Analogies between Xenophon's Parasang and Hamilton's Post-hour

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THE DISTANCES MARCHED in the *Anabasis* are usually reported by Xenophon in multiples of 5 parasangs.[1] It is not clear whether the parasang is an accurate measure of distance equal to 30 Greek stadia,[2] or rather indicates the time consumed in traversing a given space.[3] The application of the first definition to the route of the anabasis of Cyrus the Younger from Sardes to Cunaxa in Babylonia and to the retreat of the Ten Thousand from Cunaxa to Cotyora on the Black Sea satisfies many partial distances reported by Xenophon.[4] However, there are segments in the anabasis and the retreat where it is obvious that Xenophon employs a shorter parasang.[5]

[1] Cf. Tables 2 (anabasis) and 3 (retreat) in Iordanis K. Paradeisopoulos, "Route and Parasangs in Xenophon's Anabasis," *GRBS* 54 (2014) 220–254 (hereafter 'Paradeisopoulos 2014'), at 244–245.

[2] This view is based on one understanding of the passage in Herodotus 5.53, which is discussed below. Thus, a parasang equals 5.768 or 5.322 km, depending on the definition of the stadion (192.27 meters for the Olympic stadion and 177.40 meters for the Attic). From empirical calculations based on the *Anabasis*, Col. A. Boucher, *L'Anabase de Xénophon* (Paris 1913) xiii, reported that the parasang equals 5.0 km. For a discussion of the approaches to the parasang problem see, among others, Tricia King, "How Many Parasangs to Babylon?" *Journal of the Ancient Chronology Forum* 2 (1988) 69–78; Tim Rood, "Xenophon's Parasangs," *JHS* 130 (2010) 51–66.

[3] A. H. Layard, *Discoveries among the Ruins of Nineveh and Babylon* (London 1853) 49–50. C. Tuplin, "Achaemenid Arithmetic: Numerical Problems in Persian History," *Topoi* Suppl. 1 (1997) 365–421, at 405, objects to this view, as discussed below.

[4] Cf. Iordanis K. Paradeisopoulos, "A Chronology Model for Xenophon's Anabasis," *GRBS* 53 (2013) 645–686 (hereafter 'Paradeisopoulos 2013').

[5] For example, cf. Paradeisopoulos 2013, 664 n.73: "Xenophon reports 35 parasangs (1.5.1) from river *Khabour* (*al-Busayrah*) to Corsote (near modern *al-*

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This reinforces the point made by the second definition.[6]

It seems that in the Ottoman Empire of the nineteenth century the notion of the Persian *farsang* (the parasang of Herodotus and Xenophon) still survived. Analogies are examined here between this notion and the actual distances expressed in parasangs. The comparison is based on the figures reported by William Hamilton,[7] the nineteenth-century traveler, one of the pioneers in the identification of Greek, Roman, and Byzantine sites in Asia Minor, and a commentator of Xenophon's *Anabasis*.

Post-hour: The nineteenth-century parasang?

Before the advent of the railways and the automobile, the patterns of land transport remained unchanged for centuries. In this respect, the journeys of nineteenth-century Western travelers in the Ottoman Empire provide useful information. Most employed post-horses for their journeys. They hired horses at one post-house, in order to take them to the next post-house, on average after a day's journey. There they hired fresh horses, and so on. On receiving the horses, they paid in advance at the official rate per horse per hour, multiplied, of course, by the number of horses, and by the officially reckoned distance in hours.[8] Frequently, the travelers refer to this official distance as

Bukamal in Syria) and 90 parasangs (1.5.5) from Corsote to Pylae (22 km to the south of present-day *Hit*, in Iraq). These 125 parasangs are 95.2 + 283.8 = 379 km and imply a parasang's length of 3.03 km for this segment."

[6] Layard, *Discoveries* 49: "Travellers are well aware that the Persian farsakh varies considerably according to the nature of the country, and the usual modes of conveyance adopted by its inhabitants. In the plains of Khorassan and central Persia, where mules and horses are chiefly used by caravans, it is equal to about four miles, whilst in the mountainous regions of Western Persia, where the roads are difficult and precipitous, and in Mesopotamia and Arabia, where camels are the common beasts of burden, it scarcely amounts to three. The farsakh and the hour are almost invariably used as expressing the same distance."

[7] W. Hamilton, *Researches in Asia Minor, Pontus, and Armenia* I–II (London 1842).

[8] For example, Hamilton, *Researches* I 69–70: "We had also provided ourselves with a Menzil Bouyourdi (or post-horse order) so that we had no difficulty in procuring horses all along the road, even without a tatar [Otto-

expressed in 'Turkish hours'.[9] Porter calls it by the Turkish name *agats* (*ağaç*),[10] and explains that it means one hour's travel,[11] or the Persian *farsang*.[12] The fact that the travelers paid a sum of money for the official duration of a journey (in post-hours) did not always mean that they travelled this distance in the officially reckoned time.[13] In any case, they paid according to the official 'hours'. Hamilton makes it clear: "The distances are here given in Turkish post-hours, as stated by the Menziljis [post-masters], according to the walking pace of a horse, and for which I paid."[14] Hamilton's statement shows, first, that the post-horses were employed in walking, not galloping;[15] and second, that the post-hour equaled one hour's walking distance, i.e. it equaled the Persian *farsang*, and possibly the parasang.[16] In the same paragraph, Hamilton provides his estimate for the distance: post-hours "may on an average be considered as equal to

man official in charge of the journey], at the moderate price of one piastre, or about twopence halfpenny per hour for each of our nine horses."

[9] John Macdonald Kinneir, *Journey through Asia Minor, Armenia, and Koordistan in the Years 1813 and 1814* (London 1818) 265, 278, 280, etc.; see also the following notes on Porter and Hamilton.

[10] Robert Ker Porter, *Travels in Georgia, Persia, Armenia, Ancient Babylonia* (London 1821–1822) I 207, II 651, 673, 678, etc.

[11] Porter, *Travels* I 214, II 662.

[12] Porter, *Travels* II 646, 649.

[13] For example, among numerous instances: Hamilton, *Researches* II 211: "We started at six, our day's march being to Ismil twelve hours, which, however, we performed in eight"; Porter, *Travels* II 678: "It is called thirteen hours from Ash-kala [Aşkale]; but I should calculate the distance to be no more than eight agatches [hours]"; etc.

[14] Hamilton, *Researches* II, Appendix II, 390.

[15] The post-horses were usually proceeding at a caravan's pace. However, they were also used by the tatars, the governmental messengers. In such cases, sometimes the animals were exhausted by the speed imposed; cf. Hamilton, *Researches* I 355: "The constant communication between Constantinople and Reschid Pacha in Kurdistan had lately been one great cause of loss [to the post-master of Tocat], many horses having been killed by the rapid rate at which the tatars travel."

[16] According to the second view on the meaning of the parasang noted above.

three English miles."[17]

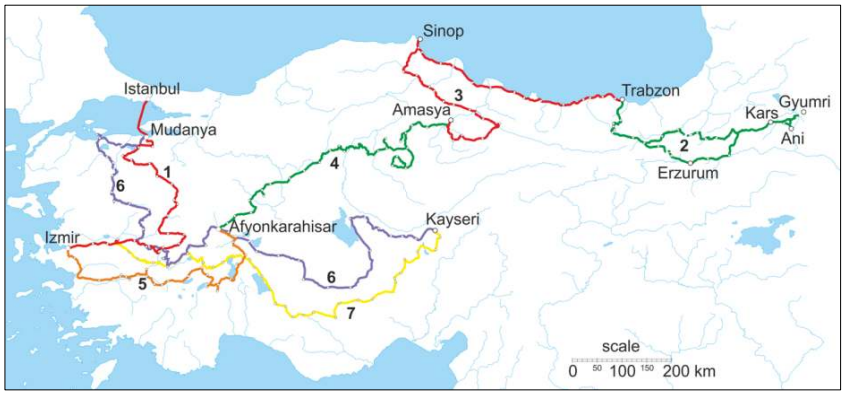
We should not take Hamilton's estimate for granted: first, because there are variations in the estimates of other travelers,[18] where, overall, it seems that up to four miles were understood as travelled in a Turkish post-hour; and, second, because the scope of this article is exactly the identification of the practical meaning of the post-hour in units of distance, as well as of any analogies it has to Xenophon's parasang.

Comparison of distances in post-hours and distances in parasangs

The narratives of the nineteenth-century travelers in the Ottoman Empire offer abundant information on official travel times in post-hours. Among these travelers, Hamilton was the most systematic and careful in writing down toponyms and distances (in hours). Usually he does not misspell the names, and he has copied down correctly the distances, but for a few errors. Hamilton summarized in his Appendix II all relevant information received by the Turkish post-masters (*menziljis*) during

[17] 3 English miles equal (3 x 1.609 m =) 4.827 kilometres.

[18] Porter, *Travels* I 255, "a farsang being an hour's travel, or four miles." His *farsang* was the 'Turkish hour' (*ağaç*), because he mentions "At the end, however, of seven agatches (farsangs)" (II 646); "At about four agatches (farsangs) to the north-east of Kars" (649); "hence we had come about ten agatches (hours), or forty miles at the utmost" (662); etc. T. B. Armstrong, *Journal of Travels in the Seat of War, during the Last Two Campaigns of Russia and Turkey* (London 1831) 237: "Here [at Khoy, in nortwestern Iran, on his way to Istanbul] we commenced the Turkish manner of travelling; they reckon the distances by time, travelling at a camel's pace, about 3½ to 3¾ English miles an hour." Eli Smith, *Missionary Researches in Armenia, Including a Journey through Asia Minor, and into Georgia and Persia* (London 1834) 24 note, explains: "The hour by which the stages of the Turkish post, and, in fact, all distances in Turkey are measured, is, an hour's march of a caravan; and though it of course varies according to the nature of the ground, may be estimated at an average of three miles, or just an English league." Edmund O'Donovan, *The Merv Oasis. Travels and Adventures East of the Caspian during the Years 1879–80–81* II (London 1882) 418–419: the Turcomans "have a measure which is called an *agatch*. This is supposed to correspond with the Persian *farsang*, which conveys the idea of an hour's swift walking—about four miles. A Turcoman *agatch* means an hour's riding, for no one walks in their country. As a rule it means about five miles, for a Turcoman horse, even when walking, will cover that distance in an hour."



Map 1: Hamilton's journeys in Asia Minor, Pontus, and Armenia

his journeys in Asia Minor, Pontus, and Armenia. Similar information is also provided by other travelers of that era, sometimes in a less systematic way.[19]

Hamilton's journeys in the years 1836 and 1837 are depicted in Map 1. They covered ca. 7800 km (Table 2), and are summarized in seven routes.

[19] Kinneir, *Journey*, provides distances in post-hours in three full parts of his journeys, namely from Izmit (Nicomedeia) to Trabzon (Trapezus), from Trabzon to Leese (Erentepe) on his way to Mosul, and from Mardin to Constantinople in his journey of the previous year. Porter, *Travels*, provides distances in post-hours for the legs of his route in Ottoman territory, i.e. from Yerevan to Istanbul and from Istanbul to Bucharest. Smith, *Missionary Researches*, provides all distances in post-hours in the Istanbul to Erzurum leg of his outward journey, and partially for the Erzurum to Trabzon leg of his return trip. W. M. Leake, *Journal of a Tour in Asia Minor* (London 1824), provides all distances in post-hours for his journey from Constantinople to Antalya (Attaleia). He also incorporates in his book General Koehler's overland return trip to Constantinople (with distances in post-hours) via a different route. Armstrong, *Journal*, provides all distances in post-hours for his journey from Van to Erzurum and Constantinople. E. D. Clarke, *Travels in Various Countries of Europe, Asia, and Africa* (London 1818), provides routes in the European part of the Ottoman Empire with distances expressed in post-hours. James Brant, "A Journey through a Part of Armenia and Asia Minor in the Year 1835," *Journal of the Geographical Society of London* 6 (1836) 187–223, reports in post-hours his journey from Trabzon through Armenia and Anatolia.

Were Hamilton's post-hours official?

Before starting to compare Hamilton's post-hours with the actual distances, we need to know if these 'hours' were official, i.e. whether different travelers at different times were charged in the same way by the post-masters along the same route. Table 1 contains information from Hamilton as well as from Kinneir, Smith, Armstrong, and Porter on journeys from Istanbul (Üsküdar) to Erzurum via Amasya and Tokat. It was the most extended common route that we managed to trace.

