The road from Aquileia to Viminacium:
strategy of the connection between Italy and the Balkan provinces

In various circumstances, scholars have outlined the strategic importance of roads and the mastery of the Roman engineers in the process of the projection and construction of routes across the entire Empire\(^1\). To assure the political, economic and strategic unity of the Roman Empire, the Romans succeeded in creating a vast network of paved roads, covering all areas, that was so dense that during Trajan’s time more than 55,000 Roman miles of roads were built across the

\(1\) See, for example, some essential contributions: Chevallier 1997; Rathmann 2003; Klee 2011; Fodorean 2013.

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Empire. For centuries, the Roman domination was based on these roads.

The road connecting Aquileia with Viminacium represented an important via militaris. It was built with a clear strategic role, to connect the northern part of Italy with the Balkan provinces. The road diagonally traverse the region from northern Italy, passing through the southern part of Pannonia, to connect with cities along the Danube River in Moesia Superior. Its importance and its status of a major axis of the Roman Empire were clearly highlighted in some important historical moments. One of these moments is the famous journey of an unknown official of the Roman Empire in A.D. 333, from Burdigala (present-day Bordeaux, France) to Jerusalem, known as Itinerarium Burdigalense sive Hierosolymitanum.

Itineraria picta et adnotata: depicting and listing settlements and distances in the Roman Empire

Since Miller’s first extensive publication of the Peutinger map in 1916, over a period of a century, scholars have gradually debated some of the most important cartographic documents of the Roman world: 1. The 1st century A.D. Artemidorus Papyrus; 2. The so-called ‘stadiums provinciae Lyciae’; 3. The Amiens Patera, listing stations along Hadrian’s Wall; 4. the Rudge Cup, discovered in 1725 at Rudge, near Froxfield, in Wiltshire, also listing stations along Hadrian’s Wall; 5. Epigraphical lists of settlements and distances, discovered in Allichamps, Autun, Junglinster, and Fedj-Souiloud (Africa); 6. The famous Forma Urbis Romae, the only scale map surviving from Roman times, dating from Septimius Severus’ reign; 7. the 3rd century A.D. shield from Dura Europos; 8. the Vicarello

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2 Von Hagen 1978.
3 Miller 1916.
5 Şahin 1994, 130–135.
6 Breeze (ed.) 2012.
7 Brodersen 2001, 7–21.
goblets, also known as the Vases Apollinaires, from the 4th century A.D.; the Antonine itinerary; and the Peutinger map.

Except for the Forma Urbis Romae, which is a scale map, all the other documents above highlight the same fact. Even though they had the knowledge to produce large scale maps, the Romans preferred the easiest possible solution, i.e. the creation of painted and written itineraries. Simply put, as Brodersen resumed in 2001, the Romans were interested in how to get from point A to point B. This concept lead to the creation of painted and written itineraries, which recorded the settlements and distances in Roman miles along the main roads.

Only one document eluded the historians’ attention. This is the so-called Itinerarium Burdigalense.

Itinerarium Burdigalense sive Hierosolymitanum. A short overview

Dated to A.D. 333, the document is a list of the settlements and distances written by an anonymous traveller who actually planned and executed a long journey from Burdigala (Bordeaux, France) to Jerusalem. Copied between the 8th and 10th centuries, the
The key question of our study is: Can the Bordeaux itinerary shed more light on the problem of the sources of these ancient documents? If so, which method should be used to prove this? Therefore, we decided to compare data from the Peutinger map and the Antonine itinerary with those contained in the Bordeaux itinerary, by discussing a sector of the Aquileia–Viminacium road, more precisely the route between Emona and Siscia. The objective was to see if there are similarities or differences between these documents.

The road along the Drava River from Emona to Taurinum, in the Peutinger map

The settlements and distances along this road are:

Emona – VIII – river crossing (Fl. [ - ? - ])


The road along the Roman roads, as the traveller from A.D. 333 did. Regarding this aspect, Pascau Arnaud mentioned: “Il est tout à fait significatif que le compilateur de l’Itinéraire Antonin ait choisi, de propos délibéré, de retirer des listes de toponymes toutes les mutationes, pour autant que sa source lui permettait de les reconnaître, comme le montre la comparaison avec l’Itinéraire de Bordeaux et avec la Table de Peutinger”.16 We suggest that one must clearly distinguish between the purpose, character and sources of each document in question, e.g. the Peutinger map, the Antonine itinerary and the Bordeaux itinerary. The first two should be perceived as documents recording all the major roads of the Roman Empire, while the Bordeaux itinerary actually reflects the route chosen by a traveller who planned and fulfilled his journey during the 4th century A.D.

