Some considerations about several roads from Moesia reflected in *itineraria picta et adnotata*

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Abstract. Several years ago, in 2011, I started a research focused on some of the most important cartographic documents of the Roman world: the Peutinger map and the Antonine itinerary. The idea for this research started from several fundamental questions: 1. Do the Peutinger map and the Antonine itinerary offer different information related to the roads of the Roman provinces? 2. How can one establish this? 3. How did other late sources, such as the *Notitia Dignitatum*, the Bordeaux itinerary, or the Cosmography of the Anonymous from Ravenna, present or describe these regions? 4. How were the Peutinger map and the Antonine itinerary actually compiled? 5. By analyzing the routes of these provinces, can one obtain new information useful to dating the above-metioned documents? 6. So far, in order to date these documents, historians have discussed them as a whole or separately, focusing on small, sometimes insignificant details from certain areas. What other methodological criteria or means can be employed, beside the classical, established methods, to provide new data? 7. Can we differentiate between the purpose of the Peutinger map and the Antonine itinerary? 8. Supposing that new dating criteria can be identified, will they be useful for further research and could this method be applied to other regions, and finally to all former Roman provinces? 9. The Peutinger map and the Antonine itinerary each list around 2700 settlements. Can one compare these two documents by analyzing the presence or the absence of certain settlements, in order to date the documents? To find possible new insights, I have compared the distances between the settlements, and I have chosen to discuss the situation from Moesia.

Keywords: Roman Empire, cartography, Tabula Peutingeriana, *itineraria*, Moesia.

Rezumat: Acum câțiva ani, în 2011, am început o cercetare legată de cele mai importante documente cartografice ale lumii romane: *Tabula Peutingeriana* şi *Itinerarium Antonini*. Ideea acestei cercetări a început de la câteva întrebări fundamentale: 1. Cele două documente amintite

oferă informații diferite privind drumurile din provinciile romane? 2. Cum putem stabili acest lucru? 3. Cum au fost descrise aceste drumuri în alte surse romane târzii, precum *Notitia Dignitatum*, itinerariul de la Bordeaux sau *Cosmographia* Anonimului din Ravenna? 4. Cum au fost redactate *Tabula Peutingeriana* şi *Itinerarium Antonini*? 5. Prin compararea drumurilor din anumite provincii, se pot obține informații noi utile în datarea celor două documente? 6. Până în prezent, pentru a data cele două documente, istoricii le-au discutat fie în ansamblu, fie separat, concentrându-se uneori pe detalii prea mici, nesemnificative din anumite zone. Ce alte criterii metodologice sau mijloace pot fi utilizate, în afară de metodele clasice stabilite, pentru a obține noi date? 7. Se poate face o distincție între scopul Tabulei şi cel al documentului *Itinerarium Antonini*? 8. Presupunând că pot fi identificate noi criterii de datare, pot fi aceastea utile pentru viitoare cercetări, şi poate fi această metodă aplicată şi pentru alte regiuni, şi în final pentru toate provinciile romane? 9. Atât *Tabula Peutingeriana*, cât şi *Itinerarium Antonini*, amintesc fiecare în jur de 2700 de aşezări. Pot fi comparate cele două documente prin analiza prezenței sau absenței anumitor localități, pentru a data aceste documente? Pentru a descoperi noi informații, am comparat distanțele dintre aşezări, şi am decis să discut situația din Moesia.

Cuvinte cheie: Imperiul Roman, cartografie, Tabula Peutingeriana, *itineraria,* Moesia

Moesia became a Roman province during the last years of Augustus' reign. In the ancient geographical sources, the province was delimited to the East by the Pontus Euxinus (Black Sea), to the West by the river Drinus (Drina), to the North by the Danubius (Danube) and to the South by the Haemus (Balkan) and Scardus (Šar) mountains. Today it includes territories from Macedonia, Southern Serbia (Moesia Superior), northern Bulgaria and the Dobrudja (South-Eastern Romania). The Romans first approached this territory during the last years of Caesar's reign. Burebista intended to expand his control over the north-eastern part of the Balkan Peninsula. Octavian Augustus, Caesar's successor, considered a war against the Dacians inevitable. In 35 BC Augustus captured Siscia. This settlement was strategically positioned at the confluence of the rivers Odra, Kupa and Sava, in Croatia. Subsequently, Octavian abandoned the idea of a war against the Dacians, but the benefits of such a conflict were obvious. He secured the

Eastern Alps and the control along the coastal strip of the Northern Adriatic[1]. During Augustus' reign, in 6 AD, Dalmatia was organized as an imperial province. In 87 AD, after attacks by the Dacians, the emperor Domitian personally arrived in Moesia and divided it into two provinces: Moesia Superior to the west and Moesia Inferior to the East. The provinces were separated by the river Ciabrus.

