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ABSTRACT

Not only do road systems serve dominance claims, but they also occupy a vital place as a power instrument. Road systems, made use of, at war, through transportation of army, are also an indispensable instrument for trade network as well as taking the existence of state back of the beyond. In this context, Roman Empire, while generating one of the most important elements for humankind, was able to take its influence, through these road nets constituted by bridges and milestone, to the lands dominated. Courier service has great importance for the rendering of power. In Roman period, the main road, from Belgrade via Edirne (Adrianople) to Istanbul strait, had been extending to Izmit (Nikomedia), passing to Anatolia side. Thus, Izmit that, until the establishment of Istanbul (Constantinople), was the center of Roman Empire in Asia Minor had rendered a service as a first distribution point of Anatolian road system. From there, routes, leading to Black Sea (Phontus) coasts, were covering a distance to the territorial enclaves of Anatolia. Hence, the main road, extending from İzmit to Anatolia, was leading to Iznik (Nikaea) and from there via Osmaneli (Lefke) was bifurcating through Ankara (Ancyra) and Eskişehir (Dorylaion). Milestones, bridges and roads fitted with stones, still existent, have the evidences for this road nets. Sakarya River (Sangarios) was one of the obstacles in the proceeding of the road net reaching to Lefke surroundings. It was extremely hard to cross this ferocious river described as a hell by traveler Ibn Battuta. Romans had built enormous bridges to cross this obstacle dominating the main road. Even though none of these bridges reached today, their remnants have certain clues. The bridge, to which we refer, is located close to Selçik Village encountered at 3 kilometers far from and northwest of Osmaneli province. This bridge, following the milestones, is one of the most important points of main road extending to Anatolia. In this context we have determined another bridge remnant in the same place through our field research. This ultimate bridge, constructed by six arches, three of which is under the water, was devastated by this river. In this study, this bridge, having no records in literature, will be dealt with the road net surrounding it, and the remnants of this road net penetrating into Anatolia will, also, be examined.

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1. Introduction

Anatolia was a natural bridge combining East and West. It was also a battle field for them.. For Eastern domination on the West; Persians, Arabs, Mongols and Turks used the route on the Anatolia, Alexander who came from the West crossed that roads and Crusaders went to Jerusalem passing on the same roads in Anatolia as well. In this way the Anatolia was carried religion, civilization and art of East to West, the civilization of Greeks became green on East (Ramsey, 1961).

The improvement of trade and civilization started from south and expanded to northwest in Anatolia. Especially Bithinya which was northwest of Anatolia during the Greek time and also took account in our work, it is observed that it was really far from the southern developments and no connection with the south. The Kingdom of Bithinya continued to enhance its developments by establishing the cities of Nikomedia, Apameia and Prousius (Ramsey, 1961)

The Romans which ruled Anatolia for a long time and carried their civilization to here firstly put their steps on Anatolia by protect themselves from the threats of Emanuel II who was the King of Pergamon at 190 BC. This was the beginning of developments which continued to 43 AD that the Anatolia (Asia Minor) became a part of Roman Empire. Roman's control of Anatolia firstly started from south coasts then expanded toward to East (O'Connor, 1993). The First big road system which connected Bithinya to out, expansive toward to north and it was constructed as a result of wars in between Romans and Kingdom of Pontus. (Ramsey, 1961). While important changes appeared on this road system after the date 292 AD that Nikomedia became the capital: these changes become faster after the setting of Constantinople at 330 AD. When the center of world transferred to Istanbul from Rome, the roads toward to Rome lost its importance and all products and richness of Anatolian cities carried to Rome from Ephesus Port in the Roman time, after the establishment of Istanbul, the route changed and it started to cross from this city. Besides to this progress the welfare in Anatolian cities changed rapidly and before the south cities were more comfort, with the Istanbul this situation changed in favor of north cities of Anatolia (Ramsey, 1961). Istanbul was a small empire itself with its specialties both the possibility of large trade network and strategic location could rule three continents. Alexandria and Antioch were the Queen cities of East until the foundation of Istanbul after that Istanbul collected these entire good adjectives on itself (Bridges, 1828). Together with the establishment of Istanbul the empire found its real capital concerning the location, and Rome lost its importance (Hill, 2007).

