

1. Introduction

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The theatre of Kalydon has been known as an archaeological monument since 1963, when constructions for the new highway between Antirrhion and Ioannina exposed a series of steps on the south side of the hill of the Sanctuary of Artemis Laphria, situated south of the city of ancient Kalydon, some 350 metres outside its city walls (Fig. 1.1).¹ Our theatre, then, belongs to a large group of theatres that disappeared completely and were forgotten about after antiquity. Some soundings were made by Euthymios Mastrokostas, the archaeologist then responsible for Aitolokarnania, and it was decided to construct the road some 200 metres further south, the location of the old highway today, to save the monument. A brief report was published² in which the theatre was referred to as a bouleterion.³ A corner of seat-rows was left exposed and the monument was largely forgotten by the scholarly community until 2001, when the Greek-Danish excavations at Kaly-

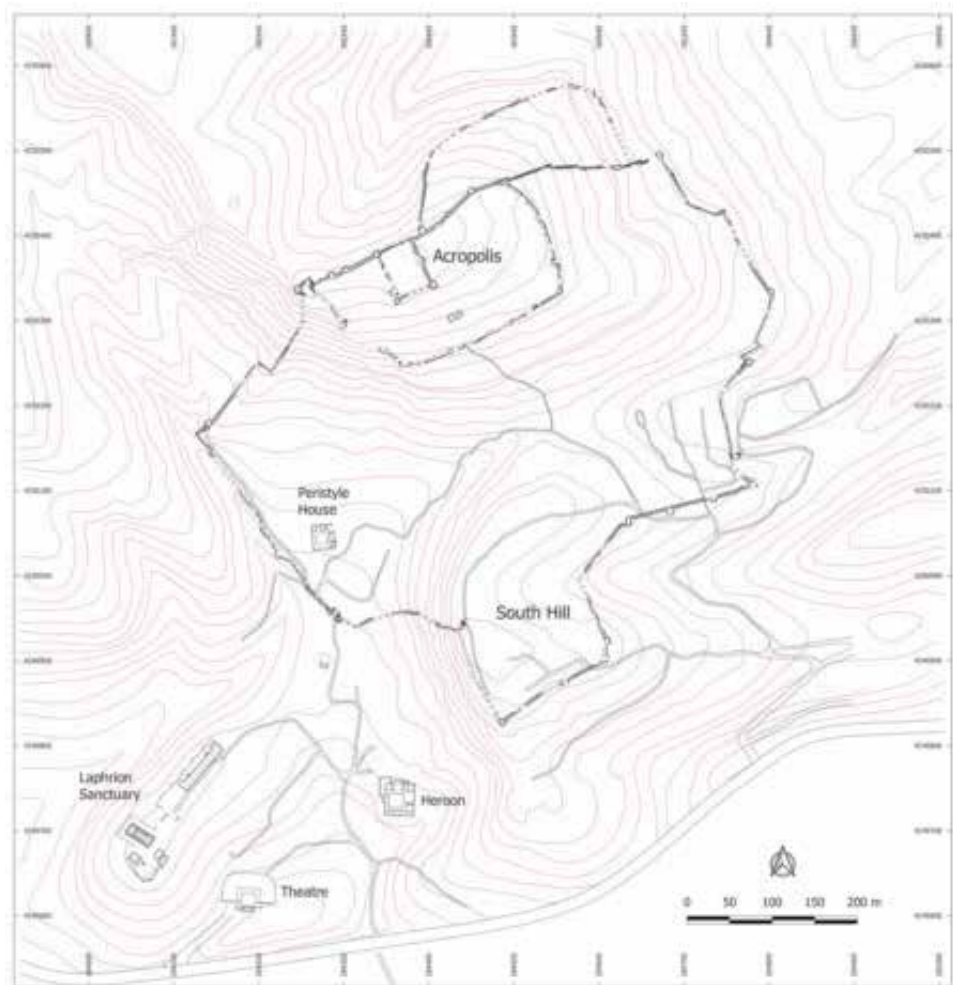
don were re-initiated.⁴ Soon after, during the course of the 2001 campaign, remnants of the west part of the proskenion stylobate and the west ramp were found and the building was identified as a theatre.

Realizing, however, that the theatre was an unusual specimen of an otherwise well-known type of building – the ancient Greek theatre mostly finds its expression within a well-established set of architectural norms – we decided to carry out a complete excavation of the structure. This was achieved in 2014 and the present publication presents the relevant data, observations and interpretations generated by that work.⁵ The seven campaigns that have taken place since 2001 each lasted for 5 weeks; in total 77 trenches, equivalent to some 1,875 square metres, were excavated, most of which were cleared down either to principal features of the theatre or to bedrock. Most were regular so-called “A” trenches, usually 5 x 5 m in size, whereas six were special trenches of varying shapes and sizes, the so-called “Z” trenches, cut to

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- 1 Dietz and Stavropoulou-Gatsi 2011, 9-10, fig. 2. See also *ibid.* figs 14 and 37.
 - 2 E.I. Mastrokostas, *Arch. Delt.* 22 (1967) B.2, 320 (s.v. 11. Καλυδών), pl. 229a.
 - 3 Interestingly, the architectural fragment which entered the Museum of Agrinio (**A25**) was registered as deriving from the *theatre* of Kalydon, not the bouleterion. Mastrokostas may simply have changed his mind in the time between the delivery of finds to Agrinio and signing off the manuscript for the article in 1967 (the actual year of publication of the 1967 *Deltion* – see note above – was 1969).

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- 4 For the history of the Kalydon excavations, see Dietz & Stavropoulou-Gatsi 2011, 9-12, and for preliminary reports of the theatre excavations from 2001 to 2003, Dietz et al. 2007, 44-7.
 - 5 Preliminary report for the seasons 2011-2: Vikatou, Frederiksen & Handberg 2014. Cf. brief reports written by R. Frederiksen & O. Vikatou accessible at *Archaeology in Greece Online* 2011 campaign (R. Pitt) and 2012 campaign (C. Morgan) [accessed 28 May 2020]. Preliminary report on the years 2011-3: Vikatou & Frederiksen 2018.

Fig. 1.1 General plan of ancient Kalydon with fortifications and major excavated and studied structures including the theatre. S. Handberg and S. MÜth (fortifications).



enable a targeted investigation of certain features of the building (Fig. 1.2). The workforce comprised employees of the Ephorate of Messolonghi and the Danish Institute, local workmen and students from five European universities. In 2013-4 restricted parts of the excavation also served as an archaeological field school for Danish university students.⁶

Volume I presents the architectural remains and their interpretation in 11 chapters, including one on the significance of the building in the history of ancient dramatic architecture and another on its acoustic properties. Beyond presenting the essential

features of the theatre itself, the publication also includes finds from the excavation belonging to the period after the theatre had ceased working as such. These are also presented in Volume I.

The core of Volume II is a number of catalogues, both of objects related to the theatre as well as of objects which apparently never had a function in the area of the theatre, but have been deposited from somewhere else in Kalydon, including close by from the hill above the theatre (Sanctuary of Artemis and Apollo), but apparently also from further away, such as the material deliberately brought to the theatre to be used as fill in the scene-building. A series of chapters in Volume II are context catalogues, presented here both in order to reduce the need for detailed

⁶ A full list of participants is provided in vol. II pp. 452-53.

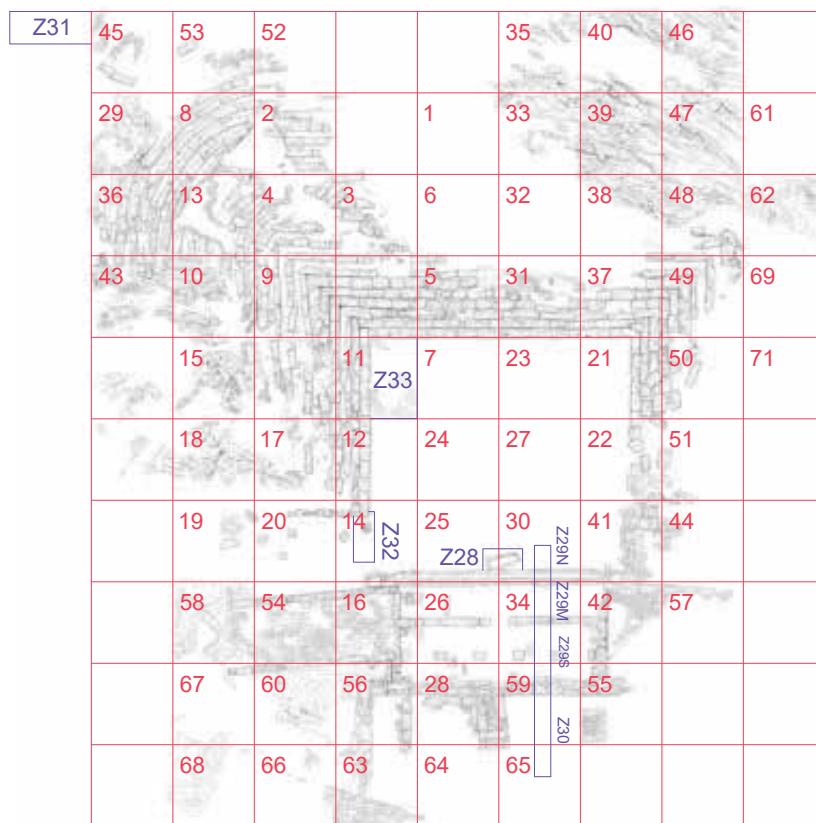


Fig. 1.2 Plan of theatre indicating location of A-trenches 1-71 and Z-trenches 28-33. N. Chatzidakis.

discussion of stratigraphy and various objects in the course of the analyses of the remains of the building itself in Volume I, but also in order better to radiate contextual meaning back on objects which under other circumstances we would only discuss for the information they convey about themselves.

The terminology for ancient Greek theatre architecture is a happy mix of ancient Greek and Latin terms, as well as of modern ones which have been accepted and are widely used by the scholarly community.⁷ We follow convention and discuss or ex-

plain terms only in cases where we acknowledge the risk of confusion. The terms for details of architectural elements as well as for the surroundings of the theatre at Kalydon have been kept as simple and self-explanatory as possible. For the description of walls and structures of the theatre itself we adopt a reader-friendly and pragmatic approach, which means that we term e.g. the back wall of the scene-building “skene south wall”, and refer to it with the acronymic designation SkSW, rather than using the neutral but non-informative “AS17”, a name given to this feature in the excavation as soon as a need for a name arose, but before the function of it was certain. Such designations are used in all the cases where there is no reasonable doubt as to the function

⁷ For recent studies on theatre terminology, see: Frederiksen 2002 for an analysis of the word θέατρον; Fraisse & Moretti 2007, 155-214 on the building account of the theatre at Delos, which is particularly rich in the ancient theatre vocabulary for architectural elements of the theatre (there is a good brief overview of contributions from inscriptions to nomenclature in Bieber 1962², 110-1 as well as an older bibliography,

ibid. 290 note 7); Moretti & Maudit 2015 for a good brief general overview of the most important terminology and the written sources for them. Cf. Isler 2017, I, 24-5.

Fig. 1.3 Theatre from above. North is up.



of the termed feature, and serves to aid the reader and facilitate as fast and firm an understanding of the basic facts as possible. For features and structures for which interpretation is not certain, however, the excavation structure or feature number is used. A full list of features and structures and their abbreviations is provided on pp. XV-XVI. All measurements are in the metric system and they are always external for structures and internal for spaces, unless otherwise stated.

Excavations and methodology

Investigations 1963

The first excavation happened when the theatre was accidentally discovered in 1963.⁸ What seems to have happened is that the bulldozer dug in vari-

ous places before the archaeologists were called to stop the work. The machines destroyed a fair section of the central-western part of the koilon before work was brought to a halt, leaving a long scar in the koilon approximately 10 m long and 3 m wide, visible from seat rows VII to XIX (cf. Pl. I.3; see Chap. 2.a, Pls I.1 and I.4 [light green shading] and Fig. 1.3). Traces of machines having disturbed the remaining parts of the ruin of the scene-building and disrupting the stratigraphy in places have also been identified during our excavation. A trench cut down to bedrock and stretching from the centre of the orchestra towards its north-eastern corner, found when excavation reached a certain depth in 2013 (Fig. 1.3, location of back-filled trench visible as a dark shadow diagonally across the orchestra), also attests to how far the bulldozers got before the work was stopped. This accidental encounter was, as far as we know, the first recognition of the monument as an archaeological edifice (cf. chap. 10).

4 8 See above p. 1.



Fig. 1.4 Search trench Z31 in NW-most corner of the koilon seen from the west. Discontinuation of regular stone blocks for seat rows is evident.

Excavations 2001-3 & 2011-4

From 2001 onwards, controlled archaeological excavation of the koilon was mainly a question of clearing the rows of seating-blocks from top-soil and fill that the sloping edifice had collected over time. In the areas of the koilon, where no major stone blocks were still in situ, either the blocks have been removed or the construction in these places was perhaps never planned to have included monolithic stone seats (see Chap. 2 and 3). The excavation of such areas was done with extreme care to allow observation of possible details of construction. The excavation utilized a grid of 5 x 5 m trenches, but mostly excavated as 4.5 x 4.5 m trenches, leaving temporary 1 m baulks in between (Fig. 1.2). These baulks were later removed after the necessary documentation had been made. The aim from the beginning was to uncover the entire theatre, or as much as possible while respecting potential issues of fragility, as well as future preservation and investigation.

Central to the excavation of any building or structure is the definition of its physical limits. Ancient Greek theatres often present challenges in this respect, since the koilon usually consisted of a combination of worked stone blocks and a sloping hillside, which would either have been furnished with wood-

en benches or even simply left as a sloping lawn.⁹ Non-permanent materials such as wood and mud brick are often difficult to identify and challenging to interpret, whereas non-monumentalized elements, such as a slope used for spectators but without any seats at all, are for obvious reasons hard to identify with certainty. The best-preserved part of our koilon is the north-western part, and here we continued to expand the excavation as long as we kept finding stone blocks from the rows of seats. The north-westernmost limit of the koilon was reached when a search trench (Z31) produced a discontinuation of identifiable stone blocks for seat rows (Fig. 1.2 and Fig. 1.4).

The upper central area (area 3 on Pl. I.2) with broken seat-blocks was excavated with great care, so as to enable observation of the construction underneath; some areas have been left unexcavated, so that structures of the fragile bedrock that may lie beneath can be preserved and perhaps exposed and studied at some time in the future.

