



Summary :

A gymnasium developed in the context of bath buildings in Alexandria Troas. It belongs to the category of baths-gymnasia incorporated in the same establishment, which is characteristic of the eastern provinces of the Roman Empire. It was founded in the first half of the 2nd century AD.

Date

First half of 2nd c. AD.

Geographical Location

Alexandria Troas, Troas

1. Location

The most important monumental building of Alexandria Troas, in ruins today, is its public bath complex. Built on a hill, at a very privileged location with an excellent view, the bath complex occupied an area of approximately 10,210 square metres. To the west there was probably a **palaestra**. Parts of the city's aqueduct have been preserved to the south of the monument.¹

2. Architectural Description

This type of monument belongs to an architectural form known in modern bibliography as bath-gymnasium, which emerged and flourished in the eastern provinces during the Imperial period. There, the Greek **gymnasium** adapted to the new needs of the **Roman thermae**.²

No excavation has been conducted in the area so far. Apart from the actual remains, it was the descriptions and drawings of travellers that visited the **Troas** during the 17th and 18th centuries, when several of the walls were preserved in a better condition,³ which offered valuable information towards the reconstruction of the ground plan of the monument. However, as neither the preserved ruins nor the travellers' descriptions suffice to reconstruct some of the rooms, researchers have been attempting to interpret these areas by comparing them to similar Asia Minor buildings. These buildings share marked similarities with respect to their general architectural plan and construction details. The baths in Alexandria Troas imitate the two building complexes in **Ephesus**: the eastern baths⁴ and the **Theatre Baths**.⁵ The design of some individual spaces is also similar to the **bathing complex in Sardis**.⁶

The architectural form of these monuments comprises three oblong rooms arranged successively along the three sides of a rectangular complex, in a Π-shape, surrounding the bath rooms.⁷ These are symmetrically arranged on either side of a central axis, including the main rooms for the hot, the warm and the cold bath (**caldarium**, **tepidarium** and **frigidarium** respectively). The symmetrical arrangement of the rooms was in accordance to the operation of the building. The palaestra, usually in the form of a peristyle yard, was on the fourth side and formed an independent building parallel to the rectangular building of the baths.

More specifically, the three oblong rooms of the bath complex under investigation, extend on the northern, eastern and southern side of the monument.⁸ The eastern room was wider than the northern and the southern ones. Along its long walls, at regular intervals, there were **pillars** used for supporting a **vaulted** roof. In this way, wide rectangular **niches** were formed between the pillars. Massive pillars and deeper niches were probably also formed along the walls of the northern and the southern oblong rooms. On the eastern corner of each of these two rooms there was a rectangular space with a semicircular niche on its eastern side (spaces x, y) and three possibly rectangular deep niches, on the northern and southern side respectively.⁹ A rectangular platform might have existed in the central part of the eastern wall of the complex.¹⁰

The frigidarium (room F) was exactly parallel to the wider room B. It included a pool with two semicircular edges (natatio frigida).¹¹ To the west of the frigidarium and in parallel arrangement there was a row of smaller rectangular spaces. Although there are only a



few remains of these areas, their function was revealed thanks to comparative evidence of architecturally similar monuments. So, space P in Fig. 1 was probably a water tank, while the two rooms on either side of P may have been smaller frigidaria.¹² It has also been suggested that the narrow corridor right to the west of P was the tepidarium.¹³ The front part of the building included the caldarium (space C). The eastern and western walls of the caldarium had three rectangular niches, with the central opening being double in size from the others. The niches usually incorporated the pools¹⁴ or the water basins (bath-tubs).¹⁵ On either side of the caldarium there were two rectangular spaces, equal in size, which were also heated. All the main rooms of the baths must have had vaulted roofs.

The location of the palaestra and its connection to the bath building remain unknown. The area to the west of the building slopes naturally and is therefore completely covered with ruins today. A comparison between the complexes of Alexandria Troas and the eastern baths of Ephesus leads to the conclusion that the palaestra should have been built in that area.¹⁶ In monuments of this architectural type, the palaestra is usually an independent building in front of the baths. In this way, the palaestra is clearly separated from the bathing-block. This is not the case in other baths, where the area of the palaestra is functionally incorporated into the main bathing complex. Because the palaestra was immediately in front of the hot rooms, the bathers could follow a way different from the one they took in other types of baths: the visitors started from the open space of the palaestra, intended for sporting activities, and at first entered the oblong rooms. Then they could either enter the caldarium, through the auxiliary spaces, and directly from the hot to the cold bath (starting from the tepidarium and ending in the frigidarium), or reach the eastern space and then walk in the opposite direction, that is, from the cold (frigidarium) to the hot bath (caldarium). The arrangement of the large oblong rooms around the main spaces of the bath favoured the insulation of the hot rooms. At the same time, those rooms could serve a lot of purposes and be used as changing rooms, places where the visitors could walk, while they could also be used for lectures or lessons or other cultural activities.¹⁷ This solution must have been very common in the crowded cities of the Empire, where free spaces for similar activities were difficult to find.¹⁸

