EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998: PRELIMINARY REPORT

(PLATES 46–62)

INTRODUCTION

THIS report follows on from the account of the first three seasons of excavations carried out at Sparta theatre on behalf of the British School at Athens by the present writers between 1992 and 1994, which explained the background to the new campaign, and published the fresh evidence for a revised reconstruction of the plan.[1] That first phase had concentrated on the theatre's auditorium and orchestra, in various parts of which nine trenches had been laid down.[2] The focus of attention during the four seasons from 1995 to 1998 has been on the evidence for the stage arrangements in the area of the stage building and the west parodos, first excavated by A. M. Woodward in 1924–28 (PLATE 1).[3] The current programme of work has comprised three forms of investigation: limited excavation around and into the foundations of the stage building, detailed recording of the surviving structures within the overall survey of the theatre obtained with EDM theodolite since 1991, and detailed cataloguing and drawing of all architectural elements originating from the stage building of the theatre, including those *in situ*, those re-used in later structures and those removed from the site to a stone depot west of the theatre.

The pattern of work over the four seasons was as follows:

1995. A five-week season from 10 July to 11 August completed examination of the medieval well in the orchestra (below, ST 95 XI). Mortar samples were removed from several parts of the theatre for analysis by Dr G. Chandler in the Fitch Laboratory of the British School.[4] Three trenches were opened in the area of the stage building (ST 95 XII–XIV) to examine the foundations of existing structures. Few finds were recovered and all the trenches were backfilled. Planning of the surviving walls of the stage building at a scale of 1:20 was begun, as was the cataloguing and drawing of architectural elements, with the aim of producing a computer-aided reconstruction of the stage building in its principal Roman phase.

1996. In a four-week season from 6 July to 3 August planning of the stage building walls was completed, along with drawings of the north and south elevations of the *scaenae frons* wall. Cataloguing and drawing of architectural elements were continued and almost completed, with a total of more than 200 items. Study and recording of sculpture found in the course of Woodward's excavations and subsequently removed to the Sparta Museum was also

[1] G. B. Waywell and J. J. Wilkes, *BSA* 90 (1995), 435–60, including contributions by N. Fradgley, A. D. Powell, J. W. Hayes, G. D. R. Sanders and S. E. C. Walker. See too G. B. Waywell, J. J. Wilkes and S. E. C. Walker, 'The ancient theatre at Sparta', in W. Cavanagh and S. E. C. Walker (eds), *Sparta in Laconia* (London, 1998), 97–111. A full account of Sparta theatre, incorporating the evidence from the 1992–8 excavations, is in course of preparation by the present writers.

[2] Waywell and Wilkes (n. 1), 437–40, trenches ST 92/93 I–IX. A tenth trench laid out in the western upper cavea was abandoned because of extensive modern disturbance to the area.

[3] A. M. Woodward, *BSA* 26 (1923–5), 119–58; id., *BSA* 27 (1925–6), 175–209; id., *BSA* 28 (1926–7), 3–21; id., *BSA* 29 (1927–8), 1.

[4] Results of the analysis were published by G. M. Chandler in G. B. Waywell and J. J. Wilkes, *BSA* 92 (1997), 428–34.

undertaken. As a result of this season it was judged that, in order to complete the study of the original stage arrangements of Sparta's theatre, a third phase of excavations was required, involving two seasons of investigation in the area of the west parodos in 1997 and 1998.

1997. During a season of four weeks from 18 August to 12 September a new trench (ST 97 XV) was opened across the line of the west parodos, extending from a point *c.* 18 m west of the front seats of the cavea and along the east side of the nymphaeum excavated in 1927, Woodward's last full season of excavation. Towards the end of the season two minor trenches (ST 97 XVI and ST 97 XVII) were opened against the outer (west) face of the Late Roman Wall. Except for the completion of drawings of architectural elements, no other work was undertaken on the theatre during this season.

