

THE MAGAZINES OF DELOS: A CRITICAL REASSESSMENT

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ABSTRACT

CATHARINE JUDSON: The Magazines of Delos: A Critical Reassessment
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This study reassesses the evidence for the commercial function of the so-called magazines located on the west coast of Delos (Magasins α - γ , the Magasins Ardaillon, Magasin δ , and the Magasin des Colonnes), dating to the Athenian colony period when Delos functioned as a free port (167-69 BCE). The magazines have never been fully published and their role in the economic life of the island during this period is not fully understood. In order to better understand their specific function, it is therefore necessary to reassess the current state of research on the magazines and to contextualize them in the corpus of Mediterranean commercial architecture. In order to do this, the accessibility, patronage, and typology of the magazines are considered, as well as four comparanda. Through this process, it is possible to identify new avenues for further research on the Delian magazines.

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I. Introduction

The aim of this study is to examine the so-called merchant quarter that extends along the west coast of the island of Delos southwards from the sanctuary of Apollo, with a particular focus on the so-called magazines located along the shore (fig. 1). The buildings discussed here are ones that have been previously been labeled as such ('magasin') in their publications by the French excavators. These constitute Magasins α - γ , the Magasins Ardaillon, Magasin δ , and the Magasin des Colonnes. These structures share a basic plan consisting of a peristyle courtyard which is entered via a vestibule and which is surrounded by rooms. While the structure labeled Group ε does contain commercial units and is located in this series of commercial buildings along the coast, it will not be discussed here. Other commercial structures on the island (e.g. shops, agorai) are also not discussed as this is beyond the scope of this project.

In particular, the purpose of this study is to reassess critically the state of research on these buildings and to identify new avenues for future study that will help to contextualize their function in the economy of Delos. The largest problem facing this study of the Delian magazines is the dearth of recent excavations and publications of them: they were all originally excavated and briefly published in preliminary reports in the last decade of the nineteenth century and the first two decades of the twentieth. With the exception of three seasons of excavation carried on at the Pointe des Pilastres in the 1980s (whose publication was not very informative for the questions discussed here, as discussed below) and the full excavation of Magasin γ in 2006 by Chatzidakis (unpublished), no further excavation or extensive publication has been carried out since then. Even the recent *EAD* volume on the ports by Hervé Duchêne and Philippe Fraisse does not focus on the magazines in any great detail. Therefore, many of the conclusions reached in this paper must remain tentative until

further necessary fieldwork, such as stratigraphic excavations, is carried out and the buildings and their contents are fully published.

Another major problem in understanding the use of the magazines on the south coast is the lack of good chronological evidence. The merchant quarter is generally assumed to have become fully formed and to have flourished only after the creation of the Delian free port with its subsequent dramatic increase in commerce. Except in two cases where dateable material is present, therefore, the magazines have been very generally dated to the period between 167/166 and 88/69 BCE. Based on the increasing size and complexity of the magazines from north to south, as well as the new dating for the full development of the Agora of the Competaliastes (roughly c.167-125 BCE), it is likely that the magazines were built consecutively southward down the coast.¹ The point at which the magazines went out of use is also uncertain, although the magazines that were situated outside of the Triarius wall certainly went out of use after its erection, providing a fairly marked endpoint for their use.²

In the first part of this study, each magazine or group of magazines is studied independently with regard to its general layout, construction, and material assemblage (when present). In addition, problematic issues that require more study are identified for each magazine and some proposals for solutions to these problems or avenues of approach to them are suggested. The following section is an interpretative discussion of all of the magazines and their functions. Problematic aspects discussed here include the identification of the type of commercial activities carried out, accessibility, the agency for the construction and use of the magazines (including the ethnic identity of the individuals or groups serving as patrons), their private versus public functions, and the lack of contemporary comparanda for these structures. Non-contemporary comparanda (Corinth, Al-Mina, Kassope, and Ostia) are identified and are discussed in order to better understand the precise commercial functions of the Delian magazines from a typological standpoint. Through this type of analysis, the spatial and

¹ Cf. Hasenohr 2002.

² Paris 1916, 68-9.

functional place of the magazines in the economic life of Athenian Delos can potentially be better understood and contextualized.

In particular, this analysis of the material evidence that the magazines provide is used to critique some of the prevailing models of the Delian economy which are primarily based on epigraphic and literary sources rather than archaeological remains. These models characterize the Delian economy as small-scale and not internationally important, without taking into account the large amount of multifunctional commercial space provided for the city by the magazines along the coast. The archaeological record is not extensive enough to allow for the proper development of a competing model for the entire Delian economy, lacking as it does evidence for such vital topics as what was traded in the magazines. It does, however, provide enough information to demonstrate that a greater analytical focus must be placed on the commercial architecture of the city and on the structures of the port in particular, where the level of economic exchange with the outside world should be most apparent: the scale and nature of the economic activity taking place in the Delian magazines would inform our understanding of the scale of the Delian economy. A dearth of evidence prevents any firm conclusions about this larger economic question, but the study does illuminate avenues for future research into this subject.

II. Magazines

In this section, the magazines are discussed individually or, in the cases of Magasins α - γ and the Magasins Ardaillon, in cohesive units. Their plans and architectural features are described and discussed, as well as any interpretive issues (e.g., patronage, accessibility in different phases) that arise in previous scholarship. These detailed accounts allow for later discussion of the functional and visual cohesiveness of the entire suite of magazines. The magazines are presented here in the order in which they appear along the coast from north to south.

Magasins α - γ

Magasins α , β , and γ are located on the southern edge of the Theater Quarter, and are the northernmost of the series of magazines stretching down the coast towards the Bay of Fourni (fig. 2). These magazines, referred to as Groups N and O, were briefly explored by Ardaillon in 1894,³ but were more completely excavated and published in a preliminary report by Jardé in 1903-1904.⁴

These three magazines are considered to be contemporary because of their construction techniques and similar design. Also, Magasins β and γ were obviously built at the same time because they share a common wall with bonded joints. Magasin α is separated from the other two by an alley but is similar enough in its plan and materials to be considered part of the same building project.⁵ Of the three structures, Magasin α is also the least well preserved, having been built over by later structures.

³ Ardaillon 1896, 443.

⁴ Jardé 1905.

⁵ Karvonis 2008a, 215.

Each of these three magazines follows a very similar plan that is echoed by other magazines further down the coast. The magazines face onto a paved area, previously thought to be a quay, running along the coast from the Agora of Theophrastos.⁶ Included in the front of each magazine are four independent rooms with entrances onto the street which were presumably used as shops. The ground floor of each magazine is entered through a doorway that has a double threshold. One threshold marks the entrance to the ground floor via a vestibule, while the other marks the (independent) entrance to a staircase leading to the upper story. The ground floor vestibule in turn leads to a central paved courtyard which is surrounded by a number of rooms. This courtyard is on a slight incline towards the sea to allow for drainage. The rooms around the courtyards in Magasins α - γ are all inward facing, without any doorways leading to the exterior of the building. Magasins β and γ have six rooms with access from the court, and Magasin α appears to have seven.

The courtyards of Magasins β and γ have four-sided peristyles with twelve unfluted Doric columns each, placed on a gneiss stylobate.⁷ The columns from Magasin β have been reconstructed as being approximately three meters tall, indicating (with the height of the entablature) the height of the roof in the courtyard.⁸ Fragments of entablature and architrave have been found in this magazine, but they do not match the proportions of the columns or the reconstructed intercolumniation of the peristyle.⁹ While the peristyle was certainly roofed, it is possible that the entablature elements were reused elsewhere after the building went out of use and that the extant entablature fragments are likewise not in situ. There is also the possibility that these fragments are from a second-story peristyle (cf. the stone columns from the second story of the courtyard peristyle of the Magasin des Colonnes). There are no remains of a peristyle from Magasin α , but this is not entirely surprising given the poor

⁶ Cf. Hasenohr 2002.

⁷ Jardé 1905, 9.

⁸ Jardé 1905, 10.

⁹ Jardé 1905, 10-11.

lack of preservation of this building. A three-sided peristyle should be reconstructed for its courtyard based on the presence of pavement only in the center of the courtyard and its similarities and contemporary construction with Magasins β and γ, as well as the comparanda offered by Magasin δ and the Magasin des Colonnes. Supports for this colonnade could have been wooden and therefore not preserved.

The material of these magazines is typical of Delian buildings. The walls are built of gneiss and granite facings with an earth mortar filling and were covered with stucco.¹⁰ There are no examples of painted plaster on the ground floor in these three buildings. Practically nothing is known about the upper stories of these magazines.

Of all the magazines, Magasins α-γ provided the most dateable material. An inscribed statue base was found near a door of one of the magazines with a dedication to Julius Caesar (the proconsul of Asia from 98-90 BCE and father of the dictator) by the Olearii (*ID* 1712).¹¹ This, however, does not date the magazine even if it was set up in it; rather, it gives an indication for the length of use for the magazine. A σήκωμα for liquid measures of the same Julius Caesar was found in room b of the building to the north of Magasin α (*ID* 1847).¹² A σήκωμα dedicated by Ariarathes when he was *epimeletos* was also found in Magasin α itself (*ID* 1827).¹³ Another σήκωμα of Ariarathes was found in room 5 of Magasin β (*ID* 1828).¹⁴ Chatzidakis found a third σήκωμα of Ariarathes in the southern rooms of Magasin γ during the recent excavations.¹⁵ A fourth σήκωμα of Ariarathes was found reused in an aqueduct to the south of the Apollo sanctuary (*ID* 1829). Ariarathes was *epimeletos* of the

¹⁰ Jardé 1905, 15.

¹¹ Ardaillon (1896, 443 and 1899, 73) describes this base (with inscription *ID* 1712) as being found near Group N (Magasins β and γ), while Jardé (1905, 17-18) describes it as located near Group O (Magasin α).

¹² Jardé 1905, 18; Deonna 1938, 168, 175.

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ Hasenohr 2009.

emporion (an Athenian magistrate at an unknown date after 167/6 BCE), not a king as was believed by Jardé.¹⁶ Roussel argues that Ariarathes could not have been *epimeletos* before the end of the second century BCE, based on the presence of an inscription identifying an Ariarathes son of Attalos as one of the Athenian *πρωθαισταὶ παῖδες* at Delphi for the year of 128 BCE.¹⁷

A variety of sculptures (including a Hermes, a head of Aphrodite, and multiple female heads in marble and terracotta, one wearing a diadem) has also been found in these three magazines, but none of it has been dated based on style, a difficult matter with sculpture from this period.¹⁸ It is also impossible to determine whether the magazines were the original context of the sculptural pieces: it is unclear whether these finds were ever used or traded here, or whether they were deposited here after the abandonment of the buildings.

The later construction of shops along the backs of these magazines, facing onto Rue 5, establishes some relative chronology for these magazines. Unfortunately, there is no evidence to supply an absolute date for these later shops and, more crucially, it is unclear how much time elapsed between their erection and the earlier construction of the magazines.¹⁹ As with the actual date of construction for these magazines, it is unclear for how long they were used. They are the only magazines which are located within the Triarius wall (although the southern part of Magasin γ was overbuilt by it), and may therefore have partially escaped the abandonment that seems to have occurred in the other magazines after 69 BCE. If they remained in any sort of use, however, it is unlikely to have been commercial, as the merchants had largely left Delos by 69 BCE.

¹⁶ Ibid.

¹⁷ *FdD* III 2:12 (Colin 1909-1913); Roussel 1987, 181 n.3,4: this identification is not perhaps as secure as Roussel indicates, considering that none of the *σηκώματα* of Ariarathes include a patronymic; Durrbach (1922, 151 n.1) adds that names of foreign rulers were becoming more popular in the Athenian nomenclature at this point.

¹⁸ Jardé 1905, 16.

¹⁹ Cf. Trümper 2002, 195-6.

The use of different spaces in the magazines is unknown, as is the identity of those using it. The main portion of the ground floor was a single entity, and therefore was presumably used by one person or group. Jardé argues that, although the three magazines were not under the control of a single occupant, each magazine had a unified *métier*, i.e. all the shops would sell the same type of material as that traded by the occupant of the main magazine (e.g. the Olearii).²⁰ While the shops in front and the upper story were accessible independent of the ground floor of the magazine, however, they were incorporated into the design and were therefore built at the same time as the magazines. It is thus highly likely that the same patrons controlled the entire building and either rented the shops out or operated them themselves.

Recently, Hasenohr has argued that these three magazines were public buildings constructed by the Athenian *epimeletos* Ariarathes for the possible purpose of housing the offices of the emporion. She cites the inscribed *σηκώματα* of the Athenian magistrate found in these magazines as evidence for an official presence there with oversight of the measures in use in the port.²¹ Her argument is somewhat problematic as it does not explain the separation of Magasin α from Magasins β/γ nor does it address the similarities of their plans to Magasin δ and the Magasin des Colonnes further down the coast which have been generally identified as private buildings. Furthermore, one *σηκώμα* was also found in the Magasin des Colonnes and two in Magasin δ, neither of which are public buildings according to Hasenohr's argument.²² These *σηκώματα* admittedly do not have an inscription but their presence does indicate official oversight, and the majority of the known Delian *σηκώματα* are uninscribed.²³

²⁰ Jardé 1905, 21.

²¹ Hasenohr 2009.

²² Deonna 1938, 175; cf. Karvoni 2008b, 62.

²³ cf. Deonna 1938, 175-85.

These three magazines are thus as or more likely to be private buildings like the other magazines on the coast (based on these criteria). This conclusion is also supported by the nearby dedication of the Olearii and another, found to the south of the Agora of the Competaliastes, of the Oinopolai (*ID* 1711).²⁴ These dedications were not found in the magazines, certainly, but their proximity indicates the presence of these groups in this area of the city. Magasins α - γ , as the most prominent and nearest commercial structures to the Agora of the Competaliastes, are likely candidates to house the commercial activities of these groups. They would not only provide retail space for the sale of oil or wine, but also storage and administrative space.

Les Magasins Ardaillon

The next series of commercial structures south of Magasins α - γ along the coast is the series of buildings generally referred to as the Magasins Ardaillon. They were first studied in 1894 by their eponymous explorer, and have only been partially re-explored since then. The magazines are labeled A to M from south to north (fig. 3).

These magazines are poorly understood, partially because of their early and somewhat scanty study and excavation, and partially because of their poor preservation. Because of a rise in sea level since antiquity, these buildings (as well as the other magazines along the coast) are partially submerged.²⁵ Underwater exploration has not been done extensively in this area but would be necessary in order to understand these magazines better.

According to Ardaillon, each of the magazines in this group was a separate entity with individual quays for each one or two.²⁶ He also observed that each was enclosed by its own wall extending down to the quay and therefore shutting off the magazines and their quays from public

²⁴ Cf. Durrbach 1922, 230-1.

²⁵ Duchêne and Fraisse 2001, 174-5.

²⁶ Ardaillon 1896, 439.

access.²⁷ For this reason, Ardaillon argued that these particular magazines were used as depots for the storage of goods unloaded from ships while other structures, such as Magasins α - γ , were used as retail space.²⁸ This conclusion, however, has been largely discarded after the discovery that Magasins α - γ may have fronted onto quays or a street that are badly preserved because of wave action and silting²⁹ and the realization that the independent rooms facing the quays in all of the coastal magazines were most likely for retail rather than storage.³⁰ Furthermore, as early as 1906, Jardé argued against the conclusion that the magazines were shut off from public access, observing that the roads between magazines run all the way down to the quay and that the walls around Magasin δ and Group ϵ do not extend all the way to the sea.³¹ Because of the erosion of the coastline, it is also possible that the coastal installations extended further to the west than is now visible, giving even better access to the seaward faces of the magazines.

Ardaillon observed that all the magazines in this group have a large main room or court opening onto the sea with a series of rooms behind, presumably for more permanent storage space than that offered by the main court.³² His plan of the series, however, shows a lack of standardization in size and plan: the large rooms on his plan are not of a standard size or shape, their number varies between units, and they appear on both the east and west sides of units (contrast units A and D). There is also often not a great enough difference in scale between rooms in some of the units to determine which one would play this role (for example, units H, I).

Ardaillon observed that this series of magazines were separated into smaller components by at least eight alleys or corridors running between the street to the east (identified as a continuation of

²⁷ Ardaillon 1896, 440.

²⁸ Ardaillon 1896, 443; Jardé 1905, 19.

²⁹ Jardé 1906, 641.

³⁰ Jardé 1906, 644.

³¹ Jardé 1906, 640-3; see also Paris (1916, 59-61).

³² Ardaillon 1896, 440.

Rue 5³³) and the quay to the west. Despite this observation, Jardé argued that this series of magazines was actually one large magazine consisting of a long series of rooms, a view that continues to be repeated.³⁴ Further exploration of this area and a revision of Ardaillon's plan must be undertaken before this matter can be properly resolved. Based on the different configurations of the magazines in his plan, however, it is likely that his division of the series into independent structures divided by streets would be proven (for example, contrast the plans of Magasins A and D). What is more important for an understanding of these magazines is to determine the building phases of separate magazines. This would add to the understanding both of the commercial function of these buildings and whether this changed over time, and of the overall development of the coastal commercial architecture.

The Magasins Ardaillon, like much of the rest of the commercial architecture in this quarter, is constructed of gneiss and granite masonry with plaster. Some of the magazines have evidence of decoration: colored stucco fragments were found in E, and mosaic cubes were found in E and F.³⁵ It is unknown if these structures had upper floors and, again, further survey, excavation, and underwater research must be done to determine this and other unknown features of the Magasins Ardaillon.

The largest of these magazines, and the only one to have received further study since Ardaillon's explorations is Magazine A, usually referred to as the *Établissement de la Pointe des Pilastres*. Ardaillon's reconstructed plan shows a series of four large rectangular rooms facing the sea with seven smaller series of rooms behind them, subdivided by a corridor. The entrances to the larger rooms are marked by large granite doorjambs, from which the structure derives its name (fig. 4). These pilasters are also found in some of the other Magasins Ardaillon, such as K.³⁶ Ardaillon's plan,

³³ Jardé 1906, 633-4.

³⁴ Jardé 1906, 634; cf. Interdonato (2005, 209) for the continuing reliance on old scholarship.

³⁵ Ardaillon 1896, 442.

³⁶ Ardaillon 1896, 441.

however, is very schematic and reconstructs rooms in submerged areas that Ardaillon himself did not study.

The *Établissement de la Pointe des Pilastres* and the street to its north were partially re-excavated and restudied between 1986 and 1988 by Hervé Duchêne. During these three seasons, seven sondages in total were opened, with the goal of fixing more precisely the date of construction and the succeeding occupation phases, and of the use of the building.³⁷ Based on the findings, Duchêne concluded that the first phase of the structure dated to the mid-second century to 88 BCE.³⁸ The original construction date was not determined from these excavations, but a small amount of numismatic evidence (Pergamene, Athenian, and Ptolemaic coins) from the second half of the second century BCE gives at least a *terminus post quem*.³⁹ The second much shorter phase involved a remodeling of the area and a change in orientation, and ended with a destruction dated by Duchêne not later than 60 BCE.⁴⁰ Finds suggest that in this second phase the building did not retain its commercial function.⁴¹

While these excavations did provide more information about the chronology of the *Établissement de la Pointe des Pilastres*, Duchêne has not published an updated plan of the entire structure. A partial stone plan of several of the sondages from the interior of the building is provided, but this plan is very difficult to read and is not placed in the context of a larger overall plan, so that it is impossible to tell to which architectural features it is referring (fig. 5). Duchêne and Fraisse have also produced some reconstructions of the façade of the building, but their usefulness is undermined without a full plan of the structure within which to place them (figs. 6, 7).⁴² Also problematic is the

³⁷ Duchêne 1987, 653.

³⁸ Duchêne 1988, 781.

³⁹ Duchêne 1987, 654.

⁴⁰ Duchêne 1987, 653; Duchêne 1988, 781-3.

⁴¹ Duchêne (1988, 783) does not specify what the “*mobilier receilli*” consists of.

lack of explanation for the significant differences between this new reconstruction and Ardaillon's plan. Although the new plan bears a superficial resemblance to the layout of smaller rooms and corridors in the eastern part of Ardaillon's plan of the building, it contains none of the large rooms on the west which he identified.

The lack of consensus over the plan of the Magasins Ardaillon makes any detailed comparison to the rest of the magazines along the coast virtually impossible. The basic reconstructions presented by Ardaillon and Duchêne both indicate that the plans of these magazines, even that of the *Établissement de la Pointe des Pilastres*, do not seem to conform to the relatively standardized plan seen in Magasins α - γ , Magasin δ , and the Magasin des Colonnes. Nonetheless, based on the admittedly scanty evidence available, the structures do not seem to have been significantly different in function. Furthermore, from the west their facades would likely have presented a similar appearance to that of the other magazines, giving the commercial quarter a more homogenous quality than is apparent from the reconstructed plans.

Magasin δ / Magasin à la baignoire

Magasin δ (fig. 8) is constructed on the same basic plan as Magasins α - γ . It faces the west and is fronted by a series of four independent shops (Rooms I-IV) which open onto the quay/street and do not have access to the interior of the magazine. Like comparable units in Group ϵ , two of these shops were originally connected with back rooms (I/VIII, IV/V) by windows, indicating that they would have been occupied by the same renter, as the two spaces were not wholly independent.⁴³ In the case of room V, the door to the street has been blocked, indicating a possible change in the function of the room: it may have had a commercial function originally, but was later converted into possible storage space while room IV retained its commercial function. In the latter case, it is not

⁴² Dalongeville et al. (2007, 26) also point out that Duchêne and Fraise use the wrong sea-level for the period in their reconstructions (1 m below the current level rather than approx. 2.5 m).

⁴³ Jardé 1906, 645.

clear how access to room V was achieved: from the aerial view of the remains (fig. 9), it appears that the opening on the plan is only a window and was never widened into a doorway. It is unknown, however, at what point the door into room V was closed; this may have happened relatively late in the life of the building when that room was no longer needed for its original function.