3. Masonry

The external walls were built according to the **isodomic system of masonry**, with large porous plinths carefully smoothed and placed alternatively widthways and lengthways (*opus quadratum*), with the use of a reddish **mortar** as binding material. The internal walls consisted of a core made of angular stones of unequal size and a strong binding mortar, which was externally covered with a thick layer of rough mortar. The marble slabs were fixed on this layer of mortar with the help of iron joints. Such bronze joints were found on the walls of the niches in room B, which indicates that those spaces were lavishly coated. Almost all the large central rooms and the smaller auxiliary spaces were vaulted. The massive pillars supporting the vaults were made of well-dressed porous plinths, according to the isodomic system, while at the difficult points of the upper building, such as the curved walls or the arched structures, the stones and the plinths were used interchangeably (*opus mixtum*).¹⁹

4. Decoration

Various types of coloured marble were used to cover internal walls, as it is indicated by the numerous thin slabs found scattered among the ruins of the building.²⁰ The large rooms were embellished with colourful mosaic floors made of stone and glass tesserae.²¹ The marble floors, mosaics and colourful marble slabs on the walls, produced an impressive aesthetic result, which offered lavishness to the building. It should be assumed that the whole complex included works of art, such as statues of gods and heroes or busts of emperors and notable citizens, paintings, as well as other offerings which used to decorate the various spaces of the gymnasia, baths and thermae of the ancient Graeco-Roman world.²²

5. Chronology

Due to the lack of excavations, the monument could be dated mainly according to its incorporation into a category of architectural monuments with specific typological characteristics, whose emergence and acme is defined by the study of its most important examples. The earliest known example of this category of monuments, the eastern baths of Ephesus, must have been founded –



according to the chronology of the earliest archaeological finds— around the mid-2nd century AD.²³ The close similarity between the baths of Alexandria Troas and the eastern baths of Ephesus led researchers to investigate the nature of the relation between the two monuments; possibly the same architect or commissioner. Alexandria Troas, an important city and harbour, reached its heyday in the Early Imperial years and must have accepted Roman colonists.²⁴ The city was favoured by [Julius Caesar](#) and the Emperors [Augustus](#) (31 BC-14 AD) and [Hadrian](#) (117-138 AD), who contributed to its beautification. Moreover, Philostratus, a 2nd c. philosopher from Lemnos, reports that Herodes Atticus built an aqueduct there, whose remains are today visible to the south of the baths. The aqueduct must have provided the baths with water. The two works may have belonged to the same building project, although this is not reported by the written sources of Antiquity. In addition, Herodes Atticus was **proconsul** of Asia circa 135 AD, possibly based in Ephesus. Therefore, it was suggested that the eastern baths of Ephesus and the baths of Alexandria Troas as well as the aqueduct were built by Herodes Atticus.²⁵ The baths of Alexandria Troas must have been founded in the first half of the 2nd c. AD because the building was very similar, with respect to building details, to other monuments of Hadrian's years (117-138 AD).²⁶ However, more archaeological evidence, such as the portable finds of the anticipated excavation (mainly pottery and coins), should be examined so that a safe and more accurate chronological conclusion about the foundation of the monument could be established.

There is no specific information about the abandonment and destruction of the monument. At times, severe earthquakes should have contributed to the collapse of the walls, not to mention the natives in the recent centuries that have been steadily removing the well-dressed stones, thus turning the monument into a place of extensive ruins.

6. History of Research and Current State

The earliest reference to the building as a gymnasium was made by the Dilettanti Corporation.²⁷ No excavations have been conducted in the area and the monument is still unpublished. A detailed description of the preserved ruins was given by R. Koldewey²⁸ and A.C.G. Smith,²⁹ who were the first to compare the monument with other known bath complexes of Asia Minor. Nowadays the ruins of the monument tower near the top of the hill, where the ancient city used to be. When the visitors go up the hill, they see at first the southeastern corner of the preserved tall building. The external eastern wall with the rectangular niches has survived in better condition. There are four massive pillars with arches preserved in the central space, which used to support the vaulted roof. The rest of the walls in the building rooms are substantially damaged.

