



Summary :

Outside the city of Ephesus, on the road that lead to Tralles and Magnesia on the Meander, the ruins of an impressive aqueduct have been discovered; it was funded by Caius Sextilius Pollio and has been dated to the Augustan era.

Date

4-14 AD

Geographical Location

Ephesus

1. Architectural description

An impressive Roman aqueduct has been discovered south of Selçuk. It crossed the ancient river Marna (modern Dervend Dere) and it was constructed along an E-W orientation.

This was a well-built aqueduct over 16 m. in height, with two rows of arches, one over the other; these rows of arches were not arranged so as to be precisely aligned. More specifically, the lower row comprised three large arches¹ measuring 5.20 m. in width, while six smaller arches² of the upper row (2.75 m. in width) were arranged in such a manner that two arches covered the width of each arch of the lower row. In [Roman aqueducts](#), when they feature two successive rows of arches, these rows are precisely aligned one over the other. In this example from [Ephesus](#) the arrangement of the arches is different and is reminiscent of the manner of arranging the two upper rows of arches in one of the best preserved Roman aqueducts, known as Pont du Gard close to the city of Nimes (ancient Nemausus) in southern France.³

The river's water flowed through the east arched opening of the aqueduct, while the central arch probably supported the road which lead to [Magnesia on the Maeander](#). Another road apparently crossed through the west arched opening.⁴

The aqueduct's arches were built of marble blocks in the **pseudo-isodomic** system. The lateral walls flanking the rows of arches were made of small stones held together with **mortar**.⁵

The architectural form of the two main sides of the aqueduct was similar, with very few differences. The rows of arches were supported by sturdy buttresses with a rectangular cross-section (**pilasters**). The supports of the upper row of arches rested at the middle of the lower row arches. The fronts of the arches were undecorated and were framed by simple **cymae**, while the imposts, which intervened between the pilaster capitals of the supports and the skirt of the arch, bore cymae on their four sides. Over the upper row of arches a protruding **cornice** and an (Attic) parapet were formed -no trace of the latter remains-, where the stone water conduit was placed.⁶

2. Dating

On both main sides of the aqueduct, the western section of the lower row of arches supported a horizontal **epistyle**, which bore a dedicatory inscription in Greek and Latin. This inscription mentions that the monument -which is termed a bridge-, was donated by C. Sextilius Pollio, his spouse Ofillia Bassa and his adopted son C. Ofillius Proculus and was dedicated to [Augustus](#), [Tiberius](#), [Ephesian Artemis](#) and the Demos of the Ephesians.⁷ The mention of the name of Tiberius places the construction date of the structure to 4-14 AD. The monument's architectural details support this dating.⁸

3. Function and significance of the aqueduct



The Romans, innovators in the field of engineering, managed to solve the problem of providing adequate water to their densely populated cities by constructing aqueducts. Furthermore, the construction of aqueducts constituted one of the foremost priorities of imperial building programs. These were impressive pieces of architecture and were especially functional, improving the quality of life of city dwellers.⁹ The Ephesus Aqueduct, preserved in a good state today, represented an important project of great practical and aesthetic value. It forms part of the 'Aqua Throessitica', which was the name of the water supply system funded by [Hadrian](#). It crossed through the city's outskirts carrying water to Ephesus and supplied the so-called 'Administrative Block' and the city's [nymphaea](#).¹⁰

4. History of research

The monument is mentioned by 18th century travellers who visited the area, like Chandler,¹¹ who describes it as a bridge. Choiseul-Gouffier, on the other hand, correctly identified it as an aqueduct and sketched a drawing of the monument.¹² The aqueduct's architectural form and details of its construction have been published by W. Wilberg in the third volume of the Austrian Institute's excavation reports from Ephesus.¹³ Because of its date it has been included by W. Alzinger in his study on the architecture of the Augustan era at Ephesus.¹⁴