We decided at a very early stage to make a section north-south through the whole theatre, through all layers abutting the walls of the monument and down to the bedrock, in order to make sure that we did not miss structures earlier than the ones we were able to uncover and describe in the course of the horizontal dig (Fig. 1.2 and 1.5). This section (Pl. II.2) proved extremely informative about the history of the theatre, as well as of the manner of construction,

⁹ Examples of theatres with such a combination: Mantinea, Morgantina, Sikyon and Thorikos (see below p. 53 note 21). This phenomenon of semi-monumentalization is also well known for stadia in the Classical and Hellenistic periods, e.g. at Messene, Nemea and Epidauros (for Nemea, see Miller 2001; for Messene, see Müth 2007, 91-94 and latest Themelis 2017, 19). Deliberate semi-monumentalization is hardly possible to identify with certainty, since firstly the missing blocks could have been robbed out and secondly an intended full monumentalization could have been interrupted due to lack of funds and afterwards never finished.



Fig. 1.5 Excavation in progress, July 2012. It is clearly visible how the exposed layers of bed rock are responsible for the shape of the hill side and how they continue sloping downwards in eastern direction beyond the excavation.

building techniques and preparation of the area for the different structural elements of the theatre.

The portable and minor finds of the excavation were registered on site and brought to the store rooms of the local Ephorate of Antiquities in Messolonghi, located at the nearby village of Evinochori. Larger, not in situ stones from the koilon and scene building, which were considered able to stand changing weather conditions, are stored south-west of the scene-building so that they may perhaps be used later for a partial reconstruction of the theatre. These 79 stone blocks were tagged with numbers.¹⁰ All worked stone blocks from the proskenion, and

other stone fragments with stucco or other weather-sensitive architectural members, were taken to the store rooms at Evinochori. All other finds were registered and separated on site into contexts and taken to the registration unit at Evinochori, then cleaned, dried and processed in the finds registration. Coins, all other metal finds, larger chunks of stucco and organic material were all measured in three dimensions before being removed from their excavated contexts and for cleaning, registration, conservation and storage at Evinochori. The climate-sensitive finds are stored in a climate-controlled environment at the Ephorate of Antiquities in Messolonghi.

The documentation material generated by the project (drawings and notebooks) has been digitized and a copy of this material is kept both at the Danish Institute at Athens and the Ephorate of Antiquities at Messolonghi. The hard-copy original material (i.e. 33 notebooks) is kept by the Danish Institute.

¹⁰ Numbering of architectural fragments in excavations is notoriously difficult. The solution chosen by the *synergasia* at Kalydon was to drill holes into the fragments and fasten a circular inox plate with a screw carrying the registration number punched onto it.

2. Description of the Remains of the Theatre

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Fig. 2.a.1 Photograph showing the Heroön and the Laphrion (upper right) under excavation in 1932. Approximate location of theatre indicated by arrow. The photograph shows the local topographical situation before the construction of the now old highway (Nafpaktos-Agrinio) in the 1960s. From the north-east.

2.a The Koilon

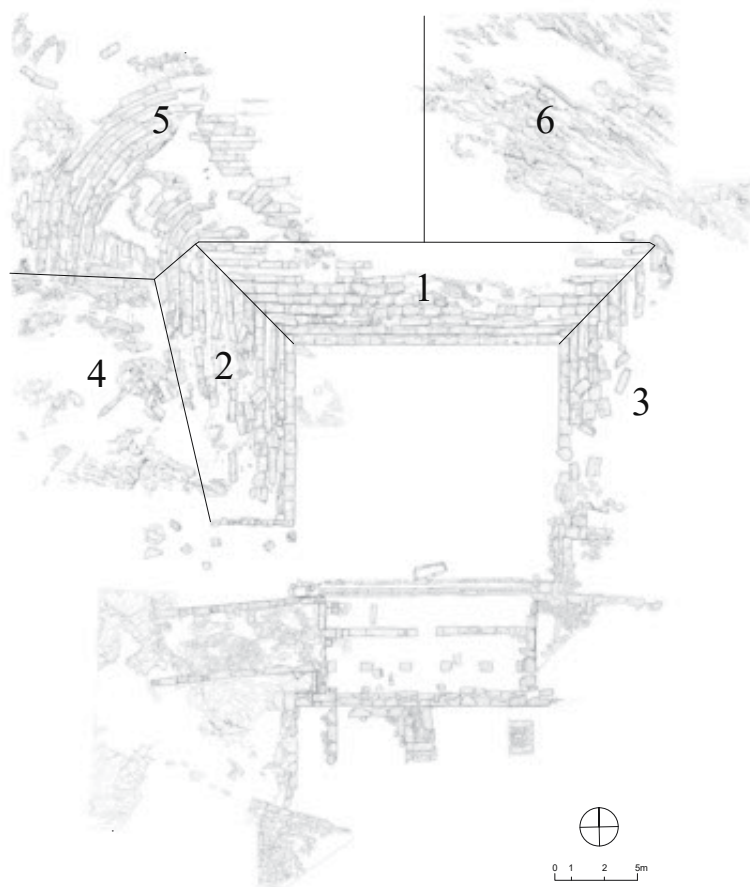
As for any ancient Greek theatre, the spectator space of the theatre at Kalydon, the koilon,¹ was the ele-

¹ The term *koilon* was coined in modern theatre research (from ancient Greek κοιλός, meaning ‘hollow’). There was apparently no ancient Greek word specifically and only designating the spectator part of the theatre. The word θέατρον was a more inclusive term, covering such seating areas in all sorts of assembly buildings. But the term seems also to have been used to designate the whole ensemble, including the other elements, such as the scene-building and orchestra – elements which did have ancient terms of their own. Since it is not clear exactly what θέατρον denoted in antiquity, ‘koilon’ is used

ment that defined the layout of the edifice and perhaps even determined the location of the theatre in the first place (cf. Chap. 3). As discussed in more detail in Chapter 3, we may assume that the hillside east of the Sanctuary of Artemis was chosen because it offered a slope on which the koilon could be constructed with as little effort as possible, while at the same time leaving the desired construction as stable as possible.

for the spectator area throughout in this publication. For a discussion of the use of θέατρον in ancient Greek texts, see Frederiksen 2002, 69-76.

Fig. 2.a.2 Division of the koilon into parts to facilitate description: 1: central, 2: western, 3: eastern, 4: upper western, 5: upper north western and 6: upper eastern. N. Chatzidakis.



Description of the remains (Pl. I.3 and Fig. 1.3)

The koilon is the largest and most characteristic part of the theatre at Kalydon. The lower and inner periphery of the edifice (central, western and eastern parts) is better preserved and therefore offers the obvious point of departure for description and understanding. The western upper part of the koilon is also better preserved than the upper centre and upper eastern parts, which is important for understanding the design and construction of the edifice at least here.

The remains of the koilon can be divided into four categories. In the upper western part of the koilon, bedrock was removed and worked to form steps on which monolithic seat blocks were laid

(Fig. 2.a.2 area 5). The natural form of the hill is visible in Figure 1.5, and the sharp angular cavity visible in the hillside rock is the koilon.

It is unknown at this time whether there was already a cavity, either natural or cut into the hill for some unknown purpose, before a theatre was planned here. There may, for example, have been a stone quarry that made an inviting place for the installation of a koilon.² Under any circumstances,

² This possibility is mentioned because it has recently been suggested that a similar theatre structure, i.e. that at Thorikos in Attica, was located in what was previously a stone quarry; the morphology of the quarried hillside could easily be turned into a stepped spectator space with a combination of more cutting and addition of the local stone. I owe this information to Dr Andreas Kapetanios of the Ionian University in Corfu,



Fig. 2.a.3 Detail of foundation for seat-row in upper centre west part of koilon. From the east.

however, some amount of work most likely had to be done on the rock further down, both in order to create the flat space of the desired size for the orchestra and to bring the hillside to the correct form and inclination for the seat rows for the koilon. The inclination of a koilon in a theatre, as in any assembly building with a stepped seating area, determines – or is determined by – the chosen height and depth of the seats, no matter how they are constructed.

Even though the bedrock is very close to the surface, and in fact in part constitutes the surface, the architect did not choose to construct the seat rows or parts of them directly from the carved bedrock, a method known from many ancient theatres,³ also in the region of Aitolia.⁴ The reason for this may very well be that the rock at Kalydon is a flysch-type

sandstone (*ammolithos*),⁵ which is quite fragile, making the use of exposed rock-cut elements prone to needing continuous impractical repair. Instead, in some places the bedrock was carved into steps which would act as bedding for the actual seat-blocks placed on top of them, quarried from the same rock, but from locations where one could choose the best specimens among the extracted blocks. In addition, with this method the option always remained for the ancients to replace blocks if they disintegrated, either because of wear and tear, or if a block that had been estimated to be of satisfactory quality was in fact not so.

The eastern part of the koilon is an artificially built mound (Fig. 2.a.2, area 3), large parts of which have collapsed or sunk; some of this collapse may have happened in antiquity, and some later due to a road that was once constructed at this point (visible on Fig. 1.1). It is obvious from looking at the morphology of the hillside, that bedrock sits far below the needed level in the entire eastern part. Here not only firm foundations would have to be made for the

Greece. Cf. Kapetanios & Docter 2018, 38; Kapetanios *forthcoming*.

- 3 Such as the rectilinear and semicircular theatres at Argos (Ginouvés 1972); Thorikos in Attica (Hackens 1967; 1968); Chaironeia in Boiotia (Anti & Polacco 1969); Stymphalos in Arcadia (Williams et al. 2002) and many more.
- 4 The theatres of New Pleuron and Oiniadai both have large parts of the koila constructed of rock-hewn seat rows. See Fiechter 1931b, pl. 8; Gogos 2009 fig. 18 pl. 4.

5 Dyggve 1948, 16-20. Kalydon is located in the “West Aetolian flysch zone”, Bommeljé and Doorn (eds) 1987, 34-38 with fig. 4.2.



Fig. 2.a.4 Detail of koilon in upper centre east part. Foundation for seat-row cut in bed rock. From the east.

seats; the whole eastern wing had to be constructed as a veritable artificial mound to bring the seat rows up to the desired height. The trenches dug in the area revealed the nature of this mound, which consists of soil and fist-sized boulders and smaller stones (Fig. 2.a.5). In situ seat blocks are almost only preserved in the north-western part of the entire east wing (lower seat rows towards the orchestra). This means that the blocks of the remaining surface of the mound either were robbed out, or indeed never existed.

A third situation is found in the upper central part of the koilon (Fig. 2.a.2, eastern part of upper western part (5), no. 3 on Pl. I.2), a chaotic mass of broken stone blocks, with no apparent order to them, and mixed with soil. It can be observed, here and there, that bedrock has been worked to receive blocks, for example at a point just east of the cen-



Fig. 2.a.5 Excavation in progress in the East Wing. Upper center with rows of seat blocks having slid out of place downwards is visible as is the fill of the East Wing, soil and stones, to the lower left. From the east.

tral axis of the theatre, at the height of Row XXII (Fig. 2.a.4). The area 3 was not excavated to bedrock everywhere, because we feared that we might remove remnants of rows of seats that were built up of smaller components. The nature of the construction in parts of this area therefore for the moment remains unknown, as it is in some other areas of the koilon too.⁶

The fourth situation constitutes a peculiarity and an open question. In the western, and, in particular, upper eastern part of the koilon, excavation laid bare extended areas of apparently *unworked* bedrock (Fig. 2.a.2, areas 4 and 6, 4 on Pl. I.2). The western areas of bedrock apparently lie so close to the surface that they must have been exposed in antiquity, next to built seat rows (just south of row blocks XIV.1-XVIII.1) and reaching close to the same height (Fig. 2.a.7).

⁶ Careful excavation could be done in this area at some point in the future, synchronized with a precise plan for the immediate conservation and protection of this part of the koilon if the excavation of it demonstrated such a need.



Fig. 2.a.6 Detail of koilon. Nature of preservation and weathering of seats blocks in lower east half of central area. Flaking obvious on blocks IV.27 and 28. From the east.

In the upper east part, the bedrock consists of pockets of soft yellow stone in between layers of the much harder, but still soft, sandstone, which is also the one quarried in blocks for the theatre. Just like the areas of bedrock in the western part of the koilon, the bedrock here shows no or very little sign of having been worked.

Several blocks from the seat rows are no longer in situ (Pl. I.4, marked with blue and red colour respectively), but most are, or rather approximately so; most rows of blocks have slid slightly downwards, because the foundation of small stones and soil under them has deteriorated (Fig. 2.a.5). Table 2.1 is a complete presentation of the dimensions of all 320 stone blocks from the seat rows of the koilon. Measurements of the depth of the individual blocks are not to be confused with the original depth of the seat rows, because the latter is composed of the former plus the void between the back edge of a lower block and the front edge of the block in the row above. The depth of a given seat row is thus an approximated figure based on the location of the seat blocks presently found in the koilon. These approximated figures are also provided in Table 2.1 and marked with an asterisk. Based on the design of the



Fig. 2.a.7 Detail of upper west part of koilon showing bed rock just south (on the right) of rows XIII-XXI. From the west.

seat rows, it makes sense to separate the description of the koilon into a lower and an upper section.

There are no indications of subdivisions of the koilon. No diazomata, and, quite notably, no stairways are identified.

Lower section

The basic design of the seat rows up through the monument is a Π -shaped one, with the parodos walls forming the termination of the koilon on the southern edge at approximately a 90-degree angle in relation to the north–south seat rows of the east and west parts of the koilon, occasionally called the “wings”. The nine lowermost rows forming the eastern, central and western parts (Fig. 2.a.2, areas 1-3) of the koilon meet in sharp 90-degree angles, whereas the rows from no. X and up meet in rounded corners.