Table 1: Distances in post-hours between Istanbul and Erzurum

km	Para-sangs[1]	Town	Distance in post-hours according to				
			Hamilton[2] 1842	Kinneir[3] 1818	Smith[4] 1834	Armstrong[5] 1831	Porter[6] 1821
		Üsküdar[7]					
44	7.6	Gebze[8]			9	9	9
48	8.3	Izmit[9]			9	9	9
31	5.4	Sapanca[10]		8	6	6	6
45	7.8	Hendek[11]		12	10	11	11
37	6.4	Düzce[12]		12	10	11	11
47	8.1	Bolu[13]		11	10	12	12
53	9.2	Gerede[14]		13	12	12	12
41	7.1	Hamamlı[15]		10	7	7	7
44	7.6	Atkaracalar[16]		¦	8	12	10
18	3.1	Kurşunlu[17]		13	3	4	4
35	6.1	Ilgaz[18]		8	8	7	7
44	7.6	Tosya		8	10	6.5	10
53	9.2	Hacihamza[19]		9	8	9	9
36	6.2	Osmancik[20]		9	8	8	8
63	10.9	Merzifon[21]		14	12	9	9
48	8.3	Amasya		9	8	9	9
69	12.0	Turhal[22]	12[23]	10	12	12	12
49	8.5	Tokat	8	8	8	9	9
56	9.7	Niksar	9		9	9	9
53	9.2	Reşadiye[24]			8[25]	8	8
48	8.3	Koyulhisar[26]			12	14	14
70	12.1	Şebinkarahisar[27]			12	11	11
85	14.7	Şiran[28]			16	16	16
29	5.0	Aksöğüt[29]			6	¦	4
3	0.5	Kelkit[30]			¦	3.5	¦
33	5.7	Bizgili[31]			¦	¦	5
32	5.5	Yazıbaşı[32]			¦	¦	2
41	7.1	Otlukbeli[33]			12	9.5	4
88	15.3	Aşkale[34]			16	13	13
54	9.4	Erzurum[35]			9	9	9
1397	242.2	Üsküdar-Erzurum			258	255.5	259

The following notes apply to Table 1:

The symbol ¦ means that the traveler does not report distance to and from the place in the respective line of the table. Thus, the post-hours reported in each next line refer to those charged at the post in the line above this symbol.

[1] The kilometric distances are presented in this column converted to 'standard' parasangs, each of 30 Olympic stadia (5.768 km), in order to allow for comparisons with the post-hours. As shown below, big differences between post-hours and parasangs indicate difficult roads.

[2] Hamilton, *Researches* II 390 (in the opposite direction).

[3] Kinneir, *Journey*. (a) Izmit-Sapanca: 257; (b) Sapanca-Tokat: 356–357 (in the opposite direction).

[4] Smith, *Missionary Researches*. Constantinople-Tokat: 21–41; Tokat-Erzurum: 41–61.

[5] Armstrong, *Journal* 237–238 (in the opposite direction).

[6] Porter, *Travels* II 672–737 (in the opposite direction). His table (II 817) summarizes this journey, but there are errors in comparison with his text.

[7] Scutari (Porter, Armstrong).

[8] Gebizeh (Smith); Gaybaissa (Porter); Herika Gaybaissa (Armstrong).

[9] Nicomedia (Smith); Is Nikmid (Porter); Is-Nikmid (Armstrong).

[10] Sabanje (Kinneir); Sabanjah (Smith); Sabanja (Porter, Armstrong).

[11] Hendik (Kinneir); Khandek (Smith); Kandag (Porter); Khaun-Dag (Armstrong).

[12] Dustche (Kinneir); Dootjeh (Smith); Doozchee (Porter); Dooz-chi (Armstrong).

[13] Boli (Kinneir, Porter, Armstrong); Boly (Smith).

[14] Geredeh (Kinneir); Gerideh (Smith); Garidi (Porter, Armstrong).

[15] Humamli (Kinneir); Hamamly (Smith); Hummumloo (Porter, Armstrong).

[16] Karajalar (Smith); Cara Jalar (Porter); Kara-Jular (Armstrong).

[17] Karacaviran (Kinneir's Karjouran, Armstrong's Kara-Jorem; Porter's Cara Joram) was renamed Kurşunlu after 1946. Cf. *Index Anatolicus*, Kurşunlu-Çankırı, at www.nisanyanmap.com (hereafter *Ind. Anat.*).

[18] Koçhisar (Kinneir's Coj Hissar, Armstrong's Kajar-Sir, Smith's Kojhisar, Porter's Cojasir) was renamed Ilgaz (*Ind. Anat.*, Ilgaz-Çankırı).

[19] Hajee Hamga (Kinneir); Haji Hamzeh (Smith); Hadji Humza (Porter); Hadji-Humza (Armstrong).

[20] Osmancik (Kinneir); Osmanjuk (Smith); Osmanjek (Porter); Hadji Osmanjook (Armstrong).

[21] Marsawan (Kinneir); Marsovan (Smith); Massiwan (Porter); Massivan (Armstrong).

[22] Tourkhal (Hamilton); Turcal (Kinneir); Toorkhal (Smith); Turkul (Porter); Turkal (Armstrong).

[23] In Hamilton: Amasya-Zile 4 hours and Zile-Turhal 8 hours.

[24] İskefsir (Armstrong's Iss-Cassar; Porter's Is Kossar) was renamed Reşadiye after 1928 (*Ind. Anat.*, Reşadiye-Tokat).

[25] Smith refers to an unidentified Kiotali. Judging from the distances, it

was located at or near Reşadiye.

[26] Köylisár (Smith); Koyla Hissar (Porter); Koyla-Hissar (Armstrong).

[27] Karahisár (Smith); Kara Hissar (Porter); Kara-Hissar (Armstrong).

[28] Shayran (Porter, Armstrong).

[29] Germürü (Porter's Germelli, Smith's Gérmery) was renamed Aksöğüt after 1946 (*Ind. Anat.*, Aksöğüt-Kelkit-Gümüşhane).

[30] Kalket in Armstrong.

[31] Bizgili is probably Porter's Bagdali in this area.

[32] Porter's Lori was renamed Yazıbaşı after 1928 (*Ind. Anat.*, Yazıbaşı-Demirözü-Bayburt).

[33] Karakulak (Karakoolák in Smith, Kara Koulak in Porter, Kara-Koulak in Armstrong) was renamed Otlukbeli after 1968 (*Ind. Anat.*, Otlukbeli-Erzincan). From Şiran to Karakulak (Otlukbeli), Smith, Armstrong, and Porter followed slightly different routes, as shown in the table.

[34] Ashkulaah (Smith); Ash Kala (Porter); Ashkala (Armstrong).

[35] Erzroom (Smith); Arzeroom (Porter, Armstrong).

Over a distance of ca. 1400 km on today's roads, the three travelers of the complete distance were charged 258, 255.5, and 259 post-hours respectively, that is, they were charged in almost the same way. Also, the partial prices charged at each post in the towns mentioned in the table were in most cases the same. Variations may relate to cheating by a post-master here and there, or to an error on the part of the traveler-writer. We will see below examples of such cases. Overall, Table 1 shows that indeed there existed an official 'tariff', a finding which is interesting for the extended Ottoman Empire. As indicated in the notes to the table, its construction necessitated the 'decoding' of toponyms reported by each traveler-writer.

Methodology

In his Appendix II, Hamilton (II 389–392) provides travel times (in post-hours) for 192 segments of journeys along his seven routes depicted in Map 1. The first task was to identify the toponyms he reports. This was in itself ambitious, because it seems that approximately one third of the names of villages in modern Turkey were changed[20] after the establishment of the Turkish Republic less than a century ago. The completion of this task was a prerequisite for the comparison to be undertaken

[20] Cf. Ugur Ümit Üngör, *The Making of Modern Turkey: Nation and State in Eastern Anatolia, 1913-1950* (Oxford 2012) 240–250.

between the post-hours and the actual distances converted to parasangs. But it may also assist the modern reader in understanding the geographical details of Hamilton's book.

After the identification of Hamilton's toponyms, the second task was to calculate the distance (in kilometers) between each pair of places reported in his Appendix II. In order to avoid subjectivity, the calculations on the map were cross-checked with the data of on-line software.[21] The rationale was that the patterns of travel are dictated by the physical characteristics of the land (valleys, mountains, rivers, etc.). A new land route involves, in general, the construction of a tunnel, a viaduct, or a new bridge over a major river. By excluding journeys along modern motorways, and other roads which apparently did not exist in Hamilton's time, we are not far from the truth if we accept that the routes followed by Hamilton in his journeys coincide, more or less, with the existing road network. Also, in the few cases where Hamilton's narrative implies routes, mainly mountain crossings, that do not correspond to roads on maps, certain assumptions were made and are reported explicitly.

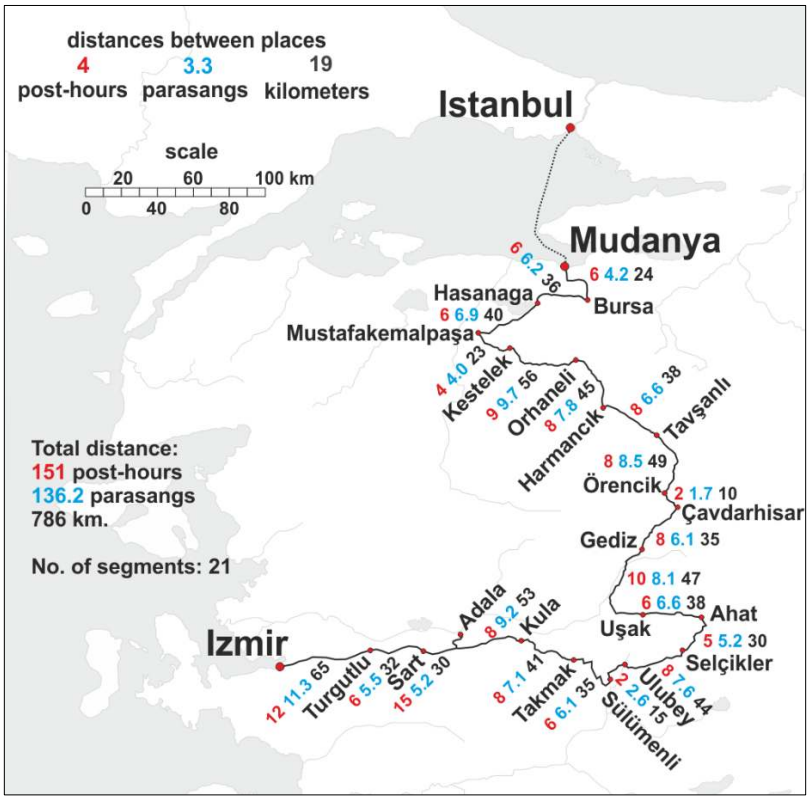
With the distances (in kilometers) for all the 192 segments of Hamilton's Appendix II, the next task was to convert them into parasangs, and to compare them with his respective post-hours. The main points of this comparison are provided below for each of the seven routes. Route 2 (from Trapezus to Gyumri and back) is presented and discussed in more detail because it incorporates alternative proposals for the route of the retreat of Xenophon's Ten Thousand. Finally, an overall comparison is provided and discussed.

Route 1: From Istanbul (Mudanya) to Izmir

Map 2 depicts this journey with the modern names of the places mentioned by Hamilton.[22] His post-hours in this route

[21] www.google.com/maps.

[22] The former name of Mustafakemalpaşa was Kirmasti, Hamilton's (I 80) Kirmansli (*Ind. Anat.*, Mustafakemalpaşa). Ancient Hadrianoi (Ἀδριανοί) in Hamilton I 827 is located at Orhaneli, formerly Adranos (*Barrington Atlas*, Map 62 Phrygia, A2); cf. *Ind. Anat.*, Orhaneli-Bursa. Ancient Aizanoi (Αἰζανοί), Hamilton's Azani (I 102), is located at Çavdarhisar (*Barrington* C3); cf. *Ind. Anat.*,

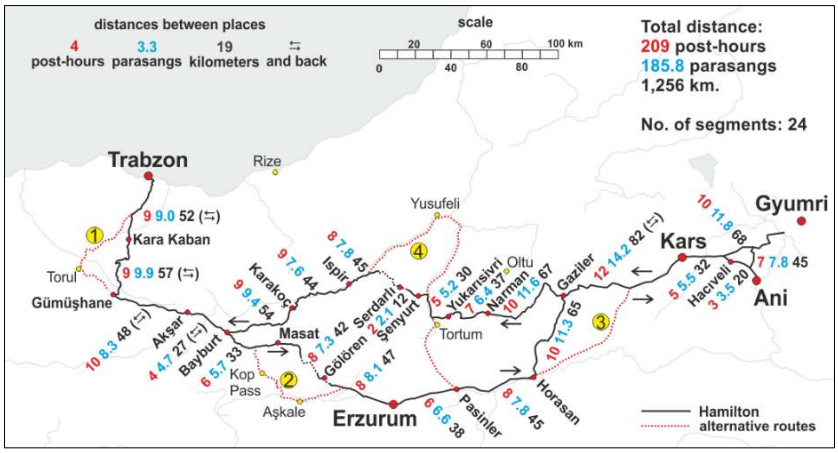


Map 2: Hamilton, from Mudanya to Izmir

correspond to distances in parasangs. Hamilton travelled the equivalent of 786 km (136.2 parasangs) on today's roads. The biggest part of the difference between this aggregate and the 151 post-hours in his Appendix II has to do with an erroneous transcription (10 more hours) of a correct number in the body of his text for the route between Adala and Sardes (Sart).[23]

Çavdarhisar-Kütahya. Ulubey, the territory of ancient Blaundos, was formerly named Göbek (I 121); cf. the Epigraphic Database for Ancient Asia Minor (epigraphik.uni-hamburg.de). Kasaba (I 149) was renamed Turgutlu after 1928 (*Ind. Anat.*, Turgutlu-Manisa). Hamilton travelled from Kasaba to Izmir via Kemalpaşa (Nif/Nymphaion, Hamilton's Ninfi (I 152), cf. *Ind. Anat.*, Kemalpaşa-İzmir) and Kavaklıdere.