The ground floor of the magazine is entered through a vestibule whose width is divided by a bonded projecting wall, leaving 1.3 meters of open space for access.⁴⁴ Its only plausible use would seem to be to protect the large white marble basin that is situated behind it at the entrance to the court (fig. 10).⁴⁵ This basin was placed on top of the pavement and surrounded by a wall; there is no definitive architectural evidence for its being in its primary context.⁴⁶ Its function is also debated. Despite its general identification as a bathtub (hence the common nickname of the magazine), it does not conform to the usual form of contemporary bathtubs,⁴⁷ nor would the placement of a bathing facility in the vestibule of a supposedly commercial structure make any sense. This is particularly clear when the basin is contrasted with the terracotta bathtub found in Apartment VI of the adjacent Group ε, which is identified as a domestic unit (fig. 11).⁴⁸

Jardé proposed that it was used as a vessel for liquids that were being traded in the magazine, such as wine or olive oil, although these would normally have been stored and transported in closed containers such as amphorae.⁴⁹ Placing a sample of the wares of the establishment at the entrance might seem to be a plausible solution if the basin were not so large (2.37 x 1.30 x 0.80 m).⁵⁰ A vessel

⁴⁴ Jardé 1906, 645.

⁴⁵ The type of marble has not been determined or, at least, published and therefore the origin of the basin is unknown.

⁴⁶ Jardé 1906, 645.

⁴⁷ Cf. Deonna (1938, 86-9) for Delos in particular; cf. Ginouvès (1962) for the larger Greek world.

⁴⁸ Jardé 1906, 661; Trümper 1998, 316.

⁴⁹ Jardé 1906, 647.

⁵⁰ Jardé 1906, 645.

of these dimensions can hold over 2000 liters of liquid, a figure which is not in keeping with the idea of sample size. Another possible explanation for the presence of the basin is that it itself was a sample of the wares sold in the magazine. A marble bas-relief depicting a funeral banquet (fig. 12) was also found in the courtyard and it could represent another type of stone object which was traded in this magazine, although it is of a much smaller scale and would be much easier to transport than the basin.⁵¹ Unfortunately, there is no other evidence for the trade of either liquid goods or marble ones in the building. In addition, the awkward placement of the basin in the entrance of the building speaks against this interpretation, as it would be significantly more practical to display samples of trade goods in the open courtyard where there is much more space for potential buyers to congregate. Deonna, citing the unfinished nature of the lugs, speculates that the basin was meant only to be temporarily stored in the magazine before it was shipped further overseas or transported to one of the wealthy houses on the island (nothing comparable has been reported in a domestic context on the island).⁵² Its placement in the entranceway and the wall that was subsequently built around it make this explanation problematic, if not entirely implausible. A further interpretation is that its form was chosen to advertise the wealth and status of the patrons of the magazine without directly representing the activities taking place in the building. In this context, it could also serve as a container for water, supplementing the supply from the court and Room XVII (see below).⁵³

Comparanda for this basin do exist in the form of Ambrogi's Roman type B.I stone basins ("vasche") (fig.13).⁵⁴ These basins have the same profile of body and rim as the Delian example. They also all have carved ring handles or lions' heads in the same locations as the bosses on the basin from Magasin δ (fig. 14-16): it is thus possible that they were destined to be carved into similar

⁵¹ Jardé 1906, 651.

⁵² Deonna 1939, 88-9.

⁵³ Cf. Desruelles et al. (2005) for the importance of intensive collection and storage of water on Delos.

⁵⁴ Ambrogi 1995, 19-27.

shapes. The main problem with drawing this stylistic parallel is that the Roman examples date to the second and third centuries CE.⁵⁵ This fact suggests either that the similarities between these basins and the Delian one are coincidental, or that the Delian basin was carved and set in place in Magasin δ at least two centuries after the building went out of use. This latter possibility is extremely unlikely, given that the basin was surrounded by a built wall and protected by the spur extending into the vestibule, both of which imply a deliberate placement in this location and therefore the intention to use it in some capacity.⁵⁶ Another problem with these comparanda is that their original context is largely unknown: most were reused in Late Antiquity and the Medieval period as sarcophagi or ornamental basins in fountains. Some examples are provenanced to the major Roman Imperial baths (Trajan, Caracalla, Diocletian), but these attributions are traditional rather than documented and, even if correct, may not be the original context of these basins.⁵⁷ Ambrogi, following the lead of Deonna, does recognize the similarities of these basins to the Delian example, but does not discuss its function other than to label it as decorative.⁵⁸ There are no currently apparent predecessors for the Delian basin, although this is based on solely negative evidence.

The main court of Magasin δ is paved in gneiss, and originally had a peristyle in wood (cf. Magasin α) whose presence is indicated by a series of square holes in the paving.⁵⁹ In the south-west corner is a marble basin set into the pavement and covered by a paving stone, and in the north-east corner is a terracotta stamnos likewise covered. Jardé identified these as installations for water collection, although he notes that they did have a large capacity.⁶⁰ Nine rooms open off of the court.

⁵⁵ Ambrogi 1995, 59-60.

⁵⁶ Jardé 1906, 645 n.4.

⁵⁷ Ambrogi 1995, 43-6.

⁵⁸ Ambrogi 1995, 46-7; Deonna 1938, 88.

⁵⁹ Jardé 1906, 647.

⁶⁰ Jardé 1906, 649-50.

Of these, rooms IX, X, and XI have windows onto the court.⁶¹ This indicates that these rooms were most likely not used for the storage of goods, as they were more difficult to completely close off. Room X may also originally have had a double threshold, meaning that there was either even greater access to the interior of the room or that there was at one point access to the upper story of the magazine from the interior of the building via a staircase.⁶²

There are a number of traces of decoration from the ground floor that are possibly related to cult activity. A gneiss projection in the wall of the court between rooms XV and XVI may have been the location of a niche containing statuettes.⁶³ Traces of decorated stucco, an engaged demi-column, and a cornice with denticules were also found in the same area, pointing to the presence of what Jardé identifies as a lararium.⁶⁴

In addition, the exterior of Room XI had two layers of painted plaster with figural scenes. The first layer depicts two gesturing men accompanied by palms and amphorae, a subject that Jardé notes is common on domestic altars on Delos and at Pompeii.⁶⁵ The second layer depicts four human figures and a centaur accompanied by the inscription Διός ἔ λ[ε]υ]θερίου inside of a wreath of flowers and leaves.⁶⁶ According to Jardé, this scene is unique, but seems to have traits of domestic cult.⁶⁷ Given its position on the outside of the building and its subject,⁶⁸ however, it is better identified as a liturgical painting, most likely for the unit on the upper floor accessed through Room XVIII. As such,

⁶¹ Jardé 1906, 652.

⁶² This feature is identified as a double threshold from the plan (Jardé 1906, Plate XII) principally because it is not a window or a blocked up entrance. It does not seem to appear in the aerial photograph by Karvonis (2008a, 202), although this may also be a factor of the angle of the shot.

⁶³ Jardé 1906, 650.

⁶⁴ Ibid.

⁶⁵ Jardé 1906, 657.

⁶⁶ Jardé 1906, 657-8; Hasenohr 2003, 186-7.

⁶⁷ Jardé 1906, 658.

⁶⁸ Hasenohr 2003, 213.

it can be identified as a semi-private version of the cult of the Compitaliasts and thus linked to Romans/Italians. This latter fact suggests a Roman/Italian patronage for the magazine, at least for the upper portion of it if not for the whole at some point in the history of the building.⁶⁹

Little is known about the upper story of Magasin δ. It was partially supported by the straight lateral wall that both formed the back wall of Rooms XIV-XVII and served as a retaining wall against the sloping of the terrain. Because of this situation Jardé argues that the rooms of the upper floor were larger than those of the ground floor, taking up the space of the rooms on the east side of the courtyard as well as the irregular space between the retaining wall and the street.⁷⁰ Also because of the sloping terrain, the upper story could be accessed from Rue 5, as can be seen from the five thresholds along the street in rooms XIII-XVII (XIII only exists on the upper story⁷¹).⁷² Room XVIII may also be a stairwell providing access to the upper floor from the side street: the colored plaster decoration in this room is absent where wooden supports for a staircase would be appropriate. The upper story could most likely not be accessed from the interior of the ground floor and that, therefore, it could be used or even rented out separately like in the other magazines.⁷³ Like many other buildings on Delos, the upper story appears to have been more lavishly decorated than the lower: mosaic fragments were found in a higher level in the debris than the original ground level, indicating that they came from the upper floor.⁷⁴

Room XVII is unusual and has no parallels on Delos. It is built at a level between those of the exterior road to the north and the interior of the magazine. The room itself is built on two levels

⁶⁹ Hasenohr (2003, 217-18) does argue that there was a certain degree of syncretism in and non-Italian practice of the cult of the Lares Compitales, but that it was still a primarily Italian institution.

⁷⁰ Jardé 1906, 652.

⁷¹ Jardé 1906, 652.

⁷² Jardé 1906, 656.

⁷³ Jardé 1906, 657.

⁷⁴ Jardé 1906, 656; Bruneau 1972, 304 cat.no. 324.

which were separated by a thin wall, with the eastern portion being on a higher level than the western. The floor of the western portion on the lower level is covered by a pavement with marble-chips.⁷⁵ A cistern with a white marble rim and a square cavity lined with gneiss slabs that is not connected to the cistern are located next to the eastern wall of the room. An enclosure with gneiss walls is located in the southwest corner of the room and is connected with the cistern.⁷⁶ Not shown on the plan are a trough set against the retaining wall for the upper floor that was possibly an orifice for a water conduit, and the impression of a pipe on the north wall.⁷⁷ The room has three doors leading to the northern street and one leading into room XX, which was originally a double entrance to the ground and upper floors of the magazine.⁷⁸ Room XVII also has a relatively low ceiling at only approximately 1.85 meters.⁷⁹ Jardé could not identify the function of this room. The presence of the cistern and the connected enclosure, as well as the multiple entrances for ease of public access, suggest that the space was used for collective water supply. The lack of water sources in adjacent buildings in the area would have been a serious problem for their inhabitants, one which would have been solved by this sort of quasi-fountain house. One of the many problematic aspects of this room, however, is the control over access: there is no reported evidence for closeable doors, but this does not preclude their existence in antiquity and thus a potentially limited pool of authorized users. The other problematic aspect of the identification as a fountain-house is its placement within Magasin δ. Room XVII was constructed at the same time as the rest of the building, as shown by the line of the retaining wall for the upper floor which continues across this room from the others on the front of the building. This then raises the issue of who built this magazine. They were likely privately built and operated (with the possible exceptions of the Magasins α-γ) , but a fountain house meant for public

⁷⁵ Jardé 1906, 653.

⁷⁶ Jardé 1906, 653-4.

⁷⁷ Ibid.

⁷⁸ Jardé 1906, 655-6.

⁷⁹ Jardé 1906, 654.

use integrated into the structure would suggest that there was some public, or at least collective, involvement in the building of Magasin δ. On the other hand, it is also possible that use of this water supply was restricted to all the users of the Magasin δ complex (ground floor, upper floor, shops) where a water supply incorporated into the building would have had to independently accessible from all these discrete units. This issue, however, cannot be resolved without more evidence about the activities that were carried out in the magazine and who was carrying them out.

Duchêne, followed by Hellmann, has argued that Magasin δ originally had a domestic function before it was converted into commercial or workshop space.⁸⁰ He attempts to prove this by examining the entrances to the ground floor and the blocking of communication between rooms XIX and XX in particular. He argues that this was originally an entrance *inter duas januas* with a double vestibule comparable to luxurious Hellenistic houses. In this scenario, Duchêne identifies this entrance as the principle one and that leading from the quay as a secondary service entrance during the domestic phase of the building. He cites the Maison du Trident as a comparandum for this double entrance to a house.⁸¹ The shift from a domestic function to a commercial one would therefore be marked by the blocking off of room XX and the subsequent assignment of the main entrance to the quay-side vestibule. This argument, while it attempts to explain some of the anomalies found in the magazine such as the possible signs of domestic cult, is problematic. The first issue is that room XX opens off of a narrow side street whose main purpose was to give access to the quay. It would have made much more sense for the main entrance of a wealthy house to have been located along Rue 5 or the quay: access to the main court could have been given from the road by a descending staircase, as in the Magasin des Colonnes. Furthermore, the entrance of the main vestibule is larger than that of room XX (3.48 m⁸² as opposed to 2.4 m⁸³), which does not make much sense if it was merely a

⁸⁰ Duchêne and Fraisse 2001, 108; Hellmann 2010, 283.

⁸¹ Duchêne and Fraisse 2001, 108-9.

⁸² Jardé 1906, 645.

service entrance. In addition, the floor levels between rooms XX and XIX are different: the floor level of room XX is the same as that of the street outside, approximately 50 cm lower than the floor of room XIX.⁸⁴ Duchêne makes light of this problem (citing the difference in level as less than 20 cm) by merely stating that “[l]’objection d’un dénivelé entre cour et rue ne saurait être décisive. Pour racher les niveaux, une pente légère suffisait.”⁸⁵ Furthermore, the south wall of Room XIX was only built when the door between Rooms XX and XIX was closed, making an identification of the rooms as an *inter duas januas* complex impossible (figs. 17, 18). The differences in levels must have been overcome, however, as Rooms XX/XIX definitely functioned as a secondary entrance in the first phase of the structure.

Another problem with Duchêne’s scenario is that, in addition to the fact that double thresholds are much more typical of commercial buildings than houses on Delos, the rest of the internal layout of the building does not resemble that of a contemporary house beyond the presence of a peristyle courtyard.⁸⁶ It does, however, resemble in almost every aspect the other magazines placed in close proximity to it along the coast, none of which have been attributed a domestic function in their primary phase. Finally, Duchêne does not explain how the closing of an entrance at room XX would result in or reflect the change in function of the magazine. Thus, this theory is unconvincing and it should instead be argued that Magasin δ was constructed and used as a magazine from the beginning. Its commercial function is further emphasized by the discovery of two fragments of σηκώματα, one discovered in the vestibule on the same level as the marble basin and the other in Room XI.⁸⁷

⁸³ Jardé 1906, 655; Duchêne and Fraisse 2001, 108.

⁸⁴ Jardé 1906, 655.

⁸⁵ Duchêne and Fraisse 2001, 110.

⁸⁶ Karvonis 2008a, 204; Paris 1916, 58.

⁸⁷ Jardé 1906, 647 n.1, 652 n.2.

Magasin des Colonnes

The Magasin des Colonnes (fig. 19) is the largest of the coastal magazines at almost twice the size of any of the others. Except for the fact that it incorporates two extra paved areas or courts, it has all the features seen in the other magazines.

Ten independent shops are located along the side of the magazine facing the sea. Because of the rise in sea-level, a lack of underwater exploration in the area, and enlargements of the shops to the west in a later phase, the original entrances to these rooms are unknown. Rooms I and X may have had entrances onto the quay but they also had entrances onto the lateral streets. The presence of two entrances in these shops is further indicated by the fact that the side entrance of room X was blocked by a buttressing wall.⁸⁸ Rooms V and VI are shallower than the other shops because part of the available depth is taken up by a pair of staircases to the second story which flank the main vestibule to the magazine proper.

As with the other magazines, the main courtyard is paved with gneiss slabs and the pavement is inclined for drainage.⁸⁹ There is a peristyle on the ground floor of twelve granite Doric columns, the entablature of which has not been found. It may have been constructed of the type of large blocks that were later plundered for building materials or it may simply have been of perishable wood.⁹⁰ Smaller unfluted marble columns of the Doric order were also found above the ancient ground level, and Jardé reconstructed these into a colonnade in the upper story which would overlook the lower courtyard in the form of a balcony.⁹¹ Jardé does acknowledge that the lack of an entablature that would go between the two sets of columns causes some problems, and he is somewhat dubious about reconstructing a wooden support structure in the place of this, especially as nail holes in the marble

⁸⁸ Jardé 1905, 30.

⁸⁹ Jardé 1905, 24-5.

⁹⁰ Jardé 1905, 26.

⁹¹ Jardé 1905, 26-7.

columns suppose the presence of a stone course.⁹² Two open-air paved side courts are also found in the Magasin des Colonnes which account for its larger size and greater complexity of plan.⁹³

A niche was placed in the wall of the court in front of room XXIV on axis with the main entrance. It was framed by stuccoed pilasters and the wall below was decorated with three layers of painted plaster, all of which depict hunting or gladiatorial scenes (figs. 20, 21).⁹⁴ Jardé proposed that the niche was used to hold images of household gods. The position of this niche is certainly almost identical to that of the gneiss niche in the courtyard of Magasin δ and is also in a much better state of preservation, allowing for a better understanding of its function in the magazine. The paintings, however, are also liturgical paintings and thus indicate a private practice of a public cult in the magazine rather than any sort of domestic cult.⁹⁵ A second set of liturgical paintings was found in the long corridor, next to the northern entrance from the quay.

One of the main differences between the Magasin des Colonnes and the other magazines along the coast (with the exception of Magasin δ) is that it has multiple entrances. As with the other magazines, a main vestibule leads from the quay into the main court. Two other narrower entrances also lead into the interior from the quay to the side courts, and both of these were blocked at some later point. In addition, a long corridor running along the front of the ground floor behind the shops appears to have had entrances at either end from the side streets that were later blocked. Rooms XVI, XVIII-XXI, and possibly XXVIII all originally had doors to the street that were later blocked.⁹⁶ Finally, an entrance via a flight of stairs gives access to the ground floor from Rue 5.

⁹² Jardé 1905, 28: he unfortunately does not specify where these nail holes are on the columns except to say that they are not on the capitals of the granite columns; cf. Chamonard 1924, 255-6.

⁹³ Jardé 1905, 29.

⁹⁴ Jardé 1905, 24; Bulard 1926a, 72-3; Bulard 1926b, 124-130; Hasenohr 2003, 179,189.

⁹⁵ Hasenohr 2003, 196.

⁹⁶ Jardé 1905, 30.

This high level of access and well-planned circulation pattern, at least in the original design of the magazine, must have been related to its function. I propose that the higher accessibility of the building may have set it apart from the other coastal magazines in terms of its commercial activities. The actual activities that took place in the magazine are, of course, unknown here as well because of a lack of material evidence. Nonetheless, it can be posited that the greater possibility for public access meant that the magazine was used primarily for the display and therefore the sale of goods, while other magazines might have been used more for storage. The use of the Magasin des Colonnes for the conspicuous display and sale of goods is also possibly indicated by two other factors, namely access routes to the central court and the possible presence of display areas in the peristyle itself.

Rauh argues that the magazine is set up to facilitate the flow of goods from the quay to the main courtyard. In his model, goods were carried from the quay to the two side courts via the northern and southern entrances on the west side of the building. These side courts were merely staging areas for trade goods before they were transferred into the central court and therefore did not need the elaboration of a peristyle that the main court did. Presumably the rooms around these side courtyards were for the storage of goods that were not objects of negotiation at any given time. From these paved areas, the goods were moved through rooms XI-XIV into the main court.⁹⁷ These rooms appear to have been primarily passageways and display space because of the multiple doors and windows in each one, and it is extremely unlikely that they would have been used as storage space.⁹⁸ This pattern of movement is predicated on the commodities in question being readily portable. Rauh does not take into account the fact that the southern rooms of the southern courtyard originally had entrances from the street, nor does his model explain why the number and arrangement of rooms is different around the two lateral courtyards.⁹⁹

⁹⁷ Rauh 1993, 87-8.

⁹⁸ Karvonis 2008a, 193-4, 207.

The columns on the north and south sides of the main courtyard peristyle contain rectangular holes 55 to 60 cm off the ground and placed at a 20-30° angle towards the interior of the court for which Jardé was unable to propose an explanation (figs. 22, 23).¹⁰⁰ Bruneau argues that these holes contained moveable elements, such as wooden beams, and based on the height of the holes above the floor and the commercial function of the building he suggests that display areas or stalls were placed in the peristyle.¹⁰¹ He offers as comparanda the stone tables set in the colonnades of the central kiosks in the macellum at Leptis Magna (dated to the Augustan period with a partial rebuilding in the Severan period). These tables, however, are not comparable to any structure that might be supported by the holes in the columns at the Magasin des Colonnes in terms of their material, orientation to the neighboring columns, and support system. Bruneau's hypothesis is therefore highly circumstantial at best, and an attempt to reconstruct the type of structure that he suggests does not inspire more confidence in it. Trümper suggests that these holes might have been used to support grilles (personal communication). This is as likely a solution as any, but the problem of why the holes are angled towards the interior of the court and how this would affect the placement of grilles or any other structure still applies to this suggestion. Another formal objection to this reconstruction is that no other series of cuttings for a peristyle enclosure on Delos has this angled appearance, but they are rather on an axis with the row of columns.¹⁰²

While both of these theories are only conjectural and cannot be proven without further evidence, they both identify the courtyard as space that was used for the placement and display of goods. Stalls or display stands would be much more accessible to the customer. There seems to have been no restrictions to anyone walking behind the colonnade, and a grill would provide some

⁹⁹ One possible explanation for the irregularity of the plan is the need for the architecture to conform to the contours of the slope of the landscape which Rue 5 follows.

¹⁰⁰ Jardé 1905, 25.

¹⁰¹ Bruneau 1978, 127.

¹⁰² Bruneau 1978, 125-32.

protection from the elements for viewers and goods under the peristyle or in Rooms XI-XIV with their open windows and doors. Unfortunately, neither conclusion provides any real indication of what said goods could be or who the customers would have been. This conclusion must also be tempered by the fact that the deliberately blocked entrances and the narrowing of the alley to the north of the building by means of the buttressing wall argue for some change in the usage of the building. Jardé sees this change in access as an argument that the magazine was used for the temporary warehousing of goods for transit trade rather than for retail.¹⁰³ He also believes, however, that Delos was too small to require the use of imports on any scale but was still an intermediary in Cycladic and Mediterranean trade.¹⁰⁴ This is a problem that can hardly be answered with the evidence from one magazine, but his conclusion supports his identification of the Magasin des Colonnes as storage space. He does not, however, leave room to consider that the blocked doors were originally open and in use. The alteration of the circulation system indicates only that there was a greater control of access into the magazine, rather than an actual radical change in function of the building. The commercial function of the building is also indicated by the presence of two σηκώματα, one with an unpublished find spot and one discovered in Room XI.¹⁰⁵

The second story of the Magasin des Colonnes is nearly as poorly understood as those of the other magazines are. Its presence is proven by the set of marble columns found at a higher level than the granite ones and by the two staircases next to the vestibule. Unlike the other magazines, these elements indicate that the upper floor probably could not be used separately from the ground floor as in other buildings. If Jardé is correct in his reconstruction of the upper peristyle, then the inhabitants of the upper story would have been able to have full visual access of the lower court over the balcony, which does not seem ideal for a commercial establishment (although this would have also held true

¹⁰³ Jardé 1905, 35.

