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Gymnasial Buildings and Sanctuaries. A Contribution to the Formation of the Palaestra and an Interpretation of the So-Called ‘Echo Stoa’

Summary

The emergence of the palaestra as a distinctive building in the form of the peristyle is commonly assigned to the last third of the 4th century BC. While sources show that palaestras existed already earlier, no example has yet been safely identified. This paper argues that some buildings in extra-urban sanctuaries on the Peloponnesus with a set of functions in the context of athletics and competition could represent such early gymnasial buildings. The examples from Nemea and Epidauros lead to the building complex of the Echo-Stoa in Olympia which was very likely built as the first palaestra of the precinct. This building complex might reflect the appearance of early gymnasial buildings before the peristyle was introduced as an obligatory architectural form of palaestras.

Keywords: Olympia; Epidauros; Nemea; gymnasium; palaestra; Echo stoa

Das Aufkommen der Palästra als Gebäude in Form eines Peristyls kann ins letzte Drittel des 4. Jhs. v. Chr. datiert werden, wobei die schriftlichen Quellen zeigen, dass es bereits früher Palästre gab. Von diesen ist aber noch keine sicher identifiziert worden. In diesem Beitrag wird davon ausgegangen, dass einige Gebäude in außerstädtischen Heiligtümern auf der Peloponnes, die mit Funktionen des Sports, des Wettkampfs und der Körperpflege verbunden werden können, solche frühen Palästre repräsentieren. Die Beispiele in den großen Heiligtümern von Nemea und Epidauros führen zum Gebäudekomplex der Echo-Stoa in Olympia, der sehr wahrscheinlich als erste Palästra in dem Heiligtum angesprochen werden kann.

Keywords: Olympia; Epidauros; Nemea; Gymnasion; Palästra; Echo-Stoa

I Introduction

The building type of the palaestra – a peristyle with aisles for circulation and adjacent rooms, often in the design of exedras – occurs in the archaeological record at several places in different regions first in the 2nd half of the 4th century BC: The earliest known palaestras are located in Athens, Eretria, Delphi, Amphipolis and Priene.¹

The widespread occurrence of these buildings within a short historical period suggests that the idea of the palaestra is older than the buildings in the archaeological record and in fact the term ‘palaestra’ for a gymnasial building is already attested in Plato’s *Lysis* shortly after 400 BC: He reports that Socrates was walking along the northern city walls of Athens when he noticed a door next to a well leading into a precinct (περίβολος). Inside, handsome young men lingered. Socrates asked what the building could be and got the answer it was a palaestra, recently built and it served the purpose of instruction and discussion.² Despite the fact that the first peristyles date to the same time and were well known in Athens since the so-called Pompeion was built next to the Dipylon gate around 400 BC, it is not known what Plato’s gymnasial building looked like.³ As the earliest known palaestras in the form of a peristyle were erected at least half a century later, probably Plato’s palaestra was nothing else than a walled court.

As there is a time lag between palaestras attested in literature and the widespread earliest palaestras in the shape of a peristyle, we have to widen our view to find further potential gymnasial buildings of the 4th century BC. Since Pausanias records the existence of a gymnasia-

sium and a palaestra in the Sanctuary of Zeus of Olympia it might be possible to find candidates in extra-urban sanctuaries.⁴ According to him, it was customary for the pentathletes participating in the Olympian Games to practice there. Running, jumping, discus-throwing and javelin-throwing are mentioned by the author in connection with the so-called gymnasium. Wrestling, the fifth type of sport in the pentathlon, took place in a second enclosure. Pausanias calls this the palaestra and locates it to the left of the entrance to the gymnasium. Scholars agree in the identification of gymnasium and palaestra with a large building complex in the northwest of the sanctuary (Pl. 21)⁵. The Olympian palaestra perfectly corresponds to what we understand by the synonymous building type: an unpaved quadrangle framed by a Doric peristyle, surrounded by Ionic exedras and with an emphasized northern wing housing a main exedra in the middle and a *loutron* with washbasins at both ends. Following the stylistic characteristics of the Ionic ornament of the palaestra and a *terminus ante quem* in 280 BC given by Pausanias who mentions a victory inscription from that year, which was present in the building, the palaestra was built not later than in the first quarter of the 3rd century BC.⁶ The suggested usage of the building as a place for wrestling and physical exercise corresponds with the design of the floors in the quadrangle, the aisles and the exedras with an unpaved and thus soft surface. Circumferential benches along the walls of the exedras served as resting places and as seats for visitors. Directly linked to the building’s proposed use for physical exercise are the two wash rooms among further facilities for body care.⁷

1 Athens: Palaestra in the so-called Academia (Delorme 1960, 38–42, 51–54; Travlos 1971, 42–51; Wacker 1996, 145–160; Trombetti 2012 330–336; Trombetti 2013, 6–29; Emme 2013b, 148–149, 316 no. 12; Kazakidi 2015, 213–214; A. Caruso in this volume); Eretria: double palaestra of the North Gymnasium (Delorme 1960, 16–164; Mango 2003; Emme 2013b, 329 no. 31; Trombetti 2013, 116–127; Reber 2014, 134–141; G. Ackermann and K. Reber in this volume); Delphi (Jannoray 1953; Delorme 1960, 76–80; Wacker 1996, 195–207; Emme 2013b, 324–325 no. 24; Amphipolis (Delorme 1960, 206–207; Lazaridis 1990; Wacker 1996, 143–144; Koukouli-Chrysantaki 2002, 57–73; Emme 2013b, 310–311 no. 3; Kazakidi 2015, 255–257); Priene: According to the latest excavations in the so-called Upper Gymnasium by the author the building dates back to the 4th century BC.

2 Plat. *Lys.* 203a–204a.206e. The book dates to shortly after 400 BC; cf. Delorme 1960, 60.

3 According to Emme 2013b, 295 buildings with proto-peristyles trace back to the 6th century BC. In Delos the earliest peristyle buildings occurred in the middle of the 5th century BC. Athens determined further developments with the earliest relatively large peristyles like the Pom-

peion and the π -shaped portico in the sanctuary of Artemis in Brauron at the end of the 5th century BC.