1. Each arch of the lower row comprised 21 voussoirs. Cf. Forchheimer, P.- Heberdey, R.-Keil , J.-Niemann, G.-Wilberg, W., *Agora, Torbauten am Hafen, Wasserleitungen, Brunnenhaus beim Theater, Aquädukt* (FiE III, Wien 1923), p. 257.
2. Each arch of the upper row comprised 15 imposts. Cf. Forchheimer, P.- Heberdey, R.-Keil , J.-Niemann, G.-Wilberg, W., *Agora, Torbauten am Hafen, Wasserleitungen, Brunnenhaus beim Theater, Aquädukt* (FiE III, Wien 1923), p. 260.
3. Alzinger, W., *Augusteische Architektur in Ephesos* (Wien 1974), p. 32. On the architectural form of the Pont du Gard aqueduct near the city of Nimes in southern France see Ramage, N.H. - Ramage, A., *Ρωμαϊκή Τέχνη* (Θεσσαλονίκη 2000), p. 109.
4. Cf. Alzinger, W., *Augusteische Architektur in Ephesos* (Wien 1974), p. 21.
5. Cf. Vann, R.L., *A study of Roman Construction in Asia Minor* (Diss. Cornell University 1976), p. 85.
6. For more details on the architectural form of the aqueduct see Forchheimer, P.-Heberdey, R.-Keil , J.-Niemann, G.-Wilberg, W., *Agora, Torbauten am Hafen, Wasserleitungen, Brunnenhaus beim Theater, Aquädukt* (FiE III, Wien 1923), pp. 256-262; Alzinger, W., *Augusteische Architektur in Ephesos* (Wien 1974), pp. 21-23.
7. Ἀρτέμιδι Ἐφεσ[ί]αι καὶ Αὐτοκράτορι Κ[αί]σαρι Σεβαστῷ καὶ Τιβερίῳ Καίσαρι Σεβαστοῦ υἱῷ καὶ τῷ δήμῳ τῶν Ἐφεσίων Γάιος Σεξτίλιος Ποπλίου υἱὸς Οὐστούρια Πολλίων σὺν Ὀφελλίᾳ Αὐλο[υ] θυγατρὶ Βάσση τῇ ἐκ αὐτοῦ γυναικὶ καὶ Γάϊῳ Ὀφελ[ε]λίῳ Πρόκλῳ τῷ ἐκ αὐτοῦ υἱῷ καὶ τοῖς λοιποῖς τέκνοις τῆν γεφύραν ἐκ τῶν ἰδίων ἀνέθηκεν, cf. Meric, R.-Merkelbach, R.-Nolle , J.-Sahin, S., *Die Inschriften von Ephesos* VII.1, Nr. 3001-3500, I.K. 17,1, pp. 96-97, no. 3092; Kek, D., *Der Römische Aquädukt als Bautypus und Repräsentationarchitektur* (Charybdis 12, Münster 1996), p. 292.
8. Cf. Alzinger, W., *Augusteische Architektur in Ephesos* (Wien 1974), p. 23, where the monument's architecture is compared to that of the Gate of Mazaeus at the Square Agora and that of the Memmius Monument.
9. For general information on the use of Roman aqueducts see Αδάμ-Βελένη, Π.-Ακτσελή, Δ.-Αλλαμάνη-Σουρή, Β.-Γκατζολής, Χ.-Τζαναβάρη, Κ., *Ρωμαϊκή Θεσσαλονίκη* (Θεσσαλονίκη 2003), p. 33. There it is said that the transportation of water was achieved through the use of stone and clay pipes, stretching over many kilometers and crossing mountains and hills. Rows of arches supporting stone conduits were constructed over plains, gorges and ravines, bridging rivers and securing water supply to cities, while they also constituted monumental architectural compositions. In each city this water was collected in cisterns, wherefrom through lead pipes it



supplied public baths, nymphaea and private residences, catering for the everyday needs of the citizens. For more on Roman aqueducts in particular see Hodge, A., *Roman Aqueducts and Water Supply* (London 1992); Kek, D., *Der Römische Aquädukt als Bautypus und Repräsentationarchitektur* (Charybdis 12, Münster 1996); Adam, J., *Roman Building: Materials and Techniques* (London - New York 1994), pp. 239- 245. On the water supply conduits see Vitruvius, *Περί Αρχιτεκτονικής*, translated by Π. Λέφας (Αθήνα 1996), p. 183.