¹⁰⁴ Jardé 1905, 36.

¹⁰⁵ Jardé 1905, 34 n.3; Jardé 1906, 652, n.2; Deonna 1938, 175.

for the other magazines with peristyles). Furthermore, in order to access the stairs to the upper floor, it is necessary to come into the main vestibule in the case of the southern staircase and all the way into the main court in the case of the northern one (there is no published evidence for a closeable door into the main courtyard that could control access from the vestibule). In addition, the southern staircase was lit by a window facing the court, which would also give potentially unwanted visual access to the activities going on there.¹⁰⁶ These features signal that the two floors of this magazine at least were integrated and used by the same persons or group that controlled the commercial activities that took place on the ground floor. The upper floor, like that in other magazines, was more highly decorated than the ground floor: mosaic fragments depicting flowers and a flying Eros were found.¹⁰⁷

This detailed description of individual magazines demonstrates that this series of commercial buildings shares a large number of traits in their layout and architectural form. Based on this, it is likely that they also shared a similar set of commercial functions, including storage and retail. Individual magazines differ in their levels and patterns of accessibility as well as in the amount of evidence for patronage. The implications of these similarities and differences for the entire complex of magazines will be discussed in the following section.

¹⁰⁶ Jardé 1905, 31-2.

¹⁰⁷ Jardé 1905, 32-3.

III. Discussion

The magazines along the south coast of Delos have been understudied, both in terms of their development and contents, and their role in the economic life of the island in the Late Hellenistic period. This situation has been reflected in the literature on the subject in two ways. First, there is no real effort to understand the specifics of who was using the magazines and for what purpose. Second, there have been made a number of unfounded assumptions about the Delian economy made based on the existence of the magazines without taking into consideration the particulars of size, layout, and position in the city. That a better knowledge of their use would greatly illuminate the local economy of Delos (and, eventually with more excavations and study, the actual role of Delos in the Mediterranean economy) is obvious and acknowledged, but it is not immediately possible to produce this necessary data.

One of the major obstacles to understanding how these magazines functioned on Delos is the widespread reliance on models of the Delian economy that are largely based on epigraphic and literary evidence and give significantly less weight to the architectural remains of commercial spaces such as shops, storage areas, and the magazines (for example, Gary Reger's study of Independent Delos). The arguments about the staples and luxury goods being traded on the island during its reign as a free port and the question of the scale of economic transactions during this period are thus not based on the areas in which they would have been housed, but rather on the mechanisms and personnel of financial transactions. This is not to say that a focus on the inscriptional evidence cannot be very illuminating, as Reger's study demonstrates¹⁰⁸; unfortunately, such a study has not been carried out for the following period of Athenian dominance. This is in part because of the lack of

¹⁰⁸ Reger 1994.

inventories and other records for the free port that would be complementary to and illuminating for the remains of commercial architecture.

There is also a continuing reliance on largely outdated theoretical models, such as those of Polanyi, in the discussions of the Delian case: Duchêne invokes his notions about ports of trade, including the fixing of prices, regarding the functioning and position of the Delian *emporion*, at least during the period of independence. This last is decidedly puzzling, as there is no evidence for price-fixing during the period of independence or after,¹⁰⁹ but is symptomatic of some of the overly simplistic assumptions made about the Delian economy in the later Hellenistic period. Duchêne also makes no mention of the commercial infrastructure, including the magazines, in making this argument.

The most critical and relevant questions to ask about the magazines are therefore about the scale and importance of these buildings in the economy of Delos during the period of Athenian dominance, with a strong emphasis on the material evidence. There are a number of subjects that fall under this question of scale and the way in which the magazines functioned on the island. These include: How were the magazines accessed from the sea? Who constructed and/or owned the magazines? What commodities were traded, and what sorts and scale of commercial transactions took place in the magazines? Until more archaeological excavations and study are carried out these questions cannot be answered, but it is a step in the right direction to ask the proper questions concerning these buildings. In the future, with a better understanding of the architectural phases, contents, and exact functions of these magazines, it will hopefully be possible to answer these questions and thus to gain a better understanding of the internal Delian economy and the actual place of Delos in the Mediterranean economy.

¹⁰⁹ Cf. Reger 1994, 75-82,

Accessibility

The first practical problem that must be faced in determining the scale of commercial activity is the accessibility of the magazines from the water, i.e. how the goods that were presumably traded in these buildings were transferred from the ships bringing them to the island onto the quays. There are two factors to consider: the level and roughness of the sea in the Hellenistic period, and the evidence for the presence of sailing vessels in the strait between Delos and Rheneia.

The modern coastline of Delos is not indicative of the Hellenistic coast: it has been proven that the sea-level has risen approximately 2.5 m since that period. Furthermore, wave action in the strait and the dumping of excavation debris in the Sacred Harbor by the French have resulted in a great deal of erosion in the area of the magazines, especially to the west of the Point des Pilastres. Recent study of the ancient coastline, however, suggests that the sea was 25 to 30 m west of the current shore, and that there was a sloping beach onto which boats could be drawn up (fig. 24).¹¹⁰

There is no archaeological evidence for the size of ship that frequented this stretch of water. Rougé states that ships with a depth of up to 5 m could have used the docking space, but this seems to be in a scenario where the sea came up to a quay, rather than onto a sloping beach.¹¹¹ Duchêne does acknowledge that this depth indicates a larger ship than could perhaps be comfortable in the narrow and choppy strait, made narrower by the lower sea-level.¹¹² Unfortunately, no wrecks have been reported in the area of Delos that would support these estimates, although a bronze lion that has been identified as a Hellenistic figurehead was recovered from the strait between the two islands.¹¹³ Duchêne also argues that merchant and naval ships could be accommodated in the Sacred Harbor, indicating that they must have been able to navigate this stretch of water.¹¹⁴ He largely supports this

¹¹⁰ Desruelle et al. 2007, 237-8.

¹¹¹ Duchêne et al. 2001, 176.

¹¹² Ibid.; cf. Parker (1992, 26) for average tonnages in this time period.

¹¹³ Parker 1992, 161.

¹¹⁴ Duchêne 1993, 120-1.

claim, however, by citing an inscription that has been restored as mentioning large ships without any further functional specification.¹¹⁵ This inscription was found between the Portico of Philip and the ancient quay, but in a secondary rather than primary context. Nonetheless, the frequent mentions of ἔμποροι καὶ ναύκληροι in the inscriptional record do indicate the presence of potentially large numbers of merchant ships in the vicinity of the island which have to have docked somewhere in order to unload their goods.

Given these considerations and limitations, it is only possible to pose questions about the methods of transferring goods from the ships to the magazines. If the large transport vessels were able to sail up the western coast of Delos, it is still unlikely that they would have been able to moor next to the so-called quays (more recently identified as a road along the shore in front of the magazines). With the sea-level 2.5 m lower and a high tide of only approximately 0.20 m in the strait, there would not have been enough depth for large ships so near the shore at any time.¹¹⁶ Transport to the shore would likely have to be done in smaller boats. This method of transferal of goods does not argue against the trade of fairly large quantities of goods nor does it necessarily indicate the exclusive practice of transshipment, with only the negotiations taking place on shore. It does perhaps indicate that this would not have been an ideal debarkation point for large or heavy shipments (grain, oil, marble), as these would necessitate larger transport vessels, more storage space than the magazines could perhaps provide, and a more sophisticated system for the transference of material to shore, especially in the case of marble blocks.¹¹⁷ On the other hand, there is no evidence that would completely preclude the importation of this type of material at this point on the coast.

¹¹⁵ *ID* 2556: ὁ ρος ὁ ρμ[ου] | μακρῶν π[λοίων]; the formula μακρὸν πλοῖον is attested in other inscriptions (Robert and Robert 1961, 193).

¹¹⁶ Dalongeville et al. 2007, 18.

¹¹⁷ Cf. Rickman (1971, 86) for the use of porters in transporting grain from ships to the *horrea*: a large labor force could have also compensated for less than ideal conditions on Delos.

Constructors/ Patrons

The first issue to be addressed in this section is whether the Delian magazines were public or private establishments. There is not nearly enough information available at this time to answer this question definitively, but a private designation seems to be the likelier option.

Public building projects on Delos are impossible to separate definitively from private ones except when an inscription with the owner's name or other such identifying information is found. The tendency, therefore, is in general to separate the two groups based primarily on scale.¹¹⁸ The fact that Magasins β and γ appear to be a single large scale project possibly points to construction on a larger scale than usually found in private contexts on Delos and therefore that said construction was done by Delian officials. It is by no means impossible, however, that a private association could have carried out a project on this scale: it is much smaller than the Agora of the Italians which was a private building, for example, though larger than other private buildings such as the clubhouse of the Poseidonastes (fig. 25). There is also little evidence for the involvement of Delian officials (with the possible exception of Theophrastos) in large-scale building programs on Delos in this period.

One question that would also need to be resolved for these two magazines, in addition to that of the relative size of public/private construction projects, is why the structure was subdivided into two separate but identical units. The repeated ground plan indicates that the three spaces were designed to be used for basically the same functions, but totally separate from one another. One possible solution is that a single entity, either public or private, constructed the three magazines and then rented them out separately to different groups. The presence of three $\sigma\eta\kappa\acute{\omega}\mu\alpha\tau\alpha$ in these magazines is another circumstantial piece of evidence that Magasins α - γ were places where official business took place, but this is impossible to confirm as the reports do not state whether they were in their original contexts.¹¹⁹ As has been previously noted, $\sigma\eta\kappa\acute{\omega}\mu\alpha\tau\alpha$ are also not necessarily only found

¹¹⁸ Karvoni 2008a, 211.

¹¹⁹ Cf. Hasenohr 2009.

in public spaces. Furthermore, the σήκωμα of Julius Caesar proves that Athenian magistrates were not the only officials to approve weights and measures in the port. Between this σήκωμα and the uninscribed examples found in Magasin δ and the Magasin des Colonnes, it is much more likely that the patrons of the magazines used their own measures and inscribed them in order to emphasize that they did business correctly. There are also other possibilities: for example, different σηκώματα were used for different clients. Especially if the Olearii or Oinopolai were the patrons of Magasins α-γ, it is reasonable that they would do business with both Greeks and Italians and that this was reflected in the presence of σηκώματα inscribed by both Athenian and Roman magistrates.

The agency behind the erection of the monumental granite pilasters of the Magasins Ardaillon is also something to consider. It is unclear how many of these magazines originally had these granite jambs, but they are not confined to the Établissement de la Pointe des Pilastres. The sheer monumentality as well as the uniformity of those preserved might suggest public funding, based on scale, but again could also be the product of a private association. The principal problem with this conclusion is that too little is known about the rest of the structures that are attached to these doorjambs. Standardized elaborations of entrances to the magazines would increase the likelihood of a standardized ground plan, which is not confirmed in either Ardaillon's original plan or in Duchêne's later work in the area. In addition, the clear division of the magazines into separate units in Ardaillon's plan demonstrates that it is impossible to make any reasonable argument about the public or private nature of the Magasins Ardaillon based solely on the form of only a few of their entrances.

As with the domestic architecture on Delos, it is also difficult to tell if different ethnic groups were using the coastal magazines. There is certainly very little evidence to argue one way or the other, and much of it is circumstantial. The statue base dedicated to Julius Caesar by the Olearii and the dedication of the Oinopolai indicate the presence of Italians. They were not found inside Magasins α-γ, however. Even if they were in situ, they are still not enough to tie these groups to the owners or users of the magazines except circumstantially. The σήκωμα of Julius Caesar also does not provide evidence for the ethnicity of the inhabitants of the building: it merely indicates his role as the

patron of the Delians. The presence of the three σηκώματα of Ariarathes also must be viewed in this light. As already stated, the presence of these σηκώματα also does not prove that Magasins α-γ served as administrative offices for the *epimeletos*.¹²⁰

Italian occupation is most strongly indicated for Magasin δ and the Magasin des Colonnes because of the existence of the so-called liturgical painting in their courts and on the northern façade of Magasin δ. The ethnic significance of the courtyard shrine in Magasin δ is tentatively supported by the presence of the liturgical painting inscribed with Διός ἔ λ[ευ]θερίου on the northern exterior façade of room XI, although its iconography is not distinctly Compitaliastic.¹²¹ The Magasin des Colonnes also has a graffito in the Latin alphabet reading . . .QELUS in one of the stairwells, which may support an Italian identity.¹²² Jardé furthermore reports an amphora handle with the mark . . .CVNDI. He also reports a lead strip with a relief possibly of two gladiatorial combatants and the name Λεύκ[ιος]¹²³ and two partial Greek alphabets inscribed in one of the stairwells from the Magasin des Colonnes.¹²⁴ Unfortunately, none of these items are necessarily indicative of the ethnicity of the inhabitants of the building, as the graffiti could have been made by a visitor and there is no evidence that the mark on the amphora handle was placed there by the merchants trading its contents.

Rauh believes wholeheartedly in the *Romanitas* of this magazine and states that the “features and material remains of the Magasin des Colonnes appear decidedly Roman and decidedly in keeping with the requirements of a slave-trading *emporium*.”¹²⁵ The Greek inscriptions from the magazine do not necessarily negate this impression, as this was the most common language on Delos, even in the

¹²⁰ Hasenohr 2009.

¹²¹ Hasenohr 2003, 186-7.

¹²² Jardé 1905, 39-40.

¹²³ Jardé 1905, 40.

¹²⁴ Jardé 1905, 37.

¹²⁵ Rauh 1993, 89.

Agora of the Italians.¹²⁶ The argument that slaves were being traded in this magazine is much more problematic than the language of the inscriptions: Rauh never states what the architectural requirements for slave-trading are and how they are not present in the other magazines.

Problems of Typology and Use

The largest problem any study of the magazines is that of their function and typology. There is no real evidence for the activities that were carried out inside the magazines and, therefore, it is impossible to determine whether they were used for retail (at least in areas other than the independent shops on the facades), storage of goods for sale on Delos, transshipping storage, or a combination of these. This question may never be satisfactorily answered unless much clearer archaeological evidence for the commercial activity in this area comes to light. Useful epigraphic evidence for this sort of privately conducted commercial activity is unlikely to be discovered considering the overwhelmingly civic nature of inscriptions dealing with finances.

In addition to the lack of material evidence for the use of space is the lack of a universally applicable set of criteria for identifying different types of commercial space, as recently attempted by Karvonis.¹²⁷ Particularly important for this study is his examination of the doorway as a criterion for retail and storage space: in retail contexts large doorways provide important visibility and access into a room and in storage contexts the room had to be securable with no other openings than the door.¹²⁸ He does not, however, discuss in any detail how these classifications (or any of those he developed for production areas)¹²⁹ are useful in the case of the coastal magazines, but only says that they can

¹²⁶ Trümper 2008, 466-75.

¹²⁷ Karvonis 2008a; contrast this new set of terminology and definitions with DeLaine's (2005) analysis of the different types of commercial architecture in Ostia, which focuses on the archaeological evidence for building use and accessibility rather than revising old terminology.

¹²⁸ Karvonis 2008a, 193-4.

¹²⁹ Karvonis 2008a, 158.

include different commercial functions.¹³⁰ Karvonis also rejects the term “magasin” for multi-purpose commercial buildings, replacing it with “édifice commercial”, although he does not explain why “magasin” is problematic or why his new terminology is more precise.¹³¹ Thus the criteria for identifying the commercial importance of the magazines as a whole (rather than individual rooms) in the Delian economy need to be based on an in-depth survey of the archaeological record of various types of commercial structures in order to avoid both overly general classifications and circular argumentation.

This typological problem surrounding the magazines is important to consider because the models of the Delian economy, based principally on epigraphic evidence, should be informed by the scale and function of the commercial architecture on Delos rather than the other way around. For example, Duchêne proposes that the Delian economy remained small and of limited international importance even during its period as a free port.¹³² This is evident in part, he argues, because there are no facilities for the large-scale storage of grain on Delos.¹³³ He does not, however, consider the storage capacity or ability of any of the commercial architecture on the island when he makes this claim, nor does he provide any comparanda for sufficiently large storage systems at other contemporary major trade ports. Van Berchem invokes a similar lack of commercial space when he argues that many of the materials that were recorded as sold on Delos were in fact the objects of transshipment and may never have physically been offloaded onto the island.¹³⁴ As indirect evidence, he cites the large corpus of seals from the Maison des Sceaux, and argues that the sealing of commercial contracts required the presence of the parties involved, but not necessarily the goods

¹³⁰ Karvonis 2008a, 198.

¹³¹ Karvonis 2008a, 158-9.

¹³² Duchêne and Fraisse 2001, 178.

¹³³ See also Karvonis (2008a, 211) who notes that no structure purely for storage has so far been identified on Delos.

¹³⁴ Van Berchem 1991, 132-3.

themselves.¹³⁵ Van Berchem does raise a valid point when he argues that it would be difficult for large grain ships to navigate the narrow and fairly rough channel between Delos and Rheneia,¹³⁶ but his overall argument is based primarily on negative evidence. This lack of acknowledgement of the capacities and placement of the magazines thus leaves a hole in the picture of the contemporary Delian economy: if they were not being used for staple goods, and there were no other large-scale storage areas on the island, and much imported bulk material was not actually transported onto the island, where did Delos get and (more importantly) keep its essentials? If the magazines are supposed to have been involved only in the import of luxury goods (presumably in smaller bulk), then they provide an extremely skewed view of the Delian economy which needs to be addressed. Even if the use and contents of the magazines varied seasonally depending on shipping patterns and the demands for different staples, these models of the Delian economy are not detailed enough to explain the particular functions of these buildings.

This discussion of the larger theoretical problems surrounding our knowledge of the Delian magazines makes clear that a great deal more investigation must be done before their function and role can be properly understood. The most basic and possibly the most problematic aspect of the current state of research is the lack of a specifically typological study of these buildings where the architecture and archaeological remains are considered in detail. An understanding of the typology of the building would allow for comparisons with other types of commercial architecture, both on the island and around the Mediterranean, and therefore a better understanding of the function of the buildings in their specific context. A brief comparative typological study is carried out in the next section.

¹³⁵ Van Berchem 1991, 133.

¹³⁶ Van Berchem 1991, 131-2.

IV. Comparanda

The examples used here as comparanda for the Delian magazines are intended to provide typological parallels for the commercial structures: four examples are discussed which were chosen to demonstrate the common traits of a central courtyard surrounded by rooms used for storage and administration.¹³⁷ These comparanda are intended to explore the different types of commercial activity (storage, transshipment, retail) that can occur in a building of this type. Through this exploration of typological parallels which, with the exception of the commercial building at Kassope, are archaeologically better understood and more contextualized within their local economies. An examination of the different types of activities that are reconstructed as taking place in these buildings may throw light on the specific function of the Delian magazines in the economy of that island.

The primary shortcoming of these four comparanda is that, while the Kassope example at least also belongs in the Hellenistic period, none of them is in any sort of close geographic or economic proximity. Therefore, unless similar contemporary buildings come to light in future excavations of other port cities (Alexandria or Rhodes are likely prospects), the shape and function of the Delian magazines cannot be further contextualized in Hellenistic architecture.

That being said, the chronological spread of these comparanda could indicate that this form of commercial building is based primarily on its practicality. A building consisting of a courtyard surrounded by smaller rooms allows for a large range of commercial activities. The courtyard can be used for sorting, tallying, display, or overflow storage of goods, while the rooms can be used for

¹³⁷ Trümper (2010, 64-5) gives the comparanda of *khans*, *caravanserai*, *funduqs*, and *fondachi*, which have a similar functional plan but, at least in the case of the Venetian *fondachi*, a stricter regulation of use and taxation.

display, storage, or manufacture. The whole courtyard building is a fully closed self-contained unit, as opposed to a series of shops which do not allow for this integration of activities. The same general plan is readily adaptable to most commercial activities and was thus most likely popular for its pure functionality. This can be seen in the variety of ground plans of these comparanda and of the Delian magazines, which retain the same types of spaces but which arrange them in slightly different configurations and with different modes of access based on the specific purpose of the building.¹³⁸

Corinth

The Punic Amphora Building, located in the southwestern section of the Corinthian Forum at the intersection of two major roads, is the earliest comparandum for the Delian magazines (fig. 26). The building has not been fully excavated, but enough of it is known to have a good understanding of its overall layout and use. It underwent two phases of construction and occupation. In the first phase, the Punic Amphora Building measured approximately 15 by 13.30 m, and was enlarged in the second phase by the addition of Rooms 3 and 4 to its northern end (3.6 m and 3.9 m north-south, respectively).¹³⁹

The Punic Amphora Building is arranged around a central courtyard. Its entrance has been restored in the wall between rooms 5 and 6, although the façade at this point has been destroyed by Byzantine foundations.¹⁴⁰ At least six rooms of varying sizes are arranged around the courtyard. A portico was located on the north side of the courtyard, in front of which a porch was constructed in the second phase of the building's occupation.¹⁴¹ A stair hall was constructed against the exterior of the western wall sometime after the building was constructed.¹⁴² Nothing is known about the upper

¹³⁸ cf. Karvonis (2008b, 67-8) for his second type of édifice commercial.

¹³⁹ Williams 1979, 107-10.

¹⁴⁰ Williams 1979, 110.

¹⁴¹ Williams 1979, 109.

¹⁴² Ibid.

floor(s) of the Punic Amphora Building, but it may very well have held living quarters and/or offices for the owners of the building.