The seat rows are composed of blocks cut to the desired height and depth; these blocks abut in various ways, but most often in 90-degree angles. The blocks show sign of flaking (Fig. 2.a.6), which means that their original dimensions, in many cases, are

Table 2.1 Dimensions of seat-blocks in koilon

Block no.	I.1 (analemma block)	I.2	I.3	I.4	I.5	I.6	I.7	I.8	I.9	I.10	I.11	I.12	I.13	
H	39	37	43	X	X	X	X	X	X	X	X	X	X	
W	40	119	82	103.5	89.5	86	99	105.5	105.5	103.5	114.5	118	128	
D	120	X	X	X	X	X	X	X	X	X	X	X	X	
	I.14	I.15	I.16	I.17	I.18	I.19	I.20	I.21	I.22	I.23	I.24	I.25	I.26	
H	X	X	X	X	X	X	X	X	X	X	X	X	X	
W	134	108	95	85.5	118.5	149	177.5	131	107	109	138	66.5	126	
D	X	X	X	X	X	X	X	X	X	X	X	X	X	
	I.27	I.28	I.29	I.30	I.31	I.32	I.33	I.34	I.35	H (av)	D (av)	<i>Reconstr. seat depth*</i>		
H	X	X	X	X	X	X	X	37	34	39				
W	77	96	93	79	107	95	112	77	96					
D	X	X	X	X	X	80	75	67	50		68	62		

Block no.	II.1	II.2	II.3	II.4	II.5	II.6	II.7	II.8	II.9	II.10	II.11	II.12	II.13
H	21	29	29	30	30	30	30	29	33	30	30	26	25
W	42	110	115	147	123	102	117	244	147	144	162	195	155
D	56	X	X	40	55	X	X	X	X	X	X	X	X
	II.14	II.15	II.16	II.17	II.18	II.19	II.20	II.21	II.22	II.23			
H	30	27	24	X	25	25	26	26	24	25			
W	187	185	53	218	206	89	222	184	101	102			
D	X	X	X	X	X	X	49	X	60	65			
	II.24	II.25	H (av)	D (av)	<i>Reconstr. seat depth*</i>								
H	24	X	27										
W	98	84											
D	52	52	54		62								

Block no.	III.1	III.2	III.3	III.4	III.5	III.6	III.7	III.8	III.9	III.10	III.11	III.12	III.13
H	X	X	X	27	25	20	24	20	26	X	26	25	28
W	236	245	188	50	242	55	170	156	158	156	187	226	216
D	48	45	44	48	42	30	47	63	X	44	66	48	46
	III.14	III.15	III.16	III.17	III.18	III.19	H (av)	D (av)	<i>Reconstr. seat depth*</i>				
H	X	X	X	X	X	X	25						
W	197	164	120	208	108	110							
D	47	42	40	47	52	X	47		62				

Block no	IV.1	IV.2	IV.3	IV.4	IV.5	IV.6	IV.7	IV.8	IV.9	IV.10	IV.11	IV.12	IV.13
H	23	21	21	29	32	34	32	32	23	23	23	25	X
W	94	90	103	77	95	101	99	120	109	100	102	98	X
D	[70]	73	63	[75]	71	66	X	70	X	X	73	61	64
	IV.14	IV.15	IV.16	IV.17	IV.18	IV.19	IV.20	IV.21	IV.22	IV.23	IV.24	IV.25	IV.26
H	25	25	27	24	26	23	20	21	X	X	X	X	27
W	116	100	94	110	105	98	115	88	123	112	124	143	113
D	X	61	X	63	69	70	63	69	70	62	78	45	65
	IV.27	IV.28	IV.29	IV.30	IV.31	IV.32	IV.33	IV.34	IV.35	IV.36	IV.37		
H	21	25	30	30	28	28	30	21	X	27	24		
W	113	96	79	59	52	91	97	82	80	90	114		
D	69	X	X	X	X	X	X	X	X	71	90		
	IV.38	H (av)	D (av)	<i>Reconstr. seat depth*</i>									
H	25	26											
W	121												
D	80		71	62									

Block no	V.1	V.2	V.3	V.4	V.5	V.6	V.7	V.8	V.9	V.10	V.11	V.12	V.13
H	26	25	27	26	26	26	26	25	26	21	21	X	24
W	104	106	98	41	41	108	X	123	98	100	103	114	103
D	63	72	65	X	68	68	X	X	X	X	X	X	X
	V.14	V.15	V.16	V.17	V.18	V.19	V.20	V.21	V.22	V.23	V.24	V.25	V.26
H	22	23	23	22	X	23	20	23	21	27	X	27	26
W	96	87	119	43	75	X	88	143	94	120	X	124	105
D	66	74	72	72	71	X	64	77	69	X	X	X	80
	V.27	V.28	V.29	V.30	H (av)	D (av)	<i>Reconstr. seat depth*</i>						
H	23	X	22	X	24								
W	96	82	54	111									
D	74	X	72	76		71	62						

Block no	VI.1	VI.2	VI.3	VI.4	VI.5	VI.6	VI.7	VI.8	VI.9	VI.10	VI.11	VI.12	VI.13
H	20	20	X	26	21	27	21	29	29	26	20	24	18
W	126	60	X	128	131	129	137	98	89	92	128	119	100
D	63	41	X	68	72	67	72	76	72	67	70	63	73
	VI.14	VI.15	VI.16	VI.17	H (av)	D (av)	<i>Reconstr. seat depth*</i>						
H	17	25	28	24	23								
W	105	138	83	146									
D	78	67	73	75		67	77						

Block no	VII.1	VII.2	VII.3	VII.4	VII.5	VII.6	VII.7	VII.8	VII.9	VII.10	VII.11	VII.12	VII.13
H	23	26	X	X	28	X	25	28	24	22	19	X	X
W	187	137	64	68	143	114	120	138	197	150	41	124	104
D	43	46	55	49	42	48	45	44	53	47	43	45	43
	VII.14	VII.15	VII.16	VII.17	VII.18	VII.19	VII.20	VII.21	H (av)	D (av)	<i>Reconstr. seat depth*</i>		
H	X	X	23	X	23	26	19	X	24				
W	68	111	133	161	123	94	105	86					
D	40	45	41	47	44	44	42	35	45		88		

Block no	VIII.1	VIII.2	VIII.3	VIII.4	VIII.5	VIII.6	VIII.7	VIII.8	VIII.9	VIII.10	VIII.11	VIII.12	VIII.13
H	26	27	27	X	X	19	27	30	28	30	X	X	25
W	98	97	120	153	94	96	99	94	86	118	138	105	114
D	48	45	45	48	45	44	43	45	46	44	51	46	45
	VIII.14	VIII.15	VIII.16	VIII.17	VIII.18	VIII.19	H (av)	D (av)	<i>Reconstr. seat depth*</i>				
H	X	25	27	27	28	25	27						
W	106	160	127	123	164	150							
D	43	46	47	44	49	50	46		78				

Block no	IX.1	IX.2	IX.3	IX.4	IX.5	IX.6	IX.7	IX.8	IX.9	IX.10	IX.11
H	X	X	X	X	X	29	34	31	X	X	34
W	173	148	137	177	189	101	102	205	110	62	171
D	47	48	41	45	41	46	53	47	44	35	42
	IX.12	H (av)	D (av)	<i>Reconstr. seat depth*</i>							
H	24	30									
W	153										
D	43	44		78							

Block no	X.1	X.2	X.3	X.4	X.5	X.6	X.7	X.8	X.9	X.10	X.11
H	24	30	27	33	31	30	X	33	33	X	30
W	118	97	174	118	173	45	39	105	X	82	104
D	68	53	62	54	42	68	48	67	64	61	57
	X.12	H (av)	D (av)	<i>Reconstr. seat depth*</i>							
H	X	30									
W	128										
D	X	59		78							

Block no	XI.1	XI.2	XI.3	XI.4	XI.5	XI.6	XI.7	XI.8	XI.9	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	20	X	X	34	27	24	27	30	X	27		
W	129	118	221	130	119	124	138	147	82			
D	72	48	64	53	56	53	57	64	67	59		78

Block no	XII.1	XII.2	XII.3	XII.4	XII.5	XII.6	XII.7	XII.8	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	X	X	X	25	28	30	20	X	26		
W	150	162	138	159	185	140	143	118			
D	48	52	55	52	63	36	63	63		54	78

Block no	XIII.1	XIII.2	XIII.3	XIII.4	XIII.5	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	33	26	X	X	18	26		
W	103	120	157	76	148			
D	55	53	53	52	50		53	78

Block no	XIV.1	XIV.2	XIV.3	XIV.4	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	31	27	31	31	30		
W	115	145	143	190			
D	48	66	46	53		53	78

Block no	XV.1	XV.2	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	29	21	25		
W	88	174			
D	50	49		50	78

Block no	XVI.1	XVI.2	XVI.3	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	28	28	X	28		
W	106	160	43			
D	50	42	49		47	78

Block no	XVII.1	XVII.2	XVII.3	XVII.4	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	21	25	26	X	24		
W	173	114	118	149			
D	53	48	48	52		50	78

Block no	XVIII.1	XVIII.2	XVIII.3	XVIII.4	XVIII.5	XVIII.6	XVIII.7	XVIII.8	XVIII.9	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	23	26	X	21	23	23	32	28	25	25		
W	164	145	151	168	167	165	129	128	128			
D	49	51	40	50	40	56	44	57	53		49	78

Block no	XIX.1	XIX.2	XIX.3	XIX.4	XIX.5	XIX.6	XIX.7	XIX.8	XIX.9	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	X	21	26	25	25	25	25	23	X	24		
W	110	139	136	177	165	80	238	159	215			
D	X	57	55	46	50	45	48	54	56		51	78

Block no	XX.1	XX.2	XX.3	XX.4	XX.5	XX.6	XX.7	XX.8	XX.9	XX.10	XX.11	XX.12
H	X	X	X	X	28	27	27	27	X	X	X	30
W	100	196	75	125	175	95	84	151	148	165	153	110
D	49	48	42	35	48	42	50	55	54	53	48	48
	H (av)	D (av)	<i>Reconstr. seat depth*</i>									
H	28											
W												
D		48	78									

Block no	XXI.1	XXI.2	XXI.3	XXI.4	XXI.5	XXI.6	XXI.7	XXI.8	XXI.9	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	X	21	32	X	36	30	X	X	X	30		
W	X	149	151	167	163	165	133	163	206			
D	45	54	58	42	47	45	46	49	48		48	78

Block no	XXII.1	XXII.2	XXII.3	XXII.4	XXII.5	XXII.6	XXII.7	XXII.8	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	X	X	X	X	33	X	X	X	33		
W	162	163	126	145	177	202	153	170			
D	59	59	52	52	X	50	56	50		54	78

Block no	XXIII.1	XXIII.2	XXIII.3	XXIII.4	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	X	X	X	26	26		
W	122	166	172	183			
D	43	54	50	42		47	78

Block no	XXIV.1	XXIV.2	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	30	25	28		
W	160	165			
D	50	52		51	78

Block no	XXVI.1	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	20	20		
W	130			
D	53		53	78

Block no	XXIX.1	H (av)	D (av)	<i>Reconstr. seat depth*</i>
H	20	20		
W	135			
D	44		44	78

Block no	XXX.1	H (av)	D (av)	Reconstr. seat depth*
H	25	25		
W	?			
D	50		50	78

Block no	XXXI.1	H (av)	D (av)	Reconstr. seat depth*
H	25	25		
W	?			
D	40		40	78

in principle unknown. It is estimated that in some cases up to 5 cm of the original block has been lost since the blocks were quarried and freshly installed in the koilon. Tool-marks are only preserved on the few surfaces which are still intact.

In the following, a detailed description of the seat blocks in each row is provided, with emphasis on particularities. Other important features between the rows are also described here. Plate I.3 provides a complete numbering of seat rows (Roman numerals) and individual stone blocks (Arabic numerals), used in the description, and the number of identified stone blocks in each row and their basic dimensions can be observed in Table 2.1. The table also provides average dimensions for the height and depth of each seat block. In the case of the height this figure will be equivalent to the real height of the seat, in so far as a block and the one below it, are both in situ, whereas the depth of a seat row is equivalent to the width of a stone block only in the rare case that the block above begins exactly where the other block ends. Mostly, the upper block overlaps the lower by 5-10 cm, and often the entire depth of a seat is a composite figure consisting of the depth of a stone block plus the fill behind it and the block behind/above. This composite figure is also provided in the table, whenever it applies. The structural relation of stone blocks in the koilon to the analemata is explained below. The descrip-

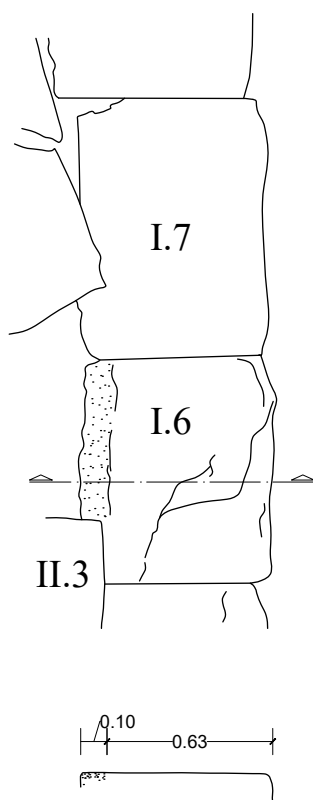
tion begins from the innermost and lowest row and progresses upwards.

Row I (blocks I.2-36; block 1 at 30.45 masl is part of the analemma): This row of seat blocks is almost entirely preserved, from the innermost eastern corner of the West Analemma (WA) to the innermost western corner of where an east analemma would have been expected (just north of AS29). The blocks are rectangular and on average 39 cm high, whereas their depth is unknown in most cases due to overlap from other blocks (measurements fluctuates from 50 cm to as much as 80 cm, averaging 68 cm). The actual original seat depth is believed to have been c. 62 cm, the length of the blocks between 80 cm and 119 cm. It can be observed that some blocks of I.2-26 are set on bedrock and thus still in situ, while the rest must be at least approximately in situ.⁷ The blocks are nicely worked to form straight vertical sides with anathyroses on the short sides, and firmly fitted to their neighbours. The surfaces have been left fairly rough (Fig. 2.a.6), and because the blocks of Row II are laid up against or in part over the back edge of the blocks in Row I, the form and treatment of these parts of the blocks in Row I are largely unknown. However, on some blocks the innermost c. 10 cm of the surface has been made flat and uniform so as better to receive the lower front edge of the block above (e.g. I.6 is only partly overlaid by II.3, Fig. 2.a.9; the flat surface carries traces from the pointed chisel). This means that the effective seat depth of e.g. block I.6 would have been approximately 63 cm when the anathyrosis to receive II.3 is subtracted. A recess has been cut in block I.12 to receive I.13, the first block of the 14 forming the central part of Row I (blocks 13-26). The height of these blocks is a little more uniform (38-40 cm) than the average for Row I. The depth of the blocks of Row I (blocks 13-26) cannot be measured, since the edges of the blocks of Row

⁷ It has not been possible to observe the situation explicitly in each individual case, without causing damage to the monument.