[23] According to Hamilton's note (II 389), "the direct road [Adala-Sardis] is only 12 [hours], but we went round by the tomb of Halyattes." However, in



Map 3: Hamilton, from Trabzon to Gyumri and back

Route 2: From Trabzon to Kars, Ani, Gyumri, and back

The identification of this route is important. First, it shows that the traditional caravan route from Trabzon did not necessarily follow the layout of the modern road (red dotted line 1, Map 3); it was shorter. Second, Hamilton went from Bayburt to Erzurum without passing through the Kop Pass (dotted line 2). Third, from Horasan towards Kars he followed not the main road (dotted line 3) but a northern variant. And fourth, from Kars to Bayburt, his alternative to the traditional route via Erzurum and the Kop Pass was not the hypothetical one (dotted line 4) via Yusufeli to the northeast of Ispir, proposed as the route of the retreat of Xenophon's Ten Thousand.[24] These four sub-routes are presented here and discussed with the help of more detailed maps.

his text (I 144), "the direct road [from Adala] to Cassabáh [Turgutlu] by Sardis is only twelve hours. But the Menzilji insisted that we made it fifteen by going round by the tomb of Halyattes." Thus the 15 hours do not refer to the route from Adala to Sardis but to the route from Adala to Cassaba via the tomb of Alyattes, and the distance from Adala to Cassaba according to Hamilton's text (12 hours) matches the real distance in parasangs (10.7).

[24] See, for example, the map of Lehmann-Haupt's proposal as reproduced in R. Talbert (ed.), *Atlas of Classical History* (London 1985) 58; also the map of

The route from Trapezus to Bayburt

Map 4 depicts Hamilton's route, along with the routes of other nineteenth-century travelers. Gassner and Briot[25] provide similar drawings. From Djevizlik,[26] Hamilton went south. He ascended to the Karakaban Khan[27] and crossed the mountains at an altitude of ca. 2500 m. He turned westwards and arrived at Stavros;[28] thence he went on southwards to Gümüşhane.[29] Apart from Hamilton, journeys along this 'summer' caravan route have been reported by Kinneir, Southgate, Tozer, and Lynch.[30] On the other hand, journeys along the 'winter' cara-

Lendle's proposal reproduced in J. W. I. Lee, *A Greek Army on the March: Soldiers and Survival in Xenophon's Anabasis* (Cambridge 2007) 21; etc.

[25] G. Gassner, "Der Zug der Zehntausend nach Trapezunt," *Abh.Braunschw. Wiss.Ges.* 5 (1953) 1–35, at 25. N. P. Rorit, "Identification of Mt. Theches of Xenophon," *JRGS* 40 (1870) 463–473 (hereafter 'Briot', as the name was erroneously printed as Rorit in the *JRGS*; cf. Gassner 3).

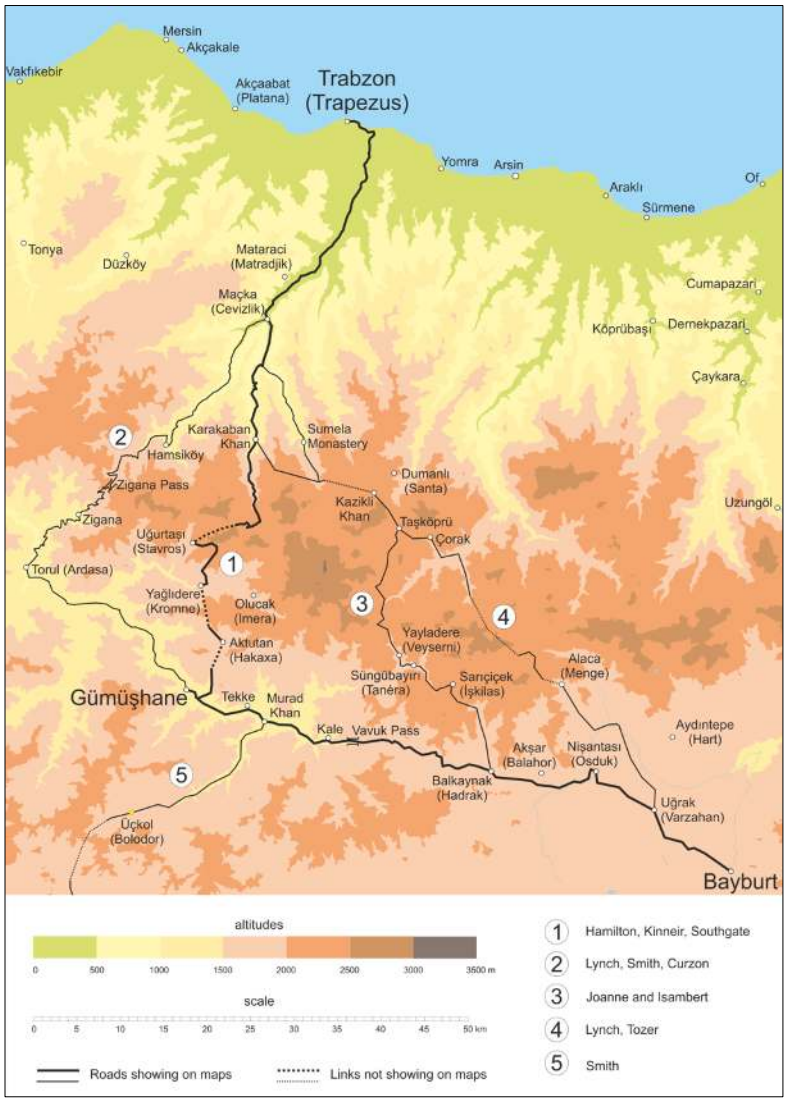
[26] Cevizlik was renamed Maçka after 1928 (*Ind. Anat.,* Maçka-Trabzon).

[27] The Karakaban (or Karakapan) Khan (inn, rest house) was to the west of Sumela Monastery. See Map 4 and map in Briot.

[28] Stavros (Stavrin) was renamed Uğurtaşı after 1928 (*Ind. Anat.,* Uğurtaş-Torul-Gümüşhane).

[29] The distance from Kara Kaban to Gümüşhane via Uğurtaşı (Stavrin), Kromne (renamed Yağlıdere after 1928: *Ind. Anat.*, Yağlıdere-Gümüşhane), and Hakaxa (renamed Aktutan after 1928: *Ind. Anat.*, Aktutan-Gümüşhane) is calculated to 57 km (9.9 parasangs) as follows: Kara Kaban [25] Uğurtaşı [12] Yağlıdere [3] Aktutan [17] Gümüşhane.

[30] Kinneir, *Journey* 343–348, went from Trapezus to Matradjik (Mataraci, to the NE of Maçka, see Map 4), to Jivislik (Maçka, which he calls Jemishee), to Matior (there is a Kodja Mezari hamlet in Briot's map to the south of the Karakaban Khan), up the Kolat Dağ (which he calls Koat Dag), to Stavros/Stavrin (Uğurtaşı; he calls it Estoury), to Korasch Dağ (there is a place called Korasch in Briot's map to the SW of Stavros), and to Gümüşhane. Horatio Southgate, *Narrative of a Tour through Armenia, Kurdistan, Persia, and Mesopotamia* I (London 1840) 150–158, went via Jivislik (Maçka), Karakaban, Stavros, and Gümüşhane. Henry Tozer, *Turkish Armenia and Eastern Asia Minor* (London 1881) 426–450, travelling from Bayburt to Trabzon, left the Gümüşhane road at Varzahan (Uğrak, see Map 4), and passed Hadji Vali Mezari, Taşköprü, Sumela Monastery, and Jivislik (Maçka); that is, he too used the 'summer route'. H. F. B. Lynch, *Armenia, Travels and Studies* II (London 1901) 240 n.1, describes the 'summer route' from Trapezus to Bayburt via Jivislik; the Sumela Monastery, across the Kazikli Dağ to Taşköprü, via Çorak Khan and across the



Map 4: Nineteenth-century routes between Trabzon and Bayburt

van route via Torul (Ardasa) and the Zigana Pass have been reported by Lynch, Curzon, and Smith.[31] All these routes testify

Kitova Dağ to Mezere Khan (see details in n.43 below).

[31] Lynch, *Armenia* II 225–236, describes a 'winter route' journey in February

to the fact that before the construction in the 1870s of the modern road from Trapezus to Bayburt (and Erzurum) via the Zigana Pass and Gümüşhane, there used to be two sets of routes from this seaport towards the mainland to its south. The 'winter route' coincided more or less with today's road. It derived its name from the fact that it crossed the mountain barriers to the south of Trapezus at lower altitudes: first the Zigana Pass towards Gümüşhane at 6640 ft. (2024 m), then the Vavuk Pass towards Bayburt at 6468 ft. (1961 m). The 'summer route' crossed the barrier at higher altitudes: first the Kazikli Dağ to the south of the Sumela Monastery at 8290 ft. (2527 m), then the Kitova Dağ to the south of Taşköprü at 8040 ft. (2450 m). In practice, this 'summer route' was the caravan route, the 'silk road', because normally there were no caravans in the winter to and from Trapezus, not only because of the difficulties in the above-mentioned passes of the Pontic range, but also because of those of the subsequent mountains (Kop Dağ etc.).

In his 'summer route' crossing, Hamilton preferred a passage from (and a stay at) Gümüşhane. This variation of the route was not obligatory. Travelers report journeys straight towards Bayburt, meeting the Gümüşhane-Bayburt road at Hadrak[32] or at

1893 from Erzurum to Trapezus, via Bayburt, Varsahan, Balahor, Hadrak, Vavuk Pass, and Zigana Pass (details in n.40 below). Robert Curzon, *Armenia: A Year at Erzeroom, and on the Frontiers of Russia, Turkey, and Persia* (London 1854), travelled via the Zigana Pass and Gümüşhane both on his way from (35–40) and to (155–165) Trapezus. Smith, *Missionary Researches* 443–454, moved from Erzurum westwards to Aşkale, Otlukbeli (Karakoolák, see n.33 in Table 1 above), and Aksöğüt (Gérmery, n.39 in Table 1); thence to Üçkol (see Map 4; formerly Bolodor, *Ind. Anat.*, Üçkol-Gümüşhane, which he calls Porodór), Gümüşhane; and from the 'winter route' to Jevizlik (Maçka) and Trapezus.

[32] A. Joanne and E. Isambert, *Itinéraire descriptif, historique et archéologique de l'Orient* (Paris 1861) 522: "Leaving the city [Trapezus] … one descends into the valley of Djevislik-su, which takes its name from a village where one arrives after 8 hours. From this place … 4 hours of climbing leads to Karakapan Khan … Then the road turns southeast … to the gorges of the Koulabad-Boghazi, from which one descends to the valley of the Balakhor-su. Passing this river at Tash Kopru (stone bridge), the first village one meets is Vésernik (7 hours from Karakapan), after which come Djennaza, Kaderna, Iskila; these four villages are at a distance of a full hour from each other. Two more stages of 2 hours each lead to Chadrak and Balakhor. Between this point and

Varzahan[33] (Map 4). Such a route from Trabzon to Erzurum was 55 miles (88 km) shorter, compared with the one via Gümüşhane, Torul, and the Zigana Pass.[34] As for the distance between Trabzon and Bayburt, the easternmost of these 'summer routes' (no. 4 in Map 4) was estimated at almost half the length of the 'winter' one.[35] If the Ten Thousand had used any of these shorter 'summer routes' on their way from Mt. Theches ("*Thalatta, thalatta!*") to Trapezus,[36] then Mt. Theches could not possibly be in the area where it is usually located.[37] Con-

Bayburt, one crosses the mountains where a population of cave-dwelling Laz lives, as wild as in Xenophon's time." In this description, Djevislik is Maçka, see n.26 above; for Karakapan Khan see n.27. Taşköprü is to the west of Çorak; see Map 4. Veyserni/Viserni (Vésernik above) was renamed Yayladere after 1928 (*Ind. Anat.*, Yayladere-Gümüşhane). Djennaza was not identified. Kaderna was probably Tanéra, renamed Süngübayırı after 1928 (*Ind. Anat.*, Süngübayırı-Gümüşhane). Iskila is İşkilas, renamed Sarıçiçek after 1928 (*Ind. Anat.*, Sarıçiçek-Gümüşhane). Hadrak (Chadrak above) was renamed Balkaynak after 1928 (*Ind. Anat.*, Balkaynak-Bayburt). Balahor (Balakhor above; Hamilton's Balahore) was renamed Akşar after 1960 (*Ind. Anat.*, Akşar-Bayburt). This route is depicted as Route 3 in Map 4.