The settlements and distances along this road are:

Emona – VIII – river crossing (Fl. [ - ? - ])


16 Arnaud 1998, 209.

The total distance registered on the Peutinger map, from Emona via Mursa to Taurunum, is 336 miles, i.e. 496.77 km. Along this road, 31 settlements are mentioned and 29 distance figures are provided. The frequency of these distances is: 6 (miles) – 1 (one time), 8 – 3, 9 – 6, 10 – 8, 11 – 4, 12 – 2, 13 – 1, 18 – 3, 37 – 1. Of these, 24 distance figures are recorded between the values of 8 to 16 miles. This means that 24 of the 29 figures, representing the average distance achievable in one day, amount to 82.75% of the total given.

In the case of the roads mentioned above, R. Talbert noticed some interesting cartographic details. From Emona, the route crosses the River Savus. The name Adpublicanos and the distance figure of VI, as well as the next one (Adrante XXXVII), were added after NORICO. A clear stop is marked between the words Aqua viva. The start of the stretch from Ad Labores Pont Ulcae is not marked. As Talbert noticed, it seems logical that the vignette between Ad Labores Pont Ulcae and Cansilena has no name because of the lack of space there.

Subsequently, the first road is listed. I have mentioned the toponyms exactly as listed in the Antonine itinerary, then the basic form, the current settlement, and the distance in Roman miles.

| 128.6 | Aquileia civitas | Aquileia | Aquileia (Italy) | XXXI |
| 128.7 | Fluvio Frigido | Fluvius Frigidus | Ajdovščina (Slovenia) | XXXVI |
| 129.1 | Longatico mansio | Longaticum mansio | Logatec (Slo) | XXII |
| 129.2 | Hennoma civitas | Emona civitas | Ljubljana (Slo) | XVII |
| 129.3 | Adrante mansio | Atrans mansio | Trojane (Slo) | XV |
| 129.4 | Caleia civitas | Celeia civitas | Celje (Slo) | XXIII |
| 129.5 | Ragundone | Ragando | Spodnje Grušovje (Slo) | XVIII |
| 129.6 | Patavione civitas | Poetovio civitas | Ptuj (Slo) | XVIII |
| 130.1 | Aqua Viva | Aqua viva | Petrijane (Croatia) | XX |
| 130.2 | Iovia hic Sinistra | Iovia | Ludbreg (Cro) | XVIII |
| 130.3 | Lentulis | Lentulis | Vrje (Cro) | XXII |
| 130.4 | Sirota | Serota | Taboriste–Borova (Cro) | XXXI |
| 130.5 | Marinianis | Magniana | Donji Mihojac (Cro) | XX |
| 130.6 | Vereis | Berebis/Vereis | Podgajci Podravski (Cro) | XXII |
| 131.1 | Mursa civitas | Mursa civitas | Osijek (Cro) | XXVI |
| 131.2 | Cibalae civitas | Cibalae civitas | Vinkovci (Cro) | XXIII |
| 131.3 | Ulmos vicus | Ulmos vicus | Tovarnik (Cro) | XXII |
| 131.4 | Sirmium civitas | Sirmium civitas | Sremski Mitrovici (Serbia) | XXVI |
| 131.5 | Bassianis civitas | Bassiana civitas | Donji Petrovci (Se) | XVIII |
| 131.6 | Tauruno classis | Taurunum | Zemun (Se) | XXX |
| 132.1 | Singiduno castra | Singidunum castrum | Beograd/Belgrade (Se) |
Between Emona and Singidunum, the Antonine itinerary lists 18 place-names and 17 distance figures. The total distance, if summed up, amounts to 391 miles. The frequency of these distance figures is: 18 (miles) – 5 (times); 20 – 2; 22 – 2; 23 – 1; 24 – 1; 25 – 1; 26 – 2; 30 – 1; 31 – 1; 32 – 1.

We will now compare the data provided by the Antonine itinerary and the Peutinger map with reference to this road. First, the length of the road differs: 336 miles on the Peutinger map and 391 miles in the Antonine itinerary. The Peutinger map depicts 31 settlements (including Emona and Taurunum), while the Antonine itinerary lists only 18.

The distances are very different. Their comparison leads to an important conclusion: all the distance figures in the Antonine itinerary are higher in comparison to those on the Peutinger map.

The Sirmium–Singidunum road sector in the Peutinger map and in the Antonine itinerary

The difference between the precise data from the Peutinger map as compared to that from the Antonine itinerary is striking if the distances and settlements between Sirmium and Singidunum are analysed. The Peutinger map mentions Sirmium (vignette, ‘double tower’ type) – XVIII – Bassianis (Donji Petrovci) – VIII – idiminio – VIII – Tauruno (vignette, ‘double tower’ type) – III – Confluentib(us) – I – Singiduno.