Moesia and its roads. A short overview

Several articles have only partially focused on the roads from Moesia represented on the Peutinger map[2]. In 2004, A. Panaite studied the Roman roads of Moesia Inferior, investigating also data referring to this region provided by the Peutinger map and the Antonine itinerary[3]. At the end of her article, she provided a useful catalogue of the milestones discovered in Moesia Superior. In another study, she described the Roman roads within the territory of the city of Tropaeum Traiani[4].

In one of his books, D. Benea provided data concerning the military infrastructure and the history of the legions *IIII Flavia* and *VII Claudia*[5]. S. Conrad recently made an interesting contribution to the topic[6], focusing on the archaeological survey of the Lower Danube. A central part of his article is dedicated to the Roman settlements from the first century AD to the fifth century AD.[7] J. J. Wilkes has successfully investigated the Danubian area[8]. M. Madzharov recently published a book about the Roman roads of Bulgaria. In presenting the main roads he included data provided by the Roman cartographic sources. In 1979 P. Petrović published the fourth volume of the *Inscriptions of Upper Moesia*[9], to be followed the third volume in 1995[10]. In 1982 B. Dragojević–Josifovska published the sixth volume[11].

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[1] Mócsy 1974, 22.
[2] Ivanov 1997, 467-640; Lisičar 1978, 9-19; Todorov 1937; Torbatov 2000, 59-72; Zavadzki 1964, 531-538.
[3] Panaite 2004, 41-92.
[4] Panaite 2006, 57-70.
[5] Benea 1983.
[6] Conrad 2006, 309-331.
[7] Conrad 2006, 315-321.
[8] Wilkes 2005, 124-225.
[9] Petrović 1979.
[10] Petrović 1995.
[11] Dragojević - Josifovska 1982.

The Roman road along the Iron Gates has been studied by P. Petrović[12]. In 2007 he discussed the historical and the geographical characteristics of Roman Dardania[13]. Petrović analyzed the same area in a book published in 2007[14], adding an important study on the Roman road from Naissus to Lissus in 2008[15]. The Roman frontier in the Iron Gate area of Upper Moesia was investigated in 1996[16]. The traces of the Roman road Naissus-Ratiaria were identified on site and the results were published in 2007[17]. In 2008 the road Lissus – Naissus – Ratiaria and the problem of the location of the Timacus Maius station were again investigated[18]. The same station was the object of another article published in 2010[19]. Other studies, such as the one published by P. Donevski about Durostorum, are very useful for details of the settlements discussed[20]. Of course, essential contributions by A. Mócsy, P. Petrović[21], Miroslava Mirković[22] and D. Mitova-Džonova should also be taken into consideration[23].

Some roads of Moesia depicted in the Peutinger map

Along the first road, from Sirmium to Viminacium, the Peutinger map depicts: Sirmium (vignette of the 'double-tower' type, today's Sremska Mitrovica) – XVIII – Bassianis (Donji Petrovci) – VIII – Idiminio – VIIII – Tauruno (vignette of the 'double-tower' type) III – Confluentib(us) – I – Singiduno. Six settlements are mentioned and a total distance of 18 + 8 + 9 + 3 + 1, i.e. 39 Roman miles.

The second road starts at Singiduno and ends at Viminatio. The settlements and distances are: Singiduno (vignette, 'double tower' type, segment grid 6A1) - XIIII - Tricornio – XII – Monte Aureo – XIIII –

[12] Petrovič 1986, 41-47.
[13] Petrović 2007, 7-24.
[14] Petrović 2007 a.
[15] Petrović 2008, 31-40.
[16] Petrović/Vasić 1996, 15-26.
[17] Petrović/Filipović 2007, 29-43.
[18] Petrović/Filipović 2008, 47-58.
[19] Petrović/Filipović 2010, 25-30.
[20] Donevski 1991, 277-280.
[21] Petrović 1996.
[22] Mirković 1977, 171-178; Mirković/Dušanić 1976; Mirković 1986; Mirković 1994, 345-404; Mirković 1996, 27-40; Mirković 2002, 757-763; Mirković 2003; Mirković 2007.
[23] Mitova-Džonova 1986, 504-509.

Margum fl – X – Viminatio (Kostolac, segment grid 6A2, vignette, 'double tower' type). The total distance along this road is 50 miles. Five settlements, four distance figures, and two vignettes are recorded. All these distances have values which represent circa one marching day of the Roman army. The frequency of the distances is: 10 (Roman miles) – 1 (time); 12 – 1; 14 – 2.