The architecture of the first phase of occupation is not very well known since much of the stone was robbed out.¹⁴³ It was smaller than the second phase of the building, as rooms 3 and 4 were only added later, but the configuration of rooms around a courtyard was the same.¹⁴⁴ According to diagnostic pottery finds, the original Punic Amphora Building was constructed in the second quarter of the fifth century BCE.¹⁴⁵ Pottery shapes, among them Punic and Chian amphorae found in the fill and loom weights, suggest that the building was originally a house with some space given over to commercial activities.¹⁴⁶

The second phase is better known. In this phase, the building was expanded to the north and the configuration of the eastern side of the court changed to form room 5.¹⁴⁷ The porch and stair hall were also added. In this phase the volume of amphorae rose dramatically, while the number and variety of other pottery types diminished and loom weights disappeared altogether. From this, the excavators argue that the building was almost completely commercial in function in this phase as a result of expanded trade.¹⁴⁸ The building went out of use sometime in the third quarter of the fifth century, possibly because of the disruption of trade by the Peloponnesian War.¹⁴⁹

Two major commodities are represented by the ceramic evidence from the Punic Amphora Building: wine and salted fish. Chian amphorae holding wine comprise approximately 40% of the

¹⁴³ Williams 1978, 16.

¹⁴⁴ Williams 1979, 107.

¹⁴⁵ Williams 1979, 105.

¹⁴⁶ Williams 1979, 111.

¹⁴⁷ Williams 1979, 107.

¹⁴⁸ Williams 1979, 111.

¹⁴⁹ Williams 1979, 112-13, 118.

amphorae fragments found.¹⁵⁰ Another approximately 40% of the amphorae were of the Punic Mañá-Pascual A4 type,¹⁵¹ which was probably manufactured in the area of the Straits of Gibraltar.¹⁵² These amphorae carried pickled and salted fish produced in the West Mediterranean, fillets of which have been found in the Punic Amphora Building.¹⁵³ Because of the incomplete state of excavation and the fact that used amphorae were smashed and spread on the ground of the building, it has so far been impossible to calculate how many amphorae are present in the entire structure. Zimmerman Munn has estimated, based on a small sample, that 400 to 500 broken amphorae were spread in one stratum of the second phase courtyard alone.¹⁵⁴

Because only the quantity rather than the type of amphorae changed between the two phases of the building, Williams argues that the building was occupied by the same merchant in both phases.¹⁵⁵ The lifetime of the building was certainly short enough that this is possible, or that the two phases represent two generations of the same family. There is no evidence to suggest that the merchant of the Punic Amphora Building was not a native Corinthian. Zimmerman Munn argues that this merchant was catering to retail trade and that he probably acquired his goods (at least the preserved fish) from wholesale contractors who in turn bought it from the shippers who had transported it from the Western Mediterranean.¹⁵⁶ She does acknowledge that the nationality of these shippers cannot be determined, and that they might have been either Greek or Punic.¹⁵⁷

¹⁵⁰ Zimmerman Munn 2003, 199-200.

¹⁵¹ Zimmerman Munn 2003, 200.

¹⁵² Zimmerman Munn 2003, 205.

¹⁵³ Zimmerman Munn 2003, 201.

¹⁵⁴ Zimmerman Munn 2003, 213.

¹⁵⁵ Williams 1979, 111.

¹⁵⁶ Zimmerman Munn 2003, 213.

¹⁵⁷ Zimmerman Munn 2003, 212.

The Punic Amphora Building is similar to the Delian magazines in its basic shape, although it is smaller than the Delian buildings: all rooms open directly off of a central courtyard that contains some type of shelter (in this case the porch in front of rooms 3 and 4). Because of its placement in the city, however, the audience was most likely different. The Delian magazines were located directly on the coast and were therefore highly visible and accessible to those arriving at the main port. They catered to and were most likely administered by traders dealing in bulk goods from outside Delos. Whether or not these goods were imported for sale on Delos or stored in the magazines during transshipping, retail trade represented only a part of the activities of these buildings. In contrast, the Punic Amphora Building, while it also dealt in imports, seems to have been a purely retail establishment, located away from the port and placed at a prominent location in the center of Corinth at a major crossroads. This indicates that the inhabitants of the city were the most likely customers of the establishment, rather than visitors or merchants arriving from abroad.

Al Mina

During Leonard Woolley's excavations of the port town of al Mina, he discovered in Level III (430-375 BCE) a number of buildings that he termed warehouses.¹⁵⁸ They were laid out in more or less regular rectangular insulae, set into a grid pattern of streets. Woolley recognized a relatively standard plan in these warehouses: a deep courtyard opening onto a street which is flanked by storerooms on either side and square chambers or long magazines at the back of the court, often with a row of independent shops and warehouses along one side.¹⁵⁹ He argued that merchandise was unpacked, sorted, and tallied in the courtyard, and was then placed in the storerooms.¹⁶⁰ The publication includes an architect's plan and reconstruction of a typical warehouse which, except for

¹⁵⁸ Woolley 1938, 24.

¹⁵⁹ Woolley 1938, 12.

¹⁶⁰ Woolley 1938, 13.

the lack of a vestibule into the court and the placement of the shops is fairly similar in layout to the Delian magazines (figs. 27, 28). The major difference is that the court seems to be open to the street in the al Mina warehouses. Woolley does not indicate whether there is any evidence that the entrances to these courts could be closed in any way or whether the rooms opening onto them were lockable. Another more minor difference is that the rooms in the back of the court did not all open directly off of the court. Any perceived similarities or differences between this plan and those of the Delian magazines are potentially misleading, however, since Woolley's composite reconstruction does not resemble the plans of the actual warehouses as closely as might be expected (fig. 29).

These warehouses appear to have been used primarily for business, with little or no domestic functions: the presence of graves under the floors of some warehouses is the only indication of habitation.¹⁶¹ Woolley therefore argues that most of the merchants would have lived somewhere else, possibly in the nearby town of Sabouni.¹⁶²

Woolley argues that the merchants using these warehouses must have been Greeks, based on inscriptions and graffiti on vases in Greek.¹⁶³ The goods that have been preserved are certainly imported Greek wares, mostly Attic, including lamps, gutti, aryballoi, kotylai, and bell kraters.¹⁶⁴ Local wares, including a large quantity of lekythoi, were also imitations of Greek pottery.¹⁶⁵ This argument, however, assumes that pots equal people. The presence of Athenian pottery indicates a strong trade link, but it does not demonstrate that Athenians or other Greeks inhabited or regularly used the warehouses of al Mina. Indeed, the presence of graves under the floors of these buildings is a strong argument against this, as this is a non-Greek burial custom.

¹⁶¹ Woolley 1938, 13.

¹⁶² Woolley 1938, 13-14.

¹⁶³ Woolley 1938, 15.

¹⁶⁴ Woolley 1938, 24.

¹⁶⁵ Woolley 1938, 24-6.

While these warehouses are not as close of parallels to the Delian magazines as they first seemed from Woolley's report, they still have similar commercial purposes and functional spaces. The central court was used for the access of various rooms used for storage or display. Space for the administration of the business was also most likely included in the building, possibly in a second story. There is no published evidence for a second story in these warehouses with a different function and restricted access (despite the presence of one in the reconstruction of the typical warehouse (fig.28)) as there is in the Delian magazines, but this does not necessarily preclude its existence. More broadly, these warehouses provide an example of the type of building that is most useful for groups of merchants (here also possibly foreigners like those posited as using the magazines on Delos) who needed space for both the storage and sale of imported goods.

Kassope

The square building to the north of the agora in Kassope is the parallel closest in date to the Delian magazines (fig. 30). It is separated from the agora proper by a long stoa and a street. It is roughly square, measuring 30.20 x 32.80 m. It is entered through a vestibule with octagonal columns and is built around a peristyle court (8 x 7 octagonal columns with Doric capitals). There are 17 rooms surrounding this court on the ground floor and there was a pi-shaped second story with possibly 13 more rooms.¹⁶⁶ The extant rooms, with the exception of the corner rooms, are approximately equal in size (4.65 x 4.20 m on the east and west sides of the building, 4.85 x 4.80 on the north and south sides).¹⁶⁷ The corner rooms are triangular, having been divided with diagonal walls. There has been no satisfactory answer given for this construction choice, except possibly that they served as a preventative against earthquake destruction. The building was constructed of polygonal masonry foundations and mudbrick upper walls with a timber frame.¹⁶⁸

¹⁶⁶ Dakaris 1952, 344-6; Kraynak 1984, 75.

¹⁶⁷ Dakaris 1952, 334.

Each room contains a hearth in one of the corners which was probably used for heating rather than for cooking.¹⁶⁹ Each room also contains in its center a stone base with a square cutting in the top. The purpose of these is not entirely clear: Dakaris, identifying the building as a katagogeion, argued that they were bases for banqueting tables,¹⁷⁰ while Hoepfner suggested that they supported wooden columns which in turn helped to support the second story.¹⁷¹

The building is dated by excavated numismatic and ceramic finds to the last quarter of the third century or the beginning of the second century BCE.¹⁷² Alterations were carried out after the building was damaged by the army of Aemilius Paullus in 167 BCE. It was abandoned c.30 BCE after the citizens of Kassope were resettled in Nikopolis.¹⁷³

The function of the building is debated. Dakaris argues that it was a civic katagogeion used in part for banqueting,¹⁷⁴ but the dimensions of the rooms, the position of the doors, and the lack of suitable floors for dining couches indicate that it was not a site for dining. Kraynak argues that it served as a hostelry, because of the hearths, finds indicating food consumption, and literary sources describing other katagogeia.¹⁷⁵ Hoepfner and Schwandner have more recently argued that the building was used for commercial purposes as a food market, citing its position near the agora, its resemblance to later Roman macella, and the presence of two σηκώματα in rooms ο and η.¹⁷⁶ This becomes a circular and anachronistic argument in many ways, as does an argument based on a comparison with

¹⁶⁸ Dakaris 1952, 342-4; Hoepfner and Schwandner 1986, 91.

¹⁶⁹ Dakaris 1952, 340-1; Hoepfner and Schwandner 1986, 89.

¹⁷⁰ Dakaris 1952, 340.

¹⁷¹ Hoepfner and Schwandner 1986, 89; Kraynak 1984, 75.

¹⁷² Dakaris 1979, 118; Hoepfner and Schwandner 1986, 91.

¹⁷³ Dakaris 1952, 358-9; Kraynak 1984, 76.

¹⁷⁴ Dakaris 1952, 360-2.

¹⁷⁵ Kraynak 1984, 78.

¹⁷⁶ Dakaris 1954, 206; Hoepfner and Schwandner 1986, 91; Kraynak 1984, 78.

the plan of the Delian magazines. The fairly generic plan of the Kassope building could lend itself to a number of functions: a commercial one must be based on a more detailed examination of finds and urban context. For the purposes of this study, the presence of the σηκώματα is the most convincing factor in identifying this building as a commercial structure, with the plan only being used as corroborative evidence. The location of the building in the city is also not definitive for the function of the building but, if it can tentatively be identified as a commercial structure, its location can be used to determine to some extent the type of activities that took place in it. For example, its location behind the agora might indicate that it had a primarily retail function. This is supported by the fact that there does not appear to have been provisions for a door at the entrance of the building (although a grille between the columns of the propylon is possible), indicating that there was little control of access and therefore less likely to be used for storage purposes. This problem of identification of function by probability makes it difficult to compare this building to the Delian magazines, but it also illuminates some of the problems of identification of function of the Delian buildings which are less acknowledged in their publications.

Ostia

The *horrea* of Ostia are the most commonly cited parallels for the Delian magazines, and the *Horrea Epagathiana* in particular.¹⁷⁷ The majority of these buildings were constructed in the second and third centuries CE, long after the Delian examples went out of use. Their primary function was the storage and large-scale distribution of imported goods.¹⁷⁸ Those that were used for the storage of grain are identifiable by their raised floors that provided appropriate ventilation. Only three of the

¹⁷⁷ Cf. Karvonis 2008a, 208; Schaal 1957, 66; Rickman 1971, 37.

¹⁷⁸ Cf. DeLaine 2005, 39-43.

horrea in Ostia have this feature, however.¹⁷⁹ The contents of the rest are much more difficult to identify.

The prominence of *horrea* in Ostia differs from that of the magazines on Delos. The largest difference is in the proportion of space taken up by the *horrea* in the city. Approximately fifteen *horrea* and other storage buildings are known from excavations and at least ten others have been identified in unexcavated areas.¹⁸⁰ While Ostia has not been fully excavated and the absolute percentage of land taken up by this type of building cannot be calculated, it is certainly higher than that occupied by the magazines in the city of Delos. This is a much greater number than so far safely identified on Delos. The majority of the *horrea* is lined up along the Tiber but warehouses are also found throughout the rest of the city relatively far from the shore, which differs from the consolidated location of the Delian magazines along the coast in the merchant quarter. The *horrea* specifically used for grain storage especially may differ from the Delian magazines in function, depending on one's opinion of the scale of Delian trade. These *horrea* served for storage for grain that was then transported to Rome.¹⁸¹ They served therefore as a link between the origin and the destination of the grain. If the Delian magazines were used for the storage and display of goods intended for sale on the island, then the commercial establishments of Delos acted as endpoints for imports, much like the majority of the Ostian *horrea*. If they were used for transshipping, however, they were possibly used in a similar manner to the Ostian grain *horrea*.¹⁸²

Some similarities in use can also be seen between the Ostian *horrea* and the Delian magazines. In particular, many *horrea* have independent tabernae attached to their facades, in which might have been sold goods stored in the warehouses (fig. 31).¹⁸³ In addition, it is also probable that

¹⁷⁹ Rickman 1971, 85-6; Heinzelmann 2002, 113; Hermansen 1981, 227-8.

¹⁸⁰ Heinzelmann 2002, 112.

¹⁸¹ Hermansen 1981, 232.

¹⁸² cf. Heinzelmann 2010, 7-9.

there was public traffic and business transactions taking place inside the *horrea* based on the peristyle courts around which many of them were built. That they were also used for storage of valuable goods is indicated by the presence of large numbers of rooms with lockable doors in the interiors of *horrea*.¹⁸⁴ The identification of these buildings as multi-functional commercial spaces with controlled access to certain areas through the use of closed doors or limited views is reflected in the plans and access patterns of the Delian magazines, reaffirming that they were also likely multi-purpose commercial structures.

Karvonis argues that the *Horrea Epagathiana* in particular are very close to the Delian magazines in plan and dimensions: the structure is rectangular, has four multi-functional rooms or shops on the façade, has interior rooms arranged around a peristyle, and has at least two upper stories (fig. 32).¹⁸⁵ The upper stories could be accessed by staircases located both inside and outside of the *horrea*, indicating that the use of the upper story was segmented and not necessarily used by the same patrons that used the ground floor. Because of the complete preservation of the second floor, much more is known about the use the second story than in the Delian magazines. It consists of twenty-one rooms, of which fourteen (8-11, 19-29) are single independent rooms with their own doors. Packer argues that these individual rooms were used for overnight stays by businessmen who dealt with the owners of the *horrea*.¹⁸⁶ The remaining rooms make up two larger apartments (14, 15; 17, 18, 17A/B, 18A). It is probable that the upper floors of the Delian magazines were also used for living purposes, given the presence of mosaics and paintings. They do differ from the second story of the *Horrea Epagathiana* in their level of decoration: there is no evidence of mosaics or painted plaster from the second story of the *Horrea Epagathiana* like there is for some of the Delian examples.

¹⁸³ Heinzlmann 2002, 113.

¹⁸⁴ Cf. Rickman (1971) for descriptions and diagrams of preserved locking mechanisms on specific *horrea*.

¹⁸⁵ Karvonis 2008a, 208;

¹⁸⁶ Packer 1971, 152.

In addition, the *Horrea Epagathiana* has two *aediculae* set into the eastern wall of the main courtyard in a similar position to those in Magasin δ and the Magasin des Colonnes (fig. 33).¹⁸⁷

Rickman posits that similar niches in the entrance corridor must have held statues of the tutelary deities of the establishment, but it is not known if the niches in the courtyard had the same function.¹⁸⁸

The niches in the courtyard are on the view axis of the entranceway, also comparable to that in the courtyard of the Magasin des Colonnes.

Built in c.145-150 CE, the *Horrea Epagathiana* were owned by two freedmen, Epagathus and Epaphroditus, based on the inscription “*Horrea Epagathiana et Epaphroditiana*” on a marble slab above the entrance.¹⁸⁹ From this, it is clear that the horrea of Ostia could be (though not necessarily were) built and/or owned by private individuals.¹⁹⁰ From the limited evidence, this seems to parallel what was most likely happening on Delos (though keeping in mind the hypothesis about Magasin α - γ advanced by Hasenohr). Unfortunately, these horrea are somewhat anomalous in their plan and may therefore have had a somewhat different commercial function than other horrea in Ostia (luxury goods instead of grain, for example, based on the elaborate locking systems).¹⁹¹

These four comparanda are useful in some ways in determining the functions of the Delian magazines. The Punic Amphora Building and the Ostia *horrea* provide evidence that structures of this kind could be used for both storage of bulk goods and retail (also possibly of bulk goods). This is less provable for the al Mina warehouses and the Kassope building since they are not as well understood, although these could also be further illuminated through the same parallels. Also useful for a consideration of the Delian magazines are the different levels of accessibility and groups of patrons

¹⁸⁷ Packer 1971, 151.

¹⁸⁸ Rickman 1971, 35.

¹⁸⁹ Rickman 1971, 30.

¹⁹⁰ Cf. Heinzelmann 2010, 6-7.

¹⁹¹ Rickman 1971, 37.

that have been reconstructed for these buildings. These comparisons indicate especially that a strong control of access does not inhibit the use of the central courtyard for negotiations, as can especially be seen at Ostia.

This sort of comparative analysis for any of these buildings, however, is extremely susceptible to circular argumentation. This is particularly clear in the case of the Kassope building, but is also a problem when considering the Delian magazines. The use of these specific comparanda, therefore, has great potential for bettering the understanding of the magazines, but they must be used carefully. Especially with such a small number of examples, some of which are not fully understood or completely published, conclusions are necessarily general and not as useful as they should be. A larger and more nuanced study of this sort with a much larger corpus of comparanda, however, could potentially be very profitable in better understanding the role of these commercial courtyard buildings in the Mediterranean.

V. Conclusion

The magazines to the south of the Sanctuary of Apollo have not received much attention since their excavation in the early days of the exploration of Delos. These early studies produced a good deal of information and were well published, but more work needs to be done to address issues of the Delian economy which have become prominent more recently. This aim of this study was thus to identify those areas where further research is called for through a survey of the publications of the individual magazines and a discussion of some of the broader problems surrounding our understanding of them. Many of these issues relate directly to the magazines: What was being traded and who was trading it? Was Delos the final destination for the goods that were housed in the magazines and, if so, were they sold directly from the shops attached to the magazines or distributed to other commercial establishments on the island? Other questions must be asked about the overall form and scale of the Delian economy during the second period of Athenian dominance when the magazines were in use: was the seemingly eminent importance of the free port of Delos (as suggested in literary sources) for Mediterranean trade a fact or a fiction? Delos was dependent on imports, but how does the size and commercial functions of the magazines indicate the scale and precise nature of this import trade? None of these questions has been answered satisfactorily. While this project could not provide and did not attempt to provide solutions to any of these problems or to many smaller ones relating to the individual magazines, it aimed at identifying future directions for research and excavation in the context of fast-growing studies on the Hellenistic economy.

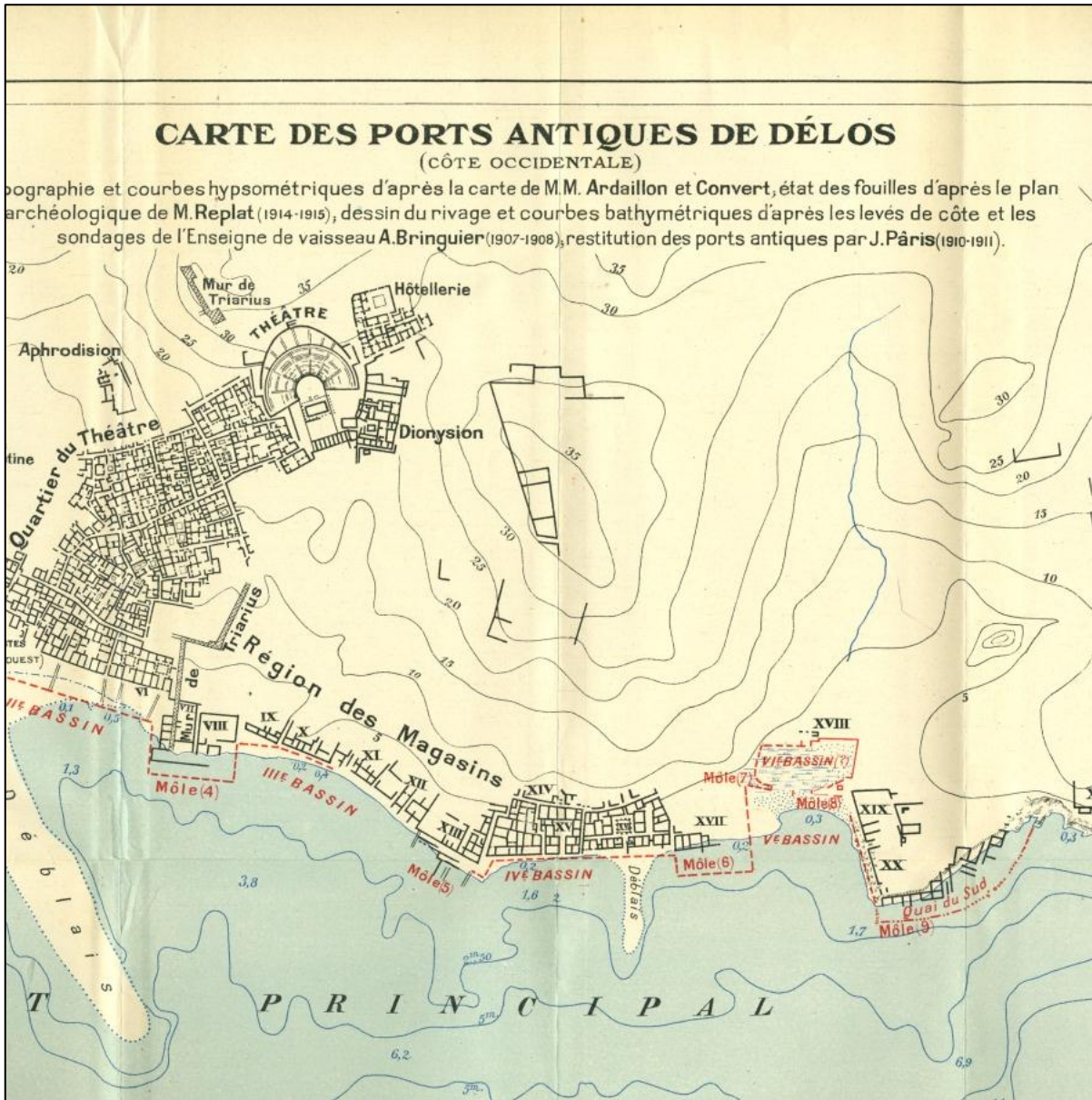


Figure 1: Plan of Magazines (Paris 1916, Plate I-IV [detail])



Figure 2: Plan of Magasins α - γ (Jardé 1905, Plate V [detail], modified by M. Trümper to reflect entrances, destroyed portions, and the later shops along Rue 5).