The Antonine itinerary states:

<table>
<thead>
<tr>
<th>131.4</th>
<th>Sirmi civitas</th>
<th>Sirmium civitas</th>
<th>Sremska Mitrovica (Serbia)</th>
<th>XXVI</th>
</tr>
</thead>
<tbody>
<tr>
<td>131.5</td>
<td>Bassianis civitas</td>
<td>Bassiana civitas</td>
<td>Donji Petrovci (Se)</td>
<td>XVIII</td>
</tr>
<tr>
<td>131.6</td>
<td>Tauruno classis</td>
<td>Taurunum</td>
<td>Zemun (Se)</td>
<td>XXX</td>
</tr>
<tr>
<td>132.1</td>
<td>Singiduno castra</td>
<td>Singidunum castrum</td>
<td>Beograd/Belgrade (Se)</td>
<td></td>
</tr>
</tbody>
</table>

Comparative analysis of the Emona–Singidunum road in Tabula Peutingeriana, Itinerarium Antonini and the Itinerarium Burdigalense

We grouped together all data available for this road from the three sources. This data is shown in Table 1.

The Bordeaux itinerary records, from Emona to Singidunum, 38 settlements and 37 distance figures. Of these settlements, 9 are recorded as civitates (Emona, Celeia, Poetovion, Iovia, Mursa, Sirmium, Bassianis and Singidunum), 8 are recorded as mansiones (Hadrante, Ragindone, Aqua Viva, Lentolis, Serota, Maurianis, Vereis and Ulmo) and 21 are recorded as mutationes (Ad Quartodecimo, Ad Medias, Lotodos, Pultovia, Ramista, Populis, Sunista, Peritur, Cardono, Cocconis, Bolentia, Serena, Iovalia, Mersella, Leutuoano, Calelena, Spaneta, Vedulia, Fossis, Novici and Altina).

Out of these 21 mutationes, only 10 are recorded in the Bordeaux itinerary: Ad Quartodecimo, Ad Medias, Lotodos, Pultovia, Cocconis, Spaneta, Vedulia, Fossis, Novici and Altina.

The total distance recorded in the Bordeaux itinerary from Emona to Singidunum is 398 Roman miles. The frequency of these distances is: 8 (miles) – 6 (times); 9 – 6; 10 – 9; 11 – 3; 12 – 10; 13 – 3; 14 – 1. As one may observe, all 37 distance figures are between 8 to 16 miles, close to the normal iustum iter of 12 miles. More precisely for this case, 19 distance figures recorded represent values of 9 and 10 miles.

The Peutinger map depicts, between Emona and Singidunum, a total distance of 340 Roman miles. The frequency of these distances is: 1 (mile) – 1 (time); 3 – 1; 6 – 1; 8 – 3; 9 – 6; 10 – 8; 11 – 4; 12 – 2; 13 – 1; 18 – 3; 37 – 1. Along this road, 34 settlements are mentioned with 31 distance figures. Out of these distances, 24 distance figures are recorded between the values of 8 to 16 miles. This means that 24 of the 31 figures, representing the average distance achievable in one day, amount to 77.41% of the total given. In comparison with the Bordeaux itinerary, the Peutinger map depicts 34 settlements. 28 settlements are recorded both in the Bordeaux itinerary and in the Peutinger map.
1. 560.7 civitas Emona (ItBurd) / Emona (TP);
2. 560.9 mansio Hadrante (ItBurd) / Adrante (TP);
3. 560.12 civitas Celeia / Celeia (‘double tower’ vignette) (TP);
4. 561.2 mansio Ragindone (ItBurd) / Ragandone (TP);
5. 561.4 civitas Poetoivone (ItBurd) / Petavione (‘double tower’ vignette) (TP);
6. 561.7 mutatio Ramista (ItBurd) / Remista (TP);
7. 561.8 mansio Aqua Viva / Aqua viva (TP);
8. 561.9 mutatio Populis (ItBurd) / Populus (TP);
9. 561.10 civitas Iovia (ItBurd) / Botivo (TP);
10. 561.11 mutatio Sunista (ItBurd) / Sonista (TP);
11. 562.1 mutatio Peritur (ItBurd) / Piretis (TP);
12. 562.2 mansio Lentolis (ItBurd) / Luntulis (TP);
13. 562.3 mutatio Cardono (ItBurd) / Iovia (TP);
14. 562.5 mansio Serota (ItBurd) / Sirotis (TP);
15. 562.6 mutatio Bolentia (ItBurd) / Bolentio (TP);
16. 562.7 mansio Maurianis (ItBurd) / Marinianis (TP);
17. 562.9 mutatio Serena (ItBurd) / Seronis (TP);
18. 562.10 mansio Vereis (ItBurd) / Berebis (TP);
19. 562.11 mutatio Iovia (ItBurd) / Iovallio (TP);
20. 562.12 mutatio Mersella (ItBurd) / Mursa Minor (TP);
21. 562.13 civitas Mursa (ItBurd) / Mursa maior (‘double tower’ vignette) (TP);
22. 563.1 mutatio Leutuloano (ItBurd) / Piretis (TP);
23. 563.2 civitas Cibalis (ItBurd) / ‘double tower’ vignette, no name, possibly Cibalae (TP);
24. 563.3 mutatio Caena (ItBurd) / Canisilea (TP);
25. 563.4 mansio Ulmo (ItBurd) / Ulmospaneta (TP);
26. 563.7 civitas Sirmium (ItBurd) / Sirmium (‘double tower’ vignette) (TP);
27. 563.11 civitas Bassianis (ItBurd) / Bassianis (TP);
28. 563.14 civitas Singiduno (ItBurd) / Singiduno (‘double tower’ vignette).