The third road is the route along the line of the Danube. The settlements and the distances are: Viminatio – X – Lederata – XIII – Punicum – XI – Vico cuppae – XII – Adnovas – X – Adscrofulas – XV – Faliatis (vignette of the 'double-tower' type) – VIII – Gerulatis – VI – Unam – VI – Egeta – IX – Clevora – IX – Ad Aquas – XXIV – Dortico – XXV – Ad Malum – XVI – Ratiaris (vignette of the 'double-tower' type) – XII – Remetodia – IV – Almo – IX – Pomodiana – IX – Camistro – VI – Aug(us)tis – XX – Pedonianis – XI – Esco (vignette of the 'double-tower' type) – XIV – Vio – IX – Anasamo – XVII – Securispa – XIII – Dimo – XVI – Adnovas (vignette of the 'double-tower' type) – IX – Latro – XVI – Trimamio – XII – Pristis (Ruse) – IX – Tegris (Marten) – XIV – Appiaris (Ryakhovo) – XIII – Trasmarisca – (Tutrakan) – XII – Nigrinianis (Malak Preslavets) – XIII – Tegvlicio (Sreburna) – XI – Durostero (Silistra, vignette of the 'double-tower' type). The total distance along this road is 423 miles. 35 figure distances are mentioned, 35 settlements, and five vignettes of the 'double-tower' type. The frequency of the distances is: 4 (Roman miles) – 1 (time); 6 – 3; 8 – 1; 9 – 7; 10 – 2; 11 – 3; 12 – 4; 13 – 4; 14 – 2; 15 – 1; 16 – 3; 17 – 1; 20 – 1; 24 – 1; 25 – 1. Thus, out of 35 distance figures, 27 (i.e. 77.14%) have values between 8 and 16 miles.

The fourth road continues along the line of the Danube and then along the coast of the Black Sea. The settlements and the distances on the Peutinger map are: Durostero – XVIII – Sagadava – XII – Sucidava (Dunăreni?) – XVII – Axiopolis (Cernavodă) – XVIII – Calidava – XVIII – Carsio (Hârşova) – XXV – Bereo – XXI – Troesmis (Turcoaia, vignette, 'double tower' type) – VIIII – Arubio – XXVI – Novioduni (Isaccea) – XLI – Salsovia (Mahmudia) – XXIIII – Adstoma – LX – Histropoli (Istria) – XL – Tomis (Constanța, vignette, 'triple tower' type). Along this road section, 13 settlements, 13 distance figures, and a total distance of 329 miles are mentioned. Two vignettes are depicted. The frequency of the distances is: 9 (Roman miles) – 1; 12 – 1; 17 – 1; 18 – 3; 21 – 1; 24 – 1; 25 – 1; 26 – 1; 40 – 1; 41 – 1; 60 – 1. Only two distance figures (9 and 12) have values between 8 to 16 miles. The others are, sometimes, unusually high.

Accepting the location of the place-names, I measured the distances between each and every settlements. From Silistra to Dunăreni the distance is 46.23 kilometers. The Antonine itinerary indicates 12 miles, i.e. 17.742 kilometers. The Peutinger map indicates 30 miles: 18 from Silistra to Sagadava, 12 from Sagadava to Sucidava. Thirty miles equals 44.355 kilometers. Therefore, the Peutinger map is more accurate in this case. The same itinerary shows Sagadava between Durostero and Sucivada. Measuring 18 miles (26 kilometers) from Silistra, I reached the settlement of Izvoarele. This settlement is mentioned in the list of the settlements provided by the Barrington Atlas[24] as Sucidava, which is correct. Sucidava on the Peutinger map is Sacidava. According to my measurement, the distance between Izvoarele and Dunăreni amounts to another 21 kilometers, i.e. circa 14 miles, which corresponds to the distance stated on the Peutinger map.

From Dunăreni to Hinog (Axiopolis) the distance measured on digital maps is circa 25 kilometers. This is correctly stated both on the Peutinger map (17 miles – 25.13 kilometers) and in the Antonine itinerary (18 miles – 26.6 kilometers). The distance from Hinog to Capidava is 23 kilometers. The Antonine itinerary states 12 miles, i.e. 17.742 kilometers. The Peutinger map indicates 18 miles between these two settlements, equal to 26.61 kilometers, closer to the real distance. From Capidava to Carsium (Hârşova) the distance measured is 28 kilometers. Both the Peutinger map and the Antonine itinerary register 18 miles (26 kilometers). From Hârşova to Gârliciu the distance is 17 kilometers. The Antonine itinerary mentions 18 miles (26 kilometers) in a straight line, and 27 kilometers if the distance is based on the meandering line of the Danube. The Peutinger map does not mention this settlement. From Gârliciu to Piatra Frecăței the measured distance is 24 kilometers. The Antonine itinerary indicates 10 miles (14.785 kilometers). From Hârşova (Carsium) to Piatra Frecăței (Beroe) the Peutinger map shows 25 miles (36.96 kilometers). As the total distance is 41 kilometers, the information seems quite accurate.