1998. A four-week season of excavation lasted from 3 to 27 August and was followed by a week of finds processing, at the end of which all the finds from the British School excavations on the Acropolis from 1989 to 1998, which had been retained in Aphyssou for study, were transferred to the premises of the 5th Ephorate of Prehistoric and Classical Antiquities for Arkadia and Lakonia in Sparta. The excavation of the main trench (ST 98 XV), begun in the previous season, was completed, and the two smaller trenches of 1997 (ST 98 XVI and ST 98 XVII) were reopened for the purpose of survey. Three new trenches were opened, all in the area of the west parodos, in the north-east (ST 98 XVIII) and south-east corners (ST 98 XIX), and in the north-west corner (ST 98 XX). At the conclusion of the excavation all the minor trenches were completely backfilled, and the major trench (ST 98 XV) was partly filled in order to leave exposed the two surviving lines of channelled stone blocks (see below).[5]

I The Excavations of 1995–1998 (figs. 1–2; plates 46 *b*–59 *b*)

A total of ten trenches was excavated, one in the orchestra, three in the area of the stage building and six in the area of the west parodos. They are described in outline below in order of excavation.

ST 95 XI (plate 46 *b*) was the excavation of the well located in the north-east of the orchestra and which proved, as suspected, to be of medieval date. The sides of small boulders set in mortar continued to a depth of 1.60 m, while the fill consisted mainly of large cobbles but included some medieval pottery and a coin. At the completion of excavation the well was backfilled for safety.

[5] Financial support for the four seasons' work was provided by the British Academy (Humanities Research Board), the British Museum, the British School at Athens, the Institute of Archaeology, University College London, and King's College London, to all of whom grateful thanks are due. We also acknowledge the generous support and assistance of Dr Theodoros Spyropoulos, Ephor of Prehistoric and Classical Antiquities for Arkadia and Lakonia, and his colleagues in the Sparta office of the 5th Ephorate, particularly Stella Raftopoulou, Athanasios Themos, and Eleni Zavvou. We are indebted to the Directors of the British School, Dr M. J. Price, Professor R. A. Tomlinson, and Mr D. J. Blackman, and to the Athens Secretary, Mrs Helen Clark, for their advice and administrative help. Overall direction of the work was in the hands of GBW and JJW. Architectural recording and survey was undertaken in 1995–6 by Ms Anne Hooton (Agora Excavations, Athens) and Mr N. Sunter, and in 1997–8 by Mr N. R. Fradgley (Royal Commission on Historical Monuments, England). Stone recording and analysis was directed by Dr S. E. C. Walker (Dept. of Greek and Roman Antiquities, British Museum), and scale drawing by Sue Bird (British Museum) and GBW. Conservation work was carried out by Ms G. Garrett (1995) and Ms I. Narkiss (1998). Environmental support was provided by Dr K. N. Wilkinson (King Alfred's College, Winchester) and Ms J. Sidell (Museum of London). The following worked as assistants in excavation or recording for one or more seasons: A. Bevan, G. Dods, T. Hatzinikola, M. Kosmopoulou, C. Morse, C. Pickersgill, A. Powell, L. Preston, I. Przybylska, D. Romanou, J. Stevens, H. Thliveri, C. de Waal, and M. Williamson. Teams of local workmen employed for the heavy digging were supervised by Mr Yannis Konstandelos of Aphisiou.