Of the 37 distance figures recorded in the Bordeaux itinerary and 31 distance figures recorded in the Peutinger map, 6 distance figures have the same value in both.

The Antonine itinerary lists 18 settlements, 17 distance figures and a total distance of 391 Roman miles. The frequency of the distances is: 18 (miles) – 5 (times); 20 – 2; 22 – 2; 23 – 1; 24 – 1; 25 – 1; 26 – 2; 30 – 1; 31 – 1; 32 – 1. The values of the distance figures in the Antonine itinerary are much higher compared with those from the Bordeaux itinerary and the Peutinger map. Another important aspect is that the Antonine itinerary mentions only mansiones and civitates. As Pascal Arnaud observed, mutationes are not recorded in the Antonine itinerary, at least not for this road section. Of all distance figures, none fit the values recorded in the Bordeaux itinerary and the Peutinger map. There is only one exception: from Ragundone to Patavione the Antonine itinerary records 18 miles, the same value as in the Peutinger map. This aspect supports our affirmation that the Antonine itinerary seems the most inaccurate ancient source in comparison with the others.

Consequently, between Emona and Singidunum:
1. The Bordeaux itinerary records 38 settlements, 37 distance figures and a total distance of 398 Roman miles;
2. The Peutinger map depicts 34 settlements, 31 distance figures and a total distance of 340 Roman miles;
3. The Antonine itinerary lists 18 settlements, 17 distance figures and a total distance of 391 miles.

The online database http://orbis.stanford.edu/ records, between Emona and Singidunum, a total distance of 515 kilometres, which represent 348.32 Roman miles. However, the database indicates the route Emona–Siscia–Sirmium–Singidunum in both versions, as the fastest and cheapest route. This is the road along the Sava River. Our road, the one along the Drava River (north of Sava), is, obviously, longer than the road along the Sava.

In some cases, the distances do not fit. For example, from Emona to Adrante, the Bordeaux itinerary records 14 + 10 = 24 Roman miles, while the Peutinger