10. See Özis, Ü. - Atalay, A., "Fernwasserleitungen von Ephesos", στο Friesinger, H.-Krinzinger, F. (eds.), *100 Jahre Österreichische Forschungen in Ephesos. Akten des Symposions Wien, 1995* (Wien 1999), p. 406, 407.

11. Chandler, R., *Travels in Asia Minor 1764-1765* (London 1971), pp. 77-78.

12. Choiseul-Gouffier, M. G. A. F., *Voyage pittoresque de la Grèce* (Paris 1823), p. 307, tables 118-119.

13. Forchheimer, P. - Heberdey, R. - Keil, J. - Niemann, G. - Wilberg, W., *Agora, Torbauten am Hafen, Wasserleitungen, Brunnenhaus beim Theater, Aquädukt* (FIE III, Wien 1923), pp. 256-262.

14. Alzinger, W., *Augusteische Architektur in Ephesos* (Wien 1974), pp. 21-23.

Bibliography :

	Alzinger W. , <i>Augusteische Architektur in Ephesos</i> , Wien 1974, SoschrÖAI 16
	Heberdey R., Niemann G., Wilberg W., Forchheimer P., Keil J. , <i>Agora, Torbauten an Hafen, Wasserleitungen, Brunnenhaus beim Theater, Aquädukt</i> , Wien 1923, Forschungen in Ephesos, Bd. III
	Hodge A.T. , <i>Aqueducts and Water Supply</i> , London 1992
	Özis Ü., Atalay A. , "Fernwasserleitungen von Ephesos", Friesinger, H. – Krinzinger, F. (eds), <i>100 Jahre Österreichische Forschungen in Ephesos. Akten des Symposions Wien, 1995</i> , Wien 1999, DenkschrWien 260, AForsch 1, 405-411
	Keil J. , "XV. Vorläufiger Bericht über die Ausgrabungen in Ephesos", <i>Öjh</i> , 26, 5-66
	Kek D. , <i>Der Römische Aquadukt als Bautypus und Repräsentationarchitektur</i> , Münster 1996, Charybdis Bd. 12
	Vann R.L. , <i>A study of Roman Construction in Asia Minor</i> , Cornell University 1976, PhD








Webliography :

	Ephesus Municipal Water System Analysis http://homepage.univie.ac.at/elisabeth.trinkl/forum/forum1297/05wass.htm
	The Aqueducts of Ephesos http://www.oeai.at/index.php/water-supply.html

Glossary :

	arch, the A curved structure, as a masonry, that covers openings in the stonework and is capable to supports the weight of material over an open space, as in a bridge, doorway, etc. It is often used as a decorative element.
--	---



	architrave or epistyle
The lowest part of an entablature resting on the columns capitals and supporting the frieze.	
	cornice
1. (Antiq. and Byz.) Member of the entablature or the architrave that projects in the elevation of a secular or religious building. As a horizontal member it may run along a wall. The cornice may also be the projecting part of the roof, protecting the building from rain. 2. (Byz. archit.) Decorative architectural element used to articulate the walls of a church, both on the inside and on the outside, by marking the division between the vertical wall and the spring of the vaults. It usually bears painted or sculptural decoration of vegetal or geometric motifs.	
	cyma / cymation
Moulding decoration with ovals or tri-cusps alternating with lotus flowers. It was meant to separate or to lay stress upon two surfaces. In ancient architecture we distinguish Doric, Ionic and Lesbian cymation, according to their decoration and section form.	
	mortar, the
Liquidised paste consisting of soil, water, sand or marble. It is used as binding material between rocks or plinths. Thus, it assures stability and protection of masonry.	
	nymphaeum, the
Originally the sacred grotto dedicated to the Nymphs. During the Roman period the Nymphaea were monumental public fountain constructions, commissioned by wealthy citizens. During the Early Byzantine period they often adorned the fora (public spaces).	
	pillar
Pier of square or rectangular cross-section.	
	pseudo-isodomic masonry
Masonry built of blocks of the same height within each course , but each course varying in height.	