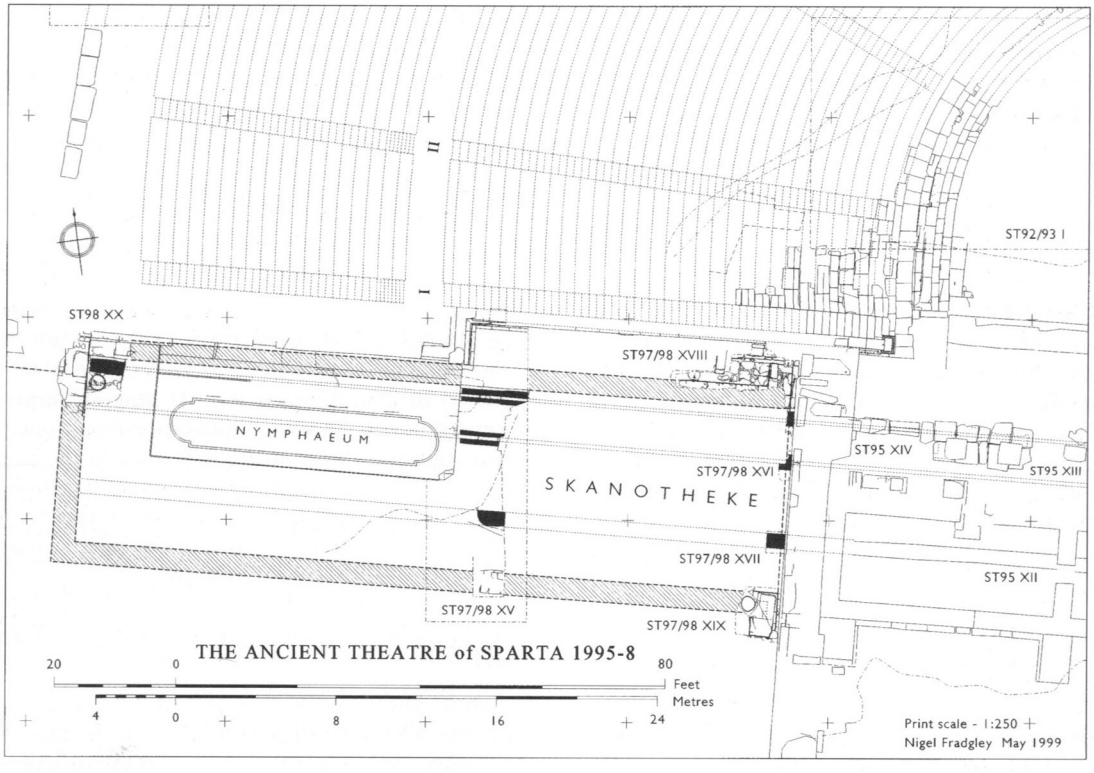

FIG. 1 Restored plan of the south-west area of Sparta theatre, showing the location of trenches.

ST 95 XII (PLATE 47 *a*) was a trench 1.50 m wide aligned north–south across the east end of the west stage room, behind the standing wall of the *scaenae frons*. Except for a small medieval cutting towards the north end all the material excavated consisted of naturally deposited orange gravel, yellow sand, and clay.[6] On the west side of the trench there lay *in situ* one of the blocks of poros limestone belonging to the earlier stage structure (this is the more southerly line designated CC–CC on the plan of Woodward's excavation).[7] Here it was possible to verify that this single course of blocks had been laid directly upon the natural ground with no make-up or other preparation. The north, east and south limits of the trench were defined by the footings of the standing walls of the stage building, the wall of the *scaenae frons*, the dividing wall between the west and central rooms of the stage building, and the massive rear wall of the same structure. These footings were found to consist entirely of loosely packed, broken pieces of architectural elements, mostly in marble but with a few fragments of limestone, to a depth of nearly 2 m below the foundation offset. The fragments included column drums, capitals, architrave, frieze and cornice blocks, all of the Doric order, which appear identical in character to those pieces reused in the upper parts of the same walls.[8]

[6] That it was natural was verified by Dr K. Wilkinson of King Alfred's College, Winchester.

[7] Woodward, *BSA* 27 (1925–6), 190 pl. 27.

[8] For a preliminary publication of some of these fragments, see Waywell, Wilkes, and Walker (n. 1), fig. 9. 9–17 and below pp. 454–5.

ST 95 XIII (PLATE 47 *b*) was in effect a continuation of the previous trench, with the same east-west dimensions, on the north side of the *scaenae frons* wall. Once again the footings of the latter were found to consist mainly of broken remains belonging to the Doric order, filling a trench dug into similar levels of naturally deposited sand and gravel. Away from the wall, towards the northern part of the trench, several cuttings and other features were observed but a full examination of these was judged not to be profitable within the small area available for excavation. Woodward had cleared the area in front of the stage building between the *scaenae frons* wall and the supporting wall for the projecting raised stage to its present ground level, but it is now more accessible through the recent removal of some of the large fallen architectural elements previously located there, and would still repay further selective excavation.

ST 95 XIV (PLATE 48 *a*) was a trench 1.50 m wide in the angle formed by the north face of the *scaenae frons* wall and the inner face of the west wall of the stage building. The north limit of the trench was provided by the northernmost line of poros limestone blocks (recorded as C–C on the plan of Woodward's excavations) at the point where two blocks of conglomerate stone with U-shaped channels in their upper surfaces, and once clamped together, remained *in situ*. As with the two previous trenches the purpose was to expose the footings of the *scaenae frons* wall and those of the west wall of the stage building. These were found to extend to a similar depth (*c.* 2 m), and to consist entirely of the broken fragments of a Doric order in marble. On the north side it was established that, as noted above with regard to the more southerly line of poros limestone blocks, the foundation course of the northern line had been laid directly upon the natural orange gravel which covered this part of the site.