Fig. 2.a.8 Search Trench Z32 with basin/mortar in West Parodos, seen from the south. Block I.1 (= block 1 of WA) visible in the centre, mortar to the right and square void visible just left of Block I.1.



sc. 1:20

Fig. 2.a.9 Detail of blocks I.6 and I.7 from above with corner of II.3. Cutting on back surface of I.6 to receive II.3 above and further block (now vanished) indicated with dots. N. Chatzidakis.

II above protrude throughout. Cutting (anathyrosis) to receive the blocks of Row II can be observed on blocks I. 13-14, 16-17, 19-20 and 24. The effective seat depth, however, of Row I (blocks 13-26), measured from the front edge to the beginning of the anathyrosis, varies between 58 cm and 63 cm.

Row II (II.1-25): More than 80 % of the blocks are preserved.⁸ They are roughly hewn, rectangular and on average 27 cm high and 54 cm deep. The length fluctuates between 84 cm and 242 cm. Compared to Row I, the blocks of this row are mostly considerably longer, but not as high or deep. Blocks II.15 and 16 were probably originally one block, which would have been 238 cm long (which may very well be the explanation why it is now in two pieces). The great variation in length among these blocks is a tendency that continues throughout the koilon.

A number of blocks in Row II are no longer in situ but have slid and sunk slightly out of their original position, in particular in the eastern end of the central section and the east section, due to these parts of the koilon having been constructed on an artificial fill, now largely sunk, rather than on bed-rock. This situation has also resulted in the partial collapse of the row above (III). Blocks 2-4 of Row II have tilted backwards. The back upper edge of the blocks towards Row III are not worked in the same way as the edges of the row below (I), so the blocks of Row II were not prepared to receive the lower inner edges of the blocks of Row III.⁹ This observation, combined with the observation that many of the blocks of Row II are out of place, seems to indicate that the blocks in this row were placed at least in part on a stone and soil filling, and there seems to have been an intended space of 10-30 cm of filling between Rows II and III that was exposed to the

8 When a percentage of preservation is spoken of, the situation "100 %" means that all the seat blocks in the seat row in question are preserved from the West Analemma all the way through the western, central and eastern sections up to the East Analemma.

9 Only block II.20 shows a few signs of such cutting.



Fig. 2.a.10 Rows I-V. Void between rows III and IV at the point where west wing and central section meet. NW corner of block III.7 deliberately cut away. N. Chatzidakis.

elements. The real original depth of the seats in Row II was then the actual block depth plus the fill space, the latter of which was wider when the blocks were not. The average is somewhere around 62 cm. The sides and upper edges of the blocks in Row II, towards the upper Row III, are quite unevenly finished, which also supports the observation that the blocks of Rows II and III did not overlap but were separated by a void filled with a loose material. Such filling, or space for such filling later filled in with secondarily deposited soil, can be observed behind II.10, II.15 and II.19. Block II.8 has received substantial cutting to accommodate the fitting of II.9, the first block of the 11 forming the central part of Row II (9-19).

Row III (III.1-19): More than 80 % of the blocks are preserved. They are roughly hewn and rectangular; their height difficult to measure, but measurable heights range from 22 cm to 28 cm. The blocks are between 33 cm and 60 cm deep, and from 50 cm to 235 cm long. Compared to Rows I and II, the blocks of this row are on average considerably longer and narrower, and with a general reduction in height and depth in relation to the blocks in the row below (II). There is a clear tendency that the larger and longer blocks are in the middle of the western, central and

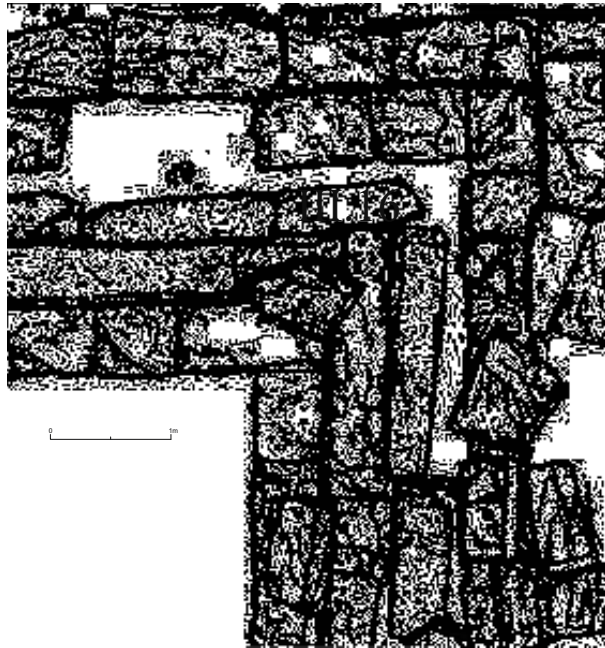


Fig. 2.a.11 Rows I-V. Void between rows III and IV at the point where east wing and central section meet. NE corner of block III.16 deliberately cut away. N. Chatzidakis.

eastern parts of the row. There seems to have been an even wider void between Rows III and IV filled in with a loose material, as between Rows II and III. The blocks towards the centre of the central row of III are wider, meaning that the void is wider towards the corners, where the central row of III meets the eastern and western parts of the row. This void is accentuated by the deliberate cutting of the inner parts of blocks III.7 and III.16 (Figs 2.a.10-11). Whereas the blocks of Rows I–II are fitted to 90-degree angles, some of the blocks of Row III meet in obtuse joints (Figs 2.a.12-13). A number of blocks in this row are no longer in situ, but many are approximately so (e.g. III.4-6, 17-18); in places it can be observed that the blocks rested in part on bedrock and in part on a filling. The block AS 1(14), found in the orchestra in front of I.2-3, may derive from Row III at the point where it takes off from the West Analemma.

Row IV (blocks IV.1-38): More than 80 % of the blocks are preserved, and all, more or less, in situ.

Fig. 2.a.12 Stylized drawing of frontal view of blocks in seat-rows I-IV. N. Chatzidakis.

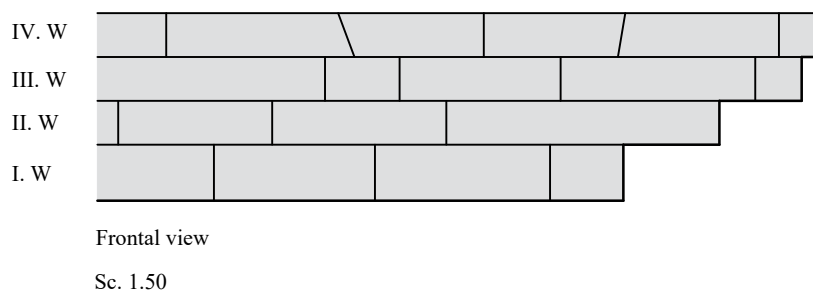
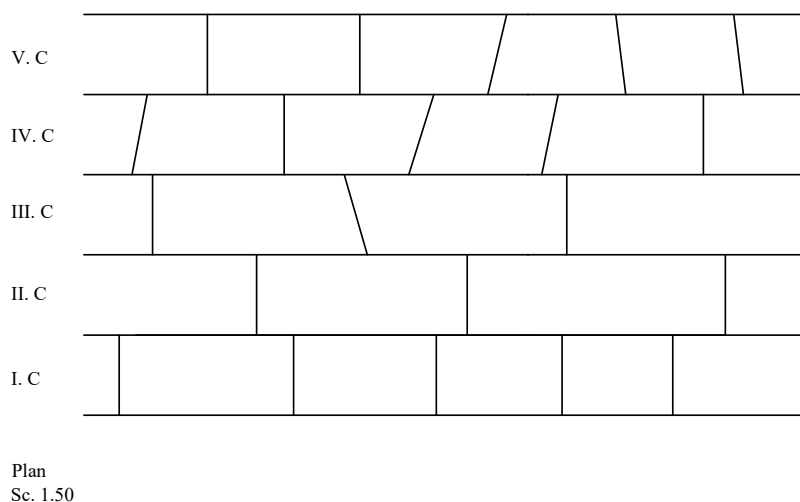


Fig. 2.a.13 Stylized drawing of view from above of blocks in seat-rows I-IV. N. Chatzidakis.



The blocks are roughly hewn, rectangular, shorter and higher than those of Rows II and III, and more similar to those of Row I (dimensions Table 2.1). Even more of the Row IV blocks meet in obtuse joints (Figs 2.a.12-13) than those of Row III. The blocks nearer to the corner where the central part of IV and its eastern part meet are better dressed and fitted, than the central portion of the central part of IV. Some of the blocks (e.g. IV.8) are left with a higher surface at the back edge so as to better receive the blocks of the row above (V), which sometimes overlap, e.g. IV.13 under V.7-8, and most of the blocks of the central part of V overlap their counterparts of Row IV below (an alternative interpretation of the difference in height from the blocks of Row IV could be weathering, but weathering of the flysch stone often includes flaking, which is not observed here). This is the opposite fitting-solution from that used between Rows I and II, where the

lower block has been cut into in order to receive the upper.

Row V (blocks V.1-30): More than 60 % of the blocks are preserved, many no longer in situ (in situ are V.4-7, 8-16 and 20-26). The eastern part of V is poorly preserved, with V.27-30 largely out of place. The blocks are roughly hewn, rectangular, and of the shorter type, like those in Rows I and IV. Many blocks of VI overlap the upper inner edge of blocks of V, usually by 10 cm, and the blocks of V at this point are finely dressed to receive those above. The corner block V.7 is short, and corner block V.24 is small and cubic. When blocks from Row V are missing, in the western part, the foundation on which the now missing blocks were set is exposed; it is a mix of dressed bedrock and individual, tightly packed pieces of the same rock.

Row VI (VI.1-17): More than 30 % of the blocks are preserved. The western and eastern parts are very



Fig. 2.a.14 Seat blocks in koilon with wedge-marks after quarrying preserved. From the south.

poorly preserved, while the central part of Row VI has more than 50 % of its blocks preserved. The blocks are roughly hewn, rectangular, and similar to those of Rows I, IV and V.

Row VII (VII.1-23): c. 50 % of the blocks are preserved. They are of the long and narrow type, like in Rows II–III; for dimensions see Table. 1. Many are no longer in situ but have slid down and into the space of Row VI. Some blocks meet in obtuse joints (as in Rows III and IV). Wherever blocks of this row and the one above (VIII) are in situ there is a clear space between them, filled with soil and stones, like the one observed between III and IV, though this one is wider. The corner of block VII.9 (towards the filled space) has been cut, like the corners of blocks III.7 and III.16. Block VII.19 – the equivalent of III.16 – is furnished with a rounded corner, producing the same effect as the cutting of block VII.19. Block VII.18 has a shallow rectangular cavity, 8 x 18 x 1-2 cm (Fig. 2.a.14).

Row VIII (VIII.1-19): c. 30 % of the blocks are preserved. They are of the long and narrow type, like in Rows II–III and VII, but they tend to be shorter. The blocks of Row VIII are predominantly in situ; some are set on bedrock and some on fill. There is a fairly wide space filled with stones and soil between

this row and Row IX, like the ones between Rows III–IV and VII–VIII. Oblique fitting is observed. Blocks VIII.3-4 have wedge-marks from the quarrying preserved on their inner edges towards Row IX (Fig. 2.a.14).

Row IX (IX.1-12): c. 20 % of the blocks are preserved and around half are in situ. They are of the long and narrow type, like in Rows II–III and VII–VIII. There is a gap (filled with soil) between Row IX and X, like the ones encountered between Rows III–IV, VII–VIII and VIII–IX.

The earth- and stone-filled gaps between seat rows III and IV, VII and VIII, VIII and IX, and finally between IX and X are observed in the western, central and eastern sections. They are clearly deliberate original elements of the koilon, simply too systematically occurring to be a result of blocks sliding. As mentioned earlier, sliding has indeed occurred, but that is to be observed in another way in the monument today. The stone blocks of Rows III, VII, VIII and IX are clearly less wide (44-47 cm) compared to the width of the stone blocks of other rows (54-71 cm), so that the combined width (after addition of the filled gaps) did not exceed the average of the other rows (c. 62 cm).

Fig. 2.a.15 Analemma I (East Analemma), on the right. Orchestra terrace wall in upper center with AS31 below.



Upper section

From Row X to Row XXI, the uppermost or last row, the design is different from that of Rows I–IX in the lower section. The stone benches are still straight in the western, central and eastern sections, but instead of forming 90-degree angles, the rows meet in quarter-circle curves. This design is only clearly visible in the western part of the koilon, since the seat rows are preserved here, which they are to a far lesser degree in the eastern part of the koilon. However, fortunately just enough of the eastern part of the koilon is preserved to confirm that the design was – at least as far as we can see – also like this here (Block X.11). From Row XI on, the rows are only preserved in the western part of the koilon. From Row XII and all the way up to Row XXIV the construction is uniform: blocks of varying length, some narrow and some wider, laid on bedrock supported by fill with a space between the rows of 20–40 cm. For the degree of preservation, see Pl. V (compare with pl. I), and for the dimensions of blocks, see Table 2.1. From Row XV to XXIV, seat blocks are not attested from the West Analemma, but only at c. 15 m north of it. South of blocks XIV.1, XV.1, XVI.1 etc. until XIX.1 bedrock is preserved so high as to not leave

space for the insertion of blocks of the kind known from throughout the koilon (Fig. 2.a.7). From Row XX to XXIV the rows can be traced, again, a little further south, but not down towards the WA.

Row X (X.1–12): Most blocks are in situ. They tend to be wider than the blocks of Row IX. Some blocks meet in obtuse joints. The rows of the western, central and eastern sections do not meet in 90-degree angles, but in a curve, in that two curving blocks, X.4 and X.11, are laid down to form a connection between the otherwise still straight rows of the western, central and eastern sections. There is a fill some 10–20 cm in width between this row and Row XI, and such a fill is the norm all the way up and as long as a relationship between two blocks in two rows, one above the other, can be analysed.

Rows XI.1–9, XII.1–8 and XIII.1–5: Only a few blocks are preserved, most in situ. One block, XIII.6, lying out of place on blocks of Row XII, derives from Row XIII (Pl. V), while a second, XIV.3, lies across Row XII. Enough blocks are preserved, however, to confirm the continuation of the design.

Row XIV.1–4: Only three blocks are in situ (XIV.3 lying on top of XIII.5). Rows XV–XVII have just a few, up to four, blocks preserved in situ, whereas Rows XVIII–XIX and XXI each have nine blocks



Fig. 2.a.16 North (inner) face of East Analemma. Bed rock visible on bottom of sondage. From the north.

preserved in situ. Row XX has 12 blocks preserved in situ, Row XXII eight blocks, while Rows XXIII and XXIV have four and two respectively.