The road system in Anatolia formed again according to location of Istanbul, Bithinya and the Sangarious River become important. The Sangarious River was the source of water and fertile of the region (Drakoulis, 2013: 238) and it was first obstacle while crossing to Anatolia. Hence the Romans connected roads to Anatolia from Istanbul by constructing the bridges. We investigated a Roman bridge on the Sangarious River and its road network with this field study. The reason of the word "unknown" in our title in this paper, this bridge was not available in any source. (O'Connor, 1993; İltir, 1978; Çulpan, 2002: 239; Tunç, 1978)*. This bridge also is not take place in extensive inventory work which done by Directory of Culture and Tourism Bilecik in the year of 2006. (Bilecik İl Kültür Envanteri, 2006).

* Çulpan was give information about the Rome and Roman Bridges. In his list he described a bridge on the east of İznik and it was on the Goksu (Gallos) River named Pithekos Bridges. The Tunç's work is very important for Rome, Byzantine and Ottoman Bridges. He mentioned two bridges on distributary of Sangarious but he did not give any information about the bridges on Sangarious River. It will be seen on next pages that the sources about the Crusaders were not give any information about this river on Sangarious too.

2. Road System Around The Bridge

There were several routes from Constantinople into Anatolia (Ramsey, 1961: 216-226; O'Connor, 1993; İltir, 1995; Haldon, 2006). The first one was The Pilgrim's Road* and it was passing by İznik and Leuke to Ankyra and it was turning south from Antioch. The second one was The Military Road and it was tracking that route; İznik, Malagina, Eskişehir, Konya (İkonion) and then Tarsus (Cilicia). This route was used during Ottoman Period as well. And the third one was also a Military Road but it was important only early time of Romans. This was passing the cities of Malagina, Eskişehir, Amorion (It is ancient city that is 15 km far from the district of Emirdağ of Afyon.) and it was a route reached to Cilicia (A gateway from Pozantı to Tarsus. R.A.) This way was not used much even it was easy and short for small trade groups. The last one was following different routes from Nikaea. It was arriving İnegöl (Linoe-Aynagöl) then Kütahya (Kotiaion) and Afyon (Akroenos) to Konya. It is very important that three of these four routes were passing the bridge which we are focusing on in this paper.