4 Paus. 6.21.2.

5 Firstly Adler, Curtius, and Dörpfeld 1892, 113–121 (cf. B. Emme in this volume).

6 Wacker 1996, 25–44 (with earlier sources) and Pausanias 6.6.3. Wacker dates the capitals to the early 3rd century BC but there is no compelling reason to exclude an earlier construction date (cf. B. Emme in this volume).

7 The *loutron* at the north-western corner of the building is well preserved. The corresponding room in the northeast was heavily remodeled in later times but since it has the same outline as the western room and since there is evidence of water supply, it is very likely to have been used as a second *loutron*. An open air *loutron* between the early Roman Propylon and the north-eastern corner of the palaestra with a row of sinks in front of the northern wall and a row of recessed basins along the south side of the yard is a later addition. Finally, brick paved areas along the northern and western side of the court of the palaestra have to be men-

Pausanias' 'Gymnasium' was erected on the northern side of the Olympian palaestra probably in late Hellenistic times.⁸ Excavations brought to light mainly a huge double-aisled Doric portico. The width of its front opening measures roughly 192.5 metres and coincides perfectly with the length of the Olympian stadium. This and the existence of a starting block determine the function of the portico as a roofed dromos or xystos.⁹ According to Pausanias, the gymnasium originally was an enclosure with buildings which framed a courtyard on all four sides.¹⁰ Following this, the appearance of this building would have been similar to several 2nd century BC enclosures, for example in Miletus, Kos and Ephesus which were part of civic gymnasia and served most likely as training grounds for types of sport requiring space.¹¹

Looking at the palaestra and the gymnasium in Olympia raises the question of what the terms mean in the context of a sanctuary. Since a palaestra firstly was seen as a place for wrestling it is connected to the physical evidence of an open-air sand courtyard or, more elaborate than that, a peristyle building with the wrestling place in its center. The term gymnasium embraces a wider range of meanings. The designation of a certain building is only one part of it. Beyond physical exercise, it designates gen-

erally the school as an institution or the youths as a group attending it.¹² In summary, a palaestra is first of all a place for physical exercises whilst a gymnasium describes a key institution of the polis state with all its functions, offices, user groups and buildings, amongst them the palaestra as a central part of a gymnasium. The wider sense of the term with a close relation to the polis state does not work in an extra-urban sanctuary several days' journey from the nearest polis: This fact is proved by the complete absence of gymnasia officials in Olympia.¹³ As there is no evidence for the institution of the gymnasium in Olympia it may be assumed that the terms refer, above all, to the visual appearance of the 'palaestra' and the 'gymnasium' and their use as sport facilities.

2 Athletic Facilities in Panhellenic Sanctuaries of the 4th century BC

As we have seen, the gymnasia building complex in Olympia is unique but 'gymnasia buildings' occur in other sanctuaries as well. They differ from Olympia in their architectural form but contain a similar set of functions.¹⁴ This is demonstrated by the example of the Ne-

tioned which probably served as places where athletes removed the mixture of dust, sweat and oil after physical exercise. These paved areas were located alongside a gutter surrounding the court and permanently supplied with fresh water by a channel which enters the palaestra from east (similar paved areas exist in the palaestras at Amphipolis and Pergamon, for example).

- 8 Adler, Curtius, and Dörpfeld 1892, 128; Wacker 1996, 45–47, 56. As there is neither stratigraphic evidence nor a basis for dating Hellenistic Doric capitals, the date of the erection of the building is not known. Recent excavations conducted by the ephoria in 2014 in the eastern portico of the building are unpublished.
- 9 On the length of the stadium see Herrmann 1972, 164, 194. On the remains of a starting device see Adler, Curtius, and Dörpfeld 1892, 128; Delorme 1960, 106; Hellner 2013, 277.
- 10 Pausanias 6.21.2 calls the palaestra the "ἄλλος περίβολος". Hence the aforementioned gymnasium has to be an enclosure too. See Delorme 1960, 106 "Il est probable que ces portiques fussent dans l'antiquité les deux seuls du gymnase."
- 11 B. Emme recently interpreted the so-called 'Westmarkt' in Miletus as a part of the large Eumenes Gymnasium consisting of a stadium, a palaestra and the xystos complex, alias 'Westmarkt' (Emme 2013a, 61–63). The existence of similar building complexes at the later 'Staatsmarkt' in Ephesos (Engelmann 1993; Thür 2007) and within the West-Gymnasium of Kos (Morricone 1950, 224–227; Rocco 1997) is very likely.
- 12 LSJ s. v. "γυμνάσιον"; <http://stephanus.tlg.uci.edu/ljsj/#eid=23760&context=lsj&action=from-search> (visited on 06/01/2016). On the meaning of the terms gymnasium and palaestra and their differentiation mainly in respect of their architecture see Mango 2003, 18–20 (with a summary of the history of the two concepts); Trümper 2008, 88 and Trümper 2015, 169; cf. Delorme 1960, 253–271, 266–267.
- 13 When gymnasiarchs are mentioned in inscriptions their offices are al-

ways related to other poleis and never to Olympia itself. For example, the *ὑποστράχια* in I. Olympia 55 is related to Tiberius Claudius Rufus in Smyrna; a *ὑποστράχης* in I. Olympia 56 is the member of a *pompē* on the occasion of games in Neapolis; the *γυμνάσιον* mentioned in I. Olympia 433–434, 436, 468, is part of honorific decrees for officials of Elis; the *γυμνάσιον* in I. Olympia 283 is an official of Elis and dedicated a statue in the precinct. The commemorative inscription I. Olympia 940 by the demos of Elis and the *boulē* of Olympia records a *γυμνάσιον* with an uncertain affiliation. – Furthermore, none of the Olympian inscriptions attest a palaestra or even a gymnasium situated in the precinct. The only gymnasium which occurs in the epigraphical record is the old gymnasium of Elis, which was called the "Xystos"; I. Olympia 54 and 436, see Dittenberger and Purgold 1896, 111–118, 527–529, with a dating to AD 85 and the 2nd century AD, respectively. This unconventional label for a gymnasium and its function is again explained by Pausanias 6.23.1: It was used as training facility for athletes taking part in the Olympic games during a 30-day period prior to the competitions in the sanctuary. – Exceptional is the decree I. Olympia 56 mentioning a further gymnasium in the context of the organization of games at Neapolis in Italy (reign of Trajan or Hadrian according to Dittenberger and Purgold 1896, 118–126).