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1. A brief description and the ground plan of the aqueduct's ruins are provided by Koldewey, A., 'Das Bad von Alexandria Troas', *AM* 9 (1884) pp. 36-48, particularly from p. 47 onwards, pl. III.
 2. About the baths-gymnasia, see mainly Nielsen, I., *Thermae et Balnea* (Aarhus 1990) from p. 105 onwards. A broader content is given to the term by Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) from p. 250 onwards. The monuments of this type are simply called baths: see Ginouvès, R., *Dictionnaire méthodique de l'architecture grecque et romaine, III. Espaces architecturaux, Batiments et ensembles* (Roma 1998) p. 100, mainly because research has not yet clarified whether these monuments founded in Asia Minor cities in the Imperial years succeeded or replaced, as regards their educational operation, the institution of the Greek gymnasium. About the function of the so-called baths-gymnasia, see Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) from p. 307 onwards, mainly p. 312.
 3. The earliest references to the baths of Alexandria Troas and the travellers' drawings were collected by Smith, A.C.G., 'The gymnasium at Alexandria Troas. Evidence for an outline reconstruction', *AnatSt* 29 (1979) pp. 23-50.
 4. Nielsen, I., *Thermae et Balnea* (Aarhus 1990), C298; Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) from p. 279 onwards, with earlier bibliography included.
 5. Nielsen, I., *Thermae et Balnea* (Aarhus 1990) C300; Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) from p. 279 onwards, with earlier bibliography included.
 6. F. Yegül, *The Bath, Gymnasium complex at Sardis* (Archaeological Exploration of Sardis 3, 1986); Nielsen, I., *Thermae et Balnea* (Aarhus 1990)



C315; Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) from p. 270 onwards, pic. 334.

7. These oblong rooms, which are typical of the architecture of the Roman thermae and baths, are reported in bibliography under the conventional term basilica thermarum (mainly in the case of the thermae of Italy and western provinces) or under the term ambulatorum, -a in the case of Asia Minor baths. See Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) pp. 414, 415, note 1; Nielsen, I., *Thermae et Balnea* (Aarhus 1990) p. 106.

8. See Drawing 1.

9. Smith, A.C.G., 'The gymnasium at Alexandria Troas. Evidence for an outline reconstruction', *AnatSt* 29 (1979) pp. 23-50.

10. At this point there is extensive damage and few remains, thus it is particularly difficult to understand the original plan. It has also been assumed that the main entrance was here. However, this seems to be quite unlikely, since access to the bath complex in the rest of the monuments that belong to the same architectural type was usually from the side of the palaestra. See Smith, A.C.G., 'The gymnasium at Alexandria Troas. Evidence for an outline reconstruction', *AnatSt* 29 (1979) pp. 23-50.

11. This addition is based on the examples of the eastern baths and the gymnasium of Vedius in Ephesus, Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) p. 282. In the Roman thermae of Italy and the western provinces –on which the baths of Asia Minor were modelled– such pools existed mainly in open-air spaces. It is not certain why in Asia Minor baths the pools of cold water are in closed rooms. This might have been so because in this way the water's temperature remained invariable, regardless of the external weather conditions. Nielsen, I., *Thermae et Balnea* (Aarhus 1990) p. 106.

12. Smith, A.C.G., 'The gymnasium at Alexandria Troas. Evidence for an outline reconstruction', *AnatSt* 29 (1979) pp. 23-50.

13. Smith, A.C.G., 'The gymnasium at Alexandria Troas. Evidence for an outline reconstruction', *AnatSt* 29 (1979) pp. 23-50.

14. Alveus, -i (Lat.), see. Ginouvès, R., *Dictionnaire méthodique de l'architecture grecque et romaine, III. Espaces architecturaux, Bâtiments et ensembles* (Roma 1998) from p. 103 onwards.

15. As for the terms, see Ginouvès, R., *Dictionnaire méthodique de l'architecture grecque et romaine, III. Espaces architecturaux, Bâtiments et ensembles* (Roma 1998) from p. 100 onwards.

16. Smith, A.C.G., 'The gymnasium at Alexandria Troas. Evidence for an outline reconstruction', *AnatSt* 29 (1979) pp. 23-50, particularly from p. 24 onwards. See also Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) p. 282.

17. About the operation of these rooms, see Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) from p. 414 onwards. Nielsen, I., *Thermae et Balnea* (Aarhus 1990) p. 106.

18. Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) p. 282.

19. About the building walls, see Koldewey, A., 'Das Bad von Alexandria Troas', *AM* 9 (1884) pp. 36-48. See also Nielsen, I., *Thermae et Balnea* (Aarhus 1990) pp. 104-108, C292.

20. The main marble type is the off-white one with blue, red and green veins; see Koldewey, A., 'Das Bad von Alexandria Troas', *AM* 9 (1884) pp. 36-48.

21. Koldewey, A., 'Das Bad von Alexandria Troas', *AM* 9 (1884) pp. 36-48, particularly from p. 39 onwards. See also Sear, F.B., *Roman Wall and Vault Mosaics* (R.M. Ergh. 23, Heidelberg 1977) p. 142, no. 168.