All the material removed from the above three trenches consisted of clean natural gravel and all were backfilled at the end of the season.

In 1995 surface cleaning near the east end of the stage building (PLATE 48*b*) revealed a small section of a channelled block that survived *in situ* on the northerly line (C–C), lying beside the east pier of the Roman stage building, the construction of which, upon a raft of mortared cobbles *c.* 2 m deep, had severed and removed the rest of the block.[9] The poros bedding-blocks aligned to the east of it were found, however, to be reused and not *in situ*, a crucial factor for the interpretation of the channelled blocks as a whole.[10]

The purpose of excavations in 1997–8 was to obtain as much evidence as was practically possible for the original stage arrangements of the theatre at the time of its completion in the early Augustan period, *c.* 20 BC (PLATE 46 *a*). In the area of the stage building which fronted the orchestra most traces of the earlier stage structure had been removed by construction of the second-phase monumental Roman stage building with its elaborate columned façade (*scaenae frons*), probably during the last quarter of the first century AD. Because of this most of the evidence relating to the period of the first stage has been recovered from the area of the west parodos, which from the outset had been the 'non-public' working area of the theatre, and not an entrance. The main approach to the theatre for most spectators would have been via the east parodos from the direction of the agora.[11] It was during excavation of the stage building in 1924 and 1925 that A. M. Woodward identified two lines of poros blocks, set *c.* 6 m apart between their centres and running east–west beneath the walls of the later stage building, as likely to have belonged to the theatre's first stage construction. They are so represented on De Jong's plan of the remains published in the *BSA* for 1926, where they are designated C–C in the north and CC–CC in the south.[12] The latter line was observed to continue west beneath the

[9] Ibid. fig. 9.24.
[10] See below at n. 21.
[11] Woodward, *BSA* 27 (1925–6), 180–6 pl. 28; Waywell and Wilkes, *BSA* 89 (1994), 430.
[12] Woodward, *BSA* 27 (1925–6), 190–2, 204, pl. 27.

foundations of the Late Roman Wall, constructed along the west side of the stage building, and into the area of the west parodos. At the west end of the front (north) line two blocks of conglomerate stone rested upon the line of the poros blocks, closely fitted and clamped and with a U-shaped channel or runnel in their upper surface (PLATE 49 *a–b*). While inspecting the site soon afterwards Dörpfeld suggested that these blocks could be evidence for a movable stage (which he associated with the ancient term *scaena ductilis*) that could be drawn sideways on rollers clear of the orchestra and out of the sight of spectators. In his report Woodward did not accept this explanation for what he described as 'the puzzling channelled blocks', mainly because he was convinced that they were not in their original situation. He concluded that they might after all be 'merely rain-water channellings'.[13] Soon afterwards Dörpfeld's suggestion was followed up and elaborated by Heinrich Bulle,[14] and then tested by trial excavations in 1935, supervised on Bulle's behalf by W. Weyhe, in the western parodos where the basin of a Roman nymphaeum had been revealed built against the south retaining wall of the theatre during Woodward's final excavation season in 1927.[15] These soundings revealed some remarkable discoveries, which were described in Bulle's general study of the theatre published two years later.[16] A narrow trench along the outside of the east wall of the nymphaeum, just within the area of Woodward's excavation, not only revealed two more channelled blocks of the north line still *in situ* but also a further channelled block, also *in situ*, on a new middle line *c.* 2 m to the south (Bulle labelled this line CCC–CCC).[17] Both lines were found to continue west into the foundations of the nymphaeum wall. The block of channelled conglomerate set on the middle line was of the heavier type (0.48 m high compared with the 0.29 of those on the north line).[18] It was not possible for Bulle to extend the trench south across the south line (Woodward's CC–CC) at this point, but he was able to dig into the section of Woodward's deep excavation in the south-west corner of the parodos, where he managed to locate the edge of two of the poros bedding blocks still *in situ* on this line. Another sounding beyond the north-west corner of the nymphaeum revealed the poros bedding blocks at the end of the north line (this was re-excavated in 1998 as trench ST 98 XX; see below).

