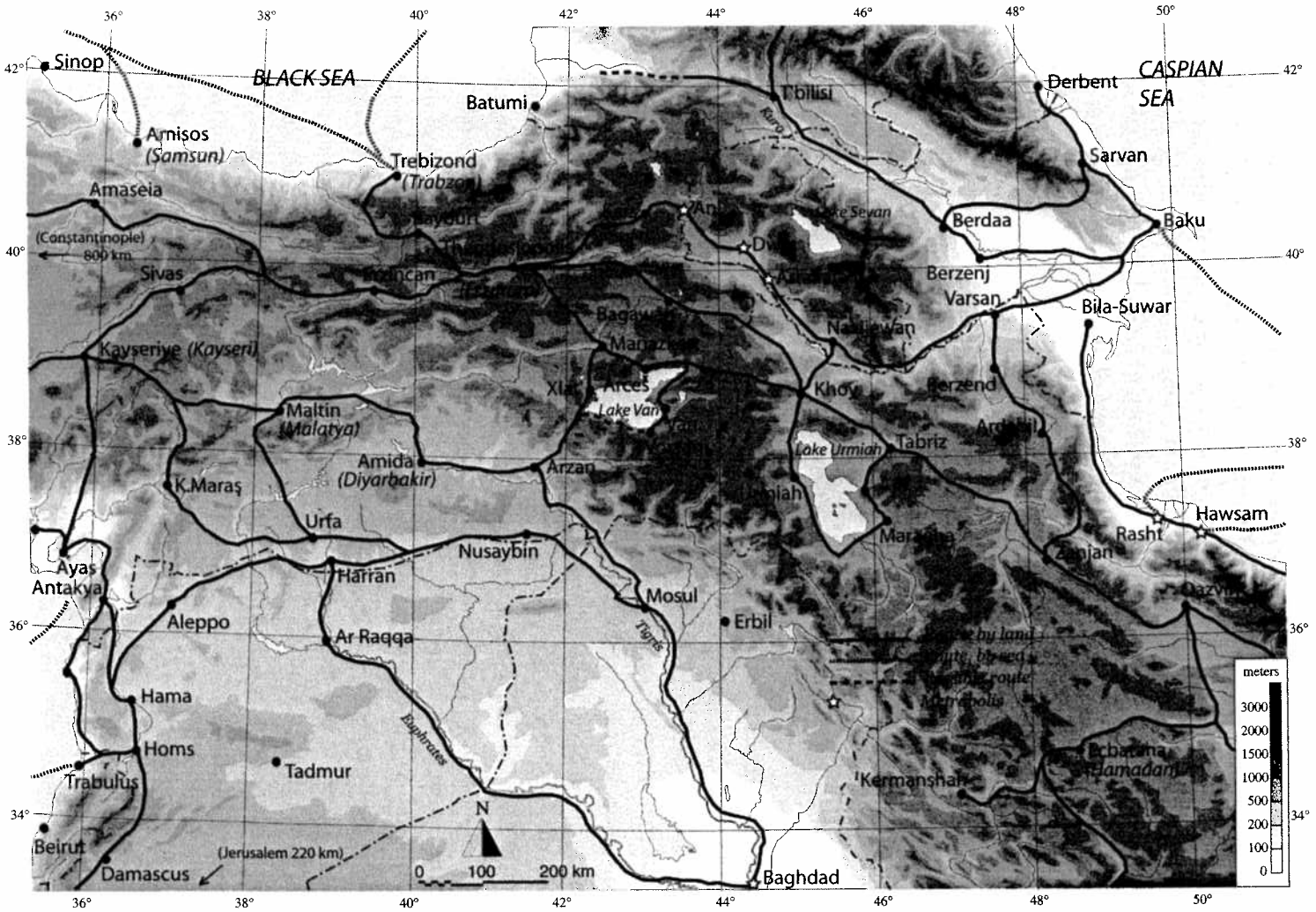
Peutinger Table and the Antonine Itinerary do document the highlands, but the information they contain on that region is so incomplete or erroneous that specialists are still at pains to give a clear picture of any route.[52]

The route pattern across the highlands becomes clearer during the later Byzantine, Sassanid, Umeyyad and Abbassid periods. Three main east-west axes slowly take shape (**Map 4**): the first axis follows the basin of the Kura linking together the Caspian shores to the Black Sea through the cities of Berdaa and Tbilisi. According to Manandian, who relies on Arab sources, this route is linked with northern Trans-Caucasian trade which started to develop in the eighth century A. D., and reached its heyday during the ninth and tenth century.[53] The second axis follows the Araxes basin westwards into Anatolia, through the cities of Ani, Kars, Theodosiopolis (Erzurum) and Trebizond, it became particularly important during the Bagratid period during the nineth to tenth centuries. The third axis crossed southern Trans-Caucasia through Vostan, Van, then went north of Lake Van through Arces (Erciş), Manazkert (Malazgırt), Xlat' (Ahlat), Arzan, Miyafarkin, Amida (Diyarbakır). This route too was in use during the Bagratid Kingdom. Besides, one north-south route linking Ecbatana to Naxijewan (modern Nakhichevan) and Artaxata that is also indicated in the Peutinger Table, is attested throughout the period.[54]

These three east-west axes gain or lose importance at the expense of each other depending on the political circumstances or the evolution of economic structures. From the eighth century onwards, the centre of gravity of international trade constantly shifted between these northern, central and southern Trans-Caucasian routes. Northern and central itineraries enjoyed particular vitality between the eighth and the eleventh century due to the development of trade with southern Russia and Europe across the Black Sea. The disintegration of the Arab Caliphate and the strengthening of the Byzantine Empire then favoured such trade.[55] But the foundation of the Frankish states following the Crusades completely changed the organisation of international trade between the east and the west during the twelfth century. The Crusaders, focused in Syria, established direct trade relations between Europe and the Muslim East, thus weakening the trade–routes running across the highlands.[56] Together with east-west routes crossing Upper Mesopotamia, the southern Trans-Caucasian itinerary then gained in importance at the expense of the northern ones.