From Beroe (Piatra Frecăței) to Troesmis (Igliţa/Turcoaia, Tulcea County), the distance measured on modern maps is 30 kilometers. The Peutinger map registers 21 miles (31.04 kilometers), while the Antonine itinerary is wrong again, since it states only 14 miles (20.69 kilometers).

[24] Map 22, Moesia Inferior, 340. Available at: http://press.princeton.edu/B_ATLAS/BATL022_.pdf.

From Troesmis to Arrubium (Măcin) the Peutinger map indicates nine miles. In the Antonine itinerary 18 miles are mentioned, and another settlement, Scytica. The distance measured on modern maps, in a straight line, amounts to 13 kilometers (almost 9 miles, as on the Peutinger map). From Arrubium to Dinogetia (Garvăn) the distance measured is, in a straight line, circa 7 kilometers. The Peutinger map does not show Dinogetia. From Arrubium to Noviodunum (Issacea) the distance is 35 kilometers. The Peutinger map indicates 26 miles (38.44 kilometers), therefore the distance is accurate. The distance Arrubium-Dinogetia-Noviodunum in the Antonine itinerary is 9 + 9 = 18 miles (26.61 kilometers), so once again the Antonine itinerary is inaccurate.

From Noviodunum (Issacea) to Salsovia (Mahmudia) the Peutinger map does not contain intermediate settlements. The distance mentioned on the Peutinger map is 41 miles (60.61 kilometers). The Antonine itinerary lists 20 miles (29.57 kilometers) from Noviodunum (Isaccea) to Aegyssus (Tulcea). The distance measured on modern maps is circa 30 kilometers, so this time the Antonine itinerary is accurate. From Aegyssus (Tulcea) to Salsovia (Mahmudia) the same itinerary lists 24 miles (35.484 kilometers). The distance measured on digital maps is only 24 kilometers. The Antonine itinerary adds up to a total of 20 + 24 miles between Noviodunum (Issacea) to Salsovia (Mahmudia), while the Peutinger map indicates 41 miles. The current distance is 54 kilometers.

From Salsovia (Mahmudia) to Tomis the Peutinger map shows a total distance of 124 miles (183.33 kilometers). Only one intermediate settlement in this segment is mapped by both the Peutinger map and the Antonine itinerary. This is Histriopolis. From Mahmudia to Istria the distance measured on maps is circa 126 kilometers, *via* Ad Stoma, today's Sfântu Gheorghe, Tulcea County. The Peutinger map totals 24 + 60 = 84 miles (124.19 kilometers). From Histriopolis to Tomis the Peutinger map registers 40 miles (59.14 kilometers). The distance measured on today's maps is circa 55 kilometers.

From Salsovia (Mahmudia) to Tomis the Antonine itinerary lists 94 miles (138.97 kilometers). The current distance is 181 kilometers. From Histriopolis to Tomis the Antonine itinerary records 25 miles (36.96 kilometers), less accurate than the Peutinger map (40 miles); the current distance is 55 kilometers. From Mahmudia to Istria the same Antonine itinerary lists 69 miles (102.01 kilometers). Again, this number is too low and inaccurate compared to the Peutinger map and the distance measured on current maps.

To sum up, the total distance between Durostero and Tomis is 329 miles on the Peutinger map, i.e. 459.81 kilometers. The same distance is stated in the Antonine itinerary as 276 miles, i.e. 408.06 kilometers. The current distance, measured on digital maps, is 476 kilometers. Once again, the information from the Peutinger map is more accurate than the data provided by the Antonine itinerary.

The fifth road continues the route of the fourth road, along the coast of the Black Sea. The settlements and the distances are: Tomis – XII – Stratonis – XXII – Callatis (Mangalia) – XXIIII – Trissa (Bŭlgarevo) – XII – Bizone (Kavarna) – XII – Dyosinopoli (XXXII) – Odessos (Varna, vignette of the 'double-tower' type) – XI – Erite – XVI – Templo Iovis (Obzor, vignette, associated with temples, type B2) – XVI – Messembria – XII – Ancialis (Pomorije, vignette of the 'double-tower' type). The total distance along this road is 169 miles. Along this road, the Peutinger map depicts 10 place-names, two vignettes of the 'double-tower' type, one associated with temples. The frequency of the distances is: 11 (Roman miles) – 1 (time); 12 – 4; 16 – 2; 22 – 1; 24 – 1; 32 – 1.