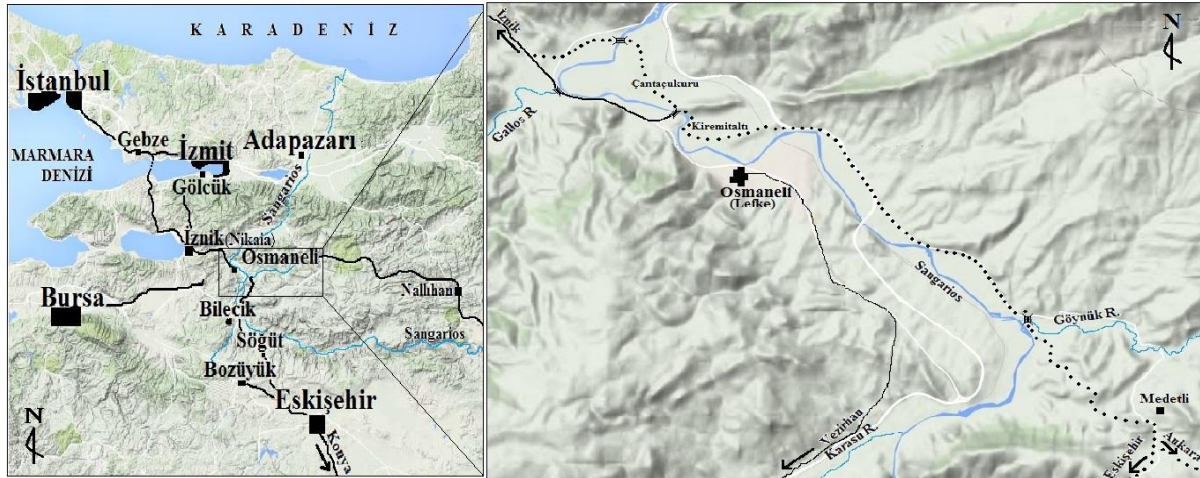
David H. French emphasized this region which we study on as "Pilgrim's Road" and he indicated this route by finding the milestones. Hence if we follow the milestones: the travel that was starting from Kadıkoy (Kalkedon) and it reached to region of Osmaneli by passing through İzmit and İznik after that it reached to Ankara from Golpazarı and Çayırhan (French, 2013: 22; O'Connor, 1993: 124). We followed the road by finding the milestones. But even it could not be found any milestones, some of them carried somewhere else and used for different purposes. Some of them ruined too. Thus we learned that the milestone belonged to the villages Uyuk and Medetli and also marked 73 (B) in French's book, it was thrown to Sakarya River in 1960's. (Our interview with Yusuf Yaman (b. 1949) and Zeki Arısoy (b. 1953) September 1, 2015). While the struggle in between the two villages one milestone was wasted, another milestone finished this discussion as used as a boundary stone between two villages (French, 2013).

The Byzantine Military Road reached to Helenopolis (close by modern Yalova) on the sea road from Istanbul and from there onwards land journey had started. The road from here to İznik passing on a village named Gaita and reached to Leukaia passing on Sakarya River. The Pithekas is another station after that. Ramsay remarked that the bridge of Pithekas would be on the place that Sakarya and Göksu join together. However this place should be previous station on the direction of Osmaneli to İznik (Ramsay, 1961)[†]. From this perspective it is possible that this bridge of Pithekas could be the bridge we study on.

Another interesting point in Ramsay is about the meeting point of the roads to Amasya (Amasia). The road from Bursa (Prousa) is getting down from Göksu to İzmit and it joined with the road of Amasya and crossed the Sakarya River. (Ramsey, 1961: 226). This description explains us the function of the towers near by Akmeşe village. Hence there is no chance to use another road from Bursa. On the other hand the joint place that crossing the Sakarya of two roads should be a bridge we are discussing in our paper.

* For the Pilgrim Road one of travelers described a different route. According to him after took on the road from İznik on Mekece crossing Tutadus which near Geyve, on Taraklı (Dable/Dablis, Near Modern Taraklı) continued to route of Ankara. It is necessary to take account of this route. Because the bridge ruins from Roman time and stone bridge built by Ottomans in 16th century 50 meters away were evidences showed this region used. But we can say that the road came to this side because of this Taraklı road was very steep and cities in Osmaneli side became important.

[†] Pithekas and Malagina were important fortresses of Bitinya. These security points after İznik built by Manuel Komnenos in the year of 1145. (Roche, 2008:148,164)