14 Typologically the closest examples to the palaestra of Olympia in the context of an extra-urban sanctuary can be found in Epidauros and Kourion on Cyprus. Both peristyle buildings have been interpreted as palaestras as well but they include closed rooms and not exedras. Furthermore, in both buildings couches and podiums for dining and cooking facilities were found. It has to be assumed that they represent banquet buildings rather than palaestras; for Epidauros see Tomlinson 1983, 82–84; cf. Mango 2004, 284; Leybold 2008, 60–68; the unpublished building in Kourion has two rooms containing couches and a third room with cooking facilities.

mean sanctuary: With the sanctuary of Olympia the precinct shares not only the worship of Zeus but also the position in a rural landscape and its periodical use with thousands of visitors during festivals.¹⁵ For the holding of diverse athletic contests within these festivals the sanctuary is equipped with specific infrastructure. Above all, there is the stadium at the eastern edge of the precinct. It was built in the last third of the 4th century BC.¹⁶ A tunnel through the western embankment of the stadium connects the race track with a rectangular building (Fig. 1). Its dimensions are 16 by 13 m. An entrance in the north leads into a square court about 8 m in size surrounded by a three-sided Doric portico. The excavator named it the 'Apodyterion,' changing room.

A very similar and even more elaborate building is situated north of the stadium at the Asclepius Sanctuary of Epidauros.¹⁷ It covers an approximately square area with a width of 40 m (Fig. 1). The building consists of an oblong courtyard with a Doric colonnade on its southern side; a hall to the north of this courtyard with a number of passages on each long side and five Ionic columns along its axis; and a kind of vestibule on the northernmost side of the complex.¹⁸ Again there is a tunnel connecting the building, which was called a palaestra by its excavator, with the racetracks in the stadium. It is believed that the stadium, tunnel and the above-mentioned building at the northern embankment of the stadium originate from one building program from the period between the last third of the 4th century BC and the early 3rd century BC.¹⁹ It has been pointed out that Argos controlled the Sanctuaries of Nemea and Epidauros during the 330s and 320s BC.²⁰ Thus, it is no surprise to find similar architectural patterns in similar contexts within the same time frame. Stephen Miller de-

finied these building units in Nemea and Epidauros as stadium-tunnel-locker complexes, an architectural type which connected stadia and facilities for athletes. A possible set of functions for these facilities was deduced from their position and design: Athletes used them for undressing/dressing, warming up, oiling or cleaning the body before and after competitions.²¹

If athletes used these buildings for body care, washing facilities are missing. I suggest that the stadium-tunnel-locker complexes of Nemea and Epidauros were functionally supplemented by a particular form of baths, the so-called athlete baths, which contain a *loutron* with its characteristic sinks and a plunge basin. Only the example in Nemea is well investigated. It is contemporaneous with the stadium complex and lies in the center of the precinct next to the so-called Xenon.²² The bath consists of two square compartments. The eastern compartment is divided into three sections by two rows of Doric columns. One section houses a plunge pool framed by two rooms with washbasins (*loutrons*). The middle section was probably a courtyard and the third a portico. The second compartment with the same size as the first one is attached at its eastern side and has four columns inside, most likely creating a peristyle-like structure with a wooden entablature.²³ Also the less well known bath in the sanctuary of Asklepios in Epidauros is not placed in the vicinity of the stadium but next to the *hestiatorion*. Again it contained at least one *loutron* with the characteristic washbasins and at the eastern side most likely an immersion pool. It is said the bath was built in the 2nd half of the 4th century BC.²⁴

Washbasins for cold ablutions such as in the two athlete baths are known from the second half of the 5th century BC onwards and were an integral part of *palaestras*

15 Whilst in Olympia and Delphi the Panhellenic festivals recurred every four years, in Nemea and Isthmia the interval was only two years. Local festivals were celebrated here as well; Miller 1990, 2–3.

16 Miller 2001, 90–93. The building complex was not finished by 271 BC when the Nemean games were transferred to Argos. It began falling into disrepair already in the 3rd century BC.

17 Kavvadias 1929; Tomlinson 1983, 69, 91; Miller 2001, 178–190. The building is not properly published as its excavator, P. Kavvadias, died shortly after its discovery. Thanks to Miller's efforts the building was superficially re-examined in the 1990s.

18 Patrucco 1976, 16 fig. 3 published a sketchy (and incorrect) plan of the building for the first time. The only published, but quite small-scale, plan was published by Tomlinson 1983, fig. 44. This figure depicts an obliquely orientated room at the western side of the building. Miller

2001, 178–182 demonstrated that this structure did not belong to the ancient building.

19 Miller 2001, 184–189; cf. Patrucco 1976, 100–102, 116.

20 Miller 2001, 189–190 n. 440.

21 Miller 2001, 209–210, 222–224; cf. Koenigs 1984, 84.

22 Miller 1992, 246. Evidence comes from some sherds in the foundation trenches dating no earlier than the 2nd half of the 4th century BC. On the athlete baths in Nemea and Epidauros and a further example in Oropos (Lykeion mountains) Trümper 2014, 209, 214 n. 22, and 56.

23 Miller 1992, 232–236 reconstructs a west–east orientated gabled roof over the entire building.

24 Kavvadias 1900, 154–155, with the idea that the building represents a Hellenistic bath; cf. Ginouvès 1962, 359; Aslanidis and Pinatsi 1999; Wassenhoven 2012, 125; Trümper 2014, 216–222.