This new political equilibrium was short-lived nonetheless since the Mongols started to invade the highlands as well as Upper Mesopotamia in the first half of the

[52] Miller 1916; Manandian 1965, p. 90 *sq.*; Salway 2001; Sinclair 1996–1997. See also Hewsen 2001, pp. 63–64, pl. 59, for a summary of the state of research.
[53] Manandian 1965, p. 135.
[54] Manandian 1965, pp. 87, 110–111.
[55] Manandian 1965, pp. 135–136.
[56] Manandian 1965, p. 182.

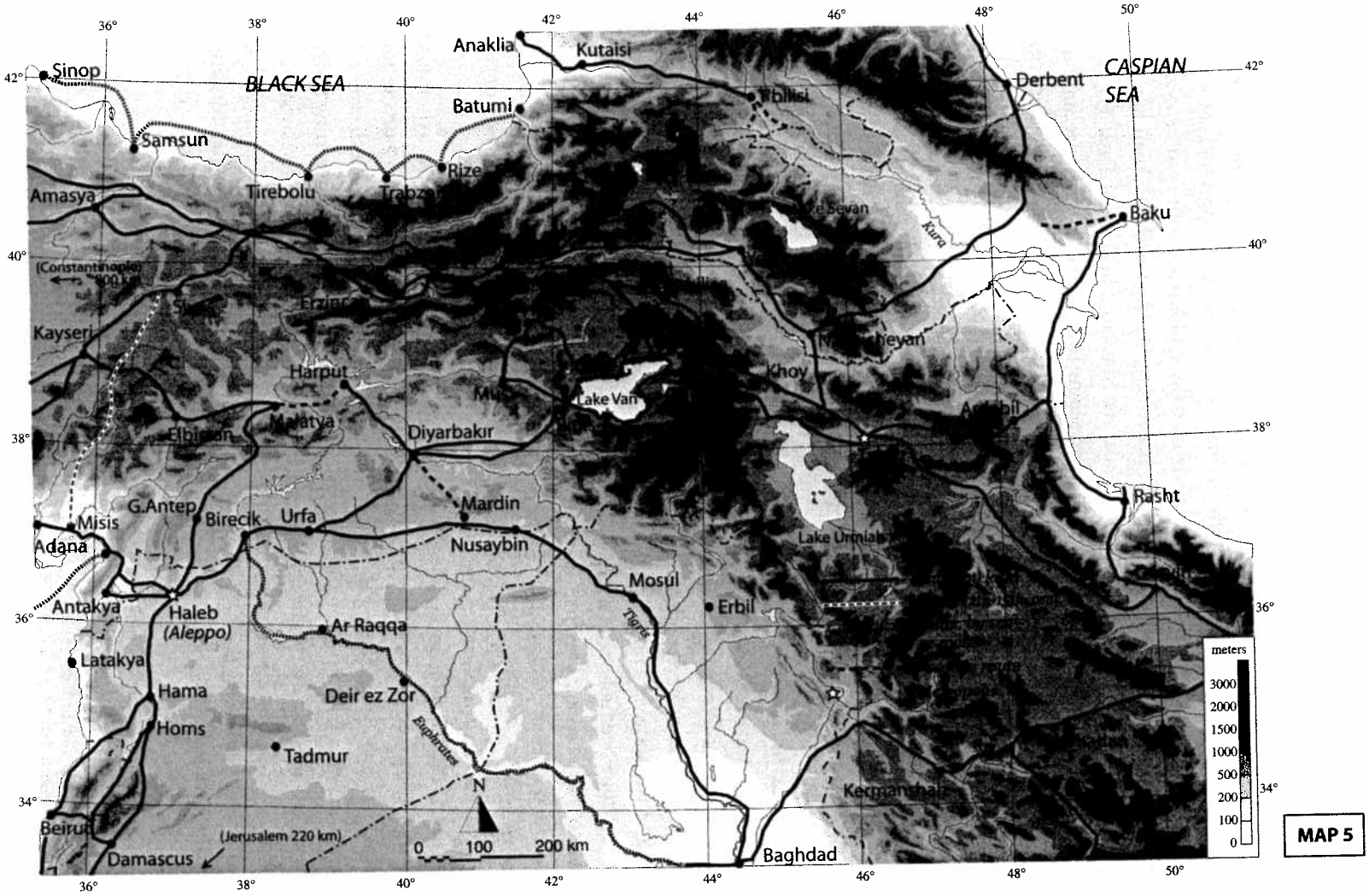


Map 4. Medieval route network (9th–13th century A. D.). Drawn after the work of Honigman (1936), Kennedy (2002) and Manandian (1965). Note that Eastern (and Central) Anatolia was occupied by Turkish nomadic tribes after the battle of Malazgırt in 1071 (Kennedy 2002, pl. 46). Indicated routes are likely to have disappeared in that region between the end of the 11th and the beginning of the 13th century.

thirteenth century. After a period of sharp decline following the invasions, trade started to flourish again in the second half of the thirteenth century under the dynasty of Gengis Khan. According to Manandian, it was not the southern transit routes, but the northern ones, through Armenia and Trebizond, that were the most important in the Mongol period. He explains this evolution by the fact that "the Mongols did not succeed in making a firm conquest of Syria and in taking into their power the southern route as well as the northern one".[57] This 'northern route' is described in detail by the Florentine, Balducci Pegolotti, at the beginning of the fourteenth century; it linked Ayas via the central Trans-Caucasian route to Tabriz.[58] Tabriz, and to some extent Sultaniyeh, had become one of the major trade cities in the Near East after the destruction of Baghdad in 1258.