[33] Tozer, *Turkish Armenia* 427: "The two roads [the 'summer' and the 'winter' road] diverge at the village of Varzahan, about two hours distant from Bayburt." See also Lynch, *Armenia* II 240 n.1, cited n.43 below. This route is depicted as Route 4 in Map 4.

[34] Compare Lynch's data in n.40 and 43 below.

[35] Comparing Lynch's data (n.40 and 43), it had a length of 66¾ miles (107.4 km) against the 127 miles (204.6 km) of the 'winter' road.

[36] We have proposed (Paradeisopoulos 2013) that the Ten Thousand ascended Mt. Theches in mid-May; thus the 'summer routes' towards Trapezus were free from snow and the Greeks could use any of them.

[37] Most commentators locate Xenophon's Mt. Theches at various peaks of the Zigana Dağları or the neighboring Kolat Dağ, i.e. to the left and right of Hamilton's crossing (Route 1 in Map 4). Gassner, *Abh.Braunschw.Wiss.Ges.* 5 (1953) 13, depicts on a map the various proposals up to his time. Lendle, *Kommentar* 276, places Mt. Theches near the Zigana Pass. According to Tim Mitford, "Thalatta, Thalatta: Xenophon's View of the Black Sea," *AnatSt* 50 (2000) 127–131, Mt. Theches was to the east of the Zigana Pass. However, if the Ten Thousand had followed towards Trapezus any of the shorter 'summer' caravan routes depicted in Map 4, then there was no reason to be taken by the guide to a certain peak in this area because according to Hamilton (I 166), the sea was visible from the road towards it, exactly at the point where

sequently, neither could Xenophon's Gymnias be at Bayburt.[38]

The route from Bayburt to Erzurum

There were two caravan roads from Bayburt to Erzurum, crossing the mountain barrier of the Kop Dağ (see Map 5).[39] Most travelers have followed and described the route via the Kop Pass and Aşkale.[40] Hamilton travelled from Bayburt along the Masat valley and arrived at the town of the same name.[41] He proceeded to a place he calls Gurula, and arrived at Erzurum.

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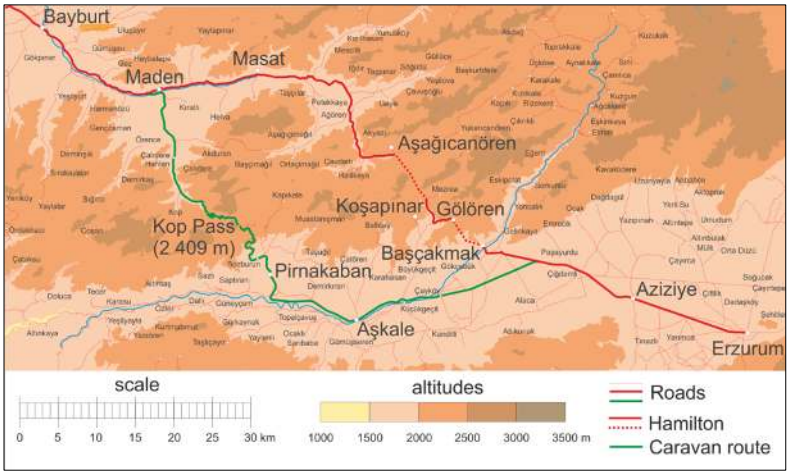
the 'summer' caravan road crossed between the Zigana Dağları and the Kolat Dağ: "At a quarter after nine, six miles from Karakaban [travelling to the south], we reached the spot from whence we saw the sea for the last time."

[38] The identification of Bayburt with Gymnias (*Anab.* 4.7.19) is based on Xenophon's (4.7.20–21) five days' march from Gymnias to Mt. Theches, when this mountain is taken to be at the Zigana Dağları or at the neighboring Kolat Dağ. However, this five days' march does not provide closure to the chronology and to the parasangs of the *Anabasis*. We have proposed (Paradeisopoulos 2013; 2014) that Gymnias was at Gyumri, Armenia, and that the Ten Thousand marched from there to Mt. Theches not in Xenophon's five days, but in Diodorus' fifteen (14.29.3).

[39] Cf. Lendle, *Kommentar* 259–260, cited in Paradeisopoulos 2014, 232–233 n.47 and 233 Map 5.

[40] Kinneir, *Journey* 355–364; Southgate, *Narrative* I 166–170. According to Lynch, *Armenia* II 225 n.1, the distance from Erzurum to Trabzon via the Kop Pass and the Zigana Pass was 199¾ miles, as follows: Erzurum [33 miles] Aşkale [10] Pirnakaban [2] Southern Kop Khan [5½] Kop Pass [5⅓] Northern Kop Khan [6½] Maden Khan [10¾] Bayburt (bridge) [6] Varzahan [6] Osluk Khan [8] Khadrak [4½] Vavuk Pass [10⅓] Murad Khan [16¼] Lower Gümüşhane [16½] Ardasa [9½] Southern Zigana village [4½] Zigana Pass [10⅓] Upper Hamsiköy [15¼] Jevizlik [20] Trabzon. In this 'winter route', Maden Khan was to the SE of Bayburt (see above). Varzahan has been renamed Uğrak (see Map 4; cf. *Ind. Anat.*, Uğrak-Bayburt). Osluk Khan is an error for Osduk (renamed Nişantaşı; cf. *Ind. Anat.*, Nişantaşı-Bayburt; see Map 4). Khadrak has been renamed Balkaynak (see n.32 and Map 4). Vavuk Pass is the crossing (altitude 1961 m) of the Vavuk Dağ to the east of Kale, on the Bayburt-Gümüşhane road (see Map 4). Murad Khan was to the east of Tekke, on the Bayburt-Gümüşhane road (see Map 4 and Briot's map). Ardasa has been renamed Torul (see Map 4; cf. *Ind. Anat.*, Torul-Gümüşhane). Jevizlik (Cevizlik) is Maçka.

[41] Hamilton's Massat (I 174) is the village Masat, 37 km east of Bayburt.



Map 5: The two routes between Bayburt and Erzurum

He does not mention Aşkale. From Masat he travelled southeast towards Aşağıcanören. According to his distances in post-hours, his Gurula was identified with Gölören, even though (see Map 5) on the map there is no direct link. From Gölören he descended to Başçakmak (again a direct link is missing), whence he joined the Kop route and arrived at Erzurum via Aziziye.[42] Lynch testifies to the layout of Hamilton's route via Koşapınar and Başçakmak (see Map 5).[43]

[42] Hamilton's 16 hours from Masat to Erzurum means that he followed a diagonal route to the southeast. The distance from Masat to Gurula (Gölören) is estimated at 42 km, turning southeast at approximately the 27th km of the road to Aşağıcanören. The route from Gölören to Erzurum in 8 hours involves first a descent to Başçakmak (ca. 10 km), and from there a distance of 37 km, thus ca. 47 km in total.

[43] According to Lynch, *Armenia* II 240 n.1, the 'summer' route from Bayburt to Erzurum passed from Koşapınar and Başçakmak. He calculates the distance from Trabzon to Erzurum along the 'summer' route at 145 miles, as follows: Trabzon [20 miles] Jevizlik [10½] Sumela (monastery) [11] across the Kazikli Dağ to Taşköprü [18¼] via Çorak Khan and across the Kitova Dağ to Mezere Khan [17½] Bayburt [10¾] Maden Khan [28] Khosabpunar village on the south side of the pass (5600 feet) [29] via Maimansur to Erzurum. In this route, Jevizlik is Maçka (see above). Kazikli Dağ is the

The route to Kars

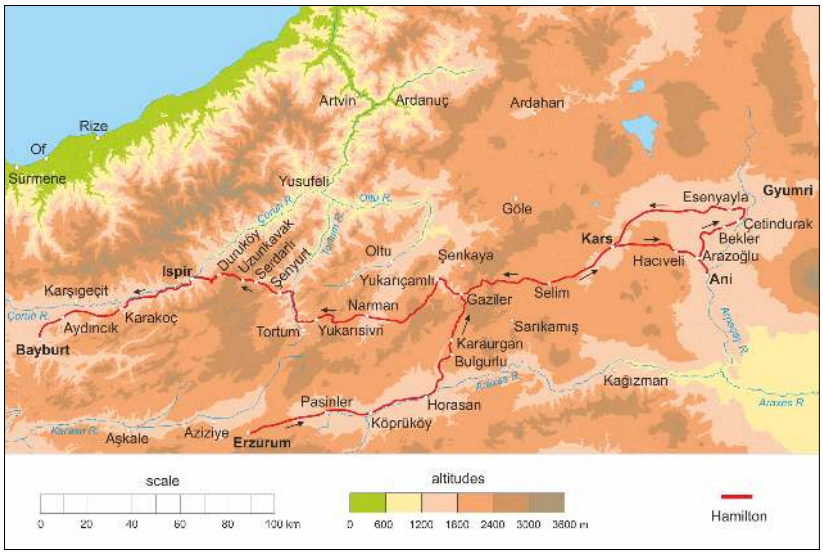
In his journey from Erzurum, Pasinler,[44] and Horasan towards Kars (I 186–194), Ani, and Gyumri via Bulgurlu and Karaurgan (Kara Oran), as well as on his return trip from Kars to Ispir (I 206–208), Hamilton passed through a place he calls Bardes.[45] Along with many on-line references to Şenkaya (see Map 6) as Bardez, Hamilton's Bardes has been identified with Gaziler[46] to the south of Şenkaya. Its distance from Horasan (65 km, 11.3 parasangs) is close to Hamilton's (10 post-hours), as well as its distance from Narman (Id) in the return trip (67 km, 11.6 parasangs; 10 post-hours). Along modern roads, the distance of

mountain to the SE of Sumela Monastery (see Map 4; Kazikli Khan in Briot's map). Taşköprü is to the south of Dumanli (Santa; see Map 4 and Briot's map). Çorak Khan was next to Taşköprü (Map 4). Kitova Dağ is the part of the Pontic range between Çorak to the north and Alaca to the south. Mezere Khan was probably at Menge (renamed Alaca; *Ind. Anat.*, Alaca-Aydıntepe-Bayburt; Map 4); Briot calls it Mezure and puts it to the NW of Armutlu (renamed Başpınar; *Ind. Anat.*, Başpınar-Aydıntepe-Bayburt), i.e. at Alaca (Menge). Maden Khan was at Maden to the SE of Bayburt (Map 5). Khosabpunar is Koşapınar (next to Hamilton's Gurula/Gölören, Map 5). Meymansır (Lynch's Maimansur) is Başçakmak (*Ind. Anat.*, Başçakmak-Aziziye-Erzurum) on Hamilton's route above.

[44] Hamilton's Hasankale was renamed Pasinler after 1928 (*Ind. Anat.*, Pasinler).

[45] Xadik (Hadeh in Hamilton I 187) was renamed Bulgurlu after 1928 (*Ind. Anat.*, Bulgurlu-Horasan-Erzurum). Hamilton's (I 187) Kara Oran or Kara Osman is Karaurgan. Hamilton's (I 190) Güshler is Güreşken (Göreşken before 1928; cf. *Ind. Anat.*, Göreşken-Şenkaya-Erzurum). From Ani Hamilton went towards Gyumri (I 203–204) via Arazoglu, Maurek (now Bekler, formerly Mevrek and Mavriciopolis, cf. *Ind. Anat.*, Bekler-Kars), and Ghurailgel (now Çetindurak, formerly Şüregel, cf. *Ind. Anat.*, Çetindurak-Akyaka-Kars). Hamilton did not visit Gyumri, but arrived at a point to the west of the river-boundary Arpa Çay, from where he could see with the help of binoculars the fortification works of the Russians (I 204–205). From this point Hamilton returned to Kars via Uzunkilise (I 205), renamed Esenyayla after 1928 (*Ind. Anat.*, Esenyayla-Akyaka-Kars).