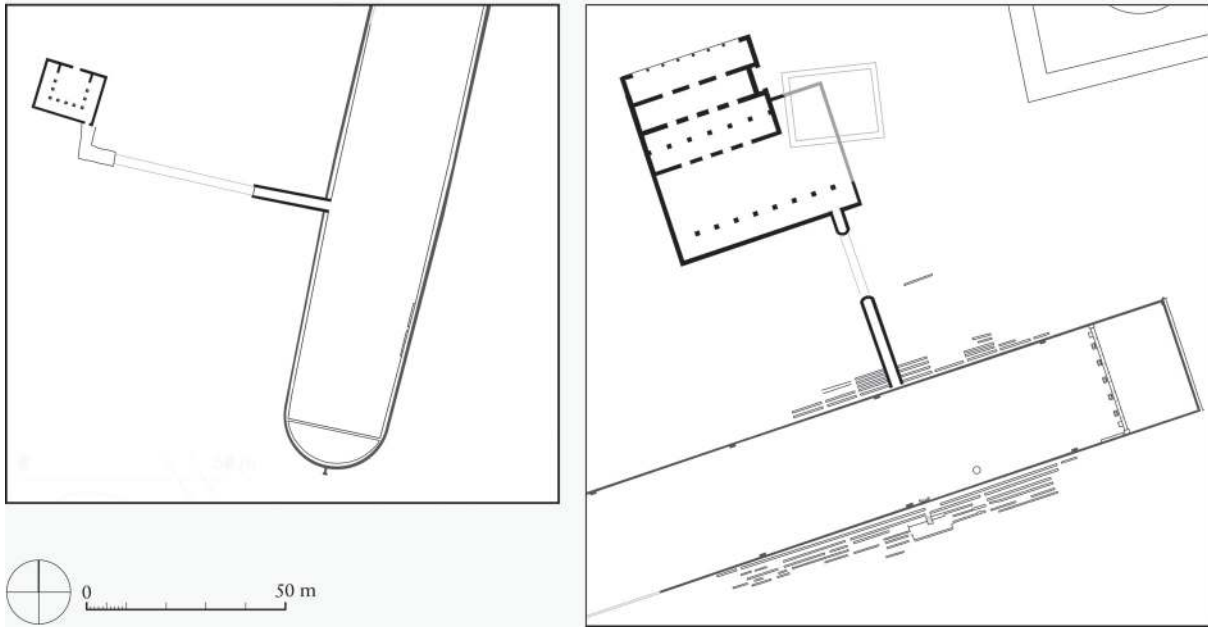


Fig. 1 Stadium-tunnel-locker-complexes in the Sanctuary of Zeus in Nemea (left) and the Sanctuary of Asclepius from Epidauros (right).

until Roman imperial times. Therefore the two baths have been interpreted as facilities for athletes, like the stadium-tunnel-locker complexes.²⁵

3 An Early Palaestra in Olympia?

At this point we have to go back to Olympia where Miller again identified a stadium-tunnel-locker complex.²⁶ It consists of a 96 m long and 8 m wide semi-roofed court between the Echo Stoa and the western embankment of the stadium (Fig. 2, 3, Pl. 1, 2).

A door in the northern narrow side of the court provides access into the passageway between Altis and stadium. The similarities to the above-mentioned building complexes in Nemea and Epidauros are evident but

as Miller neglected in his consideration a huge part of the building complex and its specific building history it seems necessary to reinvestigate the issue.

The complex incorporates the Echo Stoa at the eastern edge of the Altis, the courtyard behind this stoa, and the passageway north of the two buildings. At first glance the courtyard seems to be an accidental result of the erection of the portico in front of the stadium embankment but it has been shown that portico, courtyard and the retaining wall at the bottom of the embankment are linked together and are part of an integral building concept.²⁷ The construction date of this ensemble is the early second half of the 4th century BC.²⁸ Miller's interpretation of the building focuses on the courtyard and the passageway into the stadium only. Furthermore, he attributes the shed roof attached to the rear side of the Echo Stoa

25 Miller 1992, 244–250. The distance to the tunnel-stadium-locker complexes and the vicinity to other public buildings of the sanctuaries imply that the baths served as washing facilities not only for athletes but also for other guests of the precincts. Trümper 2014, 217–219 argues for a multifunctional usage of the building according to its topographical and architectural characteristics.

26 Miller 2001, 190–210. A further candidate might be the Panathenaic Stadium in Athens: This stadium also was built in the last third of the 4th century BC but the rebuilding phases of Hadrianic times and the late 19th century make study difficult today; Miller 2001, 210–222.

27 Kunze and Schleif 1938, 49; cf. Miller 2001, 190–192 n. 449–450. Schilbach 1992, 34–35, dates the western embankment to the second

quarter of the 5th century BC (“Stadion III”). In order to gain enough space for the erection of the Echo Stoa and its backyard the base of the embankment was cut away and replaced by a low retaining wall. On the genesis of the stadium in Olympia in general, see Mallwitz 1967 and Schilbach 1992.

28 Koenigs 1984, 1–6, and especially 4. Ceramic findings from the filling of the foundation trenches give a terminus post quem in the middle of the 4th century BC. To the dating of the completion of the first building phase in the timeframe between 340 and 330 BC see also footnote 48. Following Koenigs, this date coincides with metrical characteristics of the building; Koenigs 1984, 20–22; cf. Kunze and Schleif 1938, 56; Schilbach 1992, 35; Miller 2001, 192.