The central Trans-Caucasian route through Erzurum, together with the southern route via Diyarbakır and Erciş became the major east-west axes linking Anatolia with Persia during the fourteenth to sixteenth centuries (**Map 5**). The route pattern of the Near East was structured at that time around Constantinople, Tabriz and Jerusalem. Travellers wishing to reach Tabriz from Constantinople, followed an almost straightforward itinerary throughout northern Anatolia via Bolu, Osmancık, Niksar, Erzincan and Erzurum, then headed south-east to join Tabriz via Yerevan and Nakhichevan, or via Eleşkirt and Erciş or via Eleşkirt and Üç Kilise.[59] The southern route via Diyarbakır and Lake Van linked Tabriz to Aleppo, the port of Iskenderun and Jerusalem. From Aleppo, it was also possible to reach Constantinople via Antakya following the diagonal road across Anatolia favoured by the Ottoman armies to reach their possessions in Syria and Palestine, and thus called the 'military road.' This road-pattern may be described as a triangle stretching over Anatolia, the highlands and the Levant, with Constantinople, Tabriz and Jerusalem standing at each corner of the triangle. It should be emphasised here that among the 449 travellers' accounts studied by Yerasimos, none of them describes a route linking the north with the south of the Oriental Taurus, or the Oriental Taurus with the Lesser Caucasus chain. In short, there are no major itineraries going due south or due north; possible routes through the Ergani Pass or the Lice Pass do not seem to have been used, a fact, which may be explained by the triangular structure of 'international' activities. The only route clearly following a north-south axis lies further west, linking Sivas to Adana via Kayseri: it basically serves to connect the northern Anatolian road with the diagonal military road, that is, the road going to Tabriz with the one going to Jerusalem. According to Taeschner,[60] a similar road existed between the twelfth and the fifteenth centuries,

[57] Manandian 1965, p. 189.
[58] Manandian 1965, p. 190.
[59] Yerasimos 1991, p. 59.
[60] Taeschner 1959, map.



Map 5. Early modern route network (14th–16th century A. D.). Drawn after Kennedy (2002), Taeschner (1959) and Yerasimos (1991).

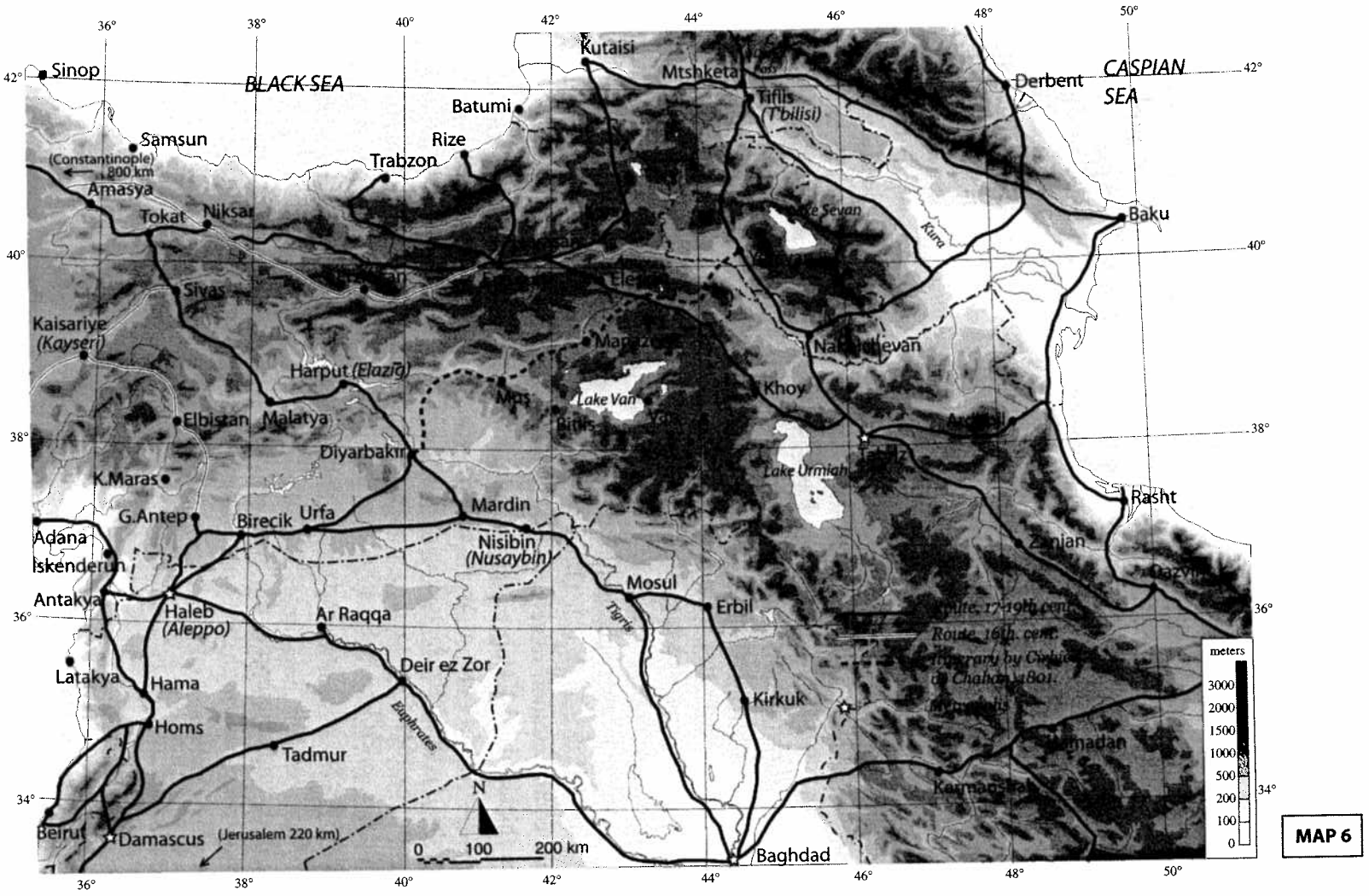
which was even shorter and more straightforward as it did not run through Kayseri but instead went straight through Gürün to the Gulf of Iskenderun.