[46] Bardız (Bardes in Hamilton I 188) was renamed Gaziler after 1928 (*Ind. Anat.*, Gazilerköy-Şenkaya-Erzurum). According to T. A. Sinclair, *Eastern Turkey: An Architectural and Archaeological Survey* (Irthlingborough 1989) II 27, a rather difficult route, constituting a northern variant of the main route between Erzurum and Kars, passed through Bardız.



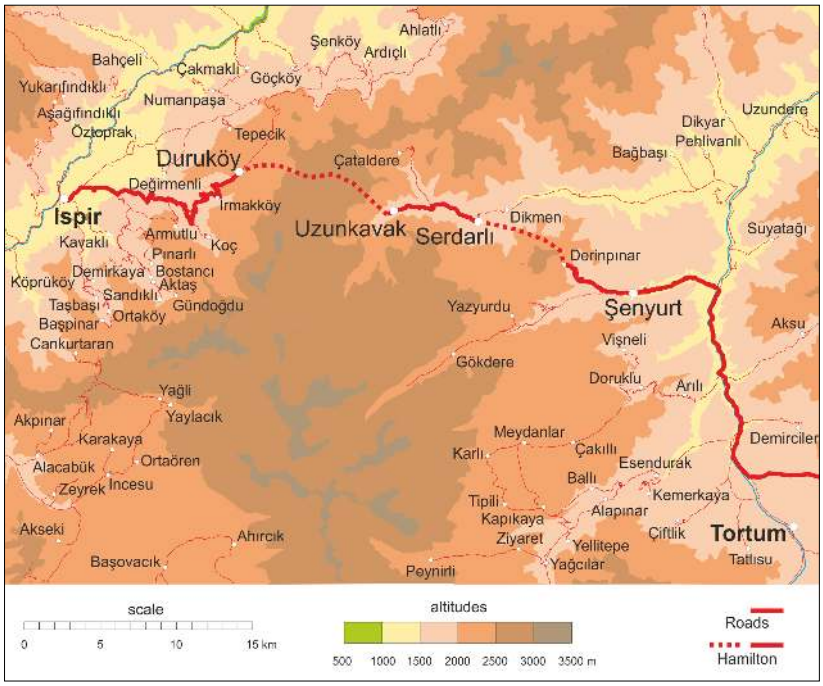
Map 6: Hamilton's journey to and from Kars, Ani, and Gyumri

Hamilton's Bardes (Gaziler) from Kars (82 km, 14.2 parasangs) exceeds his duration of the journey (12 post-hours). This implies shortcuts along the route, not showing on modern maps.

The route from Kars (and Tortum) to Ispir

On his way back to Trabzon, Hamilton's original destination when departing from Kars was Ispir (I 207), and thence a northerly march to the coast at Rize (see Map 6). Thus, the route introduced to him by the post-master at Kars was the standard route at that time between Kars and Ispir, i.e. also between Tortum and Ispir (Map 6). If this journey was feasible in antiquity, there are added grounds to question the 'mainline' view that the Ten Thousand used a route triple in length, that they went from Tortum to Ispir via Yusufeli (Maps 3 and 6).[47]

[47] Cf. n.24 above. That is based on the assumption that the river Çoruh was Xenophon's Harpasos (*Anab.* 4.7.18) and that the Ten Thousand marched towards this river from the area of Pasinler, *after* the escape of their guide (4.6.3), following in a *northern* direction the flow of the Tortum and the Oltu rivers into the lands of the Taochians (4.7.1–14) and the Chalybes



Map 7: Hamilton's route from the area of Tortum to Ispir

All the way from Kars to Ispir Hamilton mentions toponyms nowadays changed. They were identified and depicted on Map 3.[48] Map 7 illustrates the most obscure part of this leg, his route

(4.7.15–17). But this view implies that after reaching the Çoruh at present-day Yusufeli, notwithstanding that their purpose was to arrive at the sea to the *north*, strangely (and without guides) they decided to march *up* the river, southwest towards Ispir, where they found Xenophon's villages of refreshment (4.7.18).

[48] Terpenk (Tebrenek in Hamilton I 209) was renamed Yukarıçamlı after 1928 (*Ind. Anat.*, Yukarıçamlı-Oltu-Erzurum). Id (Hamilton I 212) was renamed Narman after 1928 (*Ind. Anat.*, Narman-Erzurum). Yukarı Lısgav (Yokhara Liesgaff in Hamilton I 213) was renamed Yukarısivri after 1928 (*Ind. Anat.*, Yukarısivri-Tortum-Erzurum). Aşağı Lısgav (Aschaha Liesgaff in Hamilton I 213) was renamed Aşağısivri after 1928, and Çamlıca after 1960 (*Ind. Anat.*, Çamlıca-Tortum-Erzurum). Kitsxa (Kizráh in Hamilton I 217) was renamed Kiska after 1928, Uncular after 1946, and Şenyurt after 1960 (*Ind. Anat.*, Şenyurt-Tortum-Erzurum). Hamilton's Euduk (I 217) is either the

from the north of Tortum to Ispir. This route becomes definite by the identification of his Kizráh with Şenyurt, and his Euduk with Serdarlı. However, there is no direct road from Şenyurt to Serdarlı. Hamilton's distance (2 post-hours) implies a route via Derinpınar (6 km from Şenyurt: i.e. 12 km from Şenyurt to Serdarlı; see Map 7). Also, on the way from Serdarlı to Ispir, a direct link is missing from Uzunkavak (Yeni Kieui) to Duruköy (Campor). Taking into account Hamilton's 8 post-hours from Euduk (Serdarlı) to Ispir, we have assumed the use of this missing link and have calculated the distance from Serdarlı to Ispir via Uzunkavak and Duruköy as (7 + 18 + 20 =) 45 km.

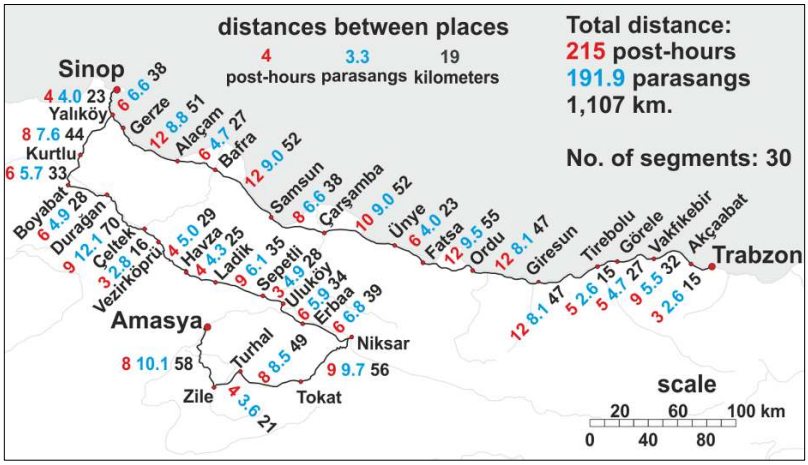
Overall, over a route of 1256 km, the only significant difference between Turkish post-hours and parasangs in this route from Trabzon to Kars, Ani, Gyumri, and back to Trabzon is in the segment from Gaziler (Hamilton's Bardes) to Kars (12 post-hours, 14.2 parasangs), as discussed above.

Route 3: From Trabzon to Sinop and Amasya

There are no unidentified places in this route, except for a certain Mehmet Bey Oglu village, reported by Hamilton between Sinop and Boyabat.[49] Judging from its distances from the

village Serdarlı, named Yukarı (Upper) Ödik before 1960 (*Ind. Anat.*, Serdarlı-Tortum-Erzurum), or the neighboring (at a distance of 1 km) village Aşağıkatıklı, named Aşağı (Lower) Ödik until 1928 (*Ind. Anat.*, Aşağıkatıklı-Tortum-Erzurum). Verinkiğ (Yeni Kieui in Hamiton I 218) was renamed Uzunkavak after 1928 (*Ind. Anat.*, Uzunkavak-Tortum-Erzurum). Kompor (Campor in Hamilton I 219) was renamed Duruköy after 1928 (*Ind. Anat.*, Duruköy-İspir-Erzurum). Kara Agatch (I 227) may be identified with Quarağah, mentioned by G. Stratil-Sauer, "From Baiburt via Ispir to Lazistan," *The Geographical Journal* 86 (1935) 402–410, at 405. It is the present-day Karakoç. Hamilton's Malassa (I 230) was renamed Aydıncık after 1928 (*Ind. Anat.*, Aydıncık-Bayburt).

[49] Names along this route changed since Hamilton's time: Platana (I 246) was renamed Akçaabat (*Ind. Anat.*, Akçaabat-Trabzon). Old names of Vakfikebir were Fol from the Greek Φωλέα (*nest*, *dwelling*) and Büyükliman (Large Port); cf. *Ind. Anat.*, Vakfikebir-Trabzon; Hamilton (I 251) places Buyuk Liman 45 minutes to the west of Fol (Vakfikebir). Görele (Xenophon's Coralla) was also called Elevü (Eleheu in Hamilton I 252; Euloi in Kinneir, *Journey* 332) from the Greek Eleoú (ἐλεοῦ, show mercy); cf. *Ind. Anat.*, Görele-Giresun. Deliler (I 314) was renamed Yalıköy after 1968 (*Ind. Anat.*, Yalıköy-Sinop). Sonisa (I 340) was renamed Uluköy after 1928 (*Ind. Anat.*, Uluköy-Taşova-Amasya).



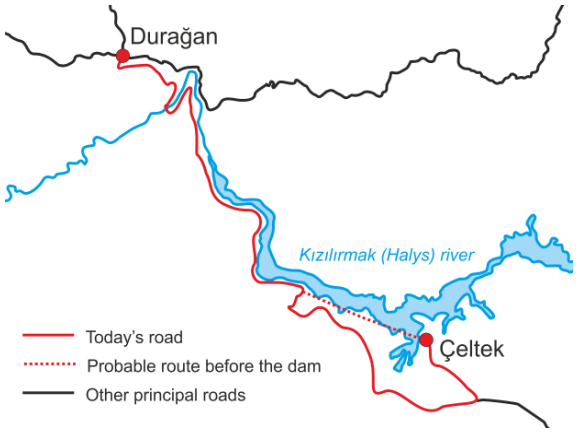
Map 8: Hamilton, from Trabzon to Sinop and Amasya

adjacent places in Hamilton's table, i.e. from Yalıköy (Delliler) to its north and Boyabat (Boiavad) to its south (see Map 8), we may locate Mehmet Bey Oglu at or near Kurtlu. For the comparison between post-hours and parasangs, this route has to be divided into two parts.

In the first part, from Trabzon to Sinop along the Black Sea coastline, the post-hours are always more than the respective parasangs. In total, a journey of 90 parasangs (519 km) was officially reckoned at 118 'hours'. This is not strange, given that both Hamilton and Kinneir have reported on the bad state or the lack of roads in parts of this route.[50]

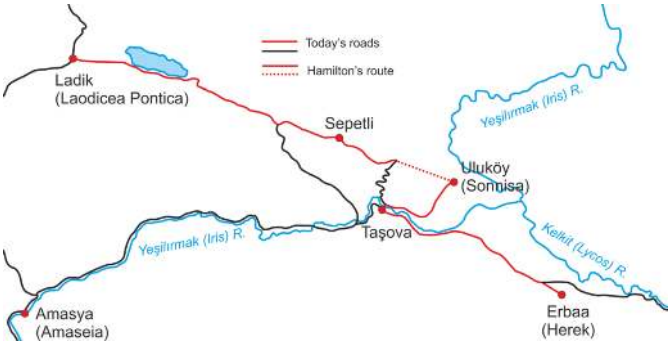
Herek (I 340) was renamed Erbaa after 1928 (*Ind. Anat.*, Erbaa-Tokat).

[50] Kinneir, *Journey* 319: at Ünye "the Mutesellim, who was the son of the pasha of Phash, wished us to perform the remainder of our journey to Trebisond by sea, adding that it was not customary for travellers to go by land, and that, if we persisted in our determination, the badness of the roads and want of accommodation would render it extremely disagreeable." Kinneir persisted and was given horses at Ünye, but later at Giresun he was obliged to embark on a boat towards Tirebolu (329) and Trabzon (332). Cf. Hamilton I 254–255: after Eleheu (Görele) "we experienced much delay and inconvenience from the difficulty of getting the baggage horses through several narrow passes, particularly at one place which the Tatar had already warned me of, and brought forward as a reason for performing this part of the journey by sea … He told me [at Tirebolu] that the road to Kerasunt



Between Durağan and Çeltek

In the second part, from Sinop to Amasya, over a route of 588 km the sums of post-hours and parasangs are close (97 and 101.9 respectively). In partial distances, there are the following noticeable differences. First, between Durağan (Douraan) and Çeltek (Cheltik) Hamilton reports 9 hours, but the distance on the road is 12.1 parasangs (70 km). As shown above, however, probably this longer present distance is caused by the artificial lake created by construction of the dam on the Kızılırmak (Halys) river, and is not a mistake.