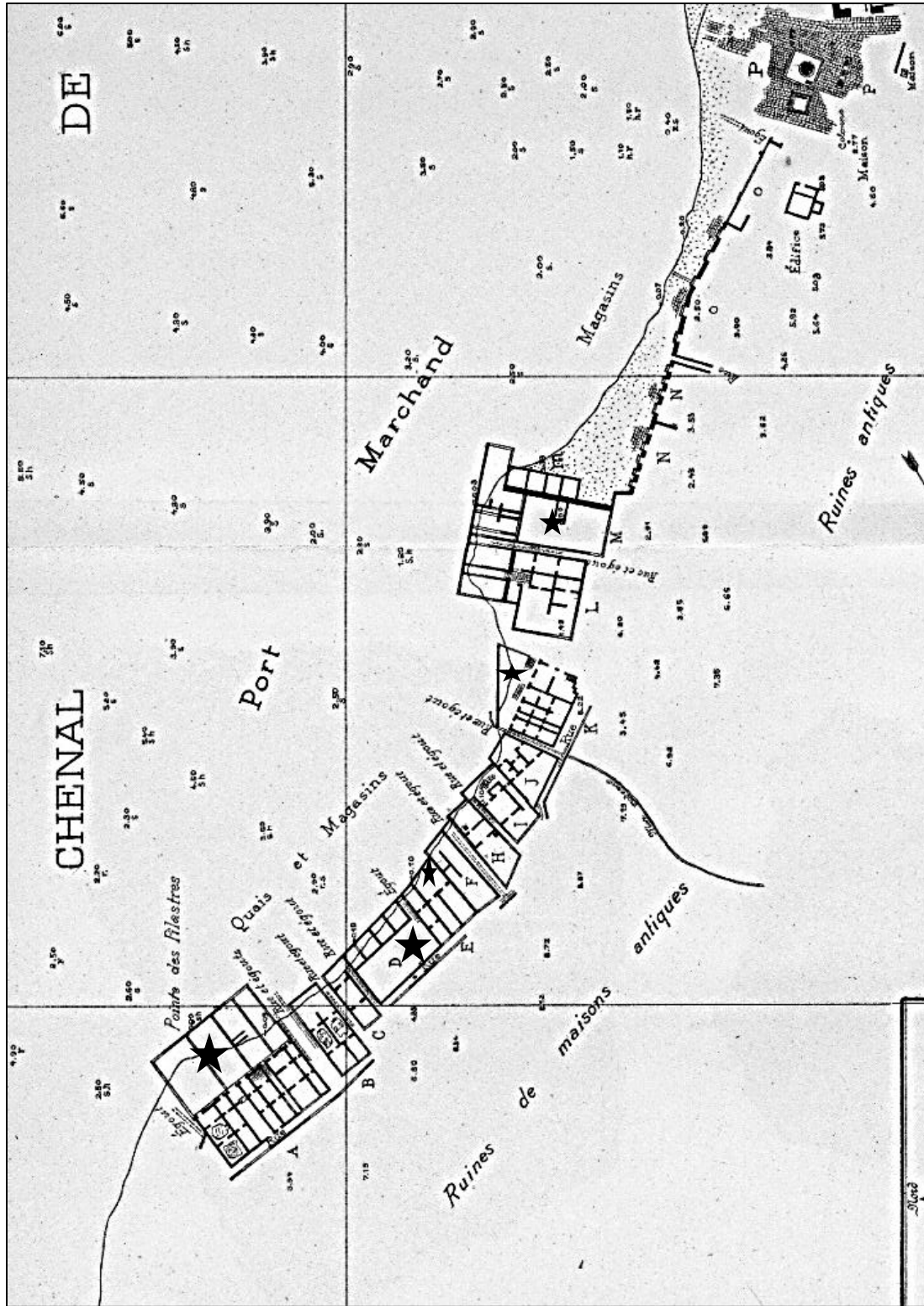


Figure 3: Plan of the Magasins Ardaillon (Ardaillon 1896, Pl. II [detail]) with stars marking possible “large rooms/courts” identified by Ardaillon.



Figure 4: Granite pilasters of the Établissement de la Pointe des pilastres (Duchêne and Fraise 2001, Plate XLII.3).

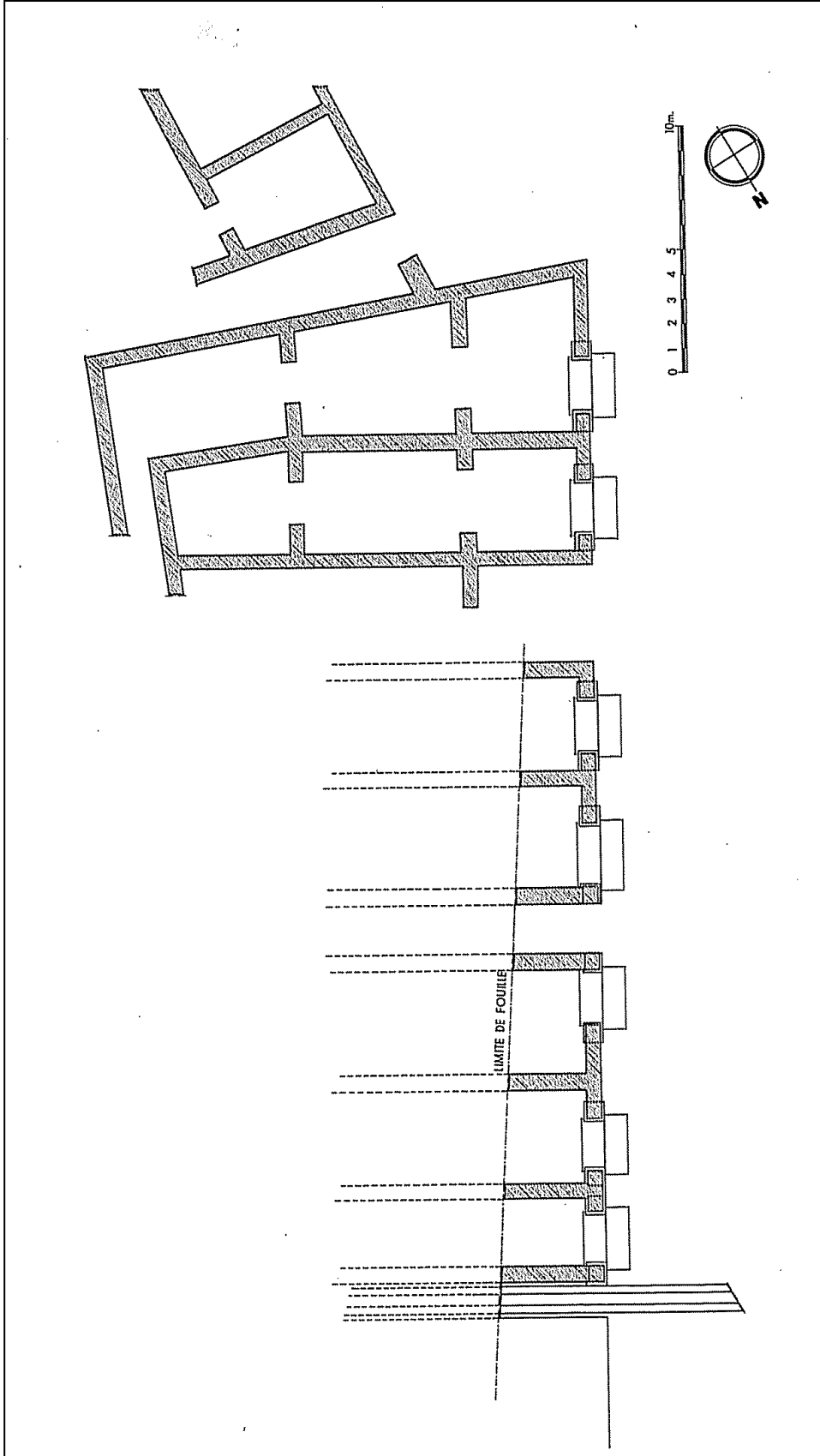


Figure 6: Reconstructed partial plan of the Magasin de la Pointe des pilastres (Duchêne and Fraisse 2001, Plan IX).

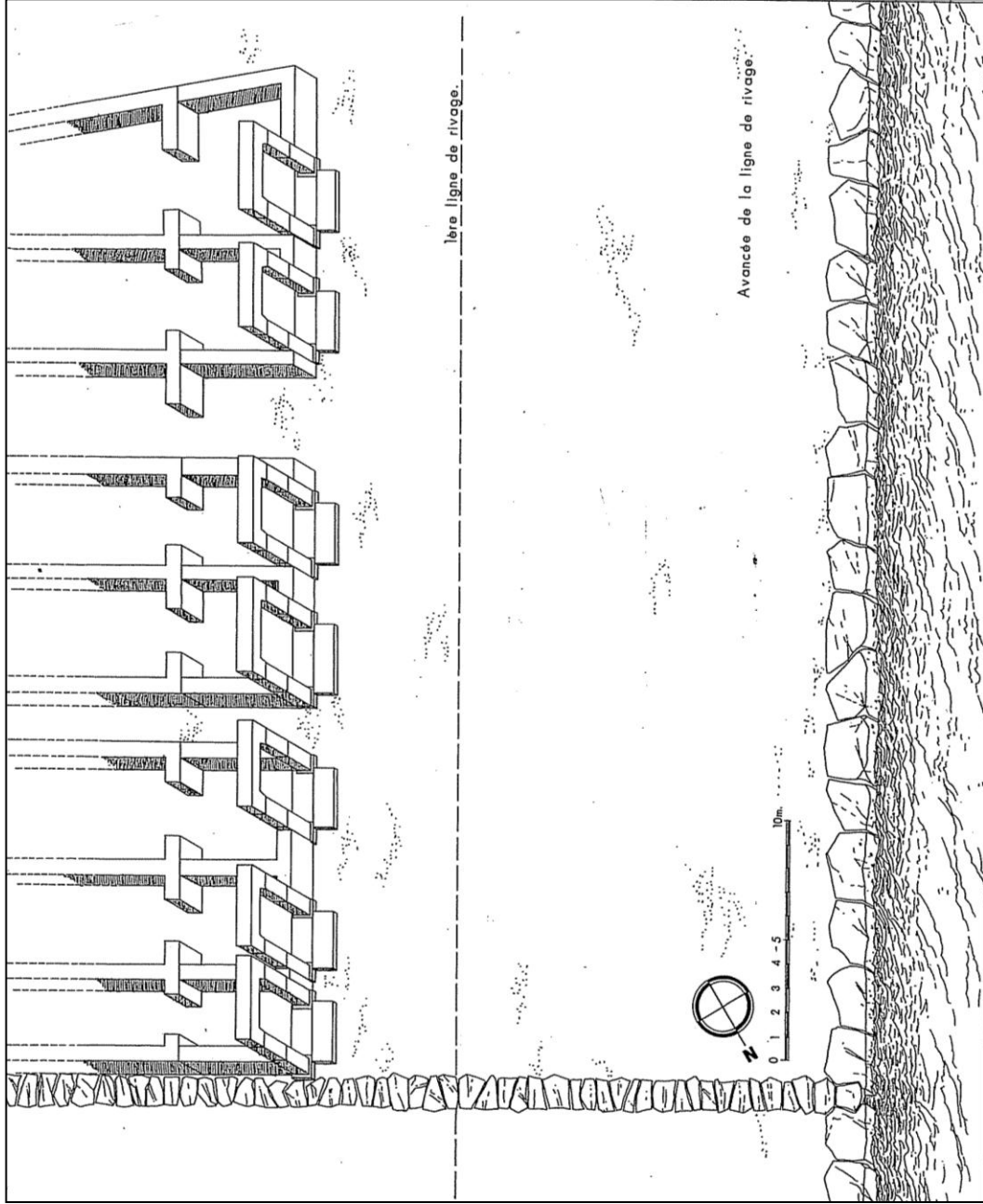


Figure 7: Reconstruction of the facade of the Magasin de la Pointe des pilastres (Duchêne and Fraisse 2001, Document XXVIII B).

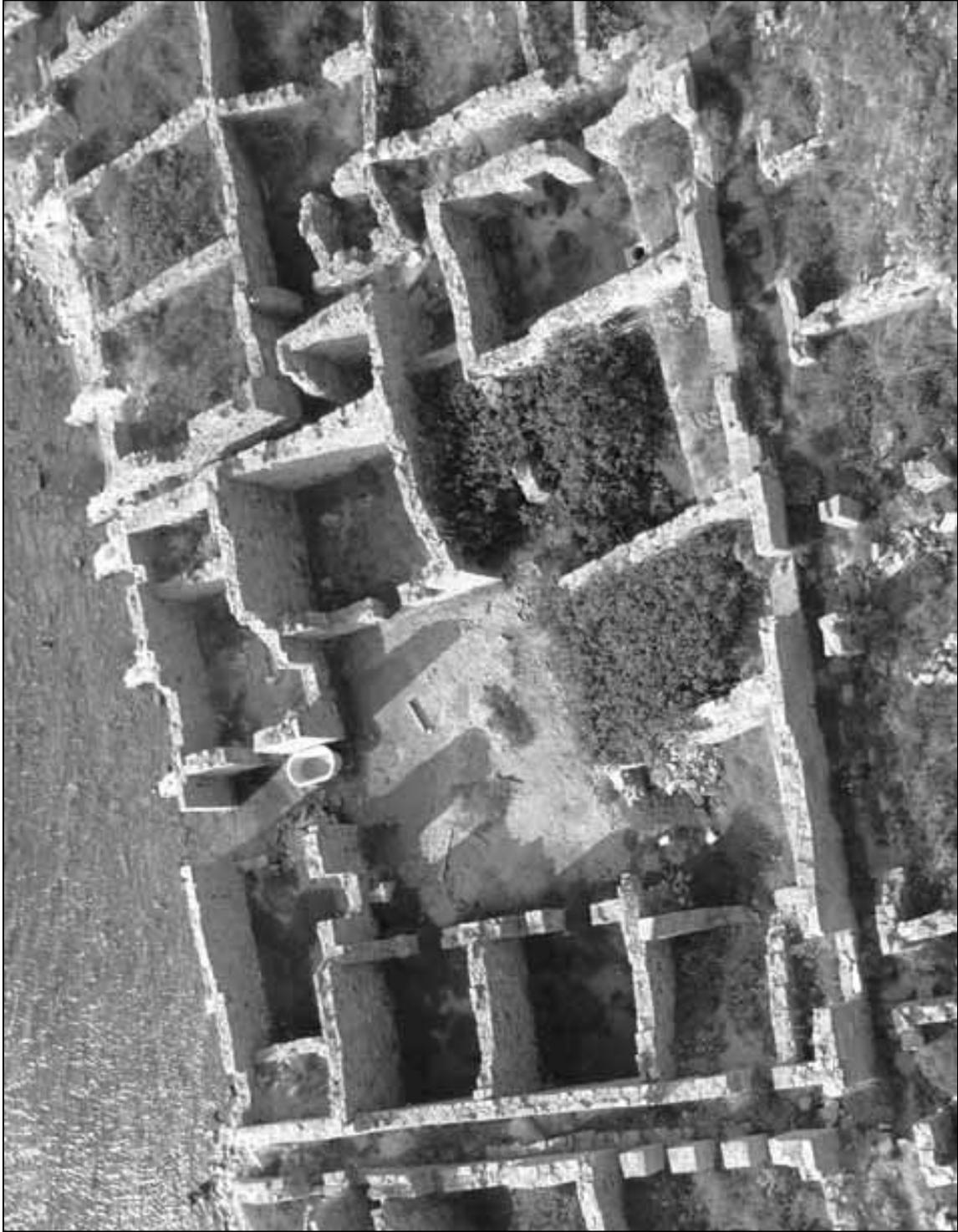


Figure 9: Aerial view of Magasin δ (Karvonis 2008, 202).

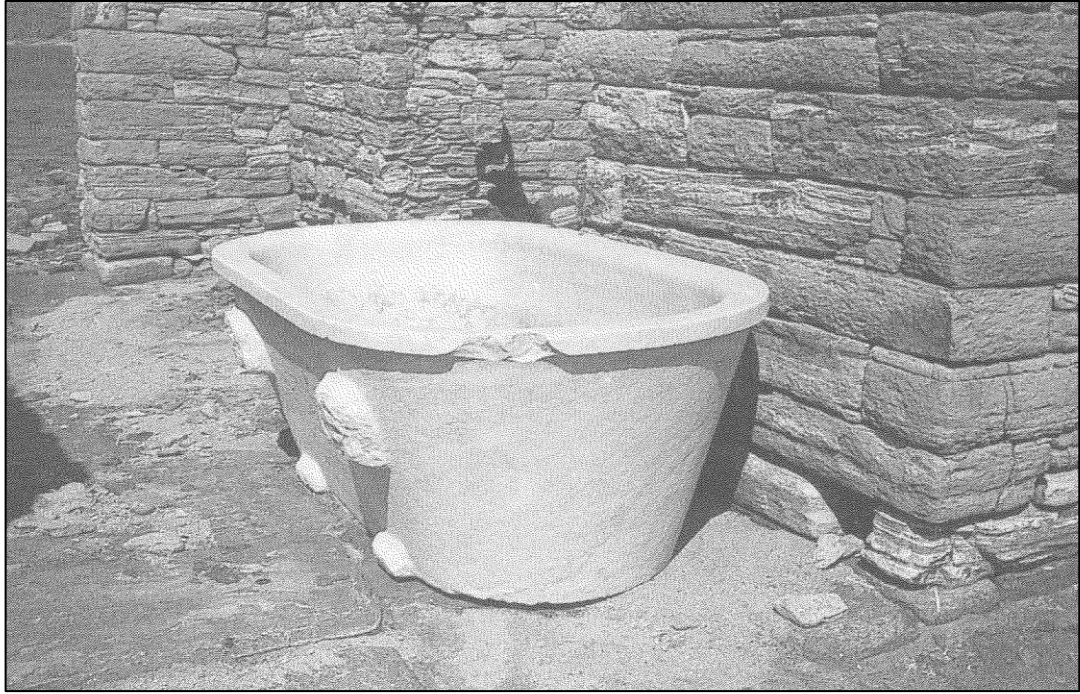


Figure 10: Marble basin in vestibule of Magasin δ (Duchêne and Fraisse 2001, Plate XLVII.2).

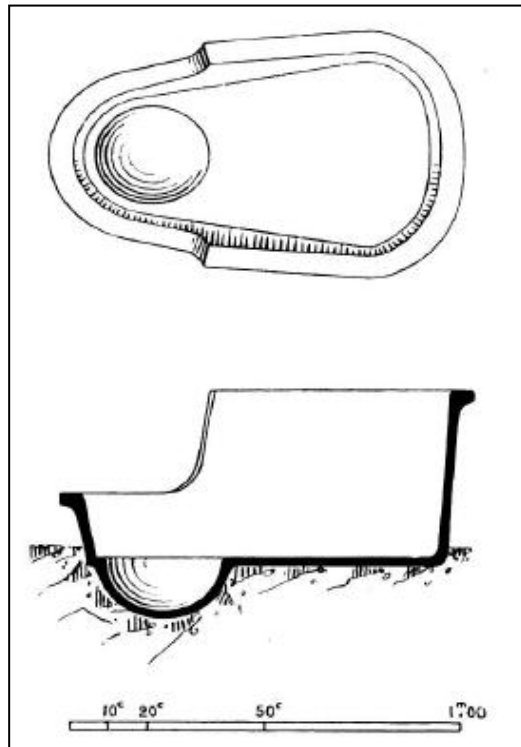


Figure 11: Bathtub from Room XVII of Group ϵ (Jardé 1906, 661).



Figure 12: Funeral banquet relief (Jardé 1906, 651).