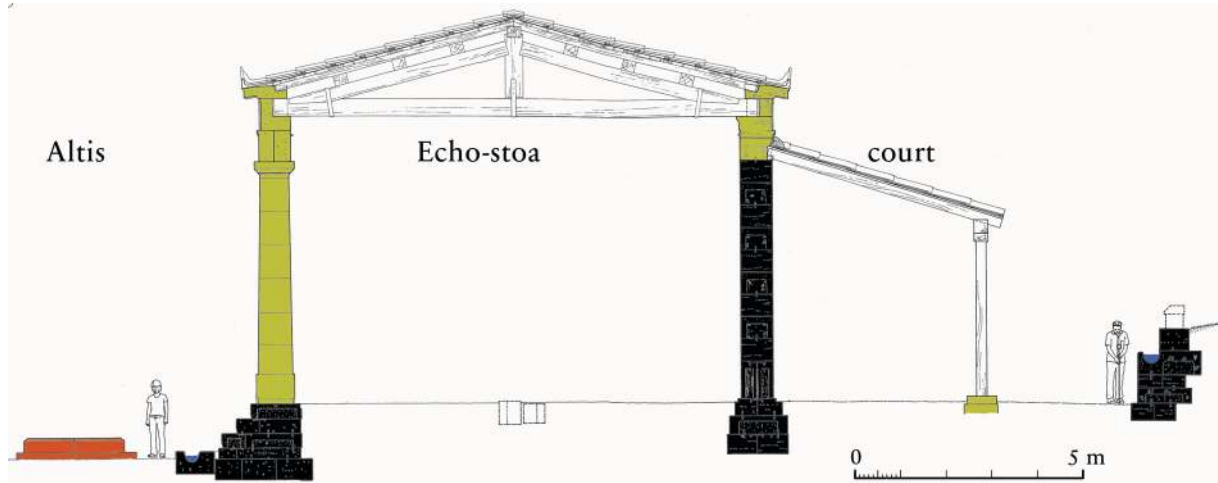


Fig. 2 Reconstruction drawing of the Echo stoa and adjacent buildings, section from south. Black = first building phase in the 2nd half of the 4th c. BC; red = Monuments erected in the front of the unfinished stoa and Hellenistic modifications; green = completion of the Echo-stoa in Augustan time and later.



Fig. 3 Echo-stoa from north-west and the area of the court behind the building and the stadium wall.



Fig. 4 Retaining wall of the western stadium embankment (left) with water channel in the front and a later wall cutting the channel (right).

to the first building stage (Fig. 2). Only this assumption provides evidence to establish a link to the other 'lockers' with the combination of courtyard, portico and stadium tunnel.²⁹ But the contrary was the case: the shed roof was not built before the final building phase of the Echo Stoa in Augustan times.³⁰ If we omit the shed roof from the discussion, the question arises why the Echo Stoa itself is not recognized as a part of the building complex under consideration.

Surprisingly, the intention behind the erection of this building – a nearly 100 m long Doric portico with an impressive depth of 9.5 m and 44 columns in the front – has never been convincingly explained: The description of a battle between the Arcadians as defenders of the sanctuary and the Eleans as attackers during games in the year 364 BC by Xenophon represents the starting point for all related considerations.³¹ Xenophon reports that the Arcadians and Pisatans held the competitions of the pentathlon in the race tracks of the stadium. When the competitors, who had reached the wrestling contest, were no longer on the race track but were wrestling in the space between the stadium and the altar, the enemy arrived. This information is important for the identification of the area between the Altar of Zeus and the stadium, commonly known as the Altis, as the wrestling area or rather literally the palaestra. The following sentences refer to the battle between the two warring parties: The Eleans fought from the roofs of the porticoes, the Bouleuterion and the temple itself while the others tried to defend the area between the Bouleuterion, the temple of Hestia and the Theatron that adjoins these buildings. According to J. Schilbach the peak of the western stadium wall, which was raised in the first half of the 4th century BC, and the steep slope in front of the terrace of the Treasure houses formed this so-called The-

atron and served as a place for spectators at the wrestling contests in the Altis.³² W. Koenigs identified at least the western embankment of the stadium with the Theatron and concluded that the Echo Stoa inherited its function as an audience space.³³ Furthermore the terrace of the treasure houses with its stepped retaining wall, which was built at the same time as the Echo Stoa, would have used as stands and provided a good view on the scenery (Pl. 2).³⁴ It is to assume, that the Echo stoa was not solely used as an audience hall. With its depth of 9.5 m only its front provided view on the Altis. The interior of the stoa must have had rather a multifunctional use. I would like to suggest to interpret the whole building ensemble as the first palaestra of Olympia consisting of a patch of ground for wrestling in front of the stoa, a huge multifunctional portico and space for an audience. In this setting the portico formed an architectural frame and provided opportunity for assembly and practice during bad weather. Furthermore, the building complex gave access for athletes to the stadium and contained facilities for body care. These two features have to be explained more carefully:

3.1 Water installations

Along the front side of the Echo Stoa runs an open water channel with inserted basins in front of every tenth column (Fig. 2, Pl. 1). Usually, such channels served as drainage for rainwater pouring down from the waterspouts along the sima. But this was not the only function of this gutter: Its gentle gradient is directed to the south. In the north it continued up to the foot of the retaining wall of the terrace of the treasure houses. This wall contained a fresh-water feeding channel and permanently supplied the gutter with its basins in front of the

29 Miller 1992, 192 n. 450, misunderstood Koenigs 1984, 84, and assumed that the shed roof could be already part of the original plan. Sinn 1996, 58–59, refers to the court behind the portico as an apodyterium without any discussion of the relation between the portico and the shed roof.

30 Koenigs 1984, 26, 84 fig. 15. "Über das zeitliche Verhältnis der Echohalle läßt sich nur sagen, daß das Pultdach selbst nachträglich an die fertige Halle der Phase C angebaut wurde [...]"

31 Xen. *Hell.* 7.4.29 and 31. The Arcadians ruled over the sanctuary between 365 and 362 BC. On the historical background see Ringel, Siewert, and Taeuber 1999, 414; cf. Diod. 15.78.2.