Map: Road System Of Bithynia and Detail Of Roman Bridge and its Surround

We can get information about the bridges like we named “Unknown Roman Bridge” on Sakarya or a bridge on the Göksu from the crusaders’ records. Especially John France gives very detailed knowledge about the bridge where it was built on Göksu. İznik captured by crusaders on 19 June and then the first groups of crusaders left İznik to Eskişehir on 26 June 1097 where the old Byzantine fortress was there. After İznik, all the army gathered at a place where there was a bridge. Anna Comnena identified as Osmanelli for this place and probably means the bridge over the Göksu. This area was about 25 km from İznik and far from a day. Crusader leaders decided to break in two groups and the first one left from here. They marched for two days and the third day morning “Dorylaeum Battle” realized on 1 July 1097. According to Anonymous, army encamped for two days by a bridge (France, 1994; Dirimtekin, 1946; Demirkent, 2004; Altan, 2003; Setton, 1969; Ayönü, 2014)*. There is a problem with the bridge for us. Because if the crusaders had gathered after passing the bridge, this bridge should not be on Göksu. Forwhy there is no expanse field for very crowded crusaders. So this must need an answer; where they rally on? The common places are opposite the Sakarya River. They are named Çaylar, Karabağlar, Çantaçukuru and Kiremitaltı localities (Bursa H-23-b2 ve H-24-a4 Haritaları (2001), Harita Genel Komutanlığı). I think, they passed Sakarya and gathered in these wide places. After that they marched on the Pilgrim’s Road about 20 km and then they turned the south part towards another bridge near the village of Küçük Yenice. They crossed the bridge and arrived Söğüt by walking on Zobran and Küre villiages. The Byzantine’s biggest military road was expanding to Sakarya Valley that is Lefke from Nikaea.

Even in the second Crusaders used this road and bridge. The Crusader Army under the rule of German King Konrad moved to Eskişehir from İznik with hosting of Byzantine commander Stephanos. The Crusaders after the leaving by Byzantine guiders settled their military quarters endangering by Turkish attacks in Sarısu Valley that Eskişehir war happened in 1097. Sultan Mesud repeat his father’s success 50 years before by overwhelming the German Crusaders. The bridge witnessed the tragic transition and Konrad who lost everything came back to İznik. This tragic event which Konrad faced that forced French Army under the commander of French Emperor Louis to fallow another route and Crusaders turned the road on Balıkesir, Alaşehir (Philadelphia)-Denizli (Altan, 2003).

It could be seen some changes on the roads during the Ottoman time. In this period the diagonal

* Dirimtekin gave detailed information about the road after İznik. The Crusaders came to stone bridge over the Derbend-Arapuçtu on the Göksu (Gallus) River by following the Roman Road from İznik and they left 11. Km of Mekece Road. The parts of army crossed the bridge and they stayed between bridge and Lefke. The bridge was very tight and crossing all the army over the bridge was almost two days. Staying the fertile place was something wanted by Crusaders too. (Dirimtekin, 1946: 85)

road starting from Uskudar and backcross to Anatolia was the backbone of Anatolian road system. This road was very important for both “Military Road” to eastern campaigns and “Pilgrim’s Road” reached to Mecca for Muslim pilgrims. However the roads for pilgrims and military were not followed the same directions and used some different routes. When we look our interesting on the road: We can see that it reached Iznik over Imit gulf or reached again Iznik by using sea road on port of Dil. In fact the next station after Iznik is Eskişehir. The oldest part of this route both Byzantines and Ottomans used was that the road from Iznik to Kutahya and than to Afyon. This route used by Selim I for Egypt campaign and Suleyman I for expedition to Iran in 1534 and after the 16th century this route is not used. After this century onwards the line of Iznik-Yenişehir-Eskişehir started the use frequently. (Taeschner, 2010: ; Osmanlı İmaratorluğunda Kollar, Ulak ve İaşe Menzilleri, 1966)*. The reason that changed the route after 16th century could be the bridge which we are discussing on damaged and became useless. In fact the caravanserai built by Koprulu Mehmed Pasha in Vezirhan reached old aliveness for route of Osmaneli-Söğüt-Eskişehir. Hence the importance of this route also can be understood on the ruins of guard that we observed on the road between Vezirhan and Soğüt. This route called “Pilgrim’s Road” during the Ottoman period and reached the Aleppo.

3. Property of the Bridge

The bridge is 2.5 km northwest of Lefke and right side of Iznik road, inside 200 m from the road. The mathematical location of the bridge is 40°22’20.05’’N, 29° 59’48.39’’E. The “Pilgrim’s Road” and the “Military Road” from Iznik to Ankara were crossing over this bridge.