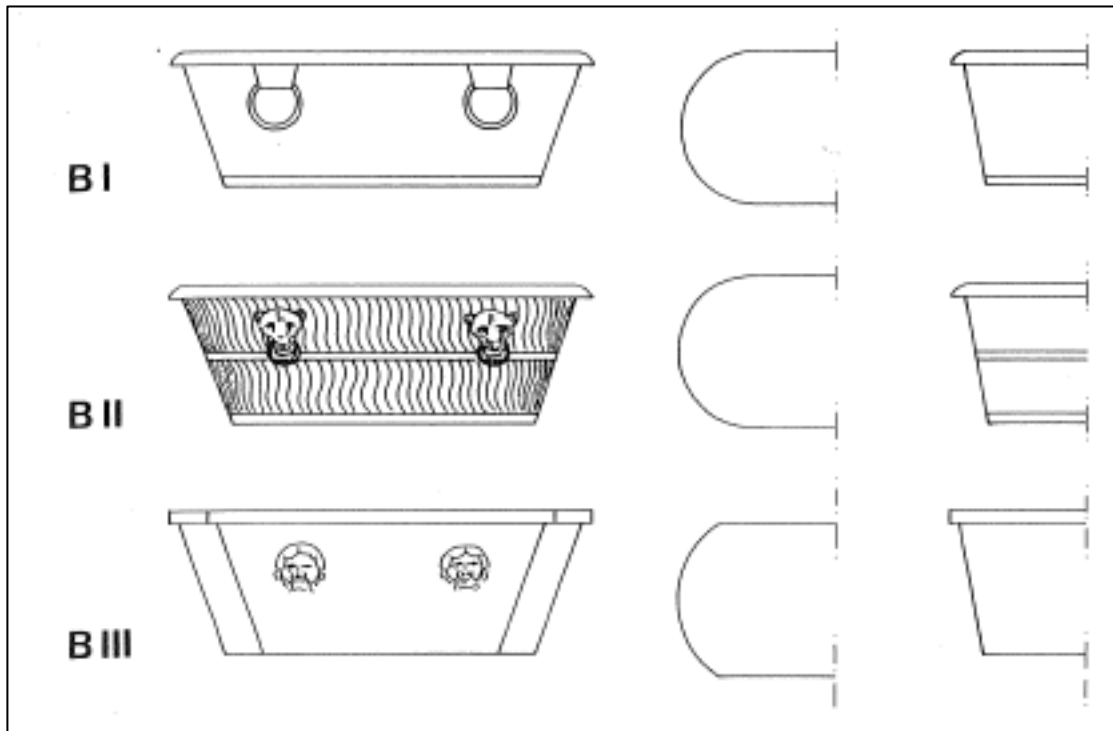


Figure 13: Type B basins (Ambrogi 1995, 21).

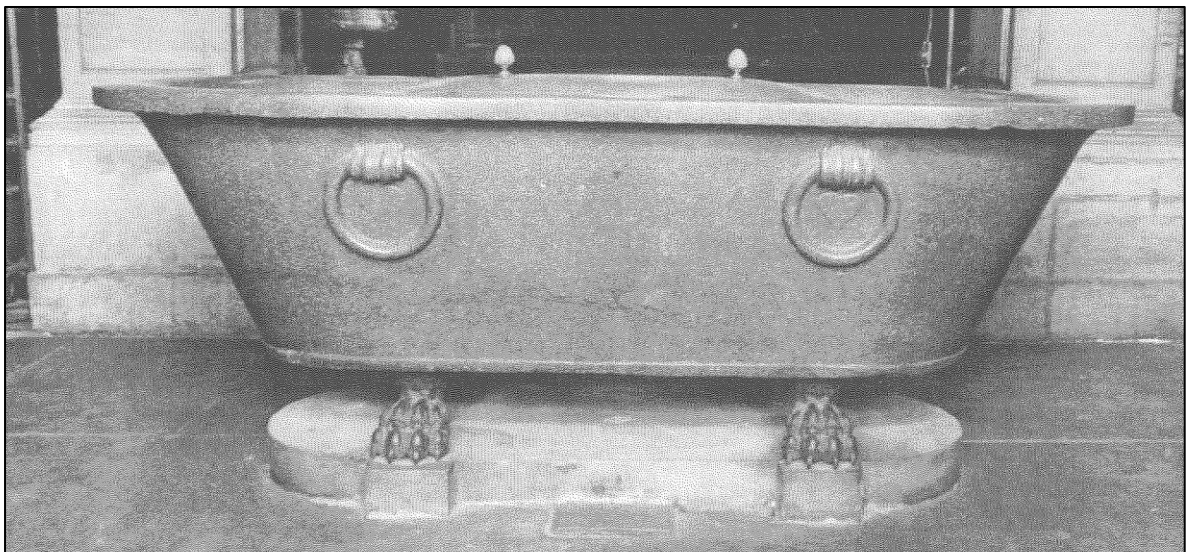


Figure 14: Porphyry basin with ring lugs (Ambrogi1995, 223).

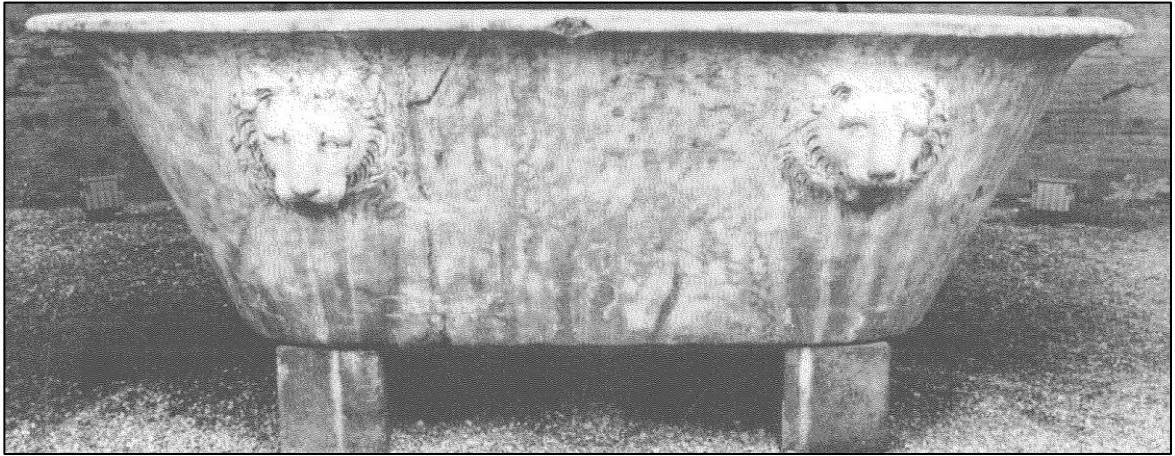


Figure 15: Marble basin with lions' heads lugs (Ambrogi 1995, 249).

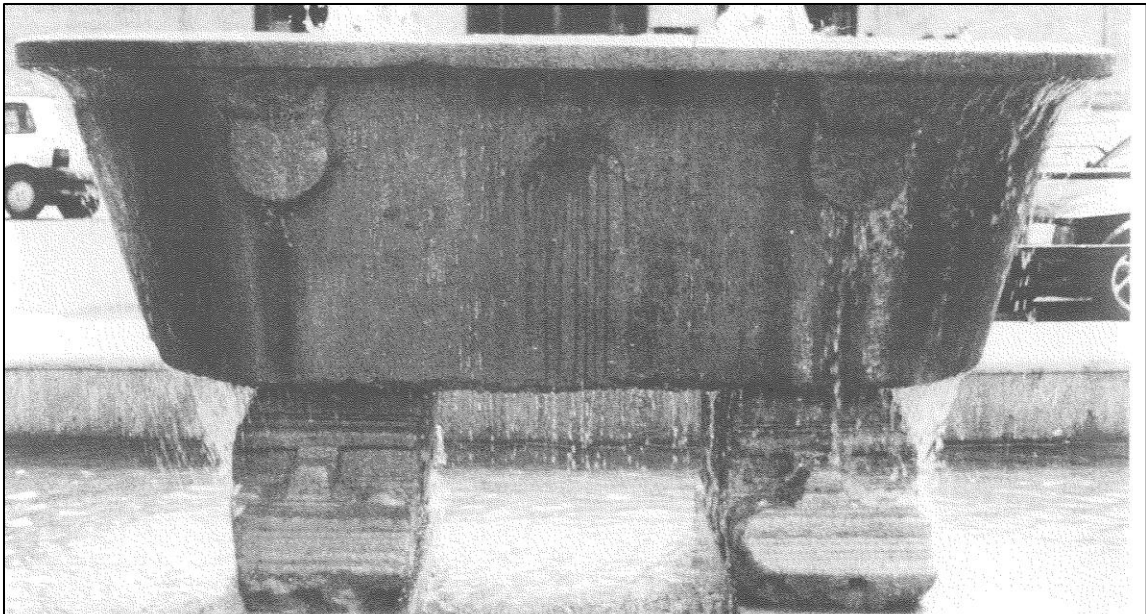


Figure 16: Basin of unidentified material with unfinished ring lugs (Ambrogi 1995, 248).

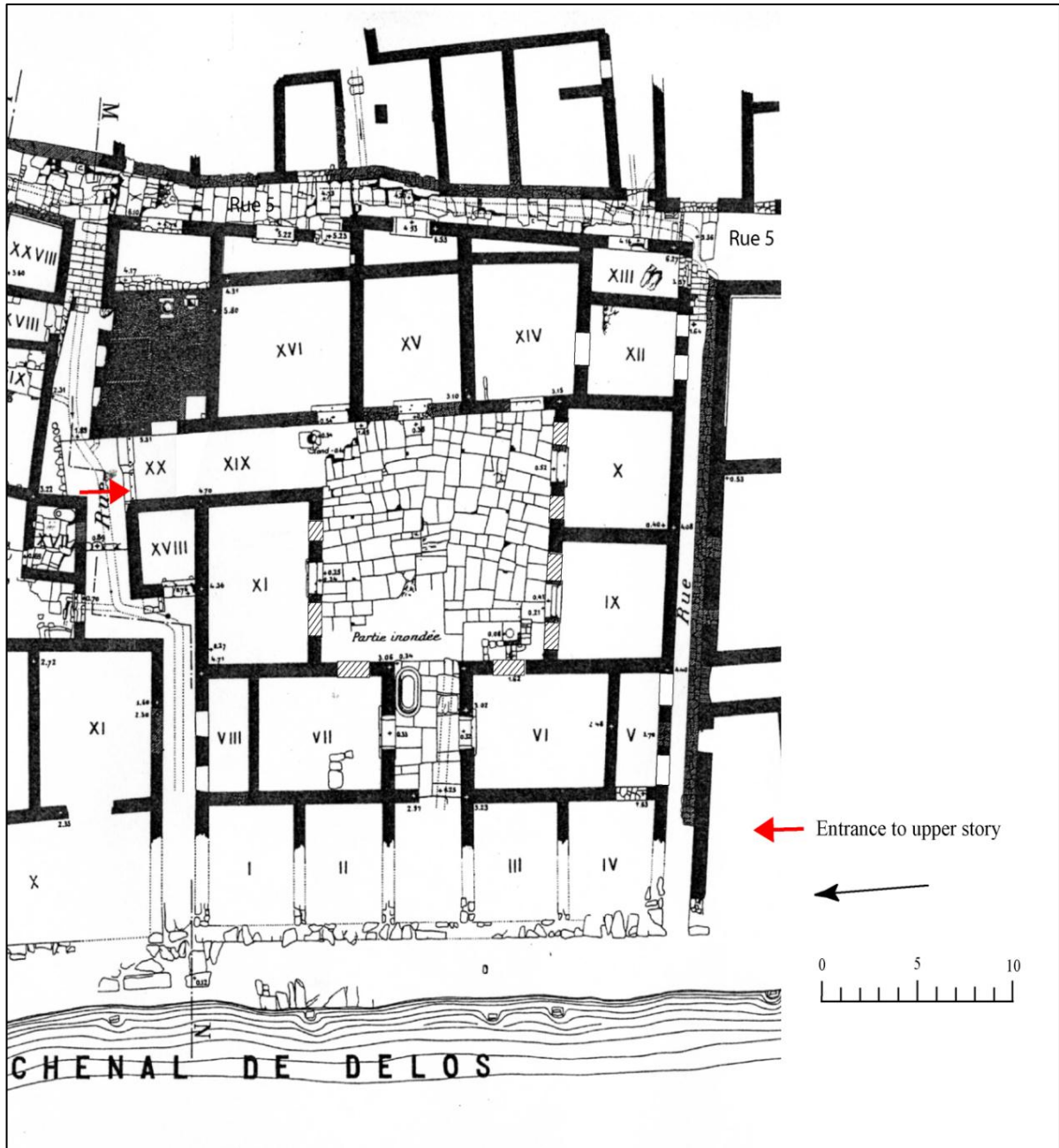


Figure 17: First phase of Magasin δ (Trümper).

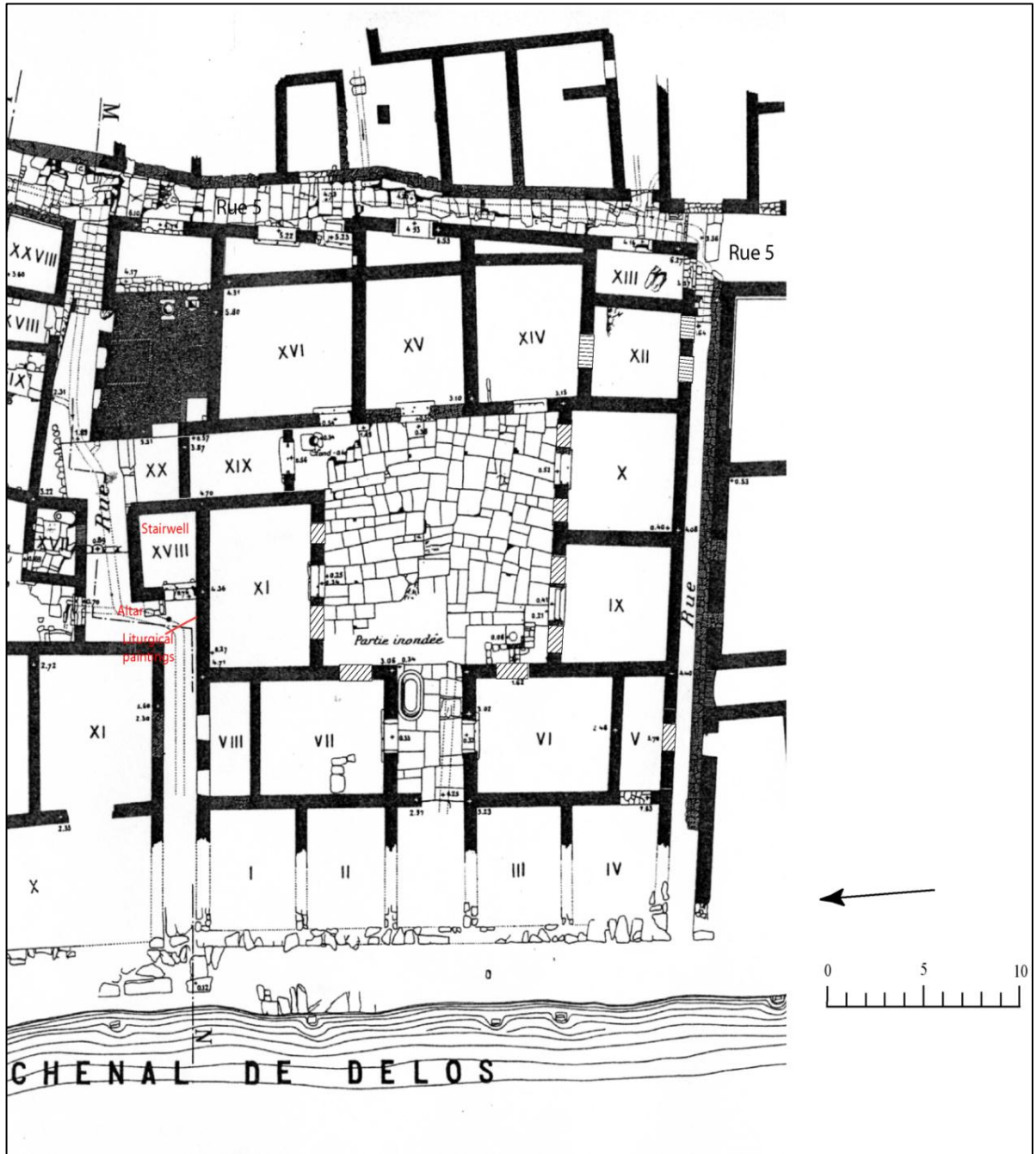


Figure 18: Second phase of Magasin δ (Trümper).

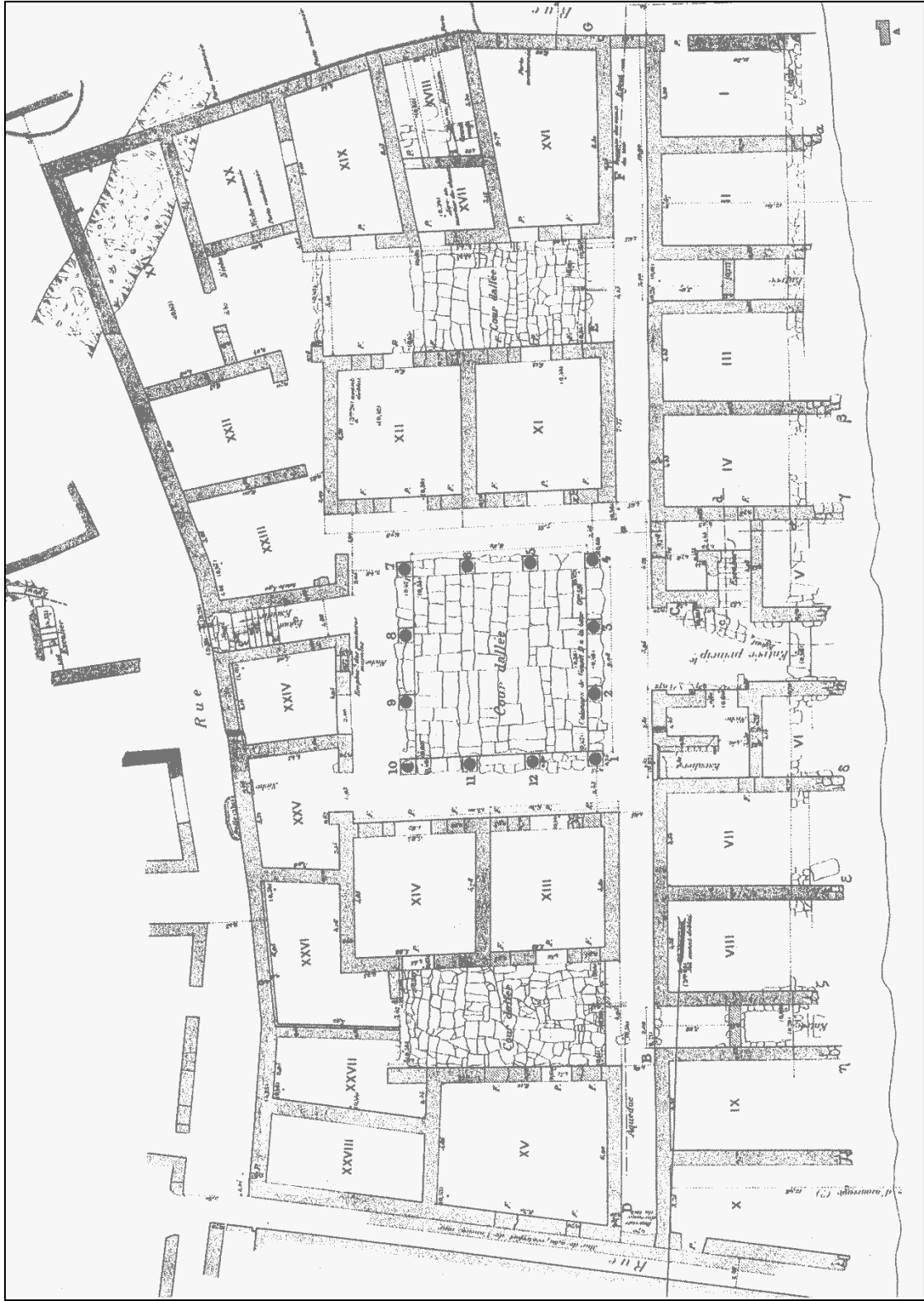


Figure 19: Plan of the Magasin des Colonnes (Jardé 1905, Plate VIII [detail]).

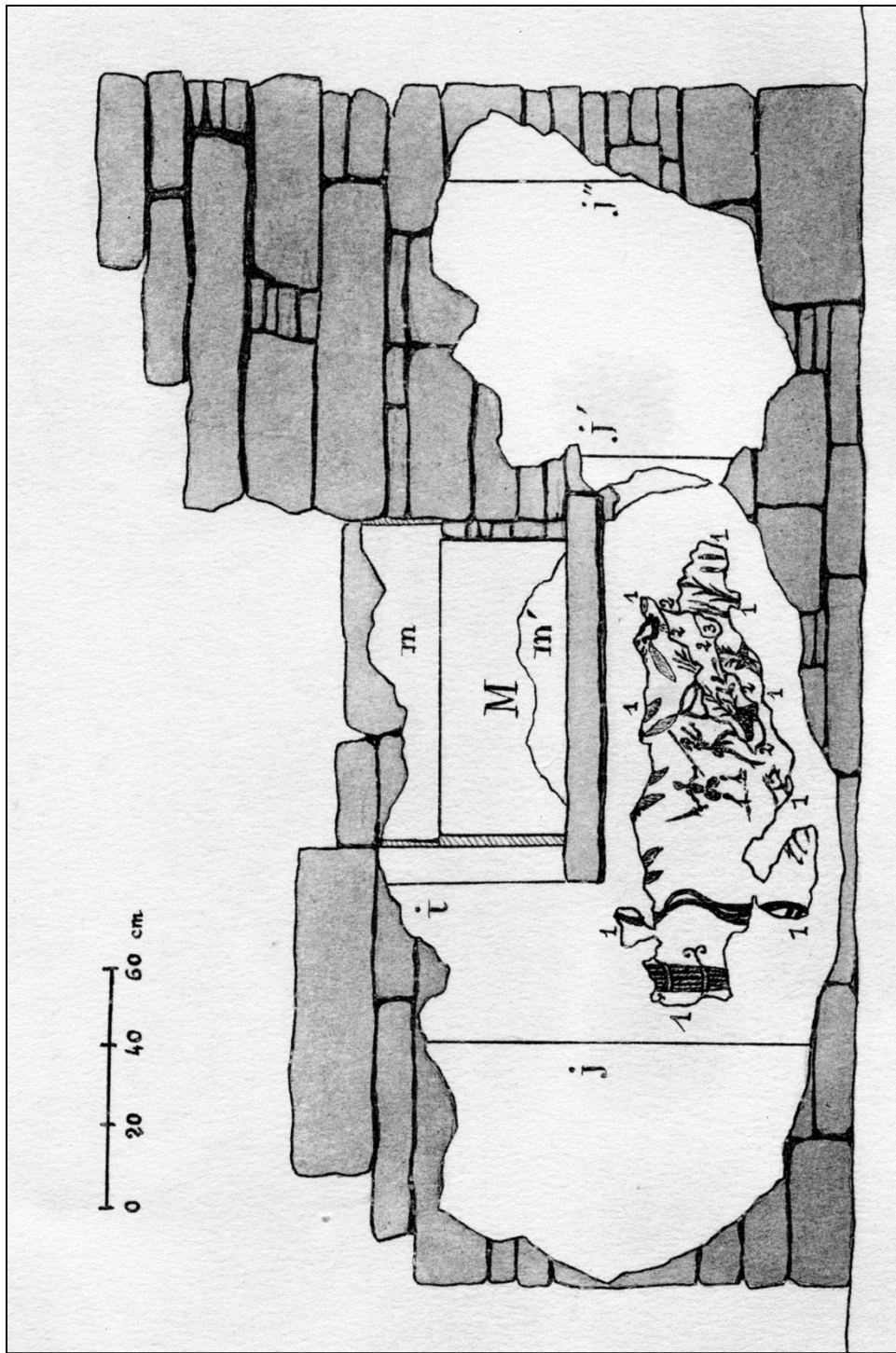


Figure 20: Niche and wall painting in central courtyard of the Magasin des Colonnes (Bulard 1926a, Plate I.3).