32 Schilbach 1992, 34–35.

33 Koenigs 1981, 367–368, and (briefly) Koenigs 1984, 84.

34 Originally, the archaic treasure houses were built on a terrace made from dumped material. Towards the Altis this terrace merged into a slope. When the Echo Stoa and its attached buildings were erected, this slope was cut away and replaced by a stepped retaining wall with a height of more than 3 m. Each step of this wall is about 0.24 m high and 0.22 m deep (a section of this stepped wall in the area of its western end is shown in Schilbach 1984, 233 fig. 12). In the east towards the stadium entrance, this wall becomes steadily higher as the level of the Altis falls. The higher parts of the wall consist of a stepped upper zone and a vertical lower base zone. On the erection date of this wall at the time of the erection of the Echo Stoa and its adjacent buildings, see Schilbach 1992, 35, and with an extensive discussion of previous scholarly research Miller 2001, 190–210.

stoa.³⁵ Similar channels fed with fresh water and supplemented with basins are well known from stadiums like Nemea and Epidauros and from several palaestras.³⁶ The water supply and the existence of these water systems not only in front of columnar halls but also in stadiums make clear that we have to assume functions not only in relation to the drainage of rainwater but also to athletic activities. Well investigated is the channel system in the stadium of Nemea with a small fountain at its southern narrow side feeding water channels with interposed basins extending along both sides of the race track.³⁷ The installation demonstrates that one important feature was the provision of water allowing the athletes to wash and refresh themselves. The inserted basins in this context must have served as water deposits and facilities for drawing water.

A second water facility in the context of the building complex in Olympia is situated in the courtyard behind the portico where a channel runs along the top of the retaining wall of the stadium embankment (Fig. 2, 4, Pl. 1). Also this gutter is connected to and fed by the water channel at the foot of the retaining wall of the treasure houses and conducts water possibly to the hippodrome which location in the southeast of the stadium is a debated issue.³⁸ For a length of about 71 m, the east side of the court is flanked by this raised water channel. It is 0.35 m wide and around 0.22 m deep. Its upper edge reaches a height of 1.1 m above ground. Consequently, the water was easily accessible from the court and the channel might have served as a washing facil-

ity in the postulated first palaestra of Olympia. Already Koenigs on the basis of the water channel vaguely assumed the court was used as washing place.³⁹ As the usage of an open raised channel for body cleaning would be unique, Miller considered the possibility that washing basins have stood along the retaining wall and have been fed by the channel.⁴⁰ As the very scarce remains of the channel do not show any outlets which could support this hypothesis, one appropriate washbasin made from limestone was found in secondary use at the base of the terrace wall of the treasure houses and might be interpreted as a remnant of such a Lutron in the courtyard.⁴¹ A comparable example for this setting provide the two Lutrons in the athlete bath in Nemea: Its wash basins were aligned along the rear walls of the bathing rooms. A horizontal channel in each of the walls led water to outlets from where it poured into the basins.⁴² Also in the Lower Gymnasium of Priene a channel run along the walls of the Lutron and fed a row of basins below.⁴³ In difference to the Lutron in Nemea and the supposed Lutron behind the Echo stoa in Olympia the channel in Priene contained a pipe with nozzles which ended in the waterspouts.⁴⁴ The two examples from Nemea and Priene at least show that the height of the channel in the court behind the Echo stoa with 1.1 m would have been in a range which was suitable for feeding washing basins.⁴⁵ However, if the channel on top of the embankment wall fed washing basins or was used as washing facility itself remains uncertain. Also the question whether the floor of the court was covered with stone slabs and if

35 The description of the channel by Kunze and Schleif 1938, 57–59, was updated by Koenigs 1984, 84–85. The chronological relation between the channel and the terrace wall of the treasure houses is debated: Kunze and Schleif 1938, 58, pointed out that the retaining wall must be younger than the portico, Schilbach 1992, 35 and Miller 2001, 208–209, date both buildings to the same building phase.

36 Permanently water fed gutters with or without inserted sinks are known from the palaestras of the Lower Gymnasium in Priene, the Upper Gymnasium in Eretria, the Gymnasia in Pergamon, Messene, Kalydon, Sikyon and the palaestra of Olympia. The striking difference to many similar installations in buildings of other purposes is the permanent water flow in the channels of these palaestras.

37 The hydraulic system belongs to the original plan of the stadium from the last third of the 4th century BC; Miller 2001, 15–23, 92–93.

38 As the entrance into the stadium crosses the connection between the channel in the wall in front of the treasure houses and the channel on top of the retaining wall of the stadium embankment, the connection is managed by a siphon (Pl. 1). Conversions of the stadium entrance resulted in modifications of the siphon which ensured that the water

always flowed through the open channel on top of the embankment wall. Miller 2001, 206–209, summarizes these construction phases; cf. Heilmeyer 1984.

39 Koenigs 1984, 84.

40 Miller 2001, 210.

41 Kunze and Schleif 1938, 55–59.

42 To the bath in Nemea see Miller 1992, 188–261. The bath dates in the 2nd half of the 4th century BC. Miller 1992, 20–210, assumes that metallic nozzles in the holes generated jets which gushed in the basins.

43 Wiegand and Schrader 1904, 269–271; Krischen 1925, 141; Delorme 1960, 193–194; Schede 1934, 86–88; Rumscheid 1998, 208; Ferla 2005, 174–175.

44 H. Fahlbusch verbally pointed out that only lead pipes and nozzles would have created a controlled jet which was suitable to fill the basins. Similar systems with lead pipes and nozzles very likely existed in the Lutrons of the palaestrae of Amphipolis and Delphi.

45 The height of the channel in Nemea above ground is 0.87 m only; in Priene the channel reaches a height of 1.18 m.

there existed a drainage or not is not answered since the remains are scarce. Last but not least the Lutron in the palaestra of Delphi has to be mentioned as a comparable example. This Lutron was situated in a court under open sky too and the washing basins were fed by a pipe system with waterspouts in a retaining wall at the eastern side of the court.⁴⁶ Stone slabs on the floor and sewers of this Lutron are preserved.

3.2 Access to the stadium

I have already pointed out the fact that Miller did not consider the possibility of a connection between the Echo Stoa and the courtyard behind it. This made him believe that Olympia represented again a stadium-tunnel-locker complex like in Nemea, Epidauros and elsewhere. But is it likely that a nearly 100 m long courtyard was only accessible from a single door in its northern narrow side wall (Pl. 1)? Already Koenigs pleaded for the existence of passageways in the rear wall of the Echo stoa connecting the portico with the courtyard.⁴⁷ As the rear wall of the early Echo Stoa has not survived in the required height, these postulated doors remain in the darkness of conjecture. However, the existence of the court behind the stoa calls for more accesses than the single door. Therefore I would like to follow Koenigs suggestion and assume that passageways in the rear wall of the stoa created a spatial and functional connection between the wrestling place on the Altis and the adjacent stadium via the stoa and the court with their different washing facilities. Following this the building complex in the east of the Altis displayed distinctive features of many later palaestras in Hellenistic poleis.