Bulle's conviction that the finds from his trial excavations in the west parodos confirmed the interpretation of the lines of channelled blocks as the trackway for an elaborate moving stage was challenged in 1986 by Caroline Buckler.[19] Buckler claimed that there were serious weaknesses in Bulle's hypothesis, basing her views on the (as we now know) incorrect information of Woodward, and concluded that the likeliest function of the grooved blocks was that 'they were all originally embedded in the earthen floor of the skanotheka and used to hold wooden scene panels or screens in storage'.[20] One of her key arguments, following Woodward's interpretation, was that the easternmost poros foundation blocks on the front line (C–C) were original and *in situ* (PLATE 48 *b*), and that consequently the difference in level between these and the two channelled blocks at the west end of C–C ruled out any possibility of a rolling stage. It was established by us in 1995, however, that the eastern poros blocks in question were reused

[13] Ibid. 190–1, and 192 n. 1 for Dörpfeld's view and Woodward's response.

[14] H. Bulle, *Untersuchungen an den griechischen Theatern* (Abhandlungen der bayerischen Akademie der Wissenschaften, Phil.-Hist. Klasse, Band 33; Munich 1928), 97–110, esp. 108 ff.

[15] *BSA* 28 (1926–7), 6–15.

[16] H. Bulle, *Das Theater zu Sparta* (Munich, 1937), esp. 5–37 for the pre-Flavian theatre.

[17] Ibid. pl.3, cf. pl. 4 *c*.

[18] The dimensions given are average thicknesses. The heavier blocks vary between 0.47 and 0.50 m, and the lighter blocks of the north line between 0.26 and 0.31 m. Cf. ibid. 7. The variations in block thickness result from irregularities in the surface levels of the underlying poros foundations.

[19] C. Buckler, 'The myth of the movable skenai', *AJA* 90 (1986), 431–6.

[20] Ibid. 436.

and not *in situ* (see above), whereas the fragmentary grooved block nearby was *in situ*, and the surface of this was nearly level with those of the western blocks.[21] One of the main objectives of the excavations of 1997 and 1998 was to reopen Bulle's trial trenches in the west parodos, and to extend them across the full width of the presumed *skanotheke*, in order to test which of the conflicting theories, Bulle's or Buckler's, was likely to be correct.

ST 97 XV, continued as **ST 98 XV** (FIGS. 1–2; PLATE 50 *a–b*), was a single trench measuring overall 15 m north–south and 5 m east–west (505–520/615–620 on the excavation grid), laid out across the line of the west parodos *c.* 18 m west of the front seats of the cavea, at the point where the marble casing of its facade ceases and the line of the wall projects *c.* 3.5 m to the south. Within the north part of the trench lay the east wall of a Roman nymphaeum, explored in the final excavation season (1927) of Woodward's BSA excavations.[22] The trench was deliberately placed to include the entire area of Bulle's 1935 trench within Woodward's 1927 excavation, but was also continued far enough to the south not only to pick up any remains on the southerly line (CC–CC) but also to locate any defining wall of the west parodos area on the south in line with the back of the stage building. The result was a trench containing two different levels of excavation: in the north part lay the remains of the nymphaeum and the footings of the cavea retaining wall first revealed by Woodward; in the south was an area of unexcavated ground *c.* 2.5 m higher, containing some well-preserved medieval structures above the robbing and demolition levels of the nymphaeum and its associated structures. For reasons of safety, and to provide barrow runs, the sides of the trench were stepped in, reducing the width from 5 m at the top to about 3.5 m at the bottom.

The remains found during 1997 and 1998 have been assigned to five periods.

PERIOD I (LATE HELLENISTIC-EARLY ROMAN)

(i) At the north end of the trench four courses of marble facing blocks of the theatre's retaining wall remained intact (PLATE 51 *a*). Topmost of these was the great torus moulding (0.50 m high), which formed a mitred joint at the angle of the southward projection of the cavea wall which extends for 2.10 m. On the east face of this projection three further marble courses (and a dislodged block from a fourth) remained in place above the torus moulding. To the west of the projection the marble casing ceased and the theatre retaining wall was faced with blocks of rusticated poros limestone surviving to a height of ten courses. Below the marble torus moulding were three smaller stepped courses, with well-finished surfaces and chamfered upper angles, that diminish in height from top to bottom (0.29, 0.25 and 0.23 m), resting upon footings of roughly dressed, fitted poros blocks.