The basic route pattern in use throughout the fourteenth to sixteenth centuries was preserved until the end of the Ottoman Empire (**Map 6**), except for the southern Trans-Caucasian route via Erciş, which seems to have lost its importance after the sixteenth century. The main arteries throughout the highlands are the old central Trans-Caucasian route and a fairly new road, branching off the northern Anatolian road at Sivas and running towards the south-east via Malatya, the Ergani Pass, Diyarbakır, Mardin, Mosul to Baghdad.[61] Again, there seems to be virtually no route linking the south with the north of the Oriental Taurus, and neither the Lice Pass nor the Bitlis Pass seem to have been in great use at that time.

In northern Trans-Caucasia however, apart from the old route linking Tabriz with Anatolia via Khoy and Erzurum, a number of north-south routes crossing the Greater and Lesser Caucasus ranges started to gain considerable importance. This development was triggered by the new trade opportunities offered by the Russian market, as well as the political alliance against the Ottoman Empire associating Persia, Poland, Moscovia and Russia. A treaty signed in 1667 tried to make the Armenian merchants from Nor Jula and Ispahan transport the silk destined for London or Amsterdam exclusively via Russia, at the expense of the Ottoman empire. This obligation was not respected, but from the first half of the seventeenth century onwards, part of the Far-eastern trade was nevertheless diverted to the north, in spite of the much longer duration of transport.[62] Three trade routes thus crossed the Lesser Caucasus (**Map 6**), one going from Nakhichevan via Shusha to Derbent, another from Nakhichevan via Yerevan to Vladikavkaz. The first one crossed the Greater Caucasus range at Sahburan, the second one at the Darial Pass. The third route branched off the central Trans-Caucasian east-west axis near Horasan, going north via Kars and Ardahan to Kutaisi in Colchis, then turned east to the ancient capital of Georgia, Mtshketa.[63]

In Upper Mesopotamia, the main route was again the old east-west axis running along the Syrian desert fringes, clearly documented since the beginning of the nineteenth century B. C. During the fourteenth to sixteenth centuries this road, which follows the Tigris river up to Mosul, turns to the west after Mosul and then runs through Nusaybin, Mardin, Urfa, Birecik, Aleppo and then goes either west to Antakya and Iskenderun or south to Damascus and Jerusalem.[64] But according to Taeschner,[65] the same road in the seventeenth to eighteenth centuries makes a detour after Mardin to reach Diyarbakır, where it goes south to Urfa again.

[61] Taeschner 1924, 1926 and 1959.
[62] Tadjirian 1996, p. 157.
[63] Kennedy 2002, pl. 45.
[64] Yerasimos 1991.
[65] Taeschner 1959.



MAP 6

Map 6. Modern route network (16th–19th century A. D.), Drawn after Kennedy (2002) and Taeschner (1924, 1926, 1959).

Even if written documentation concerning the highlands is virtually absent until the Urartu period, it seems possible to say that the centre of gravity of Near Eastern trade underwent a shift from the south to the north of the Oriental Taurus in the second half of the first millennium A. D. The old Upper Mesopotamian east-west road never disappeared, but the main communication axes gradually moved to the north on the one hand, and to the west on the other hand, along the Syrian corridor down to Palestine.

The fact that the route network almost always follows an east-west axis is indeed puzzling. The explanation that leaps to mind is obviously the topographic and climatic peculiarities of the highlands, which render most north-south routes barely passable except in summer. But this explanation is not satisfactory, particularly as the notion of a 'passable route' is a relative one. The Greater Caucasus, which is crossed today by only one asphalt road through the Darial Pass, is deemed to be extremely permeable as far as shepherds are concerned, who each year drive their flocks through "countless track-ways and major routes alike".[66] Else, one might also resort to geographical considerations, arguing that Anatolia and the highlands constitute some kind of a peninsula, a 'natural bridge' between the Orient and the Occident,[67] favourable to the circulation of goods and people between Iran and Europe. But with a similar argument, we might well say that the highlands constitute another natural bridge between the Russian steppes and Arabia.

Rather, it seems that the political situation of that region, together with the interregional economic structure, offer better explanations. The characteristics of the route network may be better explained by the fact that this region never constituted a political entity in its own right, but for the brief Armenian Empire united during the reign of Tigran II (95–66 B. C.). Therefore, the elements which gradually shaped the trade and communication routes always belonged to political structures going far beyond the highlands and Upper Mesopotamia. If the empire of Tigran had survived the assaults of the Roman army, it certainly would have left large roads linking its new capital, Tigranocerta, located somewhere to the south of the Bitlis Pass,[68] with the ancient capital of Artaxata. As a matter of fact, the Peutinger Table, which of course reflects a much later political state around the second to third centuries A. D., does show the city of Tigranocerta on a route linking the north with the south of the Oriental Taurus.

An example to support this hypothesis is the road running along the Roman *Limes* on the west bank of the Euphrates river. Large segments of this road have been found between Melitene and Zimara together with a few bridges near Eski Kahta and

[66] Braund 1994, p. 45.

[67] Taeschner 1959, p. 169.

[68] Sinclair suggests to locate Tigranocerta at the site of Arzan instead of Silvan or Kızıltepe, favoured so far; Sinclair 1994–1995. Hewsen, in his reappraisal of Armenian historical geography followed the proposal of Sinclair; Hewsen 2001, pl. 59.