The following building history of the Echo stoa in the context of the development of the whole sanctuary can support the interpretation of the building complex as the first palaestra of the precinct. Surprisingly, at the end of the first building phase around 340–330 BC only the courtyard, the krepis, the rear and side walls

of the portico were completed.⁴⁸ For the next three centuries the ensemble stayed in this incomplete state until it was finished in Augustan times using the architectural members of a dismantled 4th century portico of unknown origin (Fig. 2, Pl. 1 green colored building parts).⁴⁹ An explanation for this sudden slowdown of the building activities at the Echo stoa during the last third of the 4th century BC could be the erection of the four-sided peristyle-like palaestra with all the appurtenances of the building type at the north-western edge of the precinct precisely during this period. The construction of a further building with a similar set of functions and, above all, with the up-to-date design of a palaestra might have caused less enthusiasm for the building project between Altis and stadium. It is even possible that with the erection of the four-sided palaestra wrestling did not take place in the Altis anymore but moved completely into the new building. This functional change of the wrestling place on the Altis is illustrated by the erection of many dedications in front of the uncompleted Echo Stoa during the Hellenistic era: These monuments occupied the space which was used for wrestling contests during the 4th century BC and they covered over time the front of the unfinished stoa. Furthermore, the so-called Zanes bases were placed along the base of the terrace wall below the treasure houses and terminated the use of the stepped wall as stands.⁵⁰

4 Conclusion

Pausanias named the two huge buildings in the north-west of the sanctuary of Olympia palaestra and gymnasium. As the institution of the gymnasium did not exist in the extra urban precinct the naming refers to the visual appearance of the building complex: As comparable examples several Hellenistic gymnasia can be named with similar extended training areas flanked by Xystoi. The 'palaestra' precisely quotes the eponymous building

unfinished portico during Hellenistic times.

⁵⁰ Unfortunately, we have no evidence for the function of the Echo Stoa when it was finished in Augustan times. The erection of the so-called 'Südstaubau' in Early Imperial times as a seat for a congregation of athletes (Sinn 1995, 231–238) suggests that the complex was connected with athletic activities also in later times.

⁴⁶ Jannoray 1953, 55–61; Ginouvès 1962, 133–135.

⁴⁷ Koenigs 1984, 82.

⁴⁸ Koenigs 1984, 25–26; for a summary of the building history of the entire complex Koenigs 1984, 4.

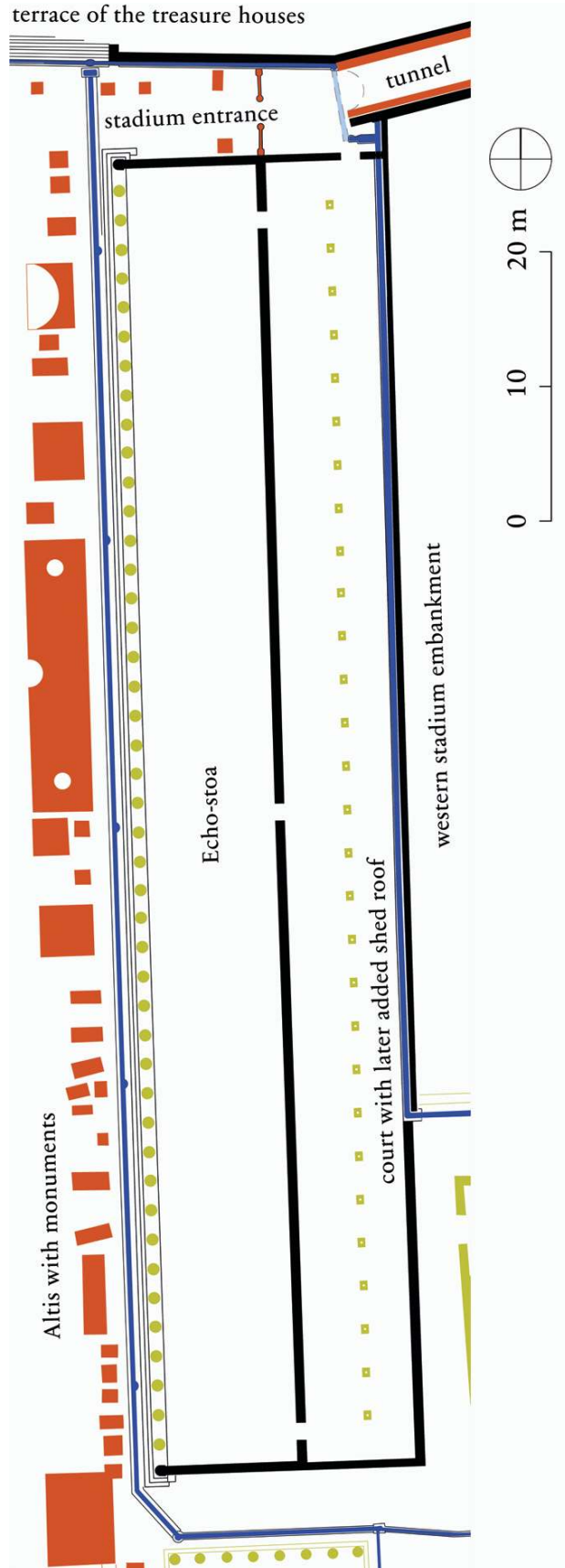
⁴⁹ Koenigs 1984, 28–64. The shed roof in the court behind the Echo Stoa belongs to this Augustan building phase. According to Koenigs 1984, 83–84 it is not likely that this roof was a provisional substitute for the

type in the form of a peristyle building which emerged in the archaeological record during the last 3rd of the 4th century BC.