Row XXIV, at the point just above Row XXIII.8, shows a good example of a constructed foundation of smaller blocks and stones, for monolithic seat blocks which have since disappeared.

There are rows above Row XXIV, but the blocks are very weathered and difficult to distinguish. There are no visible remains which may derive from Rows XXV, XXVII or XXVIII, while Rows XXVI, XXIX, XXX and XXXI all have one visible block preserved in situ. The level of the highest preserved row, XXXI is 39.63 masl, more than 9 m above the level of Row I, the lowest one.

While remembering that many seat blocks of the koilon are no longer in situ, we allow ourselves to present the following average figures for heights and depths of seat blocks, all calculated from the figures listed in Table 2.1 and the space observed between (most of) the rows: The average height of the seat blocks in Row I is 39 cm, while the same figure for Rows II–VI is 29 cm. Row VII is 31 cm high and the rest, from VIII to XXXI, are c. 30 cm high. Rows I–V are c. 62 cm deep and Row VI c. 77 cm, while

Row VII jumps to 88 cm and the remaining blocks in Rows VIII to XXXI are 78 cm deep on average. The seating system is not completely uniform, but very close to being so. The relationship between seat height and depth results in a slope of the koilon of c. 22 degrees.

The average figures provided in the description above conceal real variations, as can be observed in the ruin. The measured values as they are detected in the ruin today can be obtained by simple comparison between the individual figures in Table 2.1 and the Plans I.1 and I.3.

Analemmata

The koilon was delimited to the south by analemmata. Because of the nature of the terrain, an analemma was more necessary in the east than in the west. Here, accordingly, during excavations in the East Parodos, remains of a well-built wall (AS29) of substantial blocks were found (Pl. I.3 and Fig. 2.a.15). Four courses of nicely fitted stone blocks are preserved of this wall, which was not founded on bedrock (identified at 28.03 masl), but

on top of a layer of fine soil 25 cm thick. Bedrock appears under the soil layer. The blocks are laid to a quite uneven width towards the inside, against the fill of the east wing of the koilon (Fig. 2.a.16; cf. context **EP.6**). An unknown number of courses of blocks – at the very least one – have been robbed out of AS29 and the uppermost stone blocks preserved are situated at a level of 29.52masl only, which is below the ancient level of the orchestra (at this point c. 29.83 cm). The existence of once existing blocks can be deduced from the presence of mortises in the upper surfaces of the preserved blocks of the uppermost row. AS29 seems to have been constructed with AS31 (for further treatment of AS31, see below p. 29). For a discussion about the function of AS29 as an analemma see below p. 54.

Only one course of the West Analemma is preserved. It sits above the ancient level, is constructed much more flimsily than its eastern counterpart and is apparently the lowest, and perhaps in fact the only course that ever existed of this wall. The bedrock sits much higher in the western part of the theatre, and a far less substantial wall was therefore needed here. One stone block (WA.1, Fig. 2.a.8), forming the inner south-western corner of the koilon, is well cut and firmly placed. It does not have a further block behind and west of it, although it is dressed to a smooth surface on this side so as to receive such a block. There is soil behind WA.1 and the remaining nine blocks (AS13/WA. 2-10) form a line in a westerly direction, following the pronounced upward slope of the koilon and parodos at this spot. WA.2-10 are far less well cut and less well fitted, more or less cubic and laid on hard soil, not bedrock, with their largest and most uniformly flat side towards the open space of the parodos. Some of the blocks have flattish and partly worked surfaces, perhaps to receive a further course of blocks above. The row of stones (AS13) has slid slightly southwards in relation to what would have been its original position. The corner block WA.1

has a rectangular cavity in its upper surface (5 x 5.5 x 10.5 cm).

2.b The Orchestra and Parodoi

The orchestra¹⁰ is defined as the flat and almost square area of 246 m² (16.26 m in width East–West and 15.12 m in depth North–South) between the lowest row of seats (Row I) and the proskenion of the scene-building (Pl. I). The west basin (30.10 masl) was situated above the level of the west parodos (c. 30.05-10 masl at height of basin) and the orchestra (29.90 masl), whereas the pipe and east basin seem to have been below and covered; therefore, only the west basin was visible as an intruding part of the orchestra space. The basins and pipe are described



Fig. 2.b.1 Search trench Z33 in NW corner of orchestra. Bedrock is exposed. One displaced stone block from koilon in lower left corner of trench. North is up.

¹⁰ The ancient term ὀρχήστρα is attested from the 3rd century BCE as the dancing place for the choir. Gogos 2009, 94, cf. Isler 2017, I, 25.



Fig. 2.b.2 Search trench Z29/N north of the proskenion (visible to the left). The Byzantine cist grave in Z28 visible above. From the east.

and discussed properly as parts of the scene-building (below and Chap. 3).

Many cubic metres of soil have been removed to reach what is believed to have been the original level of the orchestra. Before excavation was initiated the surface of the accumulated soil in the orchestra was approximately 31.22 masl; the ancient level (in front of the proskenion) is measured at 29.9 masl, so on average throughout the orchestra some 1.3 m of soil was removed, equivalent to some 315 cubic metres in total (242 m x 1.3 m). A lot of soil and other material has been washed down from above the theatre, and additional material was deposited in connection with use of the theatre as a domestic dwelling site, as well as a farming and probably a grazing area in the Roman and Medieval periods respectively (see Chap. 10). The theatre was used as a burial ground in the Middle Byzantine period and judging from the level in which the grave in the orchestra was set (see Chap. 9), the surface level here does not seem to have risen more than 30-40 cm between antiquity and this period. From these observations it seems the fill layers above the orchestra and the ruin of the scene-building built up steadily but slowly, as opposed to having been the result of one or more

dramatic events (for more on the post-theatre phases and afterlife of the ruin, see Chap. 10).

Great care was taken in the excavation of two sondages in front of the first row of the central section of the koilon (trench A7 and special trench Z33), as well as of a third (Z29N) in front of the proskenion (Fig. 1.2). This was done in an attempt to spot anything of potential value during excavation, and afterwards in the study of the profiles related to the levels and construction of the ancient orchestra. All sondages were brought to bedrock (wherever possible), and everywhere a fairly uneven rock surface came to light on which a fill had been added. A comparison between readings from the sondage Z33 in the north-west corner of the orchestra, at 30.13 masl (Fig. 2.b.1), and the sondage Z29/N (Fig. 2.b.2) in front of the proskenion, where bedrock was reached at c. 28.00 masl, shows a height difference of more than 2 m.¹¹ We also re-excavated the trench that was dug by a bulldozer diagonally across the orchestra in 1963, which had removed everything down to bedrock and backfilled again immediately afterwards.

¹¹ In trench A7 bedrock was reached at various depths between 29.56 and 30.04 masl.

Important observations that give insight into the event, or events, by which the level of the orchestra was raised were made in the sondage Z29/N, in front of the proskenion (Fig. 1.2 and Pl. II.2). As can very clearly be observed on the profile of this sondage, the fill is at this point as deep as 2 m, and made up of five distinct layers, two of fist-sized and smaller stones (Pl. II.2, 3 and 5) and three of very fine and almost sterile soil (Pl. II.2, 1-2, 4 and 6). The same layers of soil and stones were found in the trench in the south-easternmost corner of the orchestra, and at the bottom of the Byzantine grave 1.5 m west of Z29/N (the uppermost stone layer identified in Z29/N was used as the bottom of the grave – here at 29.40 masl). We have reason to believe that these five layers (or some of them) exist in all areas of the orchestra which needed to be raised – and not only where we happen to have dug the trenches. Since the lowest and middle layers of soil are identical, they are likely to have been filled in at the same time, with the lowermost layer of stones placed in between. The uppermost layer of stones consists of on average slightly larger stones but may also have been filled in at the same event. These stones are also of the local flysch (identical with the bedrock here, too), the same as that used for the stone seats and the scene-building. Other smaller river boulders were mixed in with the stones of both layers.

The level of the orchestra floor

The ancient orchestra surface has only been identified with probability (see below), but a number of observations indirectly attest that the level was approximately 29.90 masl in the area in front of the proskenion. The orchestra did not, however, form a completely horizontally even area, but was furnished with a downward inclination towards the south-eastern corner of the orchestra, which is therefore on a lower level than 29.90 masl, whereas the northern area, towards the centre of the koilon, was in places

slightly higher than 30.00 masl and in the north-western corner even as high as 30.15/17 masl.

The first level indicator is the ground before the first row of seats (I.1-36), equivalent to the edge of the orchestra on three of its four sides (west, north and east). This is not in strict terms an observation of ancient level as such, but a qualified guess as to where this must have been: approximately a few centimetres higher than the level of the lower edge (underside) of the seat blocks, i.e. equivalent to where these rest on their foundation.

The next level indicator is the northern edge of the proskenion stylobate, which in certain places has drafted edges protruding 0.5-1 cm out from the smoothed vertical surface of the plinth surface and c. 2 cm below (29.90 masl) the upper edge, where the horizontal surface of the stylobate meets the vertical side.¹² This is a well-known feature from other theatres¹³ and other types of buildings utilized to indicate the floor level, and is also found elsewhere in the theatre (see below pp. 33, 37 and 40). Furthermore, it is logical that the orchestra surface would have been a few centimetres below the stylobate of the proskenion. The third level indicator is of the same kind of the former, i.e. level markers or drafted edges, c. 3cm high and c. 5 cm deep, cut on the western edges of the stones forming the OTW, 29.81 masl (Pl. III.4.3, Fig. 2.b.6), whereas the proskenion stylobate close by, which is the easternmost end of the stylobate, is 29.83 masl (the east end of the stylobate is some 9 cm lower than the west end; see below pp. 31 and 67). So, the orchestra slanted in two directions, from north to south and from west to east.

12 Measured at the westernmost stone block of the stylobate.

13 Gebhard 1973, pl. VI.



Fig. 2.b.3 East Wing Ash Pit/Context EP.5 under the proper location for block I.36 (which is not in situ). The East Analemma (AS29) is visible to the left and the Orchestra Terrace Wall in upper part of picture. From the east.



Fig. 2.b.4 AS31 seen from the east. Above the lowest part of the Orchestra Terrace Wall is visible.

Remains of the ancient orchestra floor (?)

In an area a few metres in front of the western part of the proskenion stylobate, some assemblages of hard-packed pebbles were observed, first of all in trench A14 stratum 4. Further to the east, still in front of the proskenion, in trench A25 stratum 5, a large number of minor fragments from the local bedrock (green and grey flysch) at approximately the same level (29.80-90 m) were observed. These areas were not fully excavated, firstly because such action would have entailed their destruction, and secondly the project thought it proper to enable observation of these features in the future, when new knowledge of the topic and/or new research methods may be brought into action. Further in an easterly direction, the layer of the same level (5, at 29.70-90 m) in trench A30 was described as being yellowish and compact, with tiny pieces of tile, ceramics and stucco.

Common to these three layers is that they are close to the level of the north edge of the proskenion stylobate indicating the ancient level; that they consist of minor gravel-like inclusions, suitable for a floor; and that they are packed fairly hard. They may

represent parts of individual phases of the orchestra surface, or parts of the same uppermost layer and surface, which could very well have been laid with different material in different areas for whatever reason (discussion below, Chap. 3 p. 59).



Fig. 2.b.5 Trench A41W with the Orchestra Terrace Wall (on the right) seen from the south. East Basin just visible in the foreground.



Fig. 2.b.6 Trench A41W with Orchestra Terrace Wall seen from the west. Drafting to mark the level of the orchestra level at upper edge of blocks is visible.

East Wing Ash-Pit (Context OSEC.3/ EW Ash-pit)

An accumulation of smaller stones, pottery, tiles and ash, context **OSEC.3**, was identified from slightly below ancient orchestra level in the SE corner of the orchestra and under part of the SE wing of the koilon, just south of block I.35, under block I.36 and north of the OTW and wall AS 29 (Pl. I.3). The context can be seen from the east side in the photograph Fig. 2.b.3, slightly to the right of the centre. The stone blocks just left of the context is the continuation of the OTW on the norther side of EA. The blocks are receding in size downwards, as if they are sized and positioned to fit the profile of the pit. The pit seems to have been deliberately left in place when the OTW was positioned. Further on OSEC.3/EW Ash-pit see vol. II pp. 400-402.

West parodos, south-eastern corner of orchestra and east parodos

As far as can be documented, the west part of the theatre at Kalydon was constructed with a so-called sunken orchestra, which basically means that the orchestra and scene-building are set on a lower level



Fig. 2.b.7 Orchestra Terrace Wall behind and slightly overlapping AS31. AS29 is visible to the right. From the east.

than their surroundings.¹⁴ The wedge-shaped west parodos located between the WA (West Analemma) and the West Ramp North Wall slopes downwards from the entrance, at the westernmost edge equivalent to the beginning of the ramp, and down to the area where the orchestra begins. Here, at the transition between the parodos and the orchestra, the slope flattens out. The west parodos is c. 5.8 m wide at the entrance point from the west¹⁵ and narrows down to 4.3 m, measured between the south-eastern corner of the first seat row of the koilon and the West Ramp North Wall.

The north-western part of the west parodos consists of harder soil (possibly bedrock) than the rest, and the west parodos slopes upwards not only from east to west, but also from south to north (corresponding roughly with the natural shape of the bedrock at this point). A very hard layer containing small pieces of pottery and stucco appears near the bedrock; this layer is thicker in the lower southern part of the west parodos than in the northern part

14 For the phenomenon sunken orchestra, see Gebhard 2015.

15 Measured from the point where the WRNW terminates to the west to a straight line continued from the preserved part of the WA.



Fig. 2.b.8 North side of East Water Basin seen from the north. On the left the Orchestra Terrace Wall and behind the East Ramp North Wall are visible.

towards the koilon. Close to the West Analemma wall (in the north-eastern part of A20), a layer of medium-sized stones mixed with tiles was found. These may have fallen from the koilon, in which case they would have been used in the construction there.