Figure 21: Wall painting with hunting or gladiatorial scene (Jardé 1905, 25).

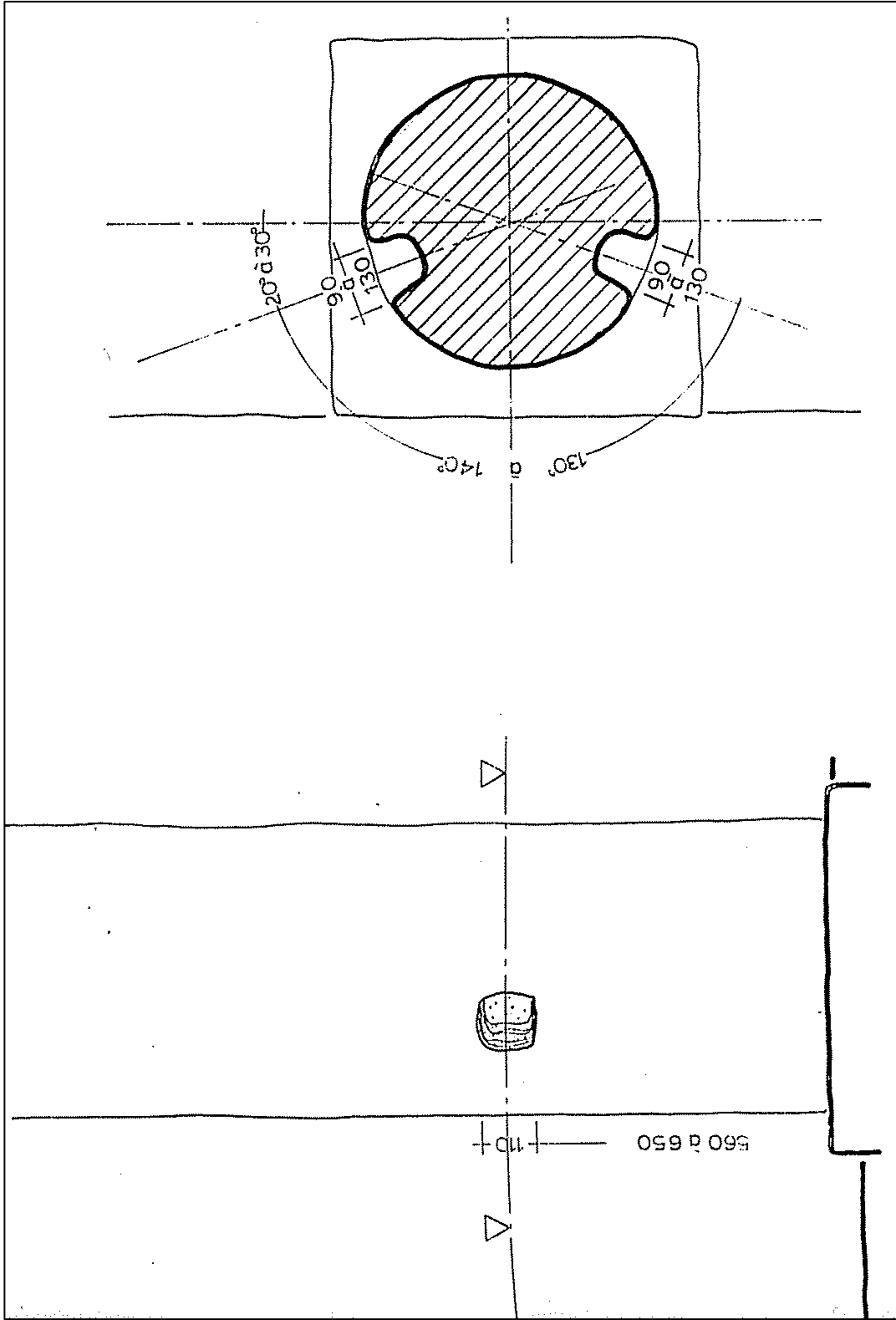


Figure 22: Cuttings in columns of the peristyle of the Magasin des Colonnes (Bruneau 1978, 127).

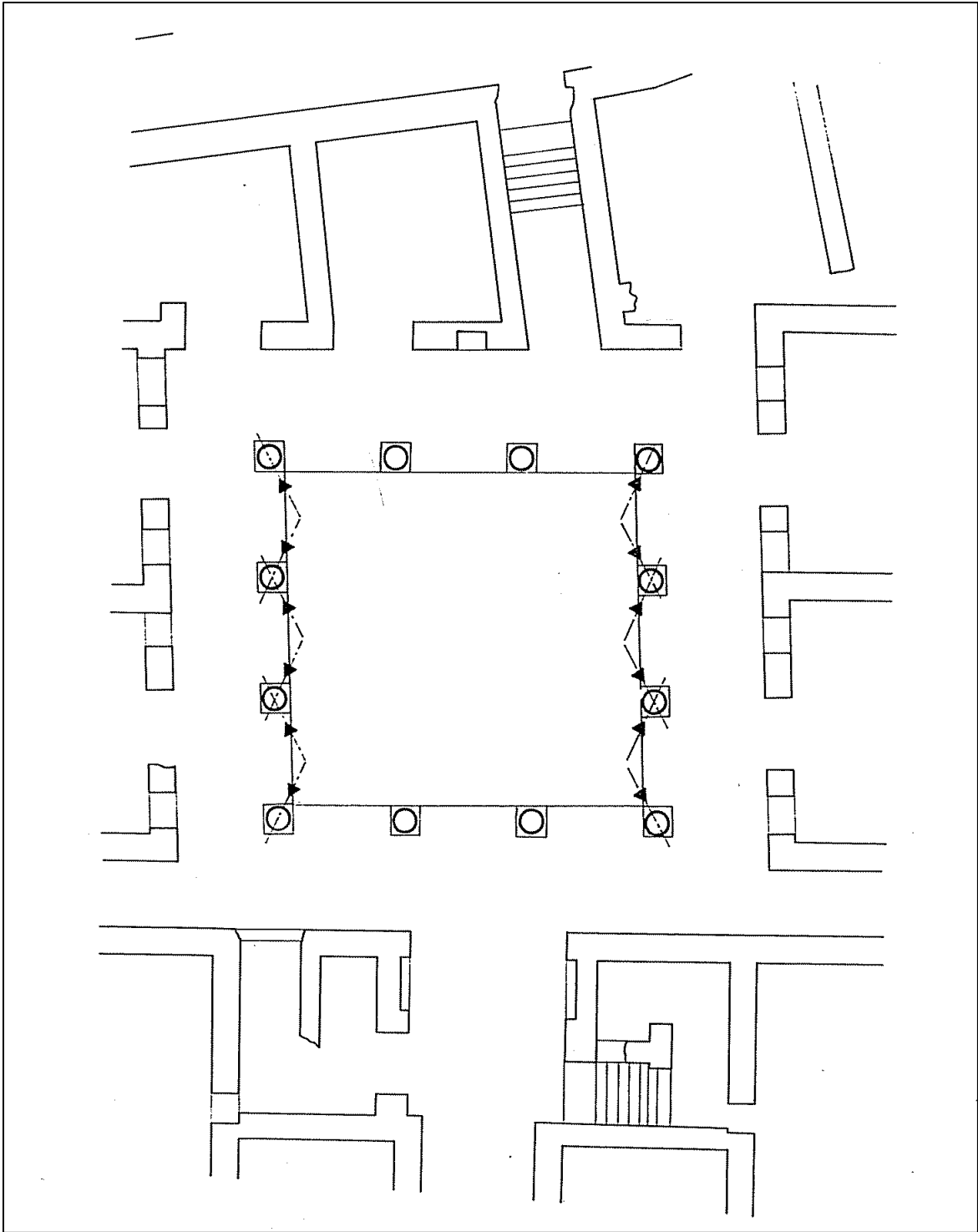


Figure 23: Angles of cuttings in the columns of the peristyle of the Magasin des Colonnes (Bruneau 1978, 128).

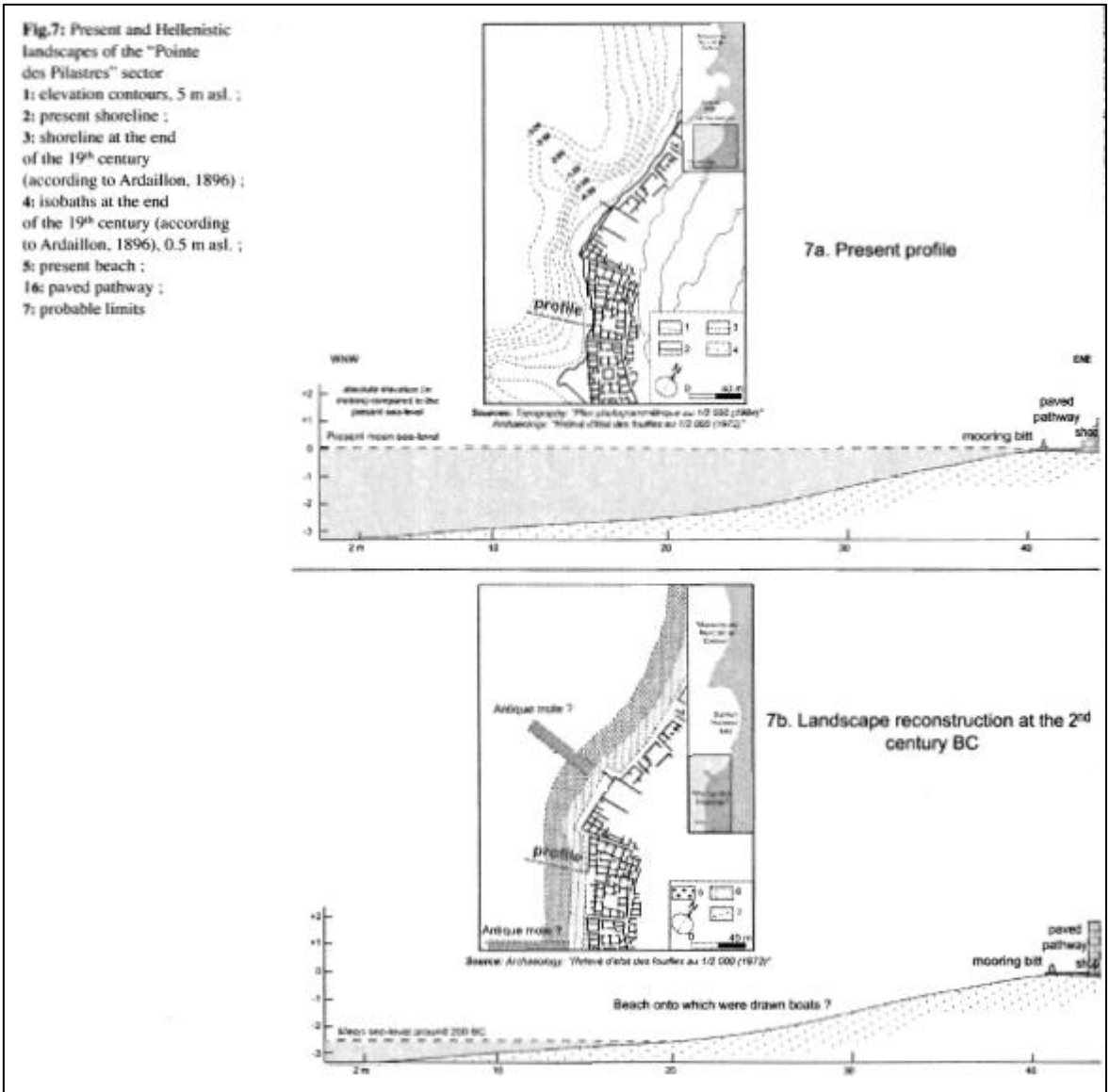


Figure 24: Modern and ancient profiles of the coastline to the west of the magazines (Desruelles et al. 2007, 238).

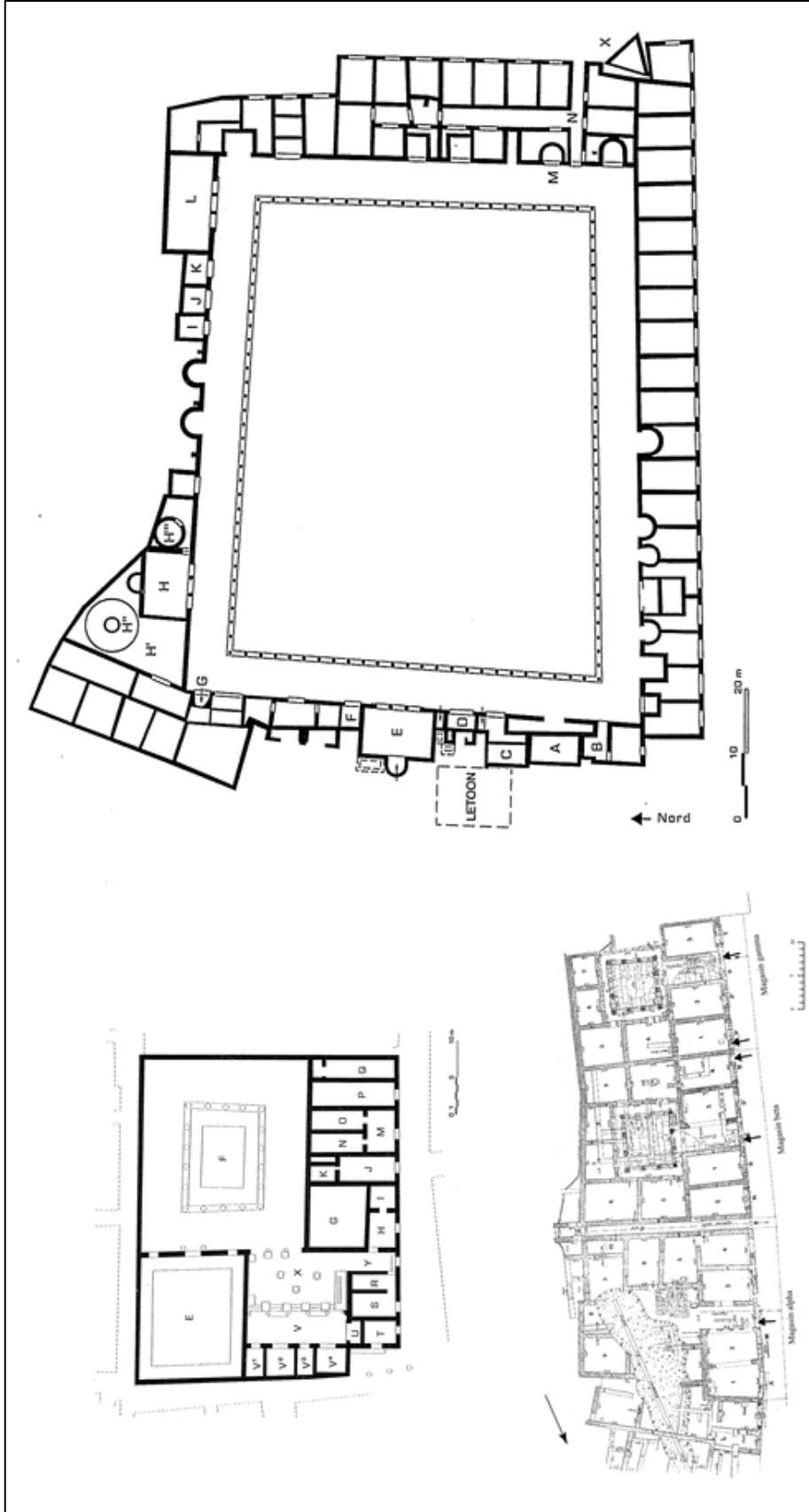


Figure 25: Clubhouse of the Poseidionastes, Magasins α - γ , and the Agora of the Italians, to scale.

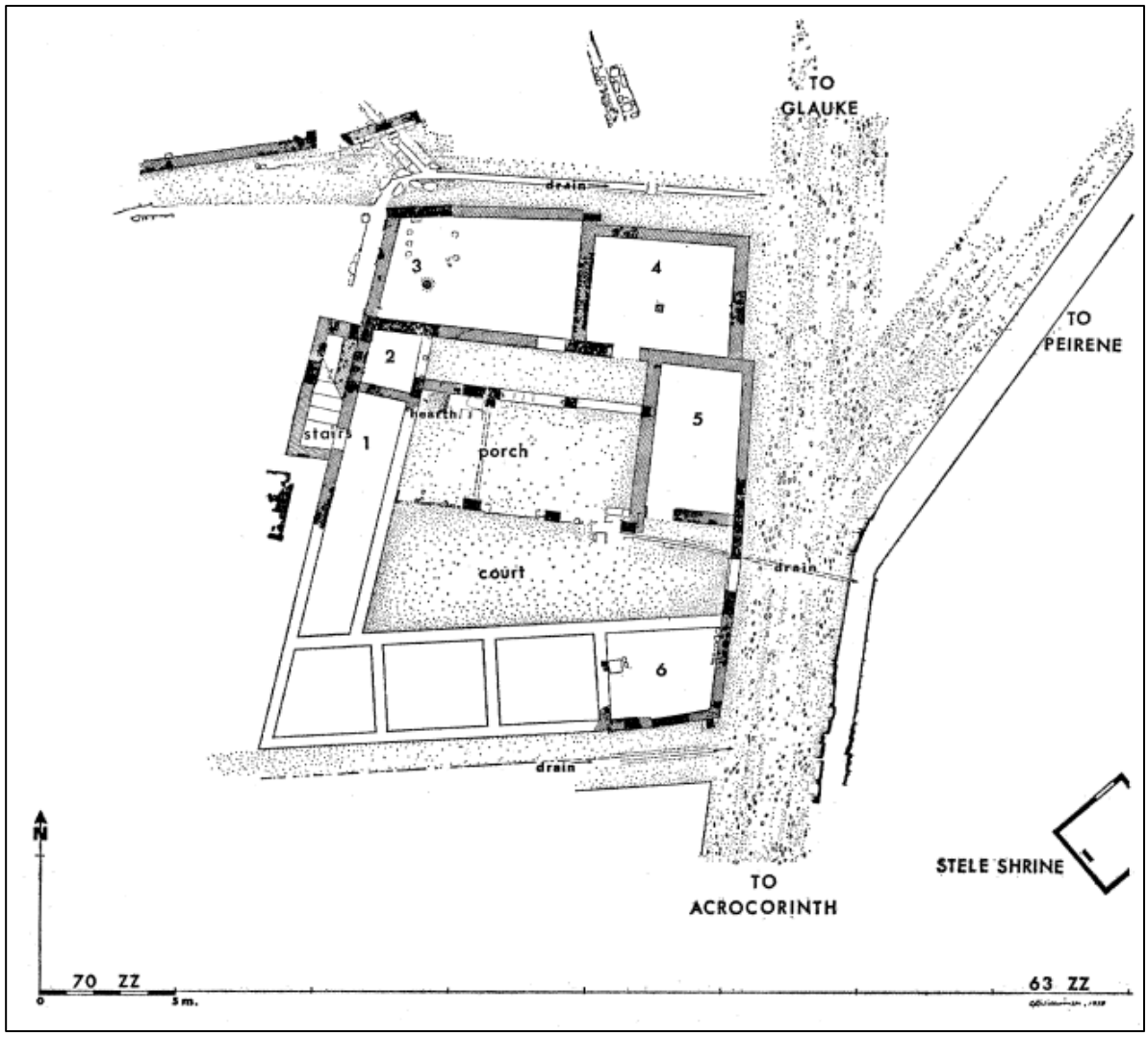


Figure 26: Punic Amphora Building in its second phase (Williams 1980, 109).