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1. Fodorean 2016. I have realised an in-depth analysis of all the settlements and distances recorded in the Peutinger map and in the Antonine itinerary for three provinces: Pannonia, Dacia and Moesia. The Peutinger map depicts, for these three provinces, a total distance of 3,952 miles, a total number of 256 settlements, and a total number of 243 distance figures (see Fodorean 2016, 145). Of these, 153 distance figures out of 243 have between 8 to 16 miles in value, representing 62.962 %. The most frequent distances recorded in all the provinces are: 12 miles – recorded in 32 cases; 9 miles – recorded in 22 cases; 10 miles – recorded in 21 cases; 14 miles – recorded in 20 cases; 13 miles – recorded in 17 cases; 16 miles – recorded in 13 cases; 11 miles – recorded in 12 cases; 8 miles – recorded in 10 cases. In total, the Antonine itinerary lists, in Pannonia and Moesia, 184 distance figures, 4,191 miles, and 196 settlements. Out of 126 distance figures mentioned in Pannonia, 80 have values from 20 miles to 30 miles. The most frequent distances recorded in all the provinces in the Antonine itinerary are: 18 miles – recorded in 21 cases; 30 miles – recorded in 20 cases; 24 miles – recorded in 18 cases; 25 miles – recorded in 16 cases; 12 miles – recorded in 13 cases; 26 miles – recorded in 11 cases; 22 miles – recorded in 9 cases; 16 miles – recorded in 9 cases; 20 miles – recorded in 8 cases (Fodorean 2016, 147).
<table>
<thead>
<tr>
<th>Itinerarium Burdigalense</th>
<th>Distance</th>
<th>Tabula Peutingeriana</th>
<th>Distance</th>
<th>Itinerarium Antonini</th>
<th>Distance</th>
<th>Modern location</th>
</tr>
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<tr>
<td>560.7 civitas Emona</td>
<td>XIII (14)</td>
<td>Emona</td>
<td>VIII (9)</td>
<td>129,2 Hennoma civitas</td>
<td>XVIII (18)</td>
<td>Ljubljana (Slo)3</td>
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<tr>
<td>560.8 mutatio Ad Quartedicimo</td>
<td>X (10)</td>
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<td></td>
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<td>Savo Fl.</td>
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<td>560.9 mansio Hadranthe</td>
<td>XII (13)</td>
<td>Adrante</td>
<td>XXXVII (37)</td>
<td>129,3 Hadranthe mansio</td>
<td>XXV (25)</td>
<td>Tatrojane (Slo)3</td>
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<td>561.0 fines Italiar et Norci</td>
<td>XIII (13)</td>
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<td>Lüdkovich (Slo)3</td>
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<td>561.2 mansio Raginodone</td>
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<td>Raginodone</td>
<td>XVIII (18)</td>
<td>129,5 Raginodone</td>
<td>XVIII (18)</td>
<td>Spodnje Graovje (Slo)</td>
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<td>XII (12)</td>
<td>Patavione</td>
<td>X (10)</td>
<td>129,6 Patavione civitas</td>
<td>XVIII (18)</td>
<td>Puj (Slo)30</td>
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<td>561.5 transm Pontem, intras Pannoniam</td>
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<td>561.6 Inferiorum</td>
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<tr>
<td>561.7 mutatio Ramista</td>
<td>VIII (9)</td>
<td>Remista</td>
<td>X (10)</td>
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<td>561.8 mansio Aqua Viva</td>
<td>VIII (9)</td>
<td>Aqua viva</td>
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<td>130,1 Aqua Viva</td>
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<td>Petrijkavec (Croatia)32</td>
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<td>VIII (8)</td>
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<td>561.10 civitas Iovia</td>
<td>VIII (9)</td>
<td>Botivo</td>
<td>VIII (9)</td>
<td>130,2 Iovia hic Sinistra</td>
<td>XVIII (18)</td>
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<td>561.11 mutatio Sunista</td>
<td>VIII (9)</td>
<td>Sonista</td>
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<td>Draganovec (CRO)35</td>
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<tr>
<td>562.1 mansio Lestoliso</td>
<td>XII (12)</td>
<td>Lestoliso</td>
<td>VIII (8)</td>
<td>130,3 Lestoliso</td>
<td>XXXII (32)</td>
<td>Virje (CRO)35</td>
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<td>562.3 mutatio Cardrino</td>
<td>X (10)</td>
<td>Iovia</td>
<td>X (10)</td>
<td></td>
<td></td>
<td>Gradina (or P uwagovac) (CRO)35</td>
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<td>XII (12)</td>
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<td>562.5 mansio Serota</td>
<td>X (10)</td>
<td>Sirotis</td>
<td>X (10)</td>
<td>130,4 Sirotis</td>
<td>XXXI (31)</td>
<td>Taborin-Borovce (CRO)30</td>
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<td>Bolentio</td>
<td>X (10)</td>
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<td>562.7 mansio Maurianis</td>
<td>VIII (9)</td>
<td>Marinianis</td>
<td>VIII (9)</td>
<td>130,5 Marinianis</td>
<td>XX (20)</td>
<td>Donji Miholjac (CRO)34</td>
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<tr>
<td>562.8 intras Pannoniam Superiorem</td>
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<td>562.9 mutatio Serena</td>
<td>VIII (8)</td>
<td>Seronis</td>
<td>X (10)</td>
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<td>Vijevo near Nasice (CRO)35</td>
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<td>562.10 mansio Vereis</td>
<td>X (10)</td>
<td>Berebis</td>
<td>VIII (9)</td>
<td>130,6 Vereis</td>
<td>XXII (22)</td>
<td>Podgajce (CRO)35</td>
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<td>Iovillia</td>
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<td>Mursa maior</td>
<td>XII (12)</td>
<td>131,1 Mursa civitas</td>
<td>XXVI (26)</td>
<td>Osijek (CRO)37</td>
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<td>563.1 mutatio Leitoxano</td>
<td>XII (12)</td>
<td>Ad Laborus Pont Ulicae</td>
<td>X (10)</td>
<td>Bobota (CRO)38</td>
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<td>563.2 civitas Cibilas</td>
<td>XII (12)</td>
<td>'double tower' vignette, no name, possibly Cibilae</td>
<td>XI (11)</td>
<td>131,2 Cibilas civitas</td>
<td>XXIII (23)</td>
<td>Vinkovci (CRO)38</td>
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<td>563.3 mutatio Caecilien</td>
<td>XI (11)</td>
<td>Caecilien</td>
<td>XI (11)</td>
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<td></td>
<td>Orluk (CRO)39</td>
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<tr>
<td>563.4 mansio Ulmo</td>
<td>XI (11)</td>
<td>Ulmospana</td>
<td>XIII (13)</td>
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<td>XXII (22)</td>
<td>Tovarnik (CRO)39</td>
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<tr>
<td>563.5 mutatio Spaineta</td>
<td>X (10)</td>
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<tr>
<td>563.6 mutatio Vedulia</td>
<td>VIII (8)</td>
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<tr>
<td>563.7 civitas Sirmium</td>
<td>VIII (8)</td>
<td>Sirmium</td>
<td>XVIII (18)</td>
<td>131,4 Sirmi civitas</td>
<td>XXVI (26)</td>
<td>Sremiska Matrovica (Serbia)32</td>
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<td>563.8 Fit ab Aquileia Sirmium usque milia CCCXII (412)</td>
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<td>563.9 mansiones XVII, mutationes XXXVIII (17/39)</td>
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<td>563.10 mutatio Fossus</td>
<td>VIII (9)</td>
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<td>563.11 civitas Bassianis</td>
<td>X (10)</td>
<td>Bassianis</td>
<td>VIII (8)</td>
<td>131,5 Bassianis civitas</td>
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<td>Donji Petroveci (Se)</td>
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<td>563.12 mutatio Noviciani</td>
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<tr>
<td>563.13 mutatio Alhina</td>
<td>XI (11)</td>
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<td>563.14 civitas Singiduno</td>
<td>VIII (8)</td>
<td>Singiduno</td>
<td>XVIII (18)</td>
<td>131,2 Singiduno castra</td>
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### Table 1. Comparative analysis of the Emona–Singidunum road in the Tabula Peutingeriana, the Itinerarium Antonini and the Itinerarium Burdigalense