The east parodos presents a different situation from the west parodos. As mentioned earlier, the entire south-eastern part of the theatre has been constructed on an artificial fill and the east parodos shows no signs of having been elevated so as to form a symmetrical counterpart to the west parodos in terms of level and slope. Two walls (AS31 and Orchestra Terrace Wall (OTW)) are oriented North–South and run from the East Ramp North Wall (ERNW) to AS29 (Pl. I.3, Fig. 2.b.5), OTW even further i.e. beyond AS29 at which point it consists of four courses of stone blocks and terminates towards the context EW ash-pit (Fig. 2.b.3). The OTW is parallel to AS31, and only slightly overlapping it (Fig. 2.b.7). At its southern end the OTW passes right next to the East Water Basin on the east side of this (Fig. 2.b.8). AS31 is more substantially built wall of large, nicely fitted blocks with their sides towards the east, the area of the parodos, left in the dressed manner or surface



Fig. 2.b.9 Search trench Z32 with mortar and, below, Block I.1 of the koilon. From the north.

finish termed ‘quarry face’.¹⁶ This surface finish is similar to the finish of the south face of the Skene South Wall (SkSW), the south face of AS29 and the north face of the ERNW. Only the northernmost part of AS31 was smoothed to receive a block (or further blocks) above, while the southern part seems to be preserved to its original height (Fig. 2.b.4). Three very clear deep cuts are preserved in the block forming the southern part of AS31, on average 10 x 1.5 cm. The Orchestra Terrace Wall consists of smaller blocks laid in irregular courses, not so firmly fitted as in AS31, apart from its northern end, beyond AS29 and up against EW ash-pit, where the blocks are fairly substantial and well fitted.

Major finds in the orchestra area

At the border between the west parodos and the orchestra, close to the inner western corner of the koilon, a fragmentary monolithic stone basin or mortar was found (H: 30 cm, D: 70 cm, inner D. at bottom of cavity: 17 cm, upper D. of cavity

¹⁶ Thus termed because the blocks leave an impression as having received no further dressing after they exited the quarry. See Scranton 1941, 21.



Fig. 2.c.1 Scene building from above. North is up.

40 cm). It is believed to be in situ – a sondage in 2014 (Z32, see Pl. I and Fig. 1.2) confirms that it sits on a level some 5-10 cm below what would have been the ancient level, and below the meticulously well-installed blocks of the first row of seats of the koilon (Fig. 2.a.8). The stone has been perfectly deepened, smoothed in the middle and clad with hydraulic plaster (Fig. 2.b.9).

During the excavation of the central area of the orchestra, an unworked stone with its top located lower than the estimated level of the orchestra was found exactly in the middle between the western inner corner and eastern inner corner of the koilon (8.13 m from koilon corner to centre of stone, measured from both sides). The position of the stone is thus on the centre axis of the structure, but not, however, near the centre of the orchestra, measured from the proskenion and the front row of seats of the koilon.

The centre was several metres to the north in relation to the find spot.

2.c The Scene-building

Description of the Remains

The scene-building is located perfectly on an axis with and in front of the koilon. The entire footprint of the structure is preserved; it consists of the scene-building proper (hereafter called the *skene*¹⁷), a proskenion and two ramps, one on each of its short sides (Pls 1-2).

¹⁷ There is general agreement in scholarship that the central building of the entire scene-building complex, behind the *proskenion* (see below pp. 38-42), was termed *σκήνη* in Greek antiquity. See Isler 2017, I, 27.



Fig. 2.c.2 Lowest courses of Skene South Wall. From the north, inside the skene, at Z29S (NS section).

The skene is a rectangular structure built of the local sandstone and measuring 12.12 x 3.40 m (41.2 m²), delimited by the walls SkEW (Skene East Wall), SkWW, SkNW and SkSW (Pl. I.3; Fig. 2.c.1). As was the case with the koilon, the western part is better preserved than the eastern; the walls in the western part are preserved to a height of some 80 cm or three courses of masonry (above the ancient level), while in the east (SkEW) only the stones forming the uppermost course of the foundation, finishing approximately at the point of ancient floor level, are preserved (Pl. II.2, with indication of ancient floor



Fig. 2.c.3 Stones and tiles up against the Skene South Wall. Drafted edge visible on blocks in SkSW.

level in scene-building, 29.84 masl).¹⁸ This means that at least the footprint of the building is preserved, strictly speaking the *hyposkenion*,¹⁹ and we may deduce a number of important details about design, construction and function, not only from observing the excavated remains but also by implication of the only likely or most likely reconstruction of a number of features (see further discussions in Chapter 5).

The SkSW is 17.12 m long and between 1.14 and 0.76 m wide; it is clearly built more strongly than the rest of the walls of the scene-building, in terms of both width and depth. The North–South section through the scene-building (Pl. II.2, Pl. III.6 and Figs 2.c.2 and 2.c.4) revealed the construction of the SkSW, in that its inside and outside could

¹⁸ Due to the west-east slant of the scene-building the floor would have sat at ca. 29:90 in the westmost end of the skene and ca. 29:80 in the east-most end.

¹⁹ This not entirely universally accepted term for the ground level of the skene is used throughout in this publication. The ancient (Greek) attestations of this meaning of the term date to the second century CE (Poll. 4.123-124; Ath. 14.631f.).



Fig. 2.c.4 Scene Building South Wall from the south at Z30 (NS section).



Fig. 2.c.6 Skene East Wall and Skene South Wall seen from above (east is up). The end of SkSW and SkEW abutt, southernmost stone of the latter is markedly small and of porolithos.



Fig. 2.c.5 Skene East Wall seen from the east with East Ramp fill in foreground. East Ramp North Wall on the right.



Fig. 2.c.7.1 The exterior face of Skene West Wall with foundation, soil with stones and bed rock beneath (after removal of context A56NW.5). In the foreground on the right the west end of the Skene South Wall, on the left the West Ramp South Wall. From the west.

be traced all the way down to the beginning of its foundation. SkSW is made of two shells of stones of various widths, laid against each other to create a uniform surface towards the south (the outside) and the same towards the north (the inside of the building), but here only from the point of the assumed floor level and up. The eastern part of the SkSW widens towards the west up to a point when it suddenly gets narrower again (after the fifth block in both the inner and outer shells, counting from the east), where afterwards it retains this new width almost all the way to its western termination. Here it rests on



Fig. 2.c.7.2 Elevation of West Ramp South Wall seen from the south. N. Chatzidakis.

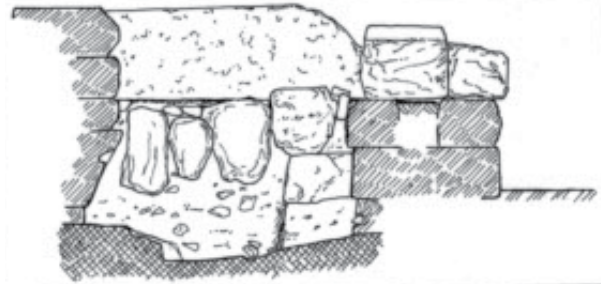


Fig. 2.c.7.3 Elevation of Skene West Wall seen from the west. N. Chatzidakis.

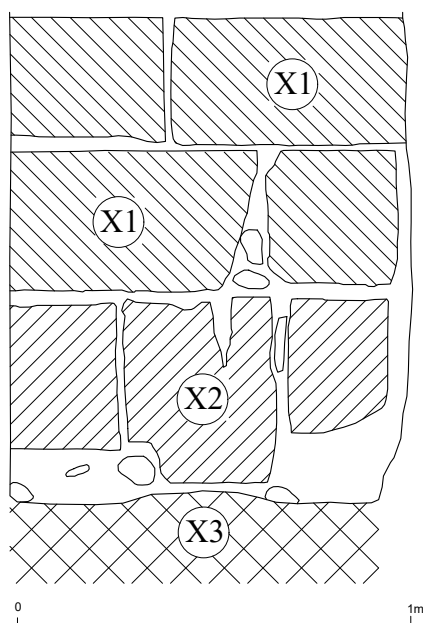
bedrock at a point 2.65 m beyond (to the west of) the SkWW and protrudes beyond the east side of the SkEW as well. The SkSW is longer than the SkNW. It is not clear, however, if the SkSW protruded as much on the east as it does on the west, or if it was even longer here. The terrace on which the theatre rests drops at precisely this point, and no remains of the SkSW are preserved beyond here. The wall certainly continued further in an easterly direction, but it is not possible to determine how much. The SkSW reaches a depth of 180.23 cm and 5 courses of stone blocks (Fig. 2.c.2, Pl. II.2), in relation to the ancient ground level (some 29.25 masl behind the skene, whereas the floor in the skene was 29.84 masl). The south face of the wall recedes gradually from the lowermost block to the uppermost – a common feature for retaining walls. The stone blocks are approximately the same height (between 30 cm and 40 cm), are laid in isodomic courses and are fitted well on top of each other. Some blocks of the inner shell have a clearly drafted edge towards the inside, 4-5 cm high and 2-3 cm deep, which attests to a deliberate marking of the floor level (Fig. 2.c.3). This observation also attests to the fact that the up-



Fig. 2.c.8 The interior face of Skene West Wall with roughly smoothed part over Skene Column Base 1. From the east.

permost preserved course of the inner shell is the last block of the socle – any stone put on top of this course would have been part of the visible wall above ground. The surfaces of the blocks of the outer shell are left with a rough hammer-face (Fig. 2.c.4). There is what could be an opening in the west end of the SkSW, 150 cm wide (Fig. 2.c.1, Pl. III.6).

SkNWE from the North (south profile of Z29M)



DESCRIPTION

X1: Worked stones of SkNWE

X2: Part of the foundation/sockle of SkNWE

X3: Worked bedrock

The SkEW runs from the SkSW and up to the corner where the ERNW meets the east end of the proskenion stylobate; its part north of the SkNWE is called the PEW (Proskenion East Wall)/ERWWN (East Ramp West Wall North) which is c. 57 cm wide. The SkEW abuts the SkSW and is overlapping the proskenion stylobate (Figs 2.c.1 and 2.c.18). It is very substantially built of one row of large stone blocks (Fig. 2.c.5), positioned with their regular flat sides towards the east and irregular sides towards the west, which were the inside and filled foundation side of the skene respectively. The blocks are finely dressed on the surface to receive further blocks for an unknown number of now lost courses above. The uppermost row of blocks preserved are those forming the last course of the sub-ancient floor level – the next (lost) course would have been the first course of the wall above ground level. The stone blocks of (the foundation of) the SkEW are substantial, some being as wide as 1 m, 46-48 cm high and one block as long as 1.34 m. The southernmost stone of the SkEW (Fig. 2.c.6) is considerably smaller than the rest of

Fig. 2.c.9 North face of socle for Skene North Wall East at Z29/M.9, from the North. C. Hagelquist and N. Chazidakis.



Fig. 2.c.10 North face of socle for Skene North Wall East at Z29/M.9, from the north.

the blocks in this wall, and is a different material (porolithos).

The SkWW (c. 55 cm wide) runs from the SkSW and up to the corner where the WRNW (West Ramp North Wall) meets the west end of the proskenion stylobate (Pl. III.7). Beyond the SkNWW it is called the PWW, and is c. 42 cm wide at this point. It is preserved to greater height than the SkEW, i.e. to c. 80 cm above the ancient floor level in the scene-building. The SkWW consists of three courses of substantial rectangular blocks north of the SkNW and two (preserved) courses of narrower blocks south of it. The short bit between the SkSW and the WRSW (Fig. 2.c.7) is made as a two-shelled double-faced wall, the foundation of which consists of roughly shaped, tending to rectangular boulders set edge up, while the wall proper consists of a flat stone-plate used as the

outer (western) shell, and the inner eastern shell consists of smaller regular blocks (see Figs. above p. 33 and Pl. III.7). The remainder of the SkWW, between the SkS and SkN walls at the point where the wall is equivalent to the north wall of the ramp, turns into a single-shelled wall constructed of blocks set edge up with the regular flat sides towards the east and thus the interior of the scene-building. The interior face of this wall has been smoothed, apart from an area immediately above the Skene Column Base 1 (SkCB 1) where a roughly hammered quarry surface, as well as clear remains of wedge-marks (8-11 x 1.5 cm, and 6.5-8 x 2 cm) from the quarrying, can be observed (Fig. 2.c.8, cf. below). The foundation for the wall protrudes some 30 cm into the space between the wall, the westernmost part of the SkSW and the easternmost part of the WRSW. The foundation is made of one course of vertically placed, squarish boulders, set in the hard soil some 30-40 cm above bedrock (Figs 2.c.7.1-2). This construction manner has been identified elsewhere in the scene-building, i.a. at the foundation for the SkNW, investigated at Z29/M.9 (Figs 2.c.9-10), although here the stones placed edge-up rest directly on bedrock. The SkWW is built with the WRNW and the SkNW, and is in fact identical with the East Wall of the West Ramp (WREW; for the description of the West Ramp see below pp. 43-46). The short bit of the wall between the SkNW and the WRNW, the proskenion west wall (PWW), consists in its uppermost course of one single block with a flattish surface, which is weathered but which does not seem to have been smoothed to receive further blocks above. Like SkEW, this wall has also been fitted with smaller stones of porolithos, but not as the final stone before the SkSW (as was the case with the SkEW).