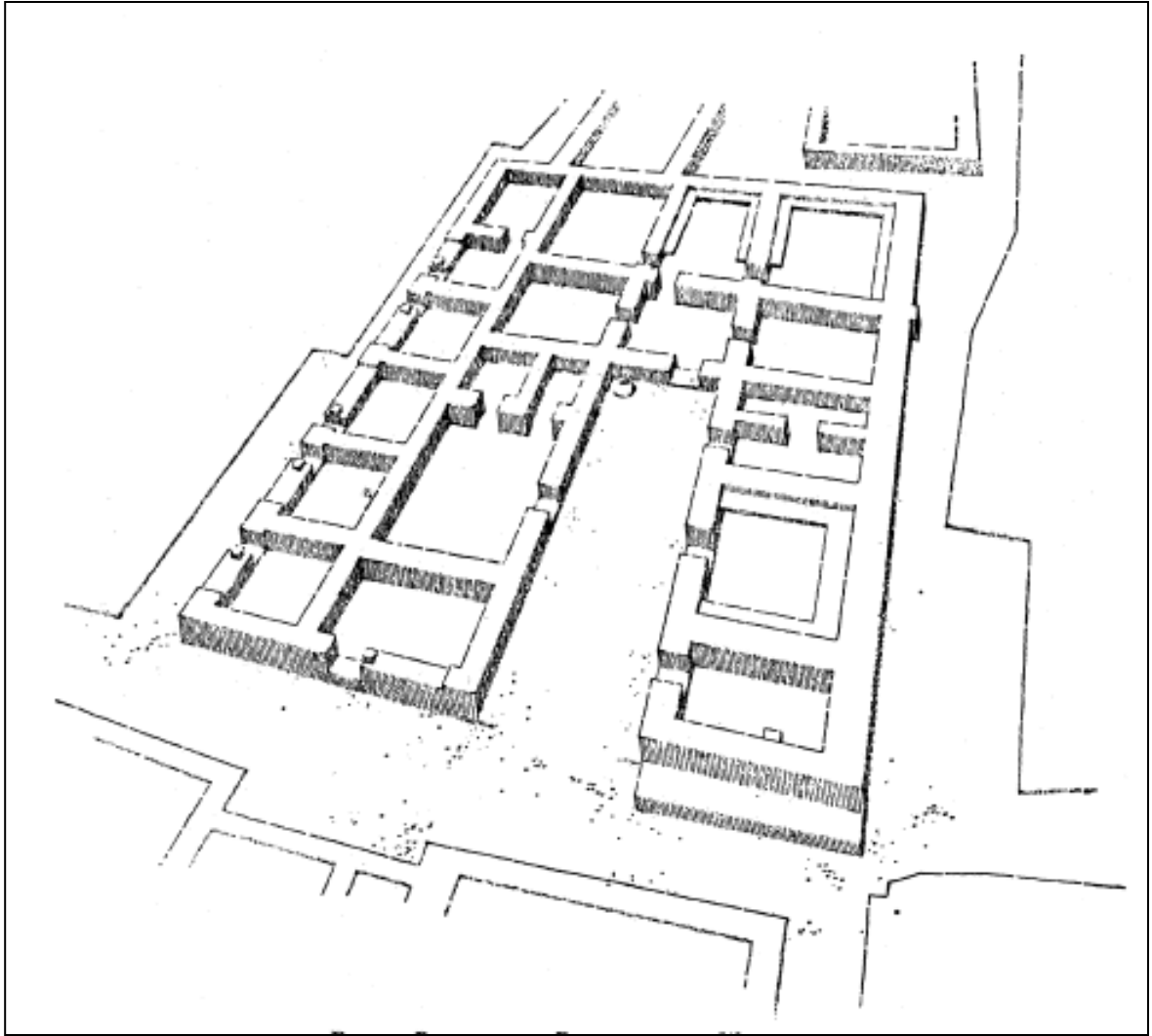


Figure 27: Reconstructed plan of a “typical” warehouse at al Mina (Woolley 1938, 15).

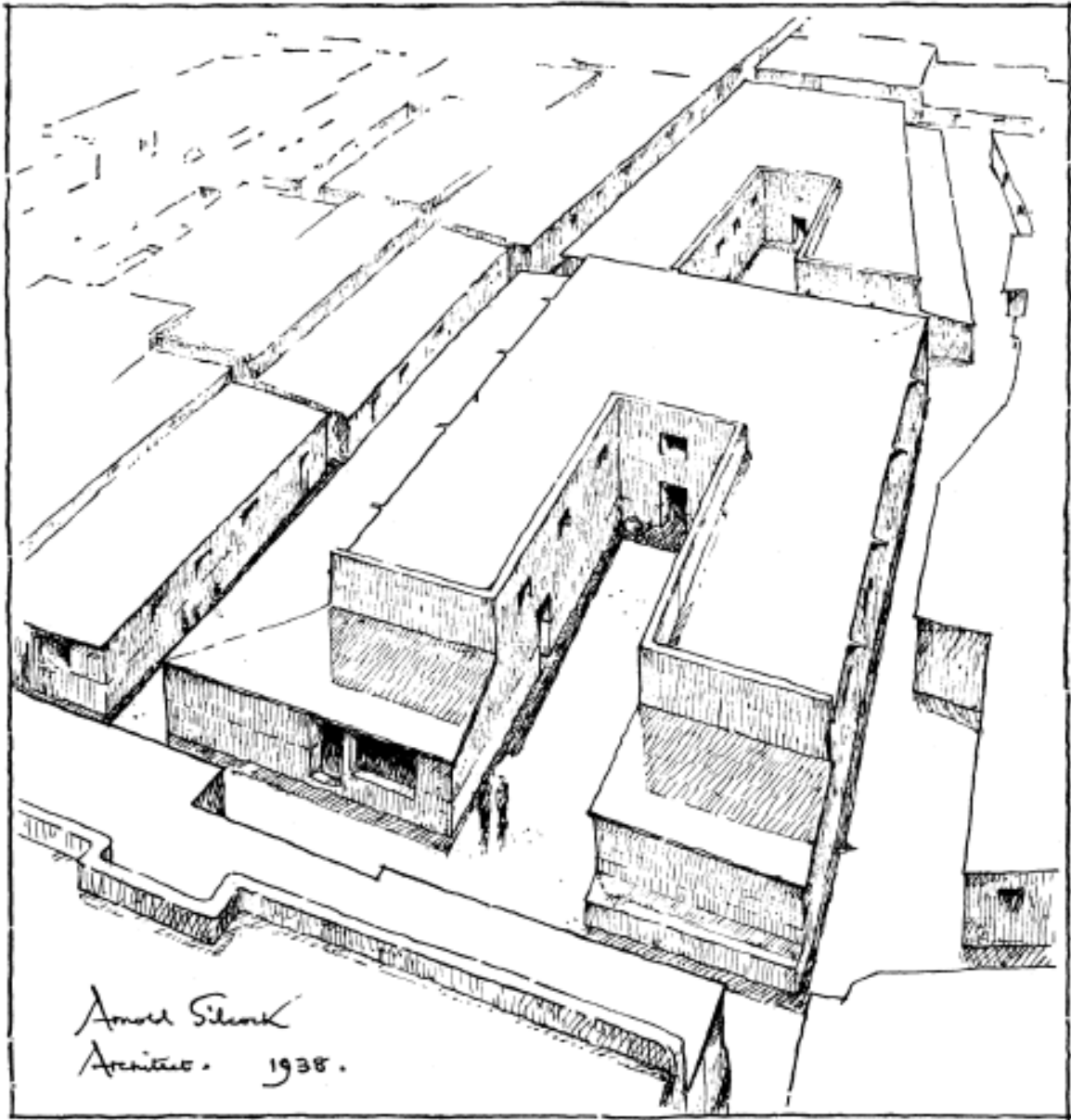


Figure 28: Reconstruction of a “typical” warehouse at al Mina (Woolley 1938, 14).

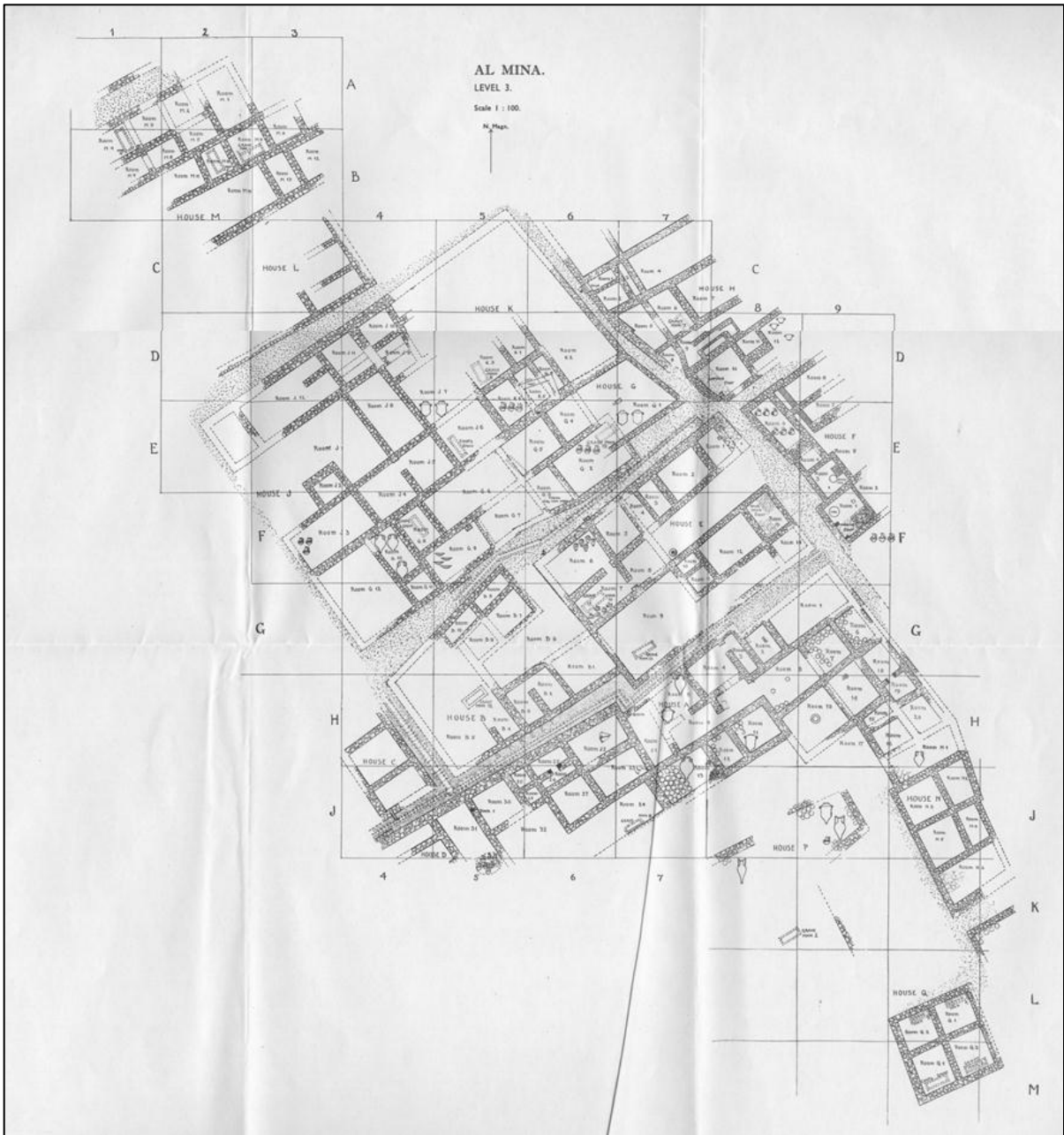


Figure 29: Stone plan of Level III at al Mina (Woolley 1938, Level III plan).

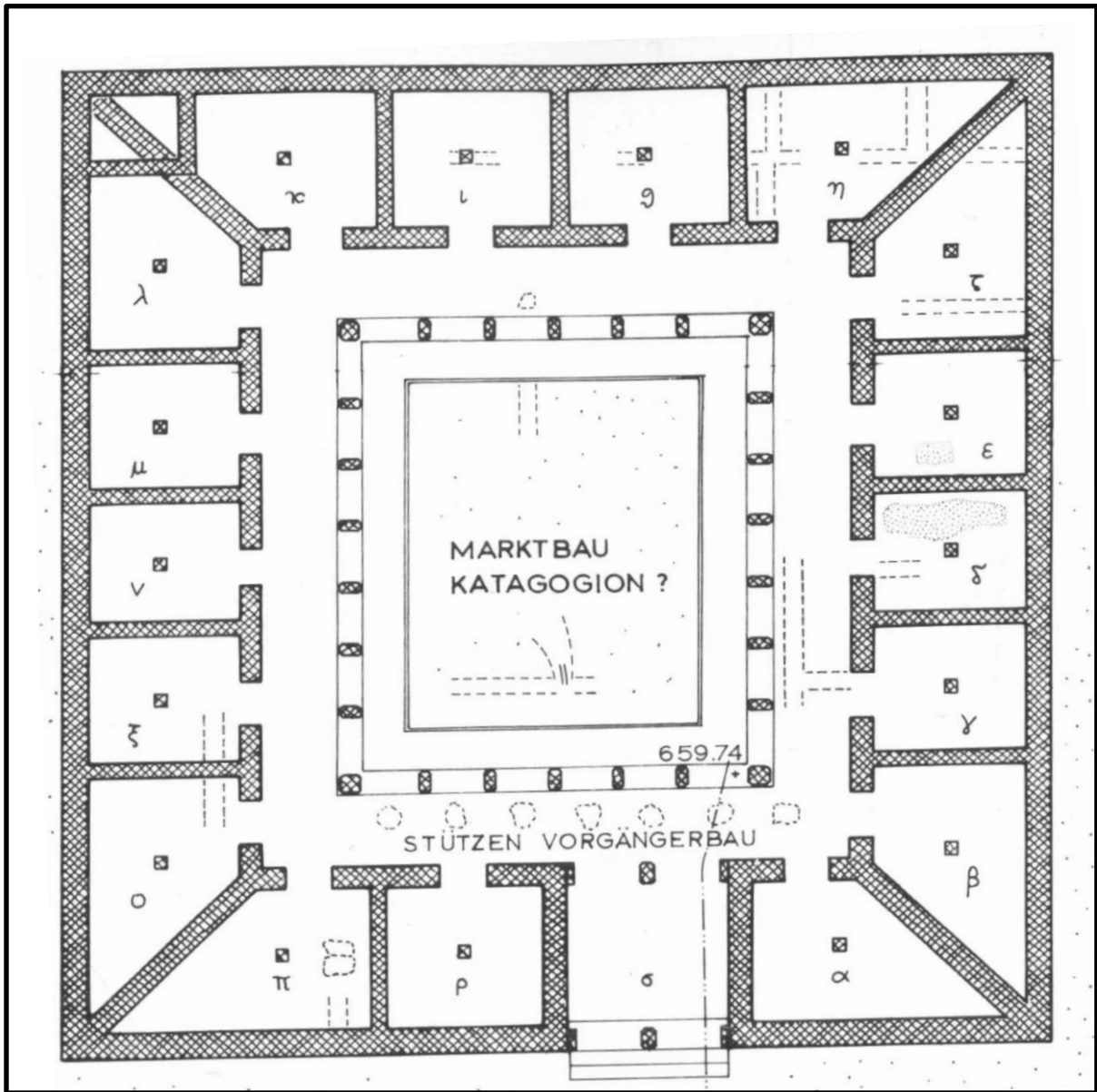


Figure 30: possible commercial building ('Marktbaue') from Kassope (Hoepfner and Schwandner 1986, fig. 68).

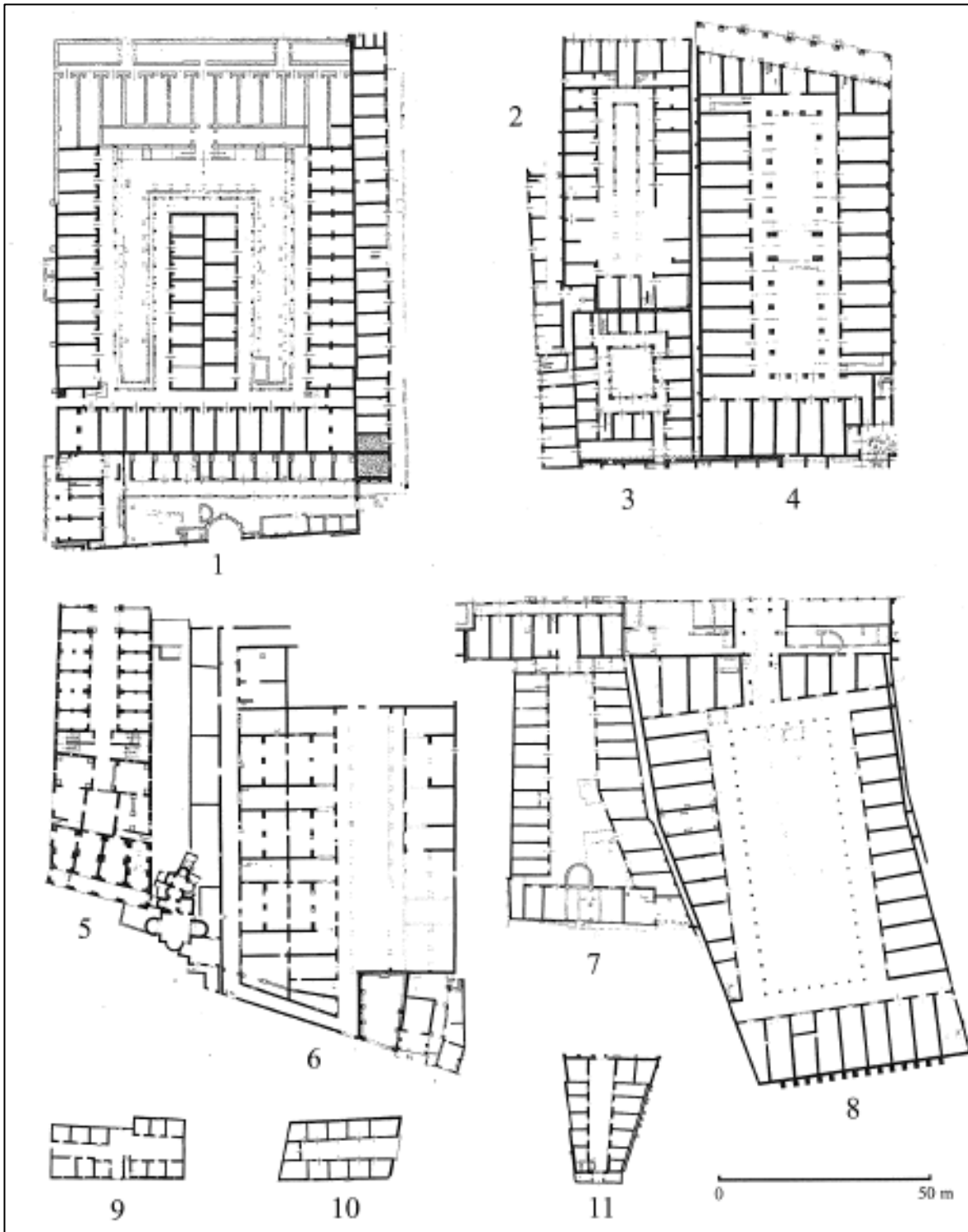


Figure 31: Plans of Ostian *horrea* (Heinzelmann 2002, 115).

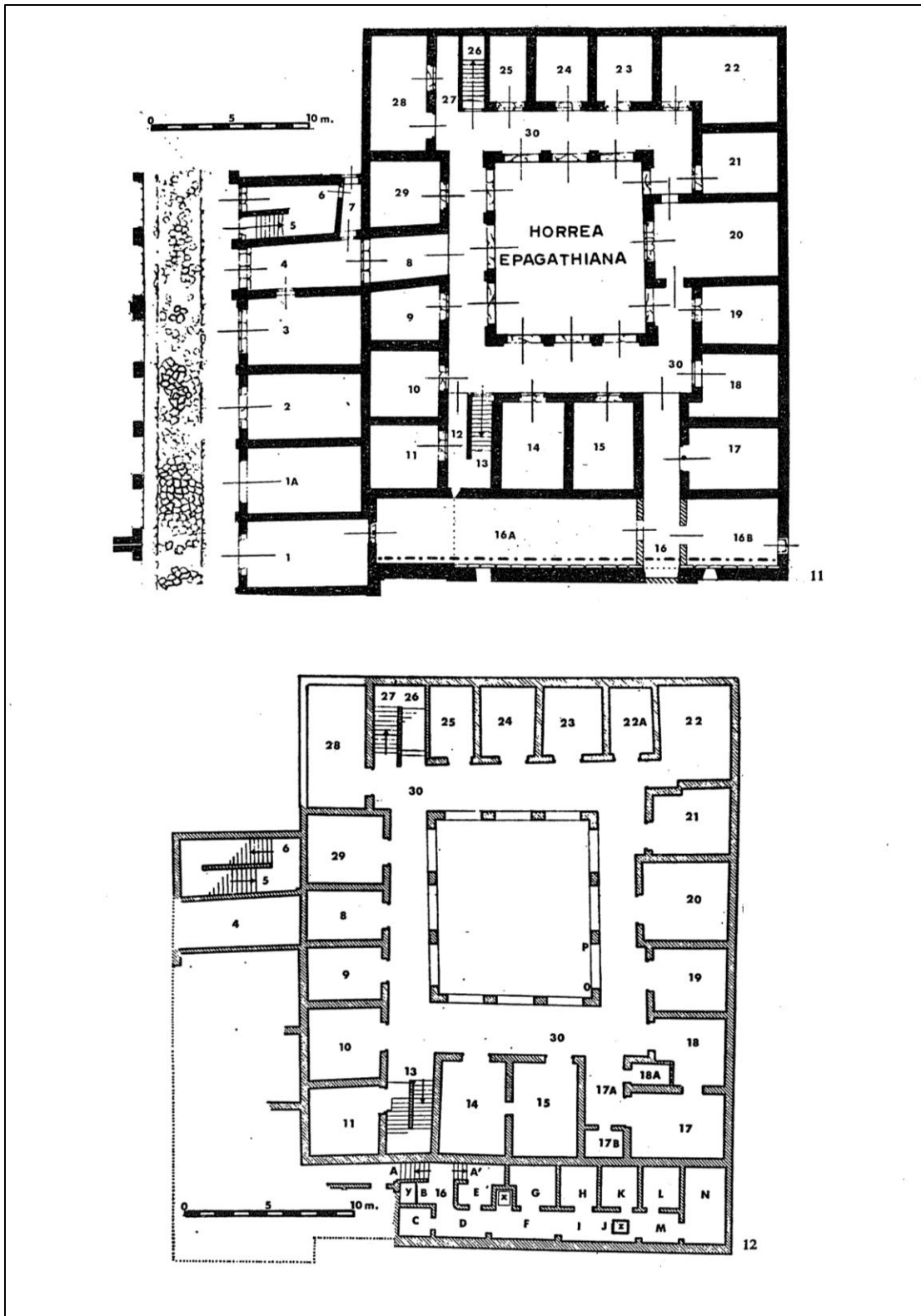


Figure 32: Plan of the Horrea Epagathiana (Packer 1971, 98).



Figure 33: Aediculae on the eastern side of the main court of the Horrea Epagathiana (Photograph: Sopr. Arch. di Ostia, A 2456).

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