The sixth road, running from south to north, connects Ancialis with Durostero. The settlements and distances along it are: Ancialis – XVIII – Cazalet – XVIII – Scatras – XII – Pannisso – XII – Marcianopolis (Devnya) – XLV – Palmatis – XIIII – Durostero. Along this road, a total distance of 119 miles is recorded as well as five settlements and six distances. The frequency of these distances is: 12 (miles) – 2 (times); 14 – 1; 18 – 2; 45 – 1.

The seventh road starts from the same Ancialis (a cross-roads) and, going from east to west, it reaches Phinipopolis/Philipopolis (Plovdiv). The settlements and the distances are: Ancialis – XII - Aquis calidis (segment 7B4, vignette, thermal baths type, symbol type C30) – L – Cabilis (Kabile) – LII – Berone – XXXVI – Ranilum – XXVII – Phinipopolis (Plovdiv, vignette of the 'double-tower' type). The total distance along this road is 177 miles. Two vignettes are shown, one of the double-tower' type and the other one associated with thermal places. Five distance figures are given. The frequency of the distances is: 12 (miles) – 1 (time); 27 – 1; 36 – 1; 50 – 1; 52 – 1.

The eighth road starts at Phinipopolis and reaches Marcianopolis. The settlements and the distances are: Phinipopolis – XII – Subradice (Hristo Danovo) – VI – Montemno – VIII – Ad Radices – X – Sostra (Lomets) – Nicopolistro (Nikjup) – CXXX – Marcianopolis (Devnya). The total distance is 166 miles. Six settlements and five

distance figures are mentioned. The frequency of these distances is: 6 (Roman miles) – 1 (time); 8 – 1; 10 – 1; 12 – 1; 130 – 1.

The ninth road connects Sostra to Esco (Gigen). The settlements and the distances are: Sostra – XIII – Melta – X – Dorionibus – XI – Storgosia – VII – Adputea – Esco (Gigen, vignette, 'double tower' type). Four settlements, four distance figures and 41 miles are recorded. The frequency of these distances is: 7 (Roman miles) – 1 (time) – 10 – 1; 11 – 1; 13 – 1.

The tenth road connects Viminacium to Naissus. The settlements and the distances are: Viminatio – Municipio – X – Iovis Pago – XII – Idimo – XVI – Horrea Magi – XVII – Presidio Dasmini – XV – Presidio Pompei – XII – Gramrianis – XIII – Naisso (vignette, 'double tower' type). The total distance is 113 miles. Eight settlements and eight distance figures are recorded. The frequency of these distances is: 10 (Roman miles) – 1 (time); 12 – 2; 13 – 1; 15 – 1; 16 – 1; 17 – 1; 18 -1. Of these, five distance figures are between the values of 8 and 16 miles.

The eleventh road connects Naissus to Ratiaris. The settlements and the distances are: Naisso – XXVII - Timaco Maiori – X – Timaco Minori – XXVII – Conbustica – XXVII – Ratiaris (Vidin, vignette of the 'double-tower' type). A total distance of 91 miles, four settlements, and one vignette are shown.

The twelfth road connects Naissus to Phinipopolis. The settlements and the distances are: Naisso – XXIIII – Romesiana (Bela Palanka) – XXV – Turribus (Pirot) – XXIIII – Meldiis – XXVIII – Sertica (Sofia, vignette, 'double tower' type) – XX – Sarto – XVIII – Egirca – XIIII – Zyrmis – XXIIII – Phinipopolis (Plovdiv, vignette of the 'double-tower' type). A total distance of 177 miles is recorded, as are eight settlements and eight distance figures, together with two vignettes. The frequency of these distances is: 14 (Roman miles) – 1; 18 – 1; 20 – 1; 24 – 3; 25 – 1; 28 – 1.

The thirteenth road connects Naissus to Gabuleo. The settlements and distances are: Naisso – XIIII – Adherculem (Zitorada, vignette type B29, associated with this toponym) – Hammeo (Prokuplje) – XX – Adfines – XX – Vindenis – XIX – Viciano (Ulpiana) – XXV – Theranda – XXX – Gabuleo. A total distance of 134 miles, seven settlements and seven distance figures are mentioned.

The fourteenth road connects Naisso to Scuiris. The settlements and the distances are: Naisso – XIIII – Adherculem (vignette) - VI – Hammeo – Scuiris (Scupis) – XX. A total distance of 20 miles is recorded.

Here are some statistics based on the data presented above. From the total of 116 distance figures, 62 have values ranging from 8 to 16 miles. This represents 53.448 %. If we also include the distance figures 17 and 18, we obtain a total of 73 distances out of 116 between the values of 8 to 18 miles, representing 62.931 %. 23 distance figures have values ranging between 20 and 30 miles, representing 19.827 %. 10 distance figures out of 116 have values between 31 and 130, representing 8.62 %. Another 10 distance figures have values from 1 to 7 miles. A total number of 2048 miles is recorded in Moesia. If we divide this figure by the number of settlements (119), we obtain 17.21 miles, the average distance.