The northern delimitation of the skene consists of two walls, the Skene North Wall West (SkNWW, ranging between 40 and 52 cm in width) and the scene-building north wall east (SkNWE, ranging between 44 and 61 cm in width), divided by a 1.17 m-wide opening. The construction of the walls is

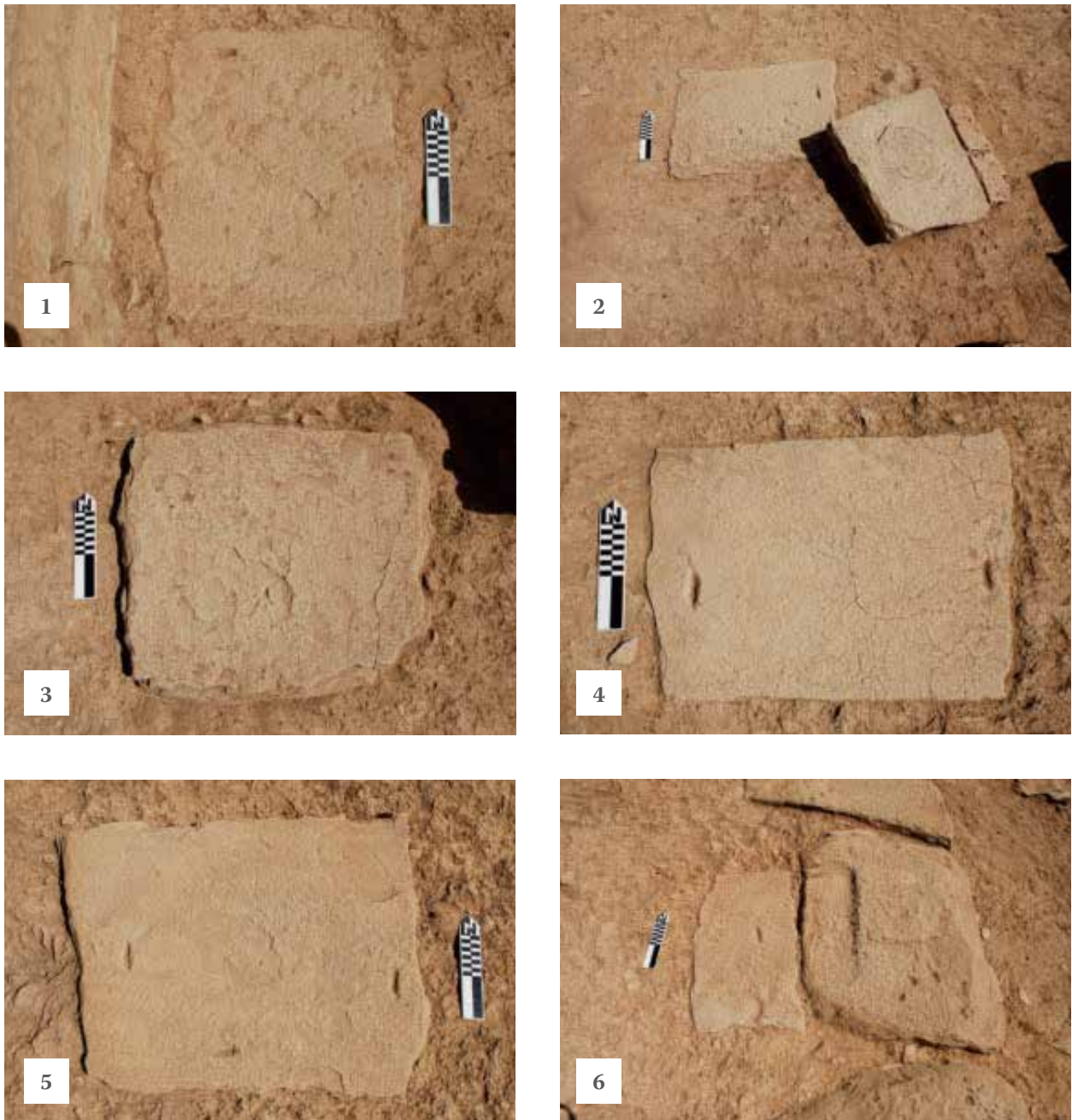


Fig. 2.c.11.1-6 Skene Column Bases 1-6. From the south.

known at the point of the North–South section (Pl. II.2 and Figs 2.c.9-10). They are both constructed as a single shell of shallow rectangular stone blocks above the ancient floor level on a foundation of a double-shelled wall below, consisting of two to three courses of flattish blocks set edge-up. This two-

shelled wall is considerably wider than the single-shelled wall above.²⁰ The SkNW wall was clearly built

²⁰ The nature of the SkNW below the ancient ground level is known at the point of the North–South section only. It was considered unnecessary to make further inves-



Fig. 2.c.12 Westernmost stone block up against Skene South Wall. In top of photograph Skene Column Base 1. From the south.

with the SkWW, since the former forms part of the latter and protrudes from it (Fig. 2.c.1). The westernmost block of the SkNWW has been dressed both on its north and its south sides to fit in the space left between two blocks of the SkWW. The same seems to be the case with the SkNWE in relation to the SkEW, although here the contemporary construction relationship is evident in another way: the upper surfaces of the easternmost block of the SkNWE and the two blocks of the SkEW nearest to it are dressed in a similar way to receive blocks above, and to the same height. The preserved height of the SkNW drops from west to east, so the westernmost end of the SkNW is as high as the SkWW (c. 30.37 masl, which is 53 cm above the ancient floor level) and the east end of the SkNE wall. The upper surface of the westernmost block of the SkNWW is flattish but not smoothed to receive yet more courses of blocks above.

A row of six flat stone blocks Skene Column Base (SkCB) 1-6, bases for posts carrying a construction above, has been identified along the centre axis of the scene-building (Fig. 2.c.1 and Figs 2.c.11.1-6) at

tigations, thus giving priority to preservation of the monument and enabling future investigations.

an average of 29.84 masl,²¹ identical with or close to the level of the other indicators for the ground level of the skene (drafted edge on blocks of the inner face of the SkSW). The fact that the easternmost of these (6) is situated at 29.74 masl, 10 cm below the average, is because the scene-building has sunk at the eastern end (see above pp. 26 and 31 and below p. 67). The average dimensions of the blocks are 60 cm by 60 cm;²² they are placed (from west to east) 2.2 m, 2.3 m, 2.4 m, 2.5 m and 2.08 m apart (measuring from centre to centre), 1.43 m from the SkSW and 1.7 m from the SkNW (measuring from the centre of the blocks to the inside of the walls). The easternmost block (SkCB 6), only approximately half the size of the other 1-5, is placed up against the third block from the north in the SkEW, which is dressed to reach the same level as the SkCB 6, so the two together originally formed a flat surface approximately the same size as the other bases (SkCB 1-5).²³ The blocks have been smoothed on their surfaces and each block has two or three mortises.

Two stone blocks were found placed close to the SkSW opposite the two westernmost stone bases (SkCB 1 and 2), while a third (not in situ) was found opposite the fourth plinth (Pl. I.1, Fig. 2.c.1 and Fig. 2.c.12, the westernmost block).²⁴ The westernmost block is in situ and measures 43* x 45 x

21 The exact masl measurements of their upper flat surfaces are (from west to east, 1-6): 1: 29.90; 2: 29.85; 3: 29.84; 4: 29.87; 5: 29.87; 6: 29.74.

22 The SkCB blocks are not completely rectangular, and the largest dimensions are, in cm (from west to east, 1-6): 63 x 49; 76 x 55; 69 x 56; 63 x 54; 82 x 65 and 71 x 37. For exact dimensions and shapes consult Pl. I.1 (and compare I.3).

23 The block has since sunk and now sits at a slightly lower level than its (most likely) original position.

24 It is not certain that this block belongs in this series; it is tentatively identified as such because of its find spot and because its measurements are similar to those of the other two blocks.



Fig. 2.c.13 Scene building with central part of proskenion stylobate visible in foreground. Seen from the north.

30 cm.²⁵ The easternmost is almost in situ – it has just been tilted forward so the lower end is visible – and measures 54 x 46 x 30 cm. The lower c. 16 cm on all four sides are left with a rougher finish, which is equivalent to the part of the block, which would have been under the ancient floor level. The westernmost block also has this feature, even more so as its entire side towards the SkSW has been left with a very rough surface. The upper horizontal surfaces of the two blocks are very irregular and the blocks are therefore believed to have broken. Their original height is unknown.

The uppermost blocks in some of the walls, i.a. of the SkNW wall, are left with a rough surface coinciding with the absence of mortises, which indicates that the blocks in question were the uppermost ones in the preserved stone construction. These are at the same time the highest preserved parts of the scene-building as such.



Fig. 2.c.14 Detail of proskenion stylobate showing the structure and colour of the sandstone and surface treatment as preparation for installation of pilaster.

Proskenion and ramps

The term *proskenion* (προσκήνιον) is attested epigraphically at Delos as early as c. 290 BC,²⁶ and it probably signified the colonnade of pillars on the side of the portico with a roof, rather than the portico as such.²⁷ Modern scholarship, however, uses the term in the inclusive way and so shall we.²⁸ A row of nine rectangular stone blocks together form the stylobate for the proskenion (PS, Pl. I.1, Fig. 2.c.13-5), 12.57 m long and 46-49 cm wide. With the Skene North Wall West (SkNWW), the Skene North Wall East (SkNWE) and the northern parts of the SkWW and SkEW, the stylobate forms a rectangular enclosed space, the portico proper, measuring 12 x 1.86 m (internal measurements). The westernmost block of the PS disappears under the acute corner angle created by the north end of the PWW (width c. 42 cm) and the east end of the north wall of the West Ramp (WRNW). At the eastern end the relationship between the easternmost block of the PS, the PWW

25 * Measureable height. The block continues some 10-20 cm (?) under the present surface.

26 IG XI.105-33, 142-91.

27 This view goes back at least to Harrison 1890, 275-6.

28 Moretti 2014, 127 note 110; Moretti & Mauduit 2015, 125; Fraisse & Moretti 2007, 169-70.



Fig. 2.c.15 Central part of proskenion stylobate, south is up. Rhombus-shaped dowel holes, curbs and circular cavities visible. South is up.

and the ERNW is different. Here, the stone blocks are only preserved at the level of the foundation, and the westernmost block of the ERNW slightly overlaps the eastern end of the PS. The northernmost stone of the PEW abuts the southern side of the westernmost block of the ERNW and there is no acute angle like that on the other side: the ERNW and the PEW meet in a 90-degree angle, introducing an asymmetry in the way the ramps are arranged in relation to the proskenion and skene.

The blocks for the stylobate are of a white-grey variation of the local sandstone; most are 1.38 m long and 46 cm wide, and the third from the eastern end is 27.3 cm high (Pl. II.2). The centre one, however, is 1.45 m long and the easternmost one as long as 1.60 m.²⁹ The length of the stylobate is 12.10 m. Ten rectangular dowel holes, on average

²⁹ The precise dimensions of the blocks are (counting from west to east and in cm): 1: 1.39 x 49; 2: 1.37 x 49; 3: 1.38 x 48; 4: 1.38 x 47; 5: 1.45 x 48; 6: 1.37 x 48; 7: 1.39 x 47; 8: 1.38 x 46 and 9: 1.60 x 46).

6-7 x 7-8 cm and c. 4 cm deep, are carved in the stylobate, the westernmost 14 cm from the west edge of the westernmost block, the next eight at the point where the blocks meet, and the tenth 15.5 cm from the east edge of the easternmost block. The pillars, then, were resting on the stylobate with their centres exactly over the joint of two stylobate blocks.³⁰ All nine blocks have a raised central part, a rectangular bar or curb, on average 101.5-103 long; the central one is 110 cm. They are up to 5 cm high and 11 cm wide. The curbs run the entire length of the blocks, subtracting some 18 cm on each side towards the

³⁰ This relationship between the stylobate and pillars is common and provides a more stable static situation than if the pillars were situated in or near the centre of each stylobate block, such as those on the stylobate of the proskenion in the theatre at Oropos (Fiechter 1930, pls 3 and 8). Stymphalos (Williams *et al.* 2002, 164) is a parallel to the situation in Kalydon; parallels in buildings with porticoes as such are many, e.g. locally in the Peristyle Building at Kalydon (Dietz in Dietz & Stavropoulou-Gatsi 2011, 111-2 figs 86 and 88).



Fig. 2.c.16 Z29/M excavated to bed rock. Visible how foundation for Proskenion Stylobate rests on bed rock. From the west.

ends of the blocks, thus making space for the pillars with half columns, the centres of which would have sat over the dowel holes and abutting the curbs on each side. The spaces for the pillars range between 36 and 38 cm in width.³¹ The surfaces of the stylobate around the dowel holes have been smoothed to receive the stone pillars (Fig. 2.c.14), and slightly raised semi-circular areas equivalent in size to the lower diameter of the half-columns around the dowel holes seems to be due to more weathering having happened on the surface of the stylobate around the pillars, which was exposed to the elements. Eighteen circular cavities, with a diameter of 2-3 cm and depth of 1.5-2 cm, are carved next to the southern corners of the curbs, two on each stylobate block (Fig. 2.c.15). The upper northern edges of all blocks of the stylobate have been drafted, 4-5 cm high and 2-3 cm wide, so as to create an indication for the level of the orchestra.

The foundation for the stylobate was exposed and investigated at the North-South cross-section (Z29/N and Z29/S respectively, cf. vol. II pp. 389-98

31 Width of spaces for stone pillars (west to east): 1: 38 cm; 2: 37 cm; 3: >36 cm (curb broken); 4: 36.5 cm; 5: 36.5 cm; 6: 36 cm; 7: 36 cm; 8: 37 cm; 9: 36 cm; 10: 38 cm.

and Pl. II.2). It is built of two courses of squarish blocks of various form, i.a. reused from other structures, set directly on bedrock (Fig. 2.c.16; one block, **A22**, was a reused block from a previous structure).

The proskenion stylobate is not straight but bends in a gentle concave curve towards the orchestra; the curve is more prominent in the four westernmost blocks (visible by the aid of a ruler on Pl. I.1). The distance between the edge of the stylobate at its centre and the parallel line marking the height of the north-west and north-east corners respectively is 5.2 cm. There is a difference in height between the westernmost end of the stylobate (29.94 masl) and the easternmost end (29.85 masl) of 9 cm.

Proskenion pillars

Numerous fragments of the proskenion pillars were found relatively well dispersed across the excavation, **A1-15** (see Pls. 1-3 for drawings of the most important ones). Many fragments are easily recognisable as deriving from pillars composed of rectangular piers with one side turned into an engaged half-column in the Ionic style. All fragments are made of the same characteristic soft, rough and white limestone (porolithos). While hundreds of smallish but undiagnostic fragments also found in the excavation surely derive from these pillars as well, they cannot be attributed with certainty. The project was fortunate enough, however, to find enough fragments of bases, shafts and capitals so as to enable a reconstruction of this important part of the architecture. A fragment of an Ionic-style base was even found in situ next to the central raised curb and the dowel hole of the westernmost block of the proskenion stylobate (Fig. 2.c.17, **A4**). Fortunately, remains were found both of a corner pillar and of some of the regular pillars.

The corner pillar capital (**A1**) derives from the western or right corner (when facing the scene-building). It measures 14.42 x 29.99 x 29.11 cm and



Fig. 2.c.17 West Ramp North Wall, West Water Basin and Proskenion Stylobate from the west. Part of column base (western corner pillar) still in situ on the stylobate.

although it is quite weathered and battered, a number of details can be observed and measured. It has a typical volute design with lotus, when seen from the side. The abacus is narrow and undecorated, and the corners with the volutes are angled. The echinus and area of the astragal does not yield decoration, but this seems to be due to preservation (see below on other capital). The eyes of the volutes are wider apart than the width of the column shaft below. The capital is furnished with two protruding rectangular elements, which would have fitted onto similar rectangular protrusions identified on the column shafts. A large fragment of the column shaft of this corner column has been found (A9). It has 15 flutes and – just like the capital – two rectangular protruding parts which together form an angle of 90 degrees. The base (found in situ) has the conventional lower and upper torus with a scotia in between, and these parts are separated by a fillet. The upper torus and the congé are also separated by a fillet. The base terminates at the stylobate with the lowest torus.