Between Ladik and Sepetli

[Giresun] was so extremely bad, and so utterly impassable for the baggage-horses, that it was far more advisable to go by sea."

Second, between Ladik and Sepetli Hamilton reports 9 hours for a distance of 6.1 parasangs (35 km). Also between Sepetli and Uluköy (Sonnisa), he reports 3 hours for a distance of 4.9 parasangs (28 km). As shown above, a shorter route between Sepetli and Uluköy existed and has been testified to by Anderson.[51] On the other hand, the only road from Sepetli to Ladik ran along the valley of the Sepetli Su to the plain of Ladik.[52] Thus, the increased travel time (9 hours for a distance of 6.1 parasangs) had probably to do with the quality of the road. In the same area, between Uluköy and Erbaa (Herek), hours (6) and parasangs (5.9, 34 km) coincide.

Third, between Zile and Amasya (see Map 8) Hamilton reports a journey of 8 hours but the distance on the road is 10.1 parasangs (58 km). As the layout of this route via Aksalur (Hamilton's Aksaler) is definite, Hamilton's reduced time probably implies shortcuts along the way.

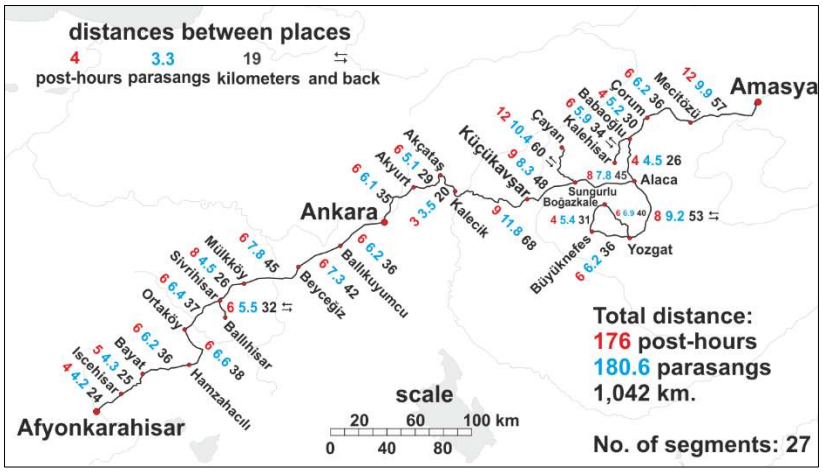
Route 4: From Amasya to Afyonkarahisar

Over the ca. 1042 km of this route (Map 9), the sums of post-hours and parasangs are close (176 and 180.6 respectively). However, there were certain difficulties in the identification of Hamilton's route between Sungurlu and Kalecik. Thus a closer examination is provided in Map 10. This map depicts also a proposal for Kinneir's route from Ankara to Yozgat, the identification of which is also difficult, because almost none of his toponyms exist today, and it seems that most were pronounced erroneously.[53] From Çorum (outside of the upper-right margin

[51] J. G. S. Anderson, *Studia Pontica* I (Brussels 1903) 73–88, and his Map VIII From Sunisa to Khavsa, at the end of the article.

[52] Anderson, *Studia Pontica* 73 with Map VIII.

[53] Kinneir, *Journey* 78–84, departed from Ankara and traveled for 8 miles in a valley; his direction was between SE and E. At the 7th mile he passed through the village Coy Pasha (Paşaköy?), probably within the present-day Ankara conglomeration. He continued NE for 13 miles in the same valley. At the 22nd mile he saw 2 miles to the left the large village Casa Oglu (Hasanoğlan, formerly Hasanoğlu). He traveled the remaining 11 miles heading between SE and E and at sunset arrived at Ooscotta, i.e at Elmadağ, which was formerly called Asi Yozgat (Küçük Yozgat, Little Yozgat) and its name resembles Kinneir's Ooscat (Yozgat). From Ooscotta (Elmadağ) he traveled 6



Map 9: Hamilton, from Amasya to Afyonkarahisar

of Map 10), Hamilton arrived at Tekiyeh Hatap which is identified with Babaoğlu.[54] He travelled to Kalehisar[55] and back, and went on to Alaca, Yozgat, and Büyüknefes.[56] He visited Boğazkale,[57] and returned to Yozgat and Alaca. From Alaca he

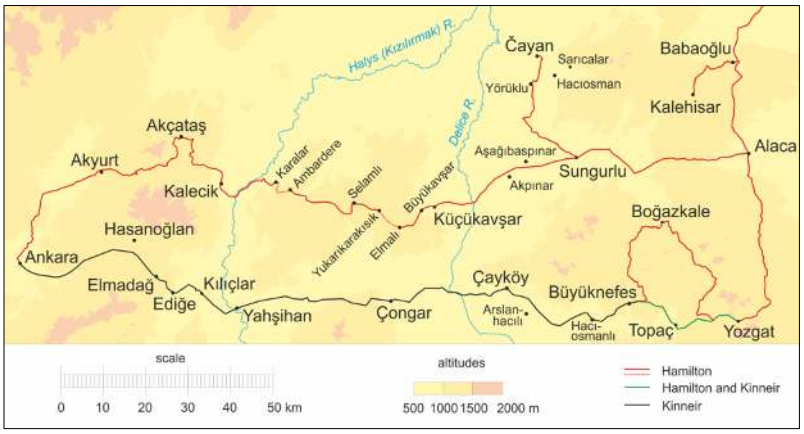
miles heading between SE and E. At the 9th mile he passed the large village Tassu (probably Ediğe) and at the 16th the flourishing village Bebislar (probably Kılıçlar). After 1.5 miles he ascended the summit and saw the river Halys (Kızılırmak), flowing to the NW, and Ukshar 4 miles ESE. After one mile he forded the river. Ukshar was at the east side of the Halys, ca. half a mile from its bank, i.e. in the area of present-day Kırıkkale, probably at the village Yahşihan. From Ukshar (Yahşihan?), after travelling 30 miles SE, he arrived at Saugor (Çongar). Therefrom he travelled 25 miles due E and arrived at Charkhoi (Çayköy). At the 16th mile he crossed the river Debja, i.e. the Delice. After travelling 28 miles from Charkhoi (Çayköy) heading between E and SE, he arrived at Topatch (Topaç). At the 5th mile he saw the village Haju Aslam (Arslanhacılı) on the right, 2 miles off the road, and at the 16th mile he passed the village Haju Osman (Hacıosmanlı). From Topatch (Topaç), after 10 miles, he arrived at Ooscat (Yozgat).

[54] Anderson, *Studia Pontica* I 22.

[55] Hamilton's Kara Hissar (I 382) is Kalehisar (Anderson, I 21).

[56] Nefes Kebir (Nefez Kieui in Hamilton I 388) was renamed Büyüknefes after 1928 (*Ind. Anat.*, Büyüknefes-Yozgat).

[57] Hamilton's (I 383) Boghaz Kieui (Boğazköy) is Boğazkale (*Ind. Anat.*,



Map 10: Hamilton's route to Alaca, Yozgat, and Ankara

proceeded to Sungurlu (Soungourli). He visited the salt mines to the north, arriving at a village he calls Sarek Hamisch. This is probably Yörüklü or the neighboring Hacıosman (not Sarıcalar farther east, though it bears a similar name), because from there he proceeded to Çayan (Chayan) which shows on the map. Returning to Sungurlu, he started his journey towards Ankara. First, he passed from the villages Aşağı Beşpınar (Beshbounar) and Akpınar (Ahabounar). Then he crossed the Delice (Delhiji Su) and arrived at Küçükavşar (Kotchuk Kieui). He passed from Büyükafşar (Boyeuk), then from Selamlı (Selami, see Map 10) and arrived at Kalecik (Kalaijik). He went on to Akçataş (Akjah Tash) and Akyurt (Ravli)[58] and arrived at Ankara. On Map 10, Hamilton's route from Küçükavşar to Kalecik along today's roads involves two short missing links: from Elmalı to Yukarıkarakısık, and from Ambardere to Karalar. The distance is calculated as 68 km (11.8 parasangs)[59] and is longer than Hamilton's 9 post-hours which, if not an error, implies shortcuts

Boğazkale-Çorum).

[58] Ravli (I 416) was renamed Akyurt after 1928 (*Ind. Anat.*, Akyurt-Ankara).

[59] The distance of 68 km is calculated as follows: Küçükavşar [11 km] Elmalı [6] Yukarıkarakısık [7] Selamlı [21] Ambardere [3] Karalar [20] Kalecik.

along the way. There are these differences between post-hours and parasangs in this route from Amasya to Afyonkarahisar:

First, between Amasya and Mecitözü (Hadji Kieui, see Map 9),[60] Hamilton reports 12 'hours' for a distance of 9.9 parasangs (57 km). There is no ambiguity concerning the layout of this route.[61] Thus, the increased transit time implies a difficult road.

Second, from Sungurlu to Sarek Hamisch (Yörüklü) and back, Hamilton reports 12 'hours' but the return distance is 6.2 parasangs (2 x 18 = 36 km). However, he started from Sungurlu before seven o'clock in the morning, and passing Sarek Hamisch (Yörüklü), he arrived at Çayan (9 km north of Yörüklü) on his way to the mines at half-past eleven (I 405–406). The mines were a mile and a half (2.5 km) SE of Çayan (I 406). Thus, the 6 hours' trip from Sungurlu was not to Sarek Hamisch (Yörüklü) but to the mines, and the distance was ca. (18 + 9 + 2.5 =) 30 km, i.e. 60 km (10.4 parasangs) including the return.[62]

Third, as mentioned above, between Küçükavşar (Kotchuk Kieui) and Kalecik (Kalaijik) Hamilton reports 9 hours but using the existing roads the distance is 11.8 parasangs (68 km).

Fourth, between Mülkköy (Meulk) and Sivrihisar (Sevri Hissar) he reports 8 hours for a distance of 4.5 parasangs (26 km). If not a mistake (because there are no alternatives on the map), probably the road here was difficult.

Route 5: From Afyonkarahisar to Izmir

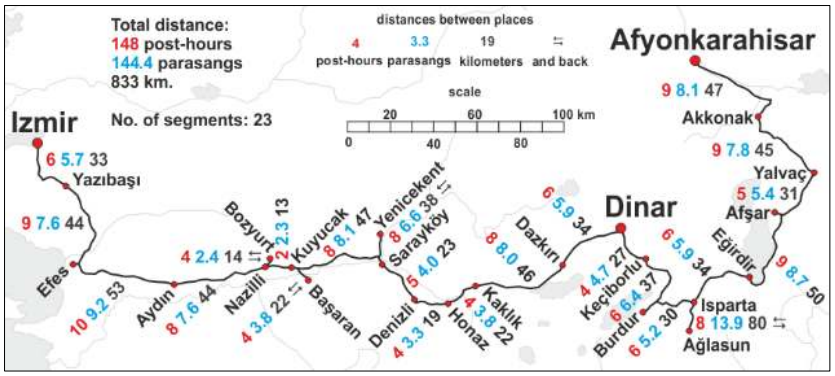
Map 11 depicts this journey with the modern names of the places mentioned by Hamilton.[63] Over a route of 833 km, the

[60] Hacıköyü (Hadji Kieui in Hamilton I 375) was renamed Mecitözü after 1928 (*Ind. Anat.*, Mecitözü-Çorum).

[61] The road ran along the Çekerek Su; cf. Tozer, *Turkish Armenia* 44–54; Anderson, *Studia Pontica* I, Map II From Hadji Keui to Amasia.

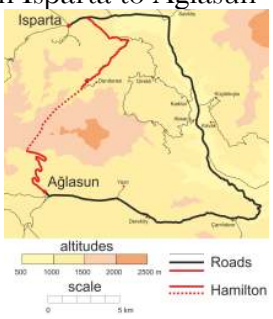
[62] Also the following apply to places between Ankara and Afyonkarahisar: Hamilton (I 447) locates the ruins of ancient Orcistos near the village Alekiam; thus Ortaköy, the site of Orcistos (*Ind. Anat.,* Ortaköy-Çifteler-Eskişehir), is Alekiam. Hamzahacılı is Hamilton's (I 449) Hamza Hadji near the ruins of Amorium. Eski Karahissar is Iscehisar; according to Hamilton (I 461) it is near the quarries of Synnadic or Docimitic marble. Iscehisar is identified with Byzantine Docimion (*Ind. Anat.*, İscehisar, Afyon).