Habeş.[69] As I said above, this road constitutes one of the rare examples of a route oriented along a north-south axis. But this road has a special status: its purpose was clearly to allow the Roman legions watching the *limes* to reach any point quickly so as to defend the empire against incoming enemies, therefore it is a frontier road. This example shows that when the highlands and Upper Mesopotamia are linked together by a special political function (here, the oriental frontier of the Roman Empire), a communication line will be constructed, however difficult the terrain.[70]

The Roman frontier road along the Euphrates constituted one of the rare exceptions of a road linking the south with the north of the Anti-Taurus, but also of a road actually following the Euphrates course in the highlands. The reasons for this exception have been explained on historical grounds. Otherwise, examples of such a route, either following the river, or using the river to transport goods and people along its course are very rare. The only instance I found is the itinerary described by J. Chahan de Cirbied for Bonaparte, then First Consul, in 1801.[71]

Chahan de Cirbied was an Armenian nobleman who was born in Urfa in 1772 and went to Europe in his youth to study. On the personal request of Bonaparte, who planned further campaigns in the Near East after his defeat in Egypt in order to control the far-eastern trade routes, Cirbied wrote a memoir called *Description de la route d'Alep à Erivan* where he describes two routes to reach Armenia from the lowlands (**Map 6**). One of these routes followed the Euphrates valley from Birecik up to Manazcert (modern Malagirt), the other one "*la moins compliquée*," crossed Upper Mesopotamia from Birecik through Edesse and Diyarbakır, then reached Manazcert. After Manazcert, these two routes united into one which went by land "*car l'Euphrate au-delà de Manacerte n'est pas navigable aisément par le peu d'eau qu'il y a dans les saisons d'été et d'automne.*"[72]

The first itinerary mentions villages and cities along the Euphrates up to Manazcerte among which Rum Kale, Samsat, Malatya, Çemişgezek, Keban, Palu and Harput. What is quite strange about this itinerary, is that Cirbied never mentions the very difficult Taurus Gorge, between Pütürge and Gerger, deemed by Mitford, who roamed the region in search for Roman roads, to be not navigable. Mitford cites Pliny who also discounted any kind of navigation along that part of the river in the Roman period,[73] as well as the accounts of von Moltke and Huntington, in 1840 and 1900 respectively. All these sources agree on the fact that the Euphrates is not navigable

[69] Comfort and Ergeç 2001, p. 31 and fig. 2; Crow and French 1980, fig. 60.1; Mitford 1980, fig. 61.1.

[70] On the means by which topographical difficulties were overcome to build this Roman frontier road, see Mitford 1980, p. 924.

[71] Beylerian 1996–1997.

[72] Beylerian 1996–1997, p. 406.

[73] Mitford 1980, p. 915.

along that gorge at any time of the year, even travelling downstream, which is the usual direction for navigation on the Euphrates. If the Taurus gorge is thought to be impassable, neither by land nor by boat in 1840, there is little chance indeed that the gorge was passable in 1801, especially for people travelling upstream. So I suspect that Cirbied did not experience himself this route north up the Euphrates, and if he ever went to Yerevan, he probably followed the other route, "*la moins compliquée.*"

To conclude, it appears that allegations of travel along the Euphrates in the highlands during historical times are very rare. Existing accounts are limited to restricted stretches of the river or are questionable. Even in the lowlands, the Euphrates River has not been the obvious axis of circulation between northern and southern Mesopotamia since time immemorial. Travel and transport along or by the river is well attested on many stretches during the time of the Mari Kingdom or during the Roman and Early Byzantine empires, as recounted by Isidore of Charax and Ammiannus Marcellinus.[74] But at other times, the route along the Euphrates seems abandoned: according to Strabo, this route was not in use during the first century B. C. A route crossing the desert was preferred, located at a three-day journey from the river.[75] Yerasimos cites the case of J. B. Tavernier who travelled across the Near East several times on his way to Persia in the seventeenth Century: Tavernier explains that the Euphrates river is not navigable because of the number of dams built for irrigation purposes. According to Yerasimos, the river was widely used until 1598 from Birecik to Fallujah, then it was abandoned probably indeed because of the number of dams and other works delaying the journey.[76] Judging from later travellers' accounts navigation along the Euphrates probably came back into use sometimes before the nineteenth century, as is inferred by numerous stories of travelling downstream by raft or on the famous *kelek*.[77]

Lastly, coming back to the question of road and route structures in the highlands and Upper Mesopotamia, I would like to emphasise an important point. I have argued that most important routes and roads followed a basically east-west axis, as apparent in the documentation available for the past four millennia. But this does not mean that no circulation whatsoever linked the Trans-Caucasian highlands with the lowlands on a regular basis. It only shows that *state* communication and *major* trade was generally not organised on a north-south basis.

Many examples nonetheless suggest that significant circulation existed between the Caucasus ranges and Upper Mesopotamia, whether it be in prehistoric times (Marro *in press*) or historical times. Traffic existed, but it was of a different nature. Both local and long-distance traffic are attested. An example is that of the Christian pilgrims

[74] Galikowki 1988.
[75] Galikowski 1988 p. 78.
[76] Yerasimos 1991, p. 80.
[77] Marro in press.

coming down from the Caucasus, who used to flock to Jerusalem especially from the fifth century onwards, in spite of the religious interdiction declared by a monophysite council in 536 A. D.[78] These Armenian and Georgian pilgrims followed routes the details of which are so far largely unknown but they stopped on their way to places like Qalat'Samaan in northern Syria.