The roads of Moesia listed in the Antonine itinerary

Along the first road, from Sirmium to Singidunum, the Antonine itinerary lists four settlements, three distance figures, and a total distance of 74 miles:

131,4	Sirmi civitas	26
131,5	Bassianis civitas	18
131,6	Tauruno classis	30
132,1	Singiduno castra	

Compared to this, from Sirmium to Singidunum, the *Itinerarium Burdigalense* lists 50 miles.

Along the second road, from Singidunum to Viminacium, the same document lists 6 settlements, 5 distances, and a total distance of 52 miles:

132,1	Singiduno castra	4 miles
132,2	Aureo Monte	24 miles
132,3	Ab Aureo Monte Vinceia	6 miles
132,4	Margo	8 miles
133,1	et leg. m. p. VIII	
133,2	inde Euminacio	10 miles
133,3	Viminacio	

Along the third road, from Viminacium to Durostorum, the Antonine itinerary lists 26 settlements, 26 distance figures, and 386 miles:

217,7	Cuppe	24
218,1	Novas	24
218,2	Talia	12
218,3	Egeta	21
218,4	Aquis	16
219,1	Dortico	10
219,2	Bononia	17
219,3	Ratiaria leg. XIIII GG.	18
219,4	Almo	18
220,1	Cebro / Cebrus	18
220,2	Augustis	18
220,3	Variana	12
220,4	Valeriana	12
220,5	Oesco leg. V Mac.	12
221,1	Uto	14
221,2	Securisca	12
221,3	Dimo	12
221,4	Novas leg. I Ital.	16
222,1	Scaidava	18
222,2	Trimmamio	7
222,3	Sexantapristis	12
222,4	Tigra	9
222,5	Appiaria	13
223,1	Transmariscam	16
223,2	Candidiana	13
223,3	Teclicio	12
223,4	Dorostoro leg. XI Cl.	

Along the fourth road, from Durostorum to Tomis, the Antonine itinerary lists 18 settlements, 17 distance figures, and a total distance of 276 miles:

223,4	Dorostoro leg. XI CI.	12
224,1	Sucidava	18
224,2	Axiupoli	12
224,3	Capidava	18
224,4	Carso	18
224,5	Cio	10

225,1	Biroe	14
225,2	Trosmis leg. I Iovia	18
225,3	Scytica	
225,4	Arrubio	9
225,5	Diniguttia	9
226,1	Novioduno leg. II Herculea	20
226,2	Aegiso	24
226,3	Salsovia	17
226,4	Salmorude	9
226,5	Vale Domitiana	17
227,1	Ad Salices	26
227,2	Historio	25
227,3	Tomos	

The fifth road, between Tomis and Ancialis, is a continuation of the fourth road. The Antonine itinerary lists 8 settlements, 7 distance figures, and a total distance of 176 miles:

227,3	Tomos	36	
227,4	Callacis		30
228,1	Timogitia		18
228,2	Dionisopoli		24
228,3	Odisso	24	
228,4	Marcianopoli		18
229,1	Scatris		26
229,2	Ancialis		

Out of 58 distance figures, 25 (43.10%) have values ranging from 8 to 16 miles. This is a particular case for the Antonine itinerary. Eight distance figures of 12 miles can be found along the third road, and two along the fourth road, which are, in fact, stretches of the same Roman road along the Danube, reaching the final destination at Tomis. This road was projected and constructed by the Roman army. That is why the ancient sources record distances of 12 miles in 10 cases. The Antonine itinerary used military documents for the mapping of this particular road. 14 distance figures out of 58 (24.13 %) have values ranging beween 20 to 30 miles. Six of these amount to 24 miles. The distance figure of 18 miles is represented 12 times. A total number of 964 miles is recorded for

Moesia in the Antonine itinerary. If we divide this figure by the number of settlements (62), we obtain an average value of 15.548 miles.

Final remarks

For Moesia, the Peutinger map mentions 14 roads, a total of 2048 miles, 119 settlements, 116 distance figures, 17 double-tower vignettes and two vignettes representing thermal places. Out of 116 figures, 62 are between the values of 8 and 16 miles, representing 53.448 %. 23 distance figures range in value between 20 and 30 miles, representing 19.827 %. The average distance, calculated by dividing the total figure of miles by the total number of settlements, is 2048 : 116 = 17.655 miles. The most frequent distance figure in Moesia, depicted on the Peutinger map, is 12 miles, recorded 16 times.