Таблица 1. Компаративна анализа пътя Емона–Синцидунум на Табула Пеутингерияна, Итinerary Antonini и Итinerary Burdigalense

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map depicts $9 + 6 = 15$ Roman miles. The Antonine itinerary lists only two settlements in this sector and one distance, of 18 Roman miles. On this section of the road, the Antonine itinerary is the only document which does not mention any intermediate stops. The Bordeaux itinerary records the *mutation* Ad Quartodecimo, while the Peutinger map depicts some natural features, such as a river crossing (Fl. [- ? -]) and Savo fl. Apart from the Bordeaux itinerary, only the Peutinger map depicts the settlement of Adpublicanos.

From Adrante to Poetovio, the Bordeaux itinerary lists seven settlements and a total distance of 75 Roman miles. The Peutinger map records, between Adrante and Poetovio, four settlements and a total distance of 73 Roman miles. The Antonine itinerary lists, between Adrante *mansio* and Patavione civitas, four settlements, the same as in the Peutinger map (Adrante *mansio*, Caleia civitas, Ragundone and Patavione civitas) and a total distance of 67 Roman miles. While the Peutinger map and the Antonine itinerary list the same settlements, the Bordeaux itinerary records another three *mutationes* (Ad Medias, Lotodos and Pultovia).

From Poetovio to Mursa, the Bordeaux itinerary records 18 settlements and a total distance of 167 Roman miles. The Peutinger map records 17 settlements and a total distance of 156 Roman miles, close to the value recorded in the Bordeaux itinerary. The Antonine itinerary records eight settlements and a total distance of 161 miles. One should notice that in this section the Antonine itinerary records only the *mansiones* (Aqua Viva, Lentulis, Sirota, Mariniianis, and Vereis) and the civitas Iovia. What is interesting is the fact that, starting from Poetovio, when the road reaches the province of Pannonia Inferior (the Bordeaux itinerary mentions ‘561.5 transis Pontem, intras Pannoniam 561.6 Inferiorum’), the Peutinger map records, with one exception (*mutation Cocconis*), all the *mutationes* mentioned in the Bordeaux itinerary: Ramista, Populis, Sunista, Peritur, Cardono and Bolentia. In the other sections discussed above, from Emona to Poetovio, the Peutinger map fails to depict any *mutationes* mentioned in the Bordeaux itinerary: Ad Quartodecimo, Ad Medias, Lotodos and Pultovia.

From Mursa to Sirmium, the Bordeaux itinerary records eight settlements, seven distance figures, and a total distance of 74 miles. The Peutinger map records six settlements, five distance figures and a total distance of 57 miles. The Antonine itinerary records four settlements, three distance figures and a total distance of 71 miles. In this section the Antonine itinerary records only the *mansiones*: in fact, only Ulmos vicus is listed (Ulmospaneta in TP). Out of four *mutationes* in the Bordeaux itinerary along this sector (Leutuoano, Caleia, Spaneta and Vedulia), only two of them are also depicted in the Peutinger map (Ad Labores Pont Ulcae and Cansilena).

The road from Sirmium to Singidunum follows a different route in the Bordeaux itinerary. While the Peutinger map and the Antonine itinerary both record a route from Sirmium via Bassianis and Taurunum to Singidunum, the Bordeaux itinerary lists a road which, from Bassianis, follows another route, mentioning two *mutationes*, Noviciani and Altina, not recorded in the other sources.