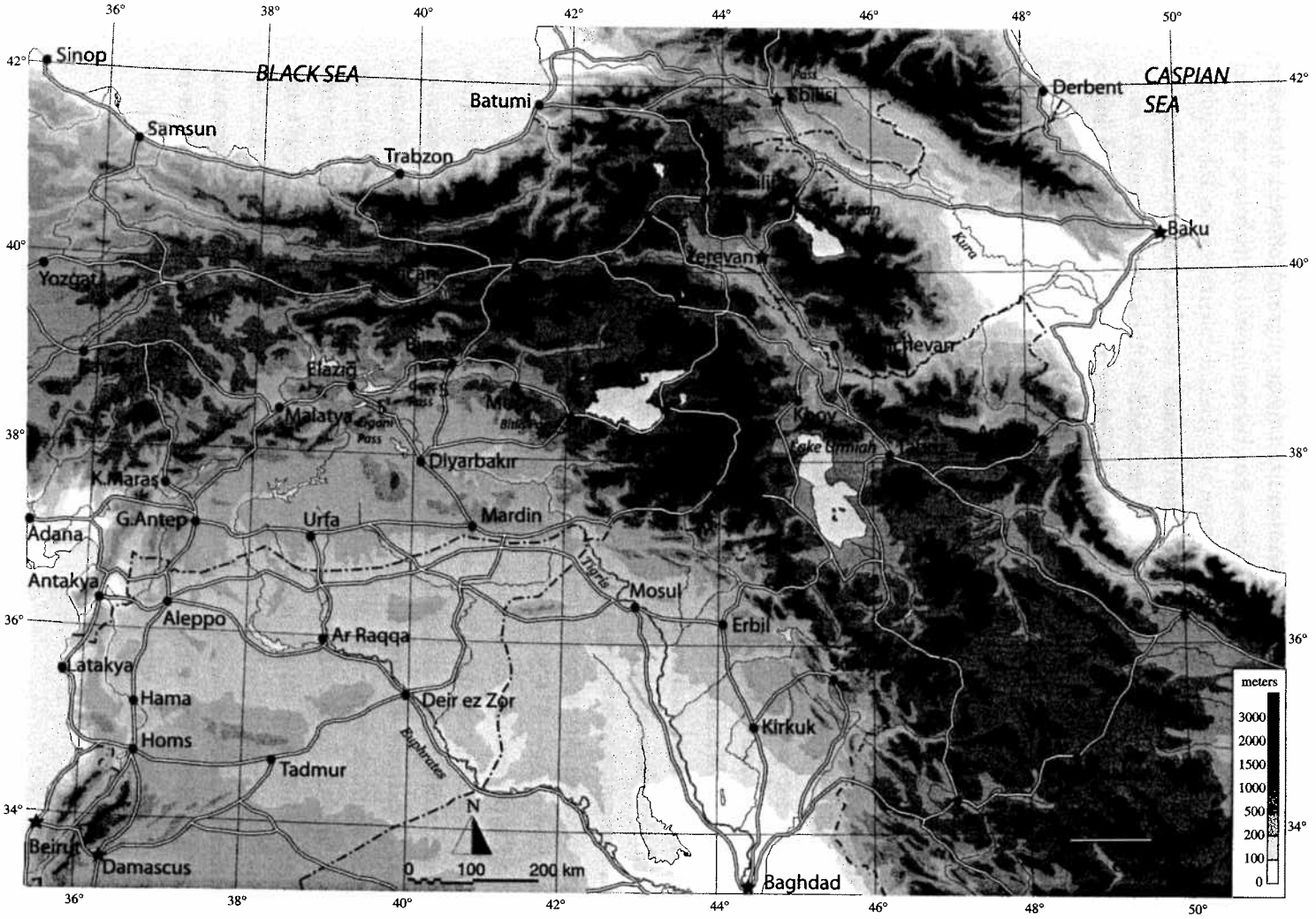
Another example, already referred to in my previous work on prehistoric routes, is the long journey implied by some transhumance shifts in the sixteenth century A. D. The Boz Ulus pastoral tribes, for example, would have their winter quarters in the lowlands near Mardin and would head north in spring to spend the summer in the highlands pastures around Diyarbakır, Kars and the Georgian plateau.[79] On a smaller scale, I would like here to refer to the transhumance tracks linking the Syrian Djezireh to the Oriental Taurus range south of Lake Van, as evidenced in the work of Hütteroth.[80] These tracks constitute clear north-south routes across the very rugged topography of the Hakkâri massif that are not reflected in any of the historical networks surveyed so far, and barely so in the modern pattern of asphalt roads.

Thus, any description of a route network will tend to be restrictive and primarily refer to the most obvious, official ways of circulation: it may not necessarily refer to the most widely *used* ways of communication, as the example of the Hakkâri mountain tracks show. We must not lose sight of the fact that the restitution of any route pattern is bound to be incomplete and partial.

To sum up, I have attempted to demonstrate that most of the route network was oriented along an east-west basis from the Old Assyrian Kingdom to the end of the Ottoman Empire. A few north-southbound routes are nonetheless attested from at least the third century B. C.: apart from the Roman frontier road along the Euphrates River, which constituted some kind of an exception, north-south traffic used to run through two major axes. The first one crossed Anatolia west of the Oriental Taurus and went from the Gulf of Iskenderun to Sivas, reaching the Trans-Caucasus via Erzurum. The second one crossed the Iranian plateau east of the Zagros, then entered the highlands through the Araxes valley via Nakhichevan and went up north to the valley of the Kura. In both cases, this traffic avoided the core of Upper Mesopotamia as well as the highlands until it reached Trans-Caucasia.

It may seem remarkable that mostly routes and rarely roads actually served as a basis for this analysis. This reflects the state of the documentation, as in most cases, well-dated road tracks are conspicuous by their absence. This may very well change in the future with the discovery of new evidence, and so may some of my conclusions.

[78] Maraval 1985, p. 112.
[79] De Planhol 1959, p. 549.
[80] Hütteroth 1959, map.