The Antonine itinerary lists in Moesia five roads, a total distance of 964 miles, 62 settlements, and 58 distance figures. 25 distance figures out of 58 (43.10%) have values from 8 to 16 miles. 14 distance figures out of 58 (24.13%) have values ranging between 20 and 30 miles. Six of these measure 24 miles. The distance figure of 18 miles is represented 12 times. A total of 964 miles is recorded for Moesia in the Antonine itinerary. If we divide this figure by the number of settlements (62), we obtain 15.548 miles, the average distance.

Based on the examples discussed above, and on several other analyses which have been already published, I am tempted to believe that the Peutinger map was compiled using early *itineraria picta*, created by the army, as sources. Therefore, I suggest that the short distances registered by the Peutinger map reflect the marching stages of the Roman army. In other words, the Peutinger map had better, far more accurate sources: road descriptions, distances recorded in ancient literary sources, lists of settlements including the distances between them, *formae*, military *itineraria* (depicted or written), maybe even *formulae provinciarum* etc. It was in the fifth century A.D., probably during the reign of Emperor Theodosius II, that it was compiled in order to assemble, in a 'map', all the geographical knowledge of the Roman Empire available at that time. This document may have accompanied, as an appended map, one of the two geographical works written in 435 A.D.: *Divisio orbis terrarum* and *Demensuratio provinciarum*[25].

[25] Weber 1976, 22.

It might be possible that the Antonine itinerary was compiled from several sources and for an administrative purpose. The person or persons who compiled the document melted together different categories of sources: probably lists of settlements and the distances recorded in the imperial archives of the public transportation system (*cursus publicus*), itineraries recorded on travel permits (*evectiones*), and, extremely rarely, data from military itineraries. Although it is apparent that the provinces were listed according to a certain order, the order of the itineraries within a province does not follow any noticeable criteria. In Pannonia as well as in Moesia, but also in Britannia, the listing of the itineraries (of the roads) seems chaotic. Some itineraries are doubled, others are presented from south to north and then, along the same road, from north to south.

As I have already pointed out, in numerous cases the distances recorded in the Antonine itinerary do not match those measured on digital maps along the former Roman roads. Even the comparison and the analysis of the same roads, as it was undertaken for the frontier road in Pannonia, lead to the final conclusion that the Peutinger map and the Antonine itinerary had different sources.

References

Benea 1983	D. Benea, Din istoria militară a Moesiei Superior şi a Daciei. Legiunea a VII-a Claudia şi legiunea a IIII-a Flavia, Cluj-Napoca, 1983.
Conrad 2006	S. Conrad, Archaeological Survey on the Lower Danube: Results and Perspectives, in: P. G. Bilde, V. F. Stolba (eds.), Surveying the Greek Chora: The Black Sea Region in a Comparative Perspective. Denmark, 2006, 309-331.
Donevski 1991	P. Donevski, Durostorum, Municipium Aurelium und das Lager der Legio XI Claudia, in: V. A. Maxfield, M. J. Dobson (eds.), Roman Frontier Studies 1989, proceedings of the XVth International Congress of Roman Frontier Studies, Exeter, 1991, 277-280.
Dragojević-Josifovska 1982	B. Dragojević - Josifovska, Inscriptions de la Mésie Supérieure. Vol. VI. Scupi et la région de Kumanovo (Centre d'études épigraphiques et numismatiques de la Faculté de philosophie de l''Université de Beograde), Belgrade, 1982.

Lisičar 1978 — P. Lisičar, Tabula Peutingeriana i rimski itinerari. Pregled i primjedbe (The Tabula Peutingeriana and Roman itineraries. Survey and remarks), Materijali, 17, 1978, 9-19 (English summary, 15-19).

Ivanov 1997 — R. Ivanov, Das römische Verteidigungssystem an der unteren Donau zwischen Dorticum und Durostorum (Bulgarien) von Augustus bis Maurikios, BerRGK, 78, 1997, 467–640.

Mirković/Dušanić 1976 — M. Mirković, S. Dušanić, Inscriptions de la Mésie Supérieure. Vol. I. Singidunum et le Nord-Ouest de la province, Belgrade, 1976.

Mirković 1977 — M. Mirković, Zum Problem der Militärgeschichte Obermöesien im 1. Jahrhundert, Živa antika, 27, 1977, 171-178.

Mirković 1986 — M. Mirković, Inscriptions de la Mésie Supérieure. Vol. II. Viminacium et Margum, Belgrade, 1986.

Mirković 1994 — M. Mirković, Beneficiarii consulares in Sirmium, Chiron, 24, 1994, 345-404.

Mirković 1996 — M. Mirković, The Iron Gates (Djerdap) and the Roman Policy on the Moesian Limes A.D. 33-117, in: P. Petrović (ed.), Roman Limes on the Middle and Lower Danube, Belgrade, 1996, 27-40.