**Final remarks**

After this comparative analysis of three ancient sources, I reached some general conclusions and observations concerning these documents:

1. The structure of the Bordeaux itinerary along the Emona–Singidunum route reveals a careful planning of the main Roman road infrastructure during the 4th century A.D. (corresponding to the reorganisation of the official state transport, the *cursus publicus*) and before this time. As noted above, along a total distance of 398 miles, the pilgrim from 333 A.D. recorded 38 settlements. Map 1 reveals the arrangement of the *civitates*, *mansiones* and *mutationes* along this route: a. From civitas Emona to civitas Celeia (50 miles in ItBurd), the traveller recorded one *mansio* (Hadrante) and two *mutationes* (Ad Quartodecimo and Ad Medias); b. From civitas Celeia to civitas Poetovione (49 miles), one *mansio* (Ragindone) and two *mutationes* (Lotodos and Pultovia) are recorded; c. From Poetovio to Iovia (40 miles), there is the same ratio: one *mansio* (Aqua Viva) and two *mutationes* (Ramista and Populis); d. From civitas Iovia to civitas Mursa (127 miles), the pilgrim recorded four *mansiones* (Lentolis, Serota, Maurianis and Vereis) and eight *mutationes* (Sunista, Peritur, Cardono, Cocconis, Bolentia, Serena, Iovalia and Mersella); e. From civitas Mursa to civitas Cibalis (22 miles), because of the short distance, only one *mutatio* (Leutuoano) is recorded; f. From civitas Cibalis to civitas Sirmium (52 miles in ItBurd), one *mansio* (Ulmo) and three *mutationes* (Caelia, Spaneta and Vedulia) are recorded; g. From civitas Sirmium to civitas Bassianis (17 miles), one *mutatio* (Fossis) is recorded; h. From civitas Bassianis to civitas Singiduno (33 miles) two *mutationes* (Noviciani and Altina) are recorded.
Out of 38 settlements listed in the Bordeaux itinerary from Emona to Singidunum, 9 of them are recorded as cities, 8 are listed as mansiones and 21 (representing 55.26%) are mutationes.

I have calculated a theoretical average distance between the settlements, dividing the number of Roman miles from one civitas to another by the number of road segments delimited by the stopping points recorded. The results are: a. From Emona to Celeia the average distance is 50 (miles) ÷ 4 (segments, corresponding to three stopping points) = 12.5 miles; b. From Celeia to Poetovio the average distance is 49 ÷ 4 = 12.25 miles; c. From Poetovio to Iovia the average distance is 40 ÷ 4 = 10 miles; d. From Iovia to Mursa, the average distance is 127+13 = 9.76 miles; e. From Mursa to Cibalis, the average distance is 22 ÷ 2 = 11 miles; f. From Cibalis to Sirmium, the average distance is 52 ÷ 5 = 10.4 miles; g. From Sirmium to Bassianis, the average distance is 17 ÷ 2 = 8.5 miles; h. From Bassianis to Singiduno, the average distance is 33 ÷ 3 = 11 miles.

The theoretical average distance from Emona to Singidunum can be calculated by dividing the total distance, 398 miles, by the number of the segments recorded, 39 (there are 38 settlements listed). The result is 398 ÷ 39 = 10.20 miles.

2. The old belief that mansiones and mutationes were located at different distances is incorrect. The average distance between the settlements recorded in the Bordeaux itinerary is 8 to 14 miles. What the Bordeaux itinerary reflects, at least for the Emona–Singidunum sector, is a perfectly arranged system of main stopping points, the mansiones, which provided better conditions for the traveller. In between these points, a dense network of mutationes served for the changing of the traction animals. However, the ratio between these points is not two mansiones for six to eight mutationes, as stated before.28 Along the longest sector of this route, between civitas Iovia and civitas Mursa, the Bordeaux itinerary records four mansiones and eight mutationes. Between civitas Emona and civitas Celeia there is one mansio recorded and two mutationes. The same is true for the sectors Celeia–Poetovio and Poetovio–Iovia. Therefore, the ratio seems to be different: 1/2, e.g. one mansio for two mutationes (or 1/3, as in the case of the Cibalı–Sirmium sector).

3. Why did the pilgrim choose the Emona–Poetovio–Sirmium–Singidunum road (along the Drava River), which measures 398 miles, instead of the Emona–Siscia–Sirmium–Singidunum road, along the Sava River, which is shorter (approximately 340 miles)? I suppose the answer is based on a perfect understanding of the infrastructure along the Drava River. This road could provide better travelling conditions for those officials who travelled using the cursus publicus. However, I think the answer is based on another important issue. Using the official transportation system, the pilgrim chose the ‘official’ road. It is along this road that the Romans edified so many mansiones and mutationes. The other road, Emona–Siscia–Sirmium–Tauruno, along the river Sava, is depicted in the Peutinger map with the following settlements and distances:29 Emona (vignette, ‘double tower’ type, symbol Ab1, segment grid 4a4) – XVIII – Aceruone – XIII – Adprotorii (Prætoriorum Latobicorum) (vignette, ‘double tower’ type, symbol Ab19) – XVI – Crucio – XVI – Novioduni – X – Romula – XIII – Quadrata – XIII – Adfines – XX – Siscia (vignette, ‘double tower’ type, symbol Ab1, segment grid 4a5) – no distance figure; river crossing30 – Ad Pretorium (vignette, symbol C10, segment grid 4a5) – XXX – Servtio (vignette, symbol C11, segment grid 5a1) – XXIII – Urbate – XXXIII – Marsonie – no distance figure, river crossing31 – Adbasante – XX – Saldis – river crossing32 – XVIII – Drinum fl. – XVIII – river crossing33 – Sirmium (vignette, ‘double tower’ type, symbol Aa1, segment grid 5a4) – XVIII – Bassianis – VIII – Idiminio – VIII – Tauruno (vignette, ‘double tower’ type, symbol Aa7, segment grid 5a5).34