[63] Midway between Afyonkarahisar and Yalvaç (Hamilton I 471) is the village Akkonak which is probably Hamilton's Akkar. The old name of



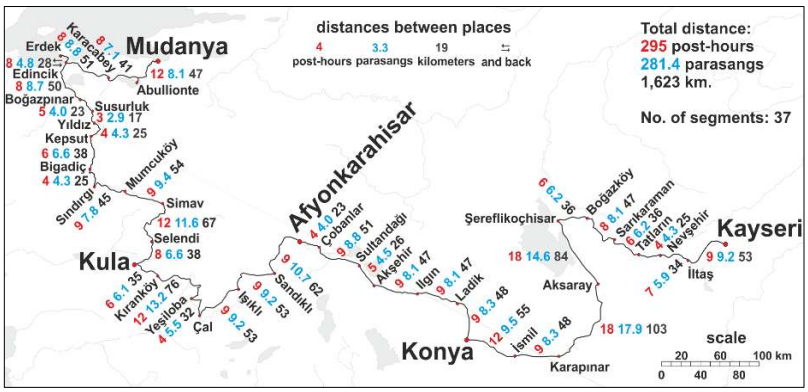
Map 11: Hamilton, from Afyonkarahisar to Izmir

sums of parasangs and post-hours are close (148 and 144.4 respectively).[64] Partially also, the 'hours' are close to the parasangs. There is one exception: for the journey from Isparta to Ağlasun (ancient Sagalassos) and back, Hamilton reports 8 post-hours, whereas on the road the return trip is 13.9 parasangs (2 x 40 = 80 km). However, Hamilton (II 486–487) reports a shorter route from Isparta, ascending the mountain straight south and descending the other side to Sagalassos, while the kilometers were based on the existing road going around the mountain.



Dazkırı was Bolatlı, Hamilton's (I 502) Balat (*Ind. Anat.*, Dazkırı-Afyon). The ruins of Tripolis of Phrygia were at Hamilton's (I 525) Kash Yeniji, which was renamed Yenicekent after 1968 (*Ind. Anat.*, Yenicekent-Denizli). The site of the ancient city Mastaura (I 531) is within the confines of the village Bozyurt Köyü (see aydinkulturturizm.gov.tr, in Turkish). The town Hortuna (Fortona in Hamilton I 542) was renamed Yazıbaşı after 1928 (*Ind. Anat.*, Yazıbaşı-Torbalı-İzmir). Also, at the beginning of the 20th century the diocese of Anea (Turk. Anya) at Sokia (Söke) included the town Fortuna (Yazıbaşı) in the İzmir province of Torbalı. Today Yazıbaşı is the İstiklal suburb of Torbalı.

64 The return from Kuyucak to Sarayköy ("and back") reported by Hamilton (Appendix II) is an error; he continued not from Sarayköy but from Kuyucak (I 526–528). An error is also the reported return from Nazilli to Kuyucak ("and back"): he continued not from Kuyucak but from Nazilli (I 530).



Map 12: Hamilton, from Mudanya to Afyonkarahisar and Kayseri

Route 6: From Mudanya to Kayseri

Map 12 depicts Hamilton's route with the identified current toponyms.[65] Over a journey of 1623 km, the total post-hours exceed the total parasangs by 13.6 (295 and 281.4 respectively). Part of this difference is not real. At Mudanya the post-master charged the journey to Abullionte (Apollonias, 47 km, 8.1 parasangs) for 12 hours, "instead of 8 or 9 which was the real distance" (Hamilton II 84). Also, Hamilton was charged 12 hours for the journey from Konya to İsmil, a distance of 9.5 parasangs (55 km). He travelled this distance in 8 hours (II 211), which means that the road was not difficult. Probably he was cheated by the post-master.

[65] Mihalıç (Muhalitsch in Hamilton II 93) was renamed Karacabey after 1928 (*Ind. Anat.*, Karacabey-Bursa). Mürvetler Köy (Meulver or Meurvetler Kieui in Hamilton II 107) was renamed Boğazpınar after 1928 (*Ind. Anat.*, Boğazpınar-Manyas-Balıkesir). Medelle (Medere in Hamilton II 160) was renamed Yeşiloba after 1928 (*Ind. Anat.*, Yeşiloba-Bekilli-Denizli). Demirciköy (II 162) is another name for Çal (*Ind. Anat.*, Çal-Denizli); Hamilton writes in a note (II 154): "Chaal (Demirji Kieui)." Ishakli (Iskali in Hamilton II 165) was renamed Sultandağı after 1928 (*Ind. Anat.*, Sultandağı-Afyon). Koçhisar (II 235) was renamed Şereflikoçhisar after 1928 (*Ind. Anat.*, Şereflikoçhisar-Ankara). Hamilton (II 253–256) reports the route from Urgub (Ürgüp) to Caesarea (Kayseri) via Karajah Euren (Karacaören), Kara Hinn (Karain Köyü), Boyali (Boyalı Köyü), Bak Tash, and Injesu (İncesu). Near his Bak Tash (between Boyali and İncesu), the valley branched into two (II 255). According to this description, Bak Tash is the village called now İltaş.

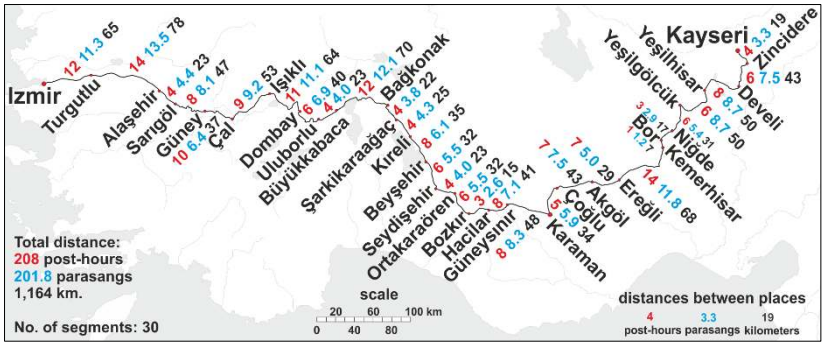
Another significant difference occurs between Aksaray and Şereflikoçhisar (18 hours, 14.6 parasangs, 84 km), precisely between Sarayhan and Şereflikoçhisar (12 hours, 8.7 parasangs). Here, as Hamilton's description of the route (II 232–236) is clear and does not allow for alternatives, probably this increased duration of the journey had to do with slower progress along the banks of the Salt Lake (Tuz Gölü).

For the rest, the Turkish post-hours coincide with, or are close to, the parasangs.

Route 7: From Kayseri to Izmir

Over a journey of 1164 km (Map 13), the total post-hours (208) are close to the total parasangs (201.8).[66] In partial dis-

[66] The following apply to changed toponyms along this route: Hamilton (II 270) visited a Greek convent on his way to Mt. Argaeus, in which he was received by the Bishop of Caesarea. The official place of the Kayseri metropolitan was the ancient and famous monastery of Ioannis Prodromos at Zincidere; cf. S. Güngör Açıkgöz, "Social and Physical Structure of the Towns in Kayseri Where Greeks Lived," *ATINER Conference Paper* 31 (Athens 2012: atiner.gr/papers/MDT2012-0031.pdf) 10. Karahisar (II 284) was renamed Yeşilhisar after 1928 (*Ind. Anat.*, Yeşilhisar-Kayseri). Misli (II 296) of Ottoman times and Gölcük until 1968 was renamed Yeşilgölcük (*Ind. Anat.*, Yeşilgölcük-Niğde). Kemerhisar (ancient Tyana) was formerly known as Kizhisar (II 300) or Kilisehisar (*Ind. Anat.*, Kemerhisar-Niğde). Güneysınır is another name for Elmasún (II 327); cf. mapcarta.com. Ancient Leontopolis and subsequent Tris Maden (II 339) was afterwards called Bozkır; cf. the city's website bozkir.gov.tr (in Turkish). Ortakaraören (Middle Karaören) is Hamilton's Kara Euran (II 344); the adjoining village to the south (at a distance of 1 km) is called Aşağıkaraören (Lower Karaören). Karaağaç (II 355) was renamed Şarkikaraağaç after 1928 (*Ind. Anat.*, Şarkikaraağaç-Isparta). The village Akçahisar, 41 km NW of Şarkikaraağaç, was renamed Akçaşar after 1948 (*Ind. Anat.*, Akçaşar köy-Yalvaç-Isparta). However, this cannot be Hamilton's (II 356) little village Ak Hissar, because this village, unlike Akçaşar, lay to the south of the road from Yalvaç to Eğirdir via Afşar (II 358). Probably Ak Hissar was located at or near Bağkonak. Hamilton's (II 361) little village Borlou, 4 hours to the northeast of Uluborlu, cannot be traced. Judging from the distance, it should be located at or near Büyükkabaca. The actual (3.8 + 12.1 + 4.0 =) 19.9 parasangs (22 + 70 + 23 = 115 km) between Şarkikaraağaç and Uluborlu match the (4 + 12 + 4 =) 20 hours reported by Hamilton, whether his intermediate villages Ak Hissar and Borlou were (or were not) at Bağkonak and Büyükkabaca respectively. Sarıgöl is Hamilton's Aineh Ghieul (II 374). According to the city's website (sarigol.bel.tr/ilcemizin-tarihcesi.



Map 13: Hamilton, from Kayseri to Izmir

tances there are not significant differences, with three exceptions:

First, Hamilton reports a 6 hours' distance between Kara Hissar (Yeşilhisar) and Misli (Yeşilgölcük), but on the road it is 8.7 parasangs (50 km). Probably there was a shorter route for horses in Hamilton's time, as shown.

Second, from Kemerhisar (Tyana, Hamilton's Kiz Hissar) to Ereğli and Akgöl there are 14 and 7 hours for 11.8 and 5 parasangs respectively. Alternative routes do not exist. Thus, the increased travel time may be attributed to the quality of the road.

Third, for the 6.4 parasangs (37 km) between Çal and Güney, Hamilton reports 10 hours of journey. He says (II 369, 392) that for the distance Çal-Güney-Sarıgöl he was charged by the postmaster 22 hours; he estimates this distance at no more than 18 hours and he traveled it in 16½ hours. For the 47 km distance between Güney and Sarıgöl the parasangs (8.1) coincide with the hours (8). Thus, the 4 hours' overcharge mentioned by Hamilton (22 instead of 18) accounts for the difference between the actual 6.4 parasangs and the reported 10 hours between Çal and Güney.

html, in Turkish), Sultan Beyazit I (called Yildirim, the Thunderbolt), viewing Sarıgöl and its surroundings from a high spot, asked for the name of the place, and when answered, he exclaimed that it looked like Inegöl in the Bursa area; henceforth the place was called Inegöl.

Summary of the findings

Table 2 summarizes the comparison between post-hours and parasangs for the 192 segments of Hamilton's journeys. The findings are interesting. In two-thirds of the cases (129 of the 192 segments, or 67%), the absolute difference between the distance reported in post-hours and the same distance measured in parasangs is decimal ('less than one'), that is, in practice, the two measurements coincide.

Table 2: Analogies between post-hours and parasangs[1]

Journey[2]	Kilometers	Segments per journey	Segments in which the absolute difference[6] between parasangs and post-hours is		
			less[3] than 1	between[4] 1 and 2	more[5] than 2
Mudanya-Izmir	786	21	15 *(71%)*	5 *(24%)*	1 *(5%)*
Trabzon-Gyumri-Trabzon	1256	24	17 *(71%)*	5 *(21%)*	2 *(8%)*
Trabzon-Sinop-Amasya	1107	30	14 *(47%)*	5 *(16%)*	11 *(37%)*
Amasya-Afyonkarahisar	1042	27	17 *(63%)*	7 *(26%)*	3 *(11%)*
Afyonkarahisar-Izmir	833	23	17 *(74%)*	5 *(22%)*	1 *(4%)*
Mudanya-Kayseri	1623	37	25 *(68%)*	9 *(24%)*	3 *(8%)*
Kayseri-Izmir	1164	30	24 *(80%)*	3 *(10%)*	3 *(10%)*
Total	7811	192	129 *(67%)*	39 *(20%)*	24 *(13%)*

Notes to Table 2:

[1] The parasang is taken to equal 30 Olympic stadia, 5.768 km.

[2] The journeys of Hamilton presented in the maps of this article are depicted here in the same way, according to their chronological order: (1) from Istanbul (Mudanya) to Izmir in 1836 (Hamilton I 68–154); (2) from (Izmir to Istanbul and Trabzon by boat and thence from) Trabzon to Kars, Ani and Gyumri, and back to Trabzon via Narman and Ispir, in 1836 (I 155–243); (3) along the coast from Trabzon to Sinop, and overland from Sinop to Amasya in 1836 (I 244–373); (4) from Amasya to Ankara and Afyonkarahisar in 1836 (I 374–469); (5) from Afyonkarahisar to Izmir in 1836 (I 470–544); (6) from Istanbul (Mudanya) to Kayseri via Kula, Afyonkarahisar, and Konya in 1837 (II 81–258); (7) from Kayseri to Izmir via Karaman in 1837 (II 259–381).