Map 7. Contemporary road network of Upper Mesopotamia and Caucasia. Drawn using the Reinhard Ryborsch road maps no. 5, 6, 7 for Turkey and the Freytag and Berndt road maps for Syria and the Caucasus. Some roads have been completed using the *Times Atlas of the World*. Only major asphalt roads are indicated.

BIBLIOGRAPHY

ANDERSON, J. G. C.
1897 "The road-system of eastern Asia Minor with the evidence of Byzantine campaigns". *Journal of Hellenic Studies* 17: 22–44.

ASTOUR, M.
1995 "Overland trade routes in ancient Western Asia", in *Civilizations of the Ancient Near East*, edited by J. M. Sasson, volume 3, pp. 1401–1430. NewYork: Scribners

BEYLERIAN, A.
1996–1997 "Un mémoire inédit de J. Chahan de Cirbied au Premier Consul". *Revue des Etudes Arméniennes* 26: 397–420.

BEITZEL B. J.
1992 "The Old Assyrian caravan road in the Mari royal archives", in *Mari in Retrospect: Fifty Years of Mari and Mari Studies*, edited by D. G. Young, pp. 35–57. Winona Lake, Indiana: Eisenbtauns

BIRMINGHAM, J. M.
1961 "The overland route across Anatolia in the eighth and seventh centuries BC". *Anatolian Studies* 11: 185–195.

BRAUND, D.
1994 *Georgia in Antiquity: A History of Colchis and Transcaucasian Iberia 550 BC–AD 562*. Oxford: Clarendon Press.

BRIANT, P.
1996 *Histoire de l'Empire Perse de Cyrus à Alexandre*. Paris: Fayard.

BRICE, W. C.
1982 "The Roman roads through the Anti-Taurus and the Tigris bridge at Hasan Keyf", in *Serta Indogermanica: Festschrift für G. Neumann zum 60. Geburstag*, edited by J. Tischler, pp. 19–32. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.

BULLIET, R. W.
1975 *The Camel and the Wheel*. Cambridge, Massachusetts: Harvard University Press.

CHAUMONT, M.-L.
1986–1987 "L'Arménie et la route royale des Perses". *Revue des Etudes Arméniennes* 20: 287–307.

COMFORT, A., ABADIE-REYNAL C. and ERGEÇ, R.
2000 "Crossing the Euphrates in antiquity: Zeugma seen from space". *Anatolian Studies* 50: 99–126.

COMFORT, A. and ERGEÇ, R.
2001 "Following the Euphrates in antiquity: North-south routes around Zeugma". *Anatolian Studies* 51: 19–50.

CROW, J. and FRENCH, D. H.
1980 "New research on the Euphrates frontier in Turkey", in *Roman Frontier Studies 1979*, edited by W. S. Hanson and L. J. F. Kepie, pp. 903–912. British Archaeological Reports Inter. Series 71. Oxford: British Archaeological Reports.

DERCKSEN, J. G.
1996 *The Old Assyrian Copper Trade in Anatolia*. Istanbul: Nederlands historisch-archeologisch Instituut.

FRENCH, D. H.
1974 "A study of Roman roads in Anatolia: Principles and methods". *Anatolian Studies* 24: 143–149.

GALIKOWSKI, M.
1988 "La route de l'Euphrate d'Isidore à Julien", in *La Géographie historique du Proche-Orient*, edited by P. L. Gattier, B. Helly, J. P. Rey-Coquais, pp. 76–98. Paris: éditions du CNRS.

GARSTANG, J.
1943 "Hittite military roads in Asia Minor". *American Journal of Archaeology*, 47: 35–62.

GOETZE, A.
1953 "An Old Babylonian itinerary". *Journal of Cuneiform Studies* 7: 51–72.

GRAF, D. F.
1993 "The Persian royal road system in Syria-Palestine". *Transeuphratène* 6: 149–168.
1994 "The Persian royal road system", in *Achaemenid history VIII: Continuity and Change*, edited by H. Sancisi-Weerdenburg, A. Kuhrt and M. Cool Root, pp. 167–189. Leiden: Nederlands Institut voor het Nabje Oosten.

HEWSEN, R. H.
2001 *Armenia: A Historical Atlas*. Chicago: University of Chicago Press.

HONIGMAN, E.
1936 "Un itinéraire arabe à travers le Pont", in *Mélanges Frantz Cumont*, edited by Annuaire de l'Institut de Philologie et d'Histoire Orientales et Slaves, vol. IV, pp. 261-271. Bruxelles: Université Libre de Bruxelles.

HÜTTEROTH, W. D.
1959 *Bergnomaden und Yaylabauern im mittleren kurdischen Taurus*, Marburg: Marburger geographische Schriften, Heft 11.

JOANNÈS, F.
1995 "L'itinéraire des dix-mille en Mésopotamie et l'apport des sources cunéiformes" in *Dans les pas des Dix-Mille, Actes de la Table Ronde de Toulouse, 3–4 février 1995*, edited by P. Briant, *Pallas* 43: 173–199. Toulouse: Presses Universitaires du Mirail.
1996 "Routes et voies de communication dans les archives de Mari", in *Mari, Ebla et les Hourrites. Dix ans de travaux*, Actes du colloque international, Paris Mai 1993, ERC, edited by J.-M. Durand, pp. 323–361. Paris: Editions Recherche sur les Civilisations.

KLENGEL, H.
1979 "Handel und Kaufleute in hethitischen Reich". *Altorientalische Forschungen* 6: 69–80.

KENNEDY, H.
2002 *Atlas historique de l'Islam*. Leiden: Brill.

KESSLER, K.
1980 *Untersuchungen zur Historischen Topographie Nord Mesopotamiens nach Keilschriftlichen Quellen des 1. Jahrhtausends v. Chr.* Wiesbaden: Dr. Ludwig Reichert.