Mirković 2002 — M. Mirković, Deserted Forts - The Moesian Limes after the Conquest of Dacia, in Limes XVIII. Proceedings of the XVIIIth International Congress of Roman Frontier Studies held in Amman, Jordan (September 2000), BAR, International Series, 1084 (II), 2002, 757-763.

Mirković 2003 — M. Mirković, Römer an der mittleren Donau. Römische Straßen und Festungen von Singidunum bis Aquae, Belgrade, 2003.

Mirković 2007 — M. Mirković, Moesia Superior: Eine Provinz An Der Mittleren Donau (Zaberns Bildbände zur Archäologie. Sonderbände der antiken Welt), Mainz, Philipp von Zabern, 2007.

Mitova-Džonova 1986 — D. Mitova-Džonova, Stationen und Stützpunkte der römischen Kriegs- und Händelsflotte am Unterdonaulimes, in: Studien zu den Militärgrenzen Rom III: 13. Internationaler Limeskongress Aalen 1983 Vorträge (Forschungen und Berichte zur Vor- und Frühgechichte in Baden-Württemberg 20), Stuttgart, 1986, 504-509.

Mócsy 1974 — A. Mócsy, Pannonia and Upper Moesia. A History of the Middle Danube Provinces of the Roman Empire, London – Boston, 1974.

Panaite 2004 — A. Panaite, The system of Roman roads in Moesia Inferior, Ephemeris Dacoromana, XII, 2, 2004, 41-92.

Panaite 2006 — A. Panaite, Drumuri romane din teritoriul oraşului Tropaeum Traiani, SCIVA, 57, 1-4, 2006, 57-70.

Petrović 1979 — P. Petrović, Inscriptions de la Mésie Supérieure. Vol. IV. Naissus. Remesiana. Horreum Margi (Centre d'études épigraphiques et numismatiques de la Faculté de philosophie de l''Université de Beograde), Belgrade, 1979.

Petrovič 1986 — P. Petrovič, La voie romaine des Ports de Fer, Starinar, 37, 1986, 41-47.

Petrović 1995 — P. Petrović, Inscriptions de la Mésie Supérieure. Vol. III/2. Timacum Minus et la valée du Timok (Centre d'études épigraphiques et numismatiques de la Faculté de philosophie de l''Université de Beograde), Belgrade, 1995.

Petrović 1996 — P. Petrović (ed.), Roman Limes on the Middle and Lower Danube, Cahiers des Portes de Fer, 2, Belgrade, 1996.

Petrović 2007 — V. P. Petrović, Pre-Roman and Roman Dardania. Historical and Geographical Considerations, Balcanica, 37, 2007, 7-24.

Petrović 2007a — V. Petrović, Dardanie dans les itinéraires romaines: les villes et les agglomérations, Belgrade, 2007.

Petrović 2008 — V. Petrović, The Roman road Naissus - Lissus: the shortest connection between Rome and the Danubian Limes, ArchBulg, 12, 1, 2008, 31-40.

Petrović/Vasić 1996 — P. Petrović, M. Vasić, The Roman frontier in Upper Moesia: archaeological investigations in the Iron Gate area - main results, in: P. Petrović (ed.), Roman Limes on the Middle and Lower Danube, Cahiers des Portes de Fer, 2, Belgrade, 1996, 15-26.

Petrović/Filipović 2007 — V. P. Petrović, V. Filipović, Newly-discovered Traces of the Roman Naissus–Ratiaria Road and the Problem of Locating Two Timacum Stations, Balcanica, 38, 2007, 29-43.

Petrović/Filipović 2008 — V. P. Petrović, V. Filipović, Locating the Timacum Maius Station on the Roman Road Lissus – Naissus – Ratiaria: New Archaeological Research, Balcanica, 39, 2008, 47-58.

Petrović/Filipović 2010 — V. P. Petrović, V. Filipović, The Roman Station Timacum Maius (?). Evidence of Urbanization and

Communications, Balcanica, 40, 2010, 25-30.

Todorov 1937 — Y. Todorov, Le grandi strade romane in Bulgaria, Rome, 1937.

Torbatov 2000 — S. Torbatov, The Roman road Durostorum - Marcianopolis, ArchBulg, 4, 1, 2000, 59-72.

Weber 1976 — E. Weber, Tabula Peutingeriana. Codex Vindobonensis 324 (with separate Kommentar volume), Graz, 1976.

Wilkes 2005 — J. J. Wilkes, The Roman Danube: An Archaeological Survey, JRS, 95, 2005, 124-225.

Zavadzki 1964 — T. Zavadzki, Emporium Piretensium. Contribution à la géographie historique des provinces de Thrace et de Mésie Inférieure, BCH, 88, 1964, 531-538.