[3] Example of 'less than one' difference: a distance of 6 post-hours in Hamilton is calculated on the map as 6.9 parasangs (40 km). The difference is (6.9 – 6 =) 0.9. This difference is less than 1, and the respective segment counts as one in the column 'less than 1' in the table.

[4] Example of 'between 1 and 2' difference: a distance of 6 post-hours is calculated as 7.5 parasangs (43 km). The difference is (7.5 – 6 =) 1.5; it counts as

one in the column 'between 1 and 2' in the table.

[5] Example of 'more than 2' difference: a distance of 6 post-hours is calculated as 8.5 parasangs (49 km). The difference is (8.5 – 6 =) 2.5; it counts as one in the column 'more than 2' in the table.

[6] Negative values also apply in the above three examples, when the value of the parasangs is *greater* than that of the post-hours. Negative values imply, in general, that Hamilton used a route *shorter* than the existing road. In Table 2 the 'absolute difference' between post-hours and parasangs is employed, i.e. there are no negative values, which are discussed below, for positive and negative differences with values 'more than 2', and 'between 1 and 2' respectively.

Further, in one fifth of the cases (39 of 192, or 20%) the absolute difference is 'between 1 and 2'; and in approximately one tenth of the cases (24 of 192, or 13%) this difference is 'more than 2'. Almost half of these 'more than 2' differences (11 of 24) occur, as expected, between Trabzon and Amasya (recall the bad state or the lack of roads in parts of Hamilton's Route 3). Furthermore, only half of them (13 of 24) relate to difficult roads; the rest have to do with reasons which do not imply difference between the post-hour and the parasang (Hamilton's error; post-master's cheating; route shorter than the existing road). Thus, only 13 of the 192 cases (or 7%) involve differences 'more than two' attributed to difficult roads. The same is true for the 'between 1 and 2' differences, where 16 of the 39 cases (41%) imply a shorter route employed by Hamilton, in comparison with the one showing on modern maps.

Testing for alternative 'parasang lengths'

These findings were based on the comparison between Hamilton's post-hour on the one hand and a 'standard' parasang of 30 Olympic stadia (5.768 km) on the other, which was employed because it had been adopted with satisfactory results in the modelling of the chronology (Paradeisopoulos 2013) and the parasangs (Paradeisopoulos 2014) of Xenophon's *Anabasis*. However, in principle it was probable that alternative 'lengths' of the parasang could fit better in this comparison with the post-hour. Hence comparisons were also performed, based on parasang lengths of 4.9 km, 5.0 (as proposed by Boucher), 5.1, 5.2, 5.322 (30 Attic stadia), 5.4, 5.5, 5.6, 5.7, 5.9, 6.0, and 6.1.

Table 3: Analogies for alternative 'lengths' of the parasang

Alternative 'lengths' (in km) of the parasang used in comparisons with Hamilton's post-hour	From the 192 segments of Hamilton's journeys (ca. 7800 km), segments in which the absolute difference between parasangs and post-hours is		
	less than 1	between 1 and 2	more than 2
4.9	78	69	45
5.0 (Boucher)	97	61	34
5.1	94	65	33
5.2	106	55	31
5.322 (30 Attic stadia)	114	49	29
5.4	122	43	27
5.5	124	44	24
5.6	128	40	24
5.7	128	42	22
5.768 (30 Olympic stadia)	129	39	24
5.9	125	42	25
6.0	125	42	25
6.1	118	46	28

The results are summarized in Table 3. The parasang of 5.768 km (30 Olympic stadia) was the one closest to Hamilton's post-hour, and further tests (beyond the limits of 4.9 and 6.1 km) were not required.

Interpretation of the analogies between the post-hour and the parasang

The study revealed analogies between the nineteenth-century post-hour on the one hand and Xenophon's parasang on the other, both as the distance traveled in one hour and as a unit of distance equal to 30 Olympic stadia. The analogies are strong; it seems that the meanings of the post-hour (descendant of the Persian *farsang*) and Xenophon's parasang (παρασάγγης) tend to coincide.[67] It appears that the parasang is the distance traveled in one hour. In most cases along roads, it is the equivalent of a journey of 30 stadia. Along difficult roads it is reduced. How-

[67] Cf. Layard, *Discoveries* (n.6 above): "The farsakh and the hour are almost invariably used as expressing the same distance."

ever, it has been rightly argued that "Xenophon makes no attempt to explain the parasang. Thus, if he actually thought it was a measure of time, he could not expect the reader to understand it, because the only previous explanation in a Greek source was that of Herodotus, and Xenophon could not rely on his readers having obtained a non-Herodotean view of this matter from some other familiar source."[68] The passage of Herodotus which contains the only known explanation of the parasang appears in the context of his description of the Persian royal road from Sardes to Susa: "If the royal road has been rightly measured in these parasangs, and if the parasang δύναται thirty stadia, as undoubtedly it δύναται…"[69]

We mentioned at the start that, usually, this passage is taken to mean that a parasang *equals* thirty stadia. But the interpretation depends on the meaning assigned to δύναται. There are at least three alternatives. The first relates to the standard meaning of this verb, δύναται 'can/is capable of'. The infinitive is usually omitted in this syntax.[70] In this case, the text means "if the parasang *can* [cover, or travel, do, etc.] thirty stadia…" The second relates to the use of δύναται to denote the significance/meaning of a word.[71] In this case, the text means "if the para-

[68] Tuplin, *Topoi* Suppl. 1 (1997) 405.

[69] Hdt. 5.53: εἰ δὲ ὀρθῶς μεμέτρηται ἡ ὁδὸς ἡ βασιληίη τοῖσι παρασάγγῃσι καὶ ὁ παρασάγγης δύναται τριήκοντα στάδια, ὥσπερ οὗτός γε δύναται ταῦτα…

[70] E.g. Hdt. 9.9: τῇ προτεραίῃ τῆς ὑστάτης καταστάσιος μελλούσης ἔσεσθαι Χίλεος ἀνὴρ Τεγεήτης, δυνάμενος ἐν Λακεδαίμονι [ποιεῖν] μέγιστον ξείνων, "on the day before that which was appointed for the last hearing of the envoys, Chileos, a man of Tegea, who of all strangers in Lacedaemon *was capable of* [doing] the most [i.e. he had most influence]." Hom. *Od.* 4.225: Ζεὺς ἀγαθόν τε κακόν τε διδοῖ· δύναται γὰρ [ποιεῖν] ἅπαντα, "Zeus gives good and ill, for he *can* [do] all things)."

[71] E.g. Hdt. 6.86: ἡ δὲ Πυθίη ἔφη τὸ πειρηθῆναι τοῦ θεοῦ καὶ τὸ ποιῆσαι ἴσον δύνασθαι, "the Pythia said that to make trial of the god and to do the deed *means* the same [thing]." Thuc. 7.58.4: τῶν δ' ἔξω Σικελίας Ἑλλήνων Λακεδαιμόνιοι μὲν ἡγεμόνα Σπαρτιάτην παρεχόμενοι, νεοδαμώδεις δὲ τοὺς ἄλλους καὶ Εἵλωτας· δύναται δὲ τὸ νεοδαμῶδες ἐλεύθερον ἤδη εἶναι, "of the Hellenes outside Sicily there were the Lacedaemonians, who provided a Spartan to take the command, and a force of Freedmen and Helots; this

sang *is taken to mean* thirty stadia…" The third relates to δύναται as 'is worth/equivalent to'.[72] In this case, the text reads: "if the parasang *is equivalent to* [or worth/equal to] thirty stadia…"

It is not certain, therefore, that according to Herodotus the parasang *equals always* thirty stadia. On the other hand, he certainly believes that on the Persian royal road described, *any* distance of thirty stadia can undoubtedly be travelled in a parasang, because he continues:[73] "from Sardes to the so-called palace of Memnon [at Susa], the number of parasangs being 450, the distance is 13,500 stadia. So if one travels 150 stadia each day, exactly 90 days are spent on the journey."[74]

A proposed understanding of the use of the parasang by Xenophon

If Xenophon's parasang was the distance travelled in one hour, then, as revealed by this study, its length was variable by definition, but on roads, in most cases, it equaled 30 stadia. The sixth-century historian Agathias says: "Now the parasang is thirty stadia, as it seems to Herodotus and Xenophon, but as the Iberians [Georgians] and the Persians say now, it is only twenty-one. The Lazi have also this unit of measure but they call it by the different name 'rest' (ἀνάπαυλα), I think for an obvious reason: because their porters stop for a while, for a rest, after covering a parasang, and lay down their load…"[75]

means that the Freedmen were free men by this time."

[72] E.g. Hdt. 2.142: τριηκόσιαι μὲν ἀνδρῶν γενεαὶ δυνέαται μύρια ἔτεα, "three hundred generations of men *are equivalent to* ten thousand years." Xen. *Anab*. 1.5.6: ὁ δὲ σίγλος δύναται ἑπτὰ ὀβολοὺς καὶ ἡμιωβέλιον Ἀττικούς, "The siglus *is worth* seven and one-half Attic obols." Thuc. 6.40.2: λόγους … ὡς ἔργα δυναμένους, "words that *are as good as* deeds."

[73] Hdt. 5.53: ἐκ Σαρδίων στάδια ἐστὶ ἐς τὰ βασιλήια τὰ Μεμνόνια καλεόμενα πεντακόσια καὶ τρισχίλια καὶ μύρια, παρασαγγέων ἐόντων πεντήκοντα καὶ τετρακοσίων. πεντήκοντα δὲ καὶ ἑκατὸν στάδια ἐπ᾽ ἡμέρῃ ἑκάστῃ διεξιοῦσι ἀναισιμοῦνται ἡμέραι ἀπαρτὶ ἐνενήκοντα.

[74] This average daily travel of 150 stadia implies a daily travel of 5 parasangs (at 30 stadia per parasang according to Herodotus in this passage). It is difficult to assume that Xenophon was unaware of this average daily advance in Herodotus, when in most cases in his *Anabasis* he reports daily marches of 5 parasangs.

[75] *Hist*. 2.21.7–8 (Keydell): ἔστι γὰρ ὁ παρασάγγης, ὡς μὲν Ἡροδότῳ δοκεῖ

We may imagine a similar practice in Xenophon's *Anabasis*. After an hour's (a parasang's) march, the army (both in the anabasis and in the retreat) stopped to rest. According to the daily march (5 parasangs), and to the duration of the four stops (for example, each of half to one hour), they were daily on the road for ca. eight to nine hours. This seems rational: one third of their time on the road, one third resting and/or sleeping, and one third in leisure, consultations, and preparations.

With this understanding of the parasang, probably it makes sense why Xenophon, almost exclusively in the *Anabasis*, reports daily marches of 5 parasangs: he was not rounding up distances; he was reporting marching time in the sense of the Persian *farsang*, the descendant of which was the nineteenth-century post-hour. As shown, this does not modify the interpretation of the parasang in units of distance, ancient or modern, in most cases of journeys along roads.

Conclusion

The parasang, as a measure of distance, has similarities to the nineteenth-century post-hour in Hamilton's *Researches*, i.e. to the distance covered in one hour by post-horses. This was perceived long ago, but here it was tested by comparing Hamilton's post-hours on the one hand to the actual kilometric distances (converted to parasangs) on the other, over his 192 segments of distances across Anatolia.

In understanding Xenophon's parasang as one hour's march (which, nevertheless, frequently is more or less equal to 30 stadia), the need to define the parasang as an exact measure of distance becomes redundant. This definition as an exact measure is not compatible with Xenophon's simultaneous use of 'standard' and 'short' parasangs in his *Anabasis*. Also, it is not always justified by the findings of the comparison between the

καὶ Ξενοφῶντι, τριάκοντα στάδια, ὡς δὲ νῦν Ἴβηρες καὶ Πέρσαι φασίν, ἐν ἑνὶ μόνῳ τῶν εἴκοσι πλείονα. Λαζοὶ δὲ οὕτω μὲν καὶ αὐτοὶ ὁμολογοῦσιν, οὐ μὴν δὲ τῷ ὀνόματι χρῶνται, ἀλλὰ ἀναπαύλας καλοῦσι, καὶ, οἶμαι, εἰκότως. οἱ γὰρ παρ' αὐτοῖς ἀχθοφόροι, ἕκαστον παρασάγγην περαιωθέντες, τὰ τε φορτία τίθενται, καὶ σφᾶς αὐτοὺς ἐλάχιστον ἀναπαύουσιν.

nineteenth-century distances in post-hours and the real kilometric distances converted to parasangs. This understanding of the parasang as one hour's march is not incompatible with the explanation offered by Herodotus.[76]

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