KEVORKIAN, R.
1996 "Le négoce international des Arméniens au XVIIIèmes", in *Arménie entre Orient et Occident. Trois mille ans de civilisation*, edited by Kevorkian pp. 142–151. Paris: Bibliothèque Nationale de France.

LEVINE, L. D.
1977 "East-West trade in the Late Iron Age: A view from the Zagros", in *Le plateau iranien et l'Asie Centrale des origines à la conquête islamique*, actes du colloque tenu à Paris 22–24 mars 1976, edited by J. Deshayes, pp. 171–186. Colloques Internationaux du C.N.R.S. no. 567. Paris: C.N.R.S.

1989 "K 4675, the Zamma itinerary". *State Archives of Assyria Bulletin, Padova* (3)2: 75–92.

MANANDIAN, H.
1965 *The Trade and Cities of Armenia in Relation to Ancient World Trade.* Lisbonne: Livraria Bertrand.

MARAVAL, P.
1985 *Lieux saints et pélerinages d'Orient. Histoire et géographie des origines à la conquête arabe.* Paris: Editions du Cerf.

MARRO, C.
(in press) "Itinéraires et voies de circulation du Caucase à l'Euphrate: le rôle des nomades dans le système d'échanges et l'économie protohistorique des IVème–IIIème millénaires av. n.è.", in *Actes de la 46ème Rencontre Assyriologique Internationale*, Paris 8–13 juillet 2000.

MICHEL, C.
1996 "Le commerce dans les tablettes de Mari", in *Mari, Ebla et les Hourrites. Dix ans de travaux,* Actes du colloque international, Paris Mai 1993, ERC, edited by J.-M. Durand, pp. 385–426. Paris: Editions Recherche sur les Civilisations.

MILLER, K.
1916 *Itineraria romana: Römische Reisewege an der Hand der Tabula Peutigeriana.* Stuttgart: Strecker und Schröder.

MITFORD, T. B.
1980 "The *Limes* in the Kurdish Taurus", in *Roman Frontier Studies 1979*, edited by W. S. Hanson and L. J. F. Kepie, pp. 913–926. British Archaeological Reports Inter. Series 71. Oxford: British Archaeological Reports.

NASHEF, K.
1987 *Rekonstruktion fer reiserouten zur Zeit des altassyrischen Handelsniederlassungen,* Tübinger Atlas Vorderen Orients, Reihe B, no. 83. Weisbaden: Harrassowitz.

OGUCHI, H.
1999 "Trade routes in the Old Assyrian period". *Al-Rafidan*, 20: 85-106.

OLMSTEAD, A. T.
1923 (reprint 1960) *History of Assyria.* Chicago: University of Chicago Press.

OPPENHEIM, L.
1969 "Essay on overland trade in the first millennium BC". *Journal of Cuneiform Studies* 21: 231–254.

PLANHOL, X. de
1959 "Géographie, politique et nomadisme en Anatolie". *Revue Internationale des Sciences Sociales,* 11/1: 547–553.

RAMSAY, W. M.
1890 *The Historical Geography of Asia Minor.* Royal Geographical Society, Supplementary Papers volume 4. London: John Murray.

RUSSELL, H. F.
1984 "Shalmaneser's campaign to Urartu in 856 BC and the historical geography of eastern Anatolia according to the Assyrian Sources". *Anatolian Studies* 24: 171–198.

SALWAY, B.
2001 "Travel, *Itineraria* and *Tabellaria*", in *Travel and Geography in the Roman Empire*, edited by C. Adams and R. Laurence, pp. 22–66. London and New York: Routledge.

SEVİN, V.
1988 "The oldest highway between the regions of Van and Elazığ in eastern Anatolia". *Antiquity* 62: 547–551.

1991 "The south westward expansion of Urartu: New observations", in *Anatolian Iron Ages: The Proceedings of the Second Anatolian Iron Ages Colloquium held at Izmir, 4–8 May 1987*, edited by A. Çilingiroğlu and D. H. French, pp. 97–112. Oxford: Oxbow Books.

SINCLAIR, T.

1987 *Eastern Turkey: An Architectural and Archaeological Survey*, volume 1. London: The Pindar Press.

1994–1995 "The site of Tigranocerta. I". *Revue des Etudes Arméniennes* 25: 183–254.

1996–1997 "The site of Tigranocerta. II". *Revue des Etudes Arméniennes* 26: 51–117.

TADJIRIAN, E. and KARAPETIAN, M.

1996 "Les voies de transit du commerce arménien en Moscovie aux XVIIème et XVIIIèmes", in *Arménie entre Orient et Occident. Trois mille ans de civilisation*, edited by R. Kevorkian, pp. 157–161. Paris: Bibliothèque Nationale de France.

TAESCHNER, F.

1924 *Das Anatolische Wegenetz nach Osmanischen Quellen*, vol. 1. Leipzig: Mayer und Müller.

1926 *Das Anatolische Wegenetz nach Osmanischen Quellen*, vol. 2. Leipzig: Mayer und Müller.

1959 "Die Entwicklung des Wegenetzes und des Verkehre in türkischen Anatolien". *Anadolu Araştırmaları* 1(2): 169-193.

TALBERT, R. J. A,

2001 *Barrington Atlas of the Greek and Roman World*. Princeton: Princeton University Press.

YERASIMOS, S.

1991 *Les voyageurs dans l'Empire Ottoman (XIV–XVIème s.)*. Ankara: Türk Tarih Kurumu Yayınları series VII, no. 917.

ZIMANSKY, P. E.

1985 *Ecology and Empire: The Structure of the Urartian State*. Studies in Ancient Oriental Civilization, no. 41. Chicago: The Oriental Institute.