28 Daremberg, Saglio (eds) 1916, tome 1.2 (C), s.v. cursus publicus, 1645: “En effet les stations ou mansiones étaient disposées sur des routes principales et placées à la distance d’un jour de marche. Dans ces lieux de séjour, on relevait les postillons, les voitures et les bêtes de trait, pour en prendre d’autres le lendemain, tandis que dans les simples relais, mutationes, l’on ne changeait que d’attelage. Il est avéré que dans les itinéraires du second siècle, on en vint à compter le chemin d’une mansio à une autre; leur distance dépendait sans doute des circonstances locale et du terrain, tandis que les mutationes ou relais se trouvaient, dans les contrées habitées, à environ cinq milles romains et, dans les autres, à huit ou neuf milles environ (de 12 à 22 kilomètres); il y avait entre deux mansiones de six à huit relais, mutationes. Dans les grands voyages on compte par prima, secunda mansio”.

29 Details in: Fodorean 2017 (forthcoming).


33 No. 27a, Savus River.

34 No. 27a, Savus River.

35 No. 27a, Savus River.

From Emona to Taurunum, the Peutinger map recorded a total distance of 309 miles, i.e. 456.85 km. Along this road, 19 settlements are mentioned and 17 distance figures. This road was a very important strategic and economic route. Aquileia, Emona and Siscia were the most important settlements during Augustus’ reign.

Therefore, both these roads, along the Drava and the Sava Rivers, were key arteries of Pannonia. Analysing the stopping points and the distances, the Emona/Singidunum road along the Drava River provided a better travelling infrastructure during the 4th century A.D. Such a road was probably recorded in the pilgrim’s travel permit (evection). This document contained, as compulsory elements: 1. The name of the emperor; 2. The end date; 3. The name of the province governor; 4. The names of the travellers; 5. Their social status (dignitas); 6. The date of issue of the permit; 7. The period during which the permit could be used. Furthermore, to sum up, a travel permit should also mention the stations and distances of the itineraries covered by the travellers.

4. As shown above, the Antonine itinerary seems a chaotic compilation created at the end of the 3rd and the beginning of the 4th century A.D. Still, our comparison revealed one important aspect: the creator of this document consciously and intentionally eliminated all the mutationes. Maybe that is why Dacia is not listed in the Antonine itinerary. This raises an important question: Was the creator of the Antonine itinerary aware enough to select the information using variegated criteria, such as the fact that Dacia was no longer a Roman province during the 4th century A.D.? One might assume this, since he had the capacity and the knowledge to remove all the mutationes from the itinerary.

5. The Bordeaux itinerary represents, in fact, the story of one journey: a topographical story, and a very accurate one at that. In other words, the accuracy of recording all the settlements (mansioes, mutationes, stationes, civitates) reflects that this document is the result of a journey, performed physically by a traveller aiming to record these settlements. However, one should not forget that using the official transport system of the Roman Empire, the so-called cursus publicus, such a traveller needed a travel permit (evection) and a travel plan, a route. In this document he had all these settlements listed. For our discussion, what really matters is the fact that the Bordeaux itinerary provides the most accurate data regarding the stopping points along this route.

6. If such an assumption seems plausible, another observation can be made regarding the accuracy of the Peutinger map: it is, by far, more accurate in comparison to the Antonine itinerary.

7. The Emona–Poetovio–Singidunum road, along the Drava River, provided a solid transportation infrastructure, necessary for safe travel.

Translated by the author

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37 A detailed topographical and archaeological description of this road, including the analysis of data from the Peutinger map at Bojanovski 1984, 145–265.
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Florin-Gheorghe FODOREAN
Listing Settlements and Distances: the Emona-Singidunum Road in Tabula Peutingeriana, Itinerarium Antonini… (95–108)


Флорин-Георге ФОДОРЕАН

Listing Settlements and Distances: the Emona-Singidunum Road in Tabula Peutingeriana, Itinerarium Antonini… (95–108)

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СПИСАК НАСЕЉА И РАСТОЈАЊА:
PУТ ЕМОНА–СИНГИДУНУМ НА TABULA PEUTINGERIANA, ITINERARIUM ANTONINI И ITINERARIUM BURDIGALENSE

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