22. About the decoration of ancient gymnasia and thermae, see mainly Delorme, J., *Gymnasion. Étude sur les monuments consacrés à l'éducation en Grèce* (BEFAR 196, Paris 1960) pp. 362-373; Manderscheid, H., *Die Skulpturenausstattung der kaiserzeitlichen Thermenanlagen* (Berlin 1981).



23. Nielsen, I., *Thermae et Balnea* (Aarhus 1990), C298; Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) from p. 279 onwards, with complete earlier bibliography.
24. Schwertheim, E., 'Zur Gründung der römischen Kolonien in Alexandria Troas' in E. Schwertheim (ed.), *Die Troas. Neue Forschungen III* (Bonn 1999) pp. 95-101. In general, about the history of the Troad in the Imperial years, see Tenger, B., 'Zur Geographie und Geschichte der Troas', in Schwertheim, E. (ed.), *Die Troas. Neue Forschungen III* (Bonn 1999) pp. 103-180, particularly from p. 165 onwards.
25. That is why the baths of Alexandria Troas are often reported in bibliography as 'baths or gymnasium of Herodes Atticus'. Cook, J.M., *The Troad, an Archaeological and Topographical Study* (Oxford 1973) p. 200, note 4, p. 201; Smith, A.C.G., 'The gymnasium at Alexandria Troas. Evidence for an outline reconstruction', *AnatSt* 29 (1979) pp 23-50, particularly p. 47, note 40.
26. Nielsen, I., *Thermae et Balnea* (Aarhus 1990) pp. 104-108, C292; Yegül, F., *Baths and Bathing in Classical Antiquity* (New York 1992) p. 304.
27. Dilettanti Society, *The Antiquities of Ionia*. v. 2 (London 1797) paint. 52-54. See Smith, A.C.G., 'The gymnasium at Alexandria Troas. Evidence for an outline reconstruction', *AnatSt* 29 (1979) pp. 23-50.
28. Koldewey, R., 'Das Bad von Alexandria-Troas', *AM* 9 (1884) pp. 36-48.
29. Smith, A.C.G., 'The gymnasium at Alexandria Troas. Evidence for an outline reconstruction', *AnatSt* 29 (1979) pp. 23-50.

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Glossary :

caldarium

Derivative of the Latin verb caleo (= warm up). It is the strongly heated room of Roman baths. Its hot plunge pool was used to take not only a hot bath but also a steam bath due to high levels of humidity. It was also called the "inner room".

frigidarium, -a (ουδ.)

Derivative of the Latin verb frigeo (being cold). It was the unheated room of Roman baths. It often incorporated one or more large water basins. It was often visited after the use of the warm and hot rooms or after the training in the exercise grounds (palaestrae). As its amount of space was the biggest in the baths, it was also devoted to other non-bathing functions and it was used as lecture hall and place of various cultural activities.

gymnasium

The gymnasium was one of the most important centres of public life in Greek cities. The institution of the gymnasium, directly connected with the development of the Greek city, aimed to create virtuous citizens and gallant warriors. As educational institutions of public character, the gymnasia were intended for the physical and theoretical education of the young and consisted of separate spaces for special purposes.

isodomic masonry (opus quadratum)

A type of masonry in which blocks of equal length and thickness are laid in courses, with each vertical joint centered on the block below.

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.

niche

Semi-circular recess on the surface of the wall.

opus mixtum (ουδ.)

Masonry consisting of small stones and abundant mortar, which often interchange with horizontal double rows of plinths.

palaestra

A colonnaded enclosure for athletic exercise. The palaestra functioned both independently and as a part of the Greek gymnasium. It was formed as an open court surrounded by colonnades with adjoining rooms.

pillar

Pier of square or rectangular cross-section.

proconsul, -lis

A quite high ranking official, *vir spectabilis* according to the rank of the senate, who was inequable only to the *Domestikos* of the *Scholae* and to the *Magister Militum per Orientem*. The proconsul usually served as a governor of the Imperial provinces (i.e. in Asia Minor the provinces of Asia and Cappadocia). The office was demoted from the 9th century onwards and the term was in use until the 12th century meaning a dignity.

tepidarium

The word is derived from the verb *tepeo* meaning 'to be tepid'. It is the room of tepid water in the Roman *thermae*. It was also called middle house or tepid house and was usually situated between the *caldarium* and the *frigidarium*. Its main function was the acclimatization of the bather to the change of temperature. Being at the *Tepidarium* the visitor could also apply ointments on his/her body before or after the hot bath, although, there was a special room for this function called *unctorium*.

vault

A semi-cylindrical roof.