The total length of the bridge was 120 m and its 60 m were over water and the rest was on the land. The hill from southwest side of the bridge (today there is a chicken facility in this place) there was the first abutment of the bridge. This other abutment was available 6 m ahead from the road and in the field. These two abutments were evacuation areas in any case of flood and rising of water. Both these two abutments had damaged and there is no face stone around it. However we have seen the Roman grout packing material around the bridge. On the other these abutments stayed under the alluvial ground and that’s why there is only 2 m available on the ground. The abutment in south had damaged more than the other. This part which in the field is about 40 m and it reached to the river with two archs. The arch that is starting on the distinction in here is connecting to the abutment 20 m ahead. Even in this side is connecting with the one more abutment inside the river about again 20 m ahead. (This main abutment is much damaged and still available inside the river as ruins. The part of the abutment that faced the water is standing slanted). From this middle abutment the bridge crossed the river with 20 m arch. On the next the arch left from bridge and turned 90 degree on the ground.

It is difficult to evaluate the figure of bridge because of its damage. But the rest of material of bridge gives some idea to us. The walls to protect the flood were built wit big stoned as a circle. The flood splitters were very important that was showing the flood power of Sangarius River.

The altitude of the region is about 100 m and the river of Sakarya is flowing over meander. It is easily observed that the marks of seam of the river in that geography that allowed the changes. Even with this specialty the place that the bridge was built selected very carefully and it constructed over the two hills which the river never changed the seam. We can see the Roman technique on the other bridges in our region. Another bridge named “Darboğaz” built over the hills which Sakarya river became tight almost 20 km the bridge that we study on. Both the place of two bridges is allowing the river flow faster. This situation became an advantage that the seam can not be change even there is a possibility of flood. On the other hand the big blocks built as an obstacle to prevent the destruction.

* Busbecq who wanted to attend the Suleyman’s army provide detailed information about the routes and stations. This voyage started from Istanbul in 1556 and reached Bozoyük over İzmit-Iznik-Yenişehir-Akbıyık. (Busbecq, 2002: 36). The same road used by Ottoman army after the 16th century. (Matrakçı Nasuh, 1530: 15-16)

As we had observed on the bridge in our subject there is mortar in between stones as Roman style. It is using huge blocs that the characteristics of Roman bridges; bring together with using of metals to fix them (Tunç, 1978). The stones had copulated with these metal connections. (O'Connor, 1993). We observed this technique on the bridge we examine. The stones had put side by side to open a canal on them, after that a hole had opened on stones, put the molten lead in the holes and all stones unified together. This operation had made the bridge strong and defeat the flood and earthquake. We observed this technique especially in the parts of bridge under the water. Moreover we understood that this part of the bridge turnabout and the metal also turned opposite. It could be seen more detailed on Roman Bridge in the Küçük Yenice.

The bridges that are placed very important transportation points supported by some other facilities to keep the bridge safe (İlter, 1978). This unknown Roman Bridge also had facility and the ruins of the facility's building could be finding 100 m west of the bridge. The technique of this building shows the Byzantine style. On the other hand it is important that these ruins under the water provide us an idea about the geological movements in the area.

It is really hard to find the time of building for the bridges without the special situations. We also can not find any clues about this unknown Roman Bridge even in books and ruins. To specify the builders of bridges are nor possible in generally (O'Connor).

It is important the shapes and the transport of stone for the bridges. The stones used in this bridge were like huge blocs and it had taken from the stone quarry in just north. This stone quarry had used in later periods. Indeed the millstones that we find proved that this stone quarry used. This place also named by residents as "Taş Kesliği". When we consider the date of the construction of bridge, it is necessary to make a professional organization to shape, transport and built such a bridge. From this point of view such this kind of works also had give an ideal of the power of the state (O'Connor, 1993).