A capital (A2) of one of the regular columns has been found, measuring 27.45 cm in width and between 19.55 and 20.25 cm in height, which means that it has a slant on the upper surface. The abacus is much higher than its counterpart on the corner column (A1). Fragments of the regular column



Fig. 2c.18 Detail of masonry of West Ramp North Wall. From the north east.



Fig. 2c.19 West Ramp North Wall from the west. Cover block with drafted edge in the foreground.



Fig. 2c.20 South part of West Ramp with West Ramp South Wall. On the right the west-most end of the Skene South Wall and the terrace wall AS26 are visible as are fill of the ramp and remains of stucco in the soil immediately south of WRSW. North is up.



Fig. 2c.21 West end of West Ramp South Wall from the south. Masonry with cover blocks.

shafts have also been found. They have 11 flutes, each 3.25 cm wide, with the arrises 0.3 cm wide. The basic measurements of the major diagnostic fragments of the proskenion pillars (A1-9) allow us to conclude that the diameter of the shaft at the capitals is 21 cm, further down 23 cm, and 25 cm at the base.

All exposed surfaces of the proskenion pillars were covered with stucco, first a 2 mm layer of white semi-fine stucco directly on the carved surface of the rough stone and then a 1 mm layer of fine whitish stucco (visible on many fragments shown Vol. II Pls 1-8).

Disjecta membra

Fragments of another pillar system were found – 16 in total, all deriving from one of two large pillar fragments (A23-24, Pls 6 and 7). They were found in context EP.1 – clearly dumped (at a level between 29.74 and 29.33 masl) some 40 cm on average below the level of the orchestra of the main phase. These 26 cm-wide pillars are furnished with unfluted half columns (radius 12-13 cm) and a rectangular protrusion on each side, measuring 13.5 cm by roughly 12 cm. They are made of the same rough and soft white-brown limestone as the proskenion pillars.

Some pillar fragments of a third type, found during the rescue excavation of Mastrokostas, are now kept in the Museum of Agrinio.³² One of these, an Ionic-style base fragment (A25, Pl. 7),³³ is the only large base fragment found in the excavation. A square plinth 6 cm in height also forms part of this monolithic base, as its lowest element under the lowest torus.

32 Agrinio Museum inv. nos 199 and 200 (museum accession protocol). Only no. 200 was located; Dietz *et al.* 2007, 46.

33 Agrinio inv. no. 200 was also studied by R. Frederiksen and S. Handberg on two occasions in July of 2002 and of 2012.

Ramps

The skene with proskenion was fitted with ramps on either side (Pl. I.1). The west ramp is much better preserved than its eastern counterpart and is built as a rectangular enclosure of walls on the north, east and south sides, while its termination towards the west has not left any structural mark (other than the western ends of the WRN and WRS walls). The north (Pl. III.5 [right] and Fig. 2.c.18) and south (Pl. III.6 [left], Figs 2.c.20-21) walls are preserved in their entire length from the west to the east (the east wall being identical to the SkWW described above). The ramp is 10.64 m long and 4.56 m wide, and the north and south walls (both 40-45 cm wide) are built of finely cut and fitted stone blocks of good quality flysch. Both walls are carefully and firmly built; the north wall (Fig. 2.c.18, Pl. III.5 [right]) is built of large uniform stone blocks and the south of blocks of very varying size, some laid on their flat side and some set edge-up (Pl. III.6 and Figs 2.c.7.2, 2.c.20, 21 and 31 [upper centre]). The north wall has been worked to a fine smooth surface, whereas the south has a rough surface, partly quarry face and elsewhere showing many marks from the pointed chisel. At its easternmost end the north wall is preserved to a height of three courses, totalling some 90 cm. The uppermost blocks of the ramp walls are only preserved at their extreme western ends (Figs 2.c.19-21), and enough of these western parts are preserved to observe the slant and measure the degree with which it raises from its position at ancient ground level at its westernmost end towards its eastern termination, where it would have met the western end of the proskenion. These uppermost finishing blocks are large, flattish rectangular blocks made of porolithos (Pl. III.5 far right, Figs 2.c.19-21). Only the last, fairly small, flat block of the WRSW is of porolithos, while the next flat uppermost block is of flysch, like the main blocks for the walls (Fig. 2.c.21). The large block of the WRNW has a rough finish on its upper flat surfaces and a fine drafted edge towards the parodos, c. 2 cm wide and 0.5-1 cm deep. Mor-



Fig. 2c.22 East Ramp, seen from the west, showing East Ramp North Wall to the left and fill of the ramp.



Fig. 2c.23 East Ramp North Wall from the north.



Fig. 2c.24 West Water Basin in surroundings. From the north.



Fig. 2c.25 East Water Basin in surroundings. From the north.



Fig. 2c.27 East Basin with square hole to receive water from West Basin via pipe. From the east.



Fig. 2c.26 East Water Basin with hydraulic plaster.

tises observed on the upper, smoothed surfaces of the uppermost preserved course of blocks of both the WRNW and the WRSW attest to the existence of an unknown number of further blocks above, now vanished. Bedrock has clearly been carved to prepare for the installation of the West Ramp; the WRNW and the WRSW have both been inserted into channels carved in the bedrock, which can be seen protruding above the level of the base line of the two walls, north of the southern end of the WRNW and south of the western end of the WRSW. The latter has a foundation of smaller stones, inserted in the voids in the bedrock so as to create a firm straight base for the first layer of stone blocks of the WRSW.

44 Between the walls is a hard, packed fill, consisting of

a mix of sand, soil and fist-sized mostly unworked stones (Figs 2.c.18 and 20).

During the excavations of the west parodos the socle of the WRNW was identified as a course of stone blocks protruding some 4-5 cm in relation to the finely carved blocks of the first course of the WRNW proper (Fig. 2.c.18). The lowermost 3-4 cm of the surface of these blocks has been left fairly rough and protruding in relation to the part above, apparently anticipating the fill of the west parodos, the ancient level of which would have sat somewhere above this rough area. In the west parodos and the area south of the West Ramp (Figs 2.c.18 and 20), numerous smaller and tiny fragments of stucco appeared close to the ancient ground level and the number of fragments increases towards the N and S walls of the ramp.

The remains of the East Ramp (ER) are not as well preserved as those of its western counterpart, and it also seems to have been more flimsily constructed. This is evident with the ERNW (width 35-40 cm), the blocks of which are smaller, more irregular and not as well laid and fitted as the WRNW (compare Fig. 2.c.23 with Figs 2.c.18 and 2.c.19). The north face of the ERNW is left with a quarry finish, as opposed to the WRNW, which is worked to a very fine surface. Mortises observed on the upper



Fig. 2c.28 Terracotta Pipe running from West Water Basin to East Water Basin, from the west.

smoothed surfaces of the uppermost preserved course of blocks of the ERNW attest, however, to the existence of an unknown number of further blocks above, now vanished. The excavation east of the SkEW did not reveal traces of a southern wall of the east ramp. While the WR has a downward slant in an easterly direction, the ER has a more gentle slant, also in this direction, but equal to the general slant of the whole scene-building (see above p. 40). The courses of stone blocks of the ERNW are simply situated in a much lower position than those of the WR (Pl. III.5, compare above and below the 30 masl line). The fill of the ER is very robust and solid, identical to the fill of the WR. It consists of a thick pack of boulders, some of which have been robbed out at some point, perhaps in post-antique



Fig. 2c.29 Terracotta Pipe running from West Water Basin to East Water Basin, from the east.

times. There was certainly an even greater need to build the ER solidly, since bedrock is situated much further down than it is under the WR. At present there is no obvious explanation why the ERNW was not as substantially built as the WRNW. The ER has produced an example of reversed stratigraphy; stratum 10 contained Hellenistic material, while the layer on top of it, stratum 9, contained Archaic and Classical sherds. This confirms the interpretation of the fill, and apparently the material was taken from somewhere where the sherds happened to be of an older date. From observations during the excavation, it may be suggested that the ancient level in the area of the ER, before the construction of the scene-building, was c. 28.85 masl (so-called stratum 10), which was then covered by material dug up



Fig. 2c.30 Terrace wall AS26 and (on the right) West Ramp South Wall from the east. Red or reddish layers visible above ancient ground level.

from elsewhere, likely in the neighbourhood, and after this filling followed a pack of stones.

Other structures relating to the scene-building

Two water basins (West Water Basin and East Water Basin) connected by a terracotta pipe were installed immediately in front of the proskenion (Pl. I.3, WWB and EWB Figs 2.c.24 and 25; for the pipe in section see Pl. II.2). The WWB was found in 2003 in front of the east termination of the west ramp and c. 40 cm from the western end of the proskenion stylobate (Figs 2.c.17 and 2.c.24). The EWB was identified in 2011 in front of the west termination of the east ramp and right up against the eastern end of the proskenion (Fig. 2.c.25). Both basins utilize the ramp walls as one of their four sides. Slabs (EWB), or more stones built together as a wall (WWB), set perpendicular to the WRNW and ERNW and finished with a fourth slab or wall parallel to the ramp walls make up the other sides. Hydraulic plaster is found on all sides, including the faces of the ramp walls forming the inner sides of the basins.



Fig. 2c.31 Terrace Wall AS26. Seen from the south. AS25 visible on the far right and West Ramp South Wall in top of picture.

The west basin is much more substantially built than its eastern counterpart (Pl. I.1, Fig. 2.c.1 [top l and r] and Fig. 2.c.24). Its internal dimensions are 53 x 76 cm and its depth 70 cm (capacity 282 litres). It is made of fairly substantial stone blocks. Only the shape of the stones of the uppermost course is known; they are all quite irregular and laid with a straight side towards the interior of the basin, thus forming its rectangular shape. The inside and bottom of the basin is covered with a hydraulic brownish dark pink plaster, c. 1 cm thick.



Fig. 2c.32 Layer of boulders and stones behind Skene South Wall, as cleaned in Z30.3 and seen from the north.



Fig. 2c.33 Row of slabs, AS24, connecting opening in Skene South Wall and foundation for stairway to upper storey. AS25 in the foreground. From the west.

The east basin is more flimsily built, simply consisting of four stone plates set edge-up. The internal dimensions of 55 x 70 cm and the depth of almost 70 cm are similar to those of the west basin, though resulting in a slightly smaller size (capacity 270 litres). The interior is covered with hydraulic plaster (Figs 2.c.26 and 27), like that of the west basin. The slabs that make up the four walls of the basin reach the same height all around, and the upper edges of the slabs are not worked to a flat even surface. There is a rectangular hole (11 x 12 cm) in the west wall of the EWB, located 13 cm from the upper edge of the basin and 43 cm from its bottom (Fig. 2.c.27). The distance between the two basins is 13.67 m, the difference in level is c. 29 cm (at the upper terminations),³⁴ and they are connected by a terracotta pipe, pi-shaped in section, running from the west basin to the east one, in front of, parallel to and on average c. 20 cm from the proskenion stylobate (Figs 2.c.28-29). The pipe is made of terracotta units measuring 60 cm in length, the bottom and sides made in one piece, U-shaped in section, the cover being random pieces of flat thick tiles, only preserved over the western half of the pipe, the eastern half in part covered by small flat stone slabs (compare Figs 2.c.29 and 30). Hydraulic plaster has been observed on parts of the pipe. The pipe first drops 15 cm within the first metre (the level at the outlet is 30.00 masl, dropping to 29.85 masl after c. 1 m), after which it drops more gently until it reaches the square hole inlet of the EWB at 29.68 masl.

Observations at the excavation pertaining to the architecture

A substantial layer of smashed roof-tiles was found in excavation trenches all over the scene-building and the west parodos, and in front of the central and western parts of the scene-building (vol. II, Pl.

³⁴ The WWB upper level is on average 30.05/10 masl and the EWB upper level is on average 29.81 masl.

II.1; Figs 23b.1 and 23c.1). This layer (contexts **TLSk**, **TLProsk** and **TLWP**) is described and interpreted in Chapters 23a-c (vol. II pp. 409-18).

Finds of red or reddish layers (or pockets) in strata were observed at various points during the excavation, always in close proximity to the stone foundations of the walls of the scene-building (Figs 2.c.16, 19 and 30). Red or reddish soil found in such contexts may be the remains of the upper structures of the walls of the scene-building (see below, p. 52).

The area behind the scene-building

A number of structures were found behind the scene-building. A very strong double-faced wall, AS26 (Pl. I.3, Fig. 2.c.31), was identified running North-South from the westernmost end of the SkSW, as well as a smaller terrace wall, AS25, parallel to AS26. AS26 is bonding with and thus constructed simultaneously with SkSW. AS25 and AS26 both have a very uneven surface, which means that the uppermost stone-blocks identified in these walls represent their real ancient upper surface.

A thick layer of stones was found south of and up against the SkSW, reaching a level a little higher than the third block from the bottom of the SkSW (Pl. II.2 and Fig. 2.c.32, surface as cleaned in Z30.3). The stones are rough irregular boulders, 10-30 cm in length. The layer spreads over a large area immediately south of the SkSW and extends below the rectangular structure (AS 20) installed immediately behind the south wall of the scene-building, slightly to the west of the centre axis of the monument. The stone part of the structure is lower than the stone socle of the skene, but still above the stone pack. The rectangular enclosure (AS 20) utilizing the SkSW as its northern delimitation was identified south of the scene-building, starting around the centre of it.

stone slabs. The interior is filled with rubble and the average level of the whole structure is 29.30 masl. A row of four large flat blocks (AS 24, 29.30-29.46 masl) is placed parallel to and up against the outside of the western part of the SkSW and the rectangular area behind the wall, thus forming an L (Pl. I.3 (AS 24), Fig. 2.c.33).

A rectangular structure, AS22, 2 x 1 m, was found approximately 1 m to the south of the south-eastern corner of the skene (Pl. I.3, south of skene to the right). It is built partly of large reused rectangular boulders of the white porous porolithos, and partly of smaller blocks of flysch. A flat structure of packed small boulders and larger stones delimiting the structure towards the north was partly excavated south of AS26. It has a different orientation than the scene-building.

48 The enclosure is 2.7 x 1.8 m and made from six flat