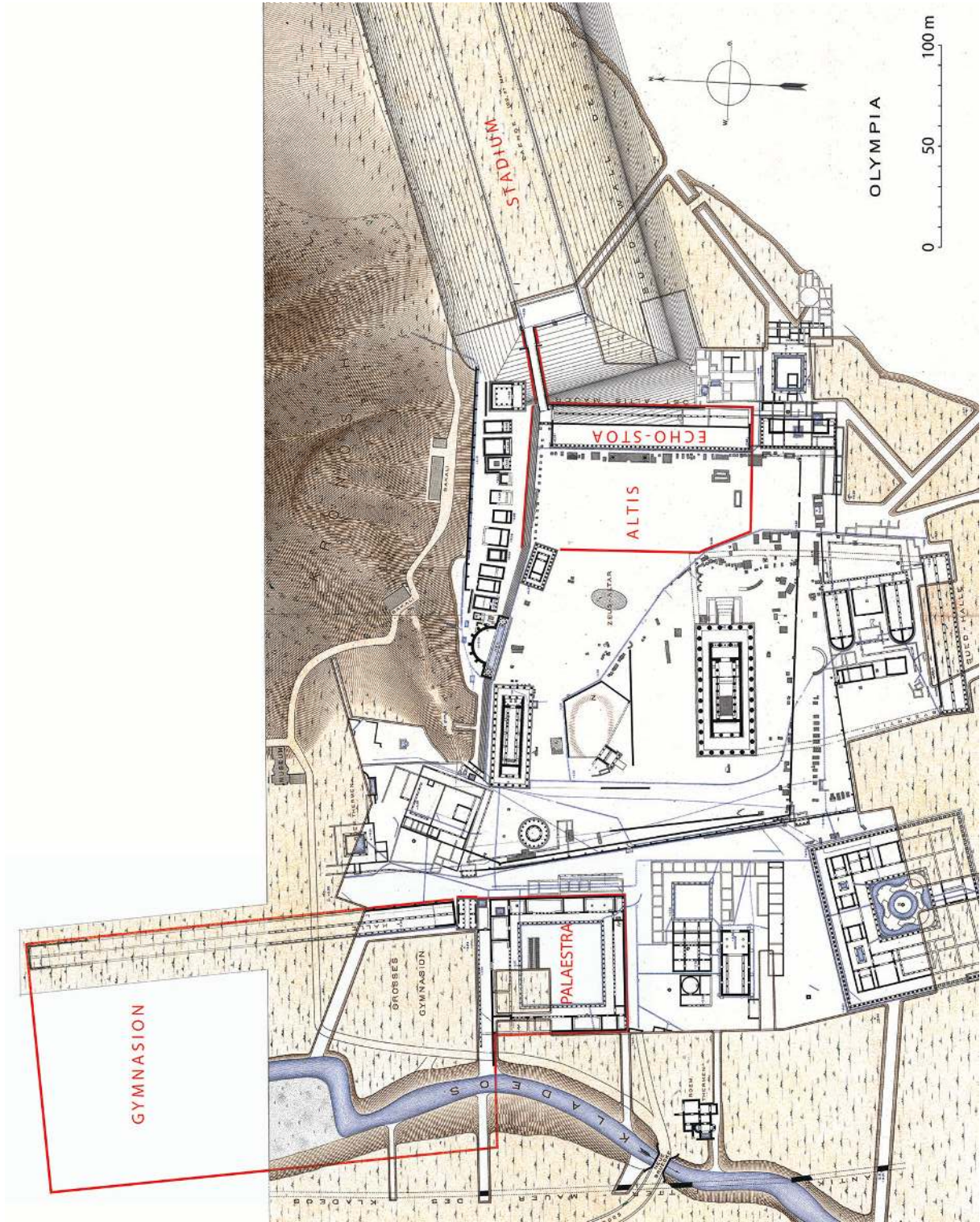
The palaestra and the gymnasium are not the earliest 'gymnasial buildings' in Olympia. Already during the 2nd half of the 4th century BC not only there but also as in Nemea and Epidauros buildings appeared which Miller named as "stadium-tunnel-locker-complexes". Furthermore, there have been athlete baths which belonged functionally to these complexes too. The erection of such gymnasial buildings in sanctuaries in the Peloponnese took place roughly in the same period as the earliest palaestras emerged in the Greek world, and can be seen as a result of experimenting, like Miller does in relation to the free-standing athlete baths in Nemea and Epidauros.⁵¹

With the Echo stoa in Olympia there is further opportunity for interpretation of these gymnasial buildings in sanctuaries: Whilst Miller focused his considerations on the "stadium-tunnel-locker-complex", he neglected the Echo stoa as a part of the building complex between Altis and stadium. The Echo stoa was erected exactly in the area which Xenophon described as the wrestling place in 364 BC. It connected spatially and functionally the wrestling place on the Altis with the stadium and provided as a multifunctional building space for audience, exercise and body care like the later palaestra in the northwest of the precinct did. Before this background gymnasial buildings in sanctuaries and in particular the building complex of the Echo stoa in Olympia might reflect the appearance of early palaestras before the building type adopted the peristyle as an obligatory architectural form in the thirties of the 4th century BC.

⁵¹ Miller 1992, 244–250.



Pl. 1 The building-complex around the Echo-stoa in Olympia. Black = first building phase in the 2nd half of the 4th c. BC; red = Monuments erected in the front of the unfinished stoa and Hellenistic modifications; green = completion of the Echo-stoa in Augustan time and later.



Pl. 2 Olympia, Sanctuary of Zeus.

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ILLUSTRATIONS: 1 U. Mania after Miller 2001, fig. 10; Roux 1961, fig. 26; Kavvadias 1900, folding map. 2 Koenigs 1984, fig. 77, modified. 3 Courtesy of the photo archive of the DAI Athens, D-DAI-ATH-2015-00061. 4 Courtesy of the photo archive of the DAI Athens, D-DAI-ATH-2015-00292..

PLATES: 1 U. Mania after Adler, Curtius, and Dörpfeld 1892, pl. 4; Koenigs 1984, fig. 79. 2 Adler, Curtius, and Dörpfeld 1892, pl. 4, modified.

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