This bridge had broken down and really damaged. We did not find any information about how this bridge broken down. However we can make deductions from the middle abutment that had turned down and still available in the water. Even thought today Sakarya River is very calm but the source informed us it was not like that in history. The reason for breaking down of the bridge could be the power of corrosion. The ruins that reached today are about 2 m on the sea and the marks of corrosion for many years still can observe. This situation showed us the bridge buried about 3 m according to the time that bridge had used. Beside there are some ruins under the ground and the Roman mortar on the stones had observed. The water turned over the about tons heavier stones, of course had broken dow the bridge.

Another possibility comes to the mind that is the Byzantines had broken down it. The Turkmen groups especially after the Kosedag War in 1243, started to move the west and northwest Anatolia that ruled by Byzantines. On the other hand the margraves continued the gaza movements on Byzantine cities. The Byzantine wanted to protect these invasions from Turks and for this reason they made a protection line west of the Sakarya especially for keeping Iznik and Istanbul. When Mihail Paleologos learned this protection line had broken than he moved and came to the region in 1281. In this invasion by Turks, the Byzantines took some measures such as fortress had made powerful, new fortifications was built, the old castles had resorted and constructed new castles in some places. In between the castles to prevent the invasions, according to Pahimeres, the Byzantines put the trees that even a snake could not pass. This fortification probably had become active until the big invasion in 1308. (Linder, 2008). When we think the measures of emperor, it is strongly possible that the bridges had broken down by him. There is no evidence of ruins in the west side (Byzantine side) had really supported this claim. This possibility that we are thinking on, from that much time had passed until the bridge used and broken down, we can find the ruins in the same place but even a single of ruin is not available in the Byzantine side. In the Islamic sources recorded that the Turks while passing

* Drakoulis writes the settlements in the province of Bithynia in his article. In the table, there is a place before Medetli and after Karadin which is named Taşköprü (Byzantic: Midum), (Drakoulis, 2013:..243).

from the Anatolia attacked to Byzantines. Hence Sultan Kılıcarıslan had taken the transit point that Crusaders must be cross and he killed many of them. Another source explains the Turks kept the sources of water (Hillenbrand, 2015).

By the way, the bridge on Göksu used until the near time (Still some of archs available), most of the sources provide detailed information about it. This bridge had mentioned the oldest events but it probably built later time than the bridge we have discussing. Even Ramsey identified this bridge as "Pithekas Bridge" the style of building resembles Turkish bridges. On the other hand this bridge had built on the place that Sangarious River and Gallos had united, and it is similar the places which Roman bridges were built. As we have determined on the place the abutment of the bridge was hallowed by water in this unification point. It could be observe on the parts still alive. For this property of the bridge, it was built in a wrong place, and the flood had broken down it. Whatever the reason had broken down the bridge, the place is wrong. Hence there is another bridge ruins almost 1 km north of this bridge. This bridge is also point the Roman bridges*. The Romans had experience for building bridges about the place that this bridge had built wrong place which the Sangarious River in the meander location.

4. Conclusion

This bridge is on the strategical point in between the roads that starting from İstanbul to Eskişehir. There are ruins blonged the two different bridges in the region and that shows the importance of Sakarya River and arund it. The researchers especially studying on Crusaders have not idea about the unknown bridge in our subject and so they have wrong route from Iznik to Eskişehir. In our field research we observed the path of the Romen Roads. The road from this bridge was lying tword to southeast. However the milestones that we found that is confirmed this route. The Pilgrim's Road and Military Road was continuing about 20 km from this bridge to Medetli Villige and there the road was dividing into two parts; the Pilgrim's Road was turning to Ankara direction by passing Golpararı and other was lying to other Roman Bridge near the the Village of Küçük Yenice and it was reached Eskişehir by passing Sogut. As a result of our research the bridge that we examined is very important to understant the routes of from Iznik to Eskişehir and next stations.

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*There is a small ruin from this bridge. This situation shows us that bridge used in previous time that the bridge in our subject. These two bridges are to much close each other and this shows the importance of the geography. Probably after this bridge had broken down the other bridge in our subject had built. As we have mentioned before, the reason of the building our bridge on the hills is probably to prevent it from the flood.

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Photo: Bridges and Milestones