(ii) Parallel with the theatre wall and lying against its southerly projection were the lowest courses and poros footings of a mortared wall (1.03 m thick, and 0.44 m high) which continued east beyond the limit of the trench and to the west beneath the foundations of the nymphaeum (PLATES 51 *b*–52 *a*). Its rubble core was faced with courses of irregular but closely fitted blocks of poros with mortar pointing. One block from the south face which survived within the foundations of the nymphaeum appeared to have been of marble. There is little doubt that this wall formed part of the north wall of the *skanotheke* (see below).

(iii) At a distance of only 0.15 m south of the wall (ii above), three channelled blocks of conglomerate stone (0.29 m high) belonging to the north line (C–C on the plan of Woodward's

[21] The eastern grooved block is numbered 4 by Weyhe in Bulle (n. 16), pl. 3 (here FIG. 3), and Buckler (n. 19), 435. Its surface is just 14 mm lower than that of the grooved blocks at the west end of C–C, situated nearly 48 m distant.

[22] See above, n. 15.

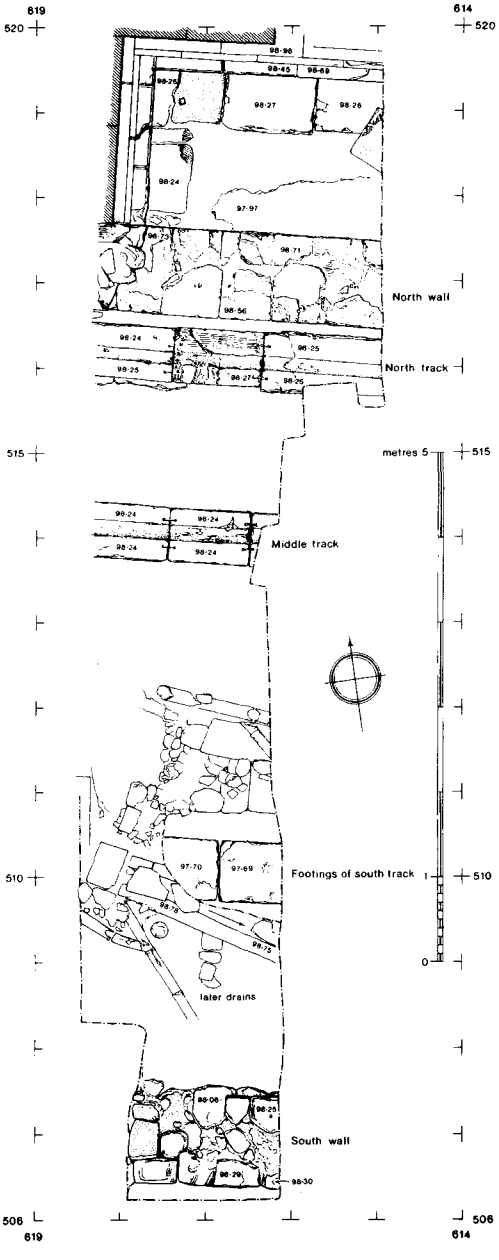

FIG. 2 Plan of trench ST 97/98 XV.

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excavation) were revealed *in situ*, two of which had been partly revealed in Bulle's 1935 trench (see above) (PLATE 52 *b*). They rested upon a single course of poros blocks and were closely fitted and clamped (traces of lead settings and fragments of the iron clamps in some of the cuttings had survived later robbing). The middle of the three blocks had at some time been caused to fracture and one piece had risen by *c.* 0.01 m above that of the precisely levelled adjacent surfaces. That this had occurred during the time that the channelled blocks were still in use is indicated by the scoring in the otherwise smooth upper surface on either side of the channel. In all three blocks the U-shaped channel (0.14 m wide and 0.065 m deep) showed signs of uneven wear, as if the flange of the wheel or roller that ran in the channel did not fit snugly into the groove, having a shallower but wider profile which caused deep scoring along the curved sides of the channel.

(iv) Around 2 m to the south of this north line three channelled blocks of conglomerate stone of the middle line first located by Bulle in 1935 (designated by him CCC–CCC) were revealed *in situ* resting on a single course of poros blocks (the 'gauge' between the centre-line of the channels was 2.06 m) (PLATE 53 *a*).[23] These blocks were of the heavier variety (0.50 m high compared with the 0.29 m blocks used in the north line, though levelled precisely with the latter), and had been closely fitted and clamped in identical fashion. Traces of scoring and uneven wear in the channels similar to those noted in the north line were also present. Both the north and middle lines continued west into the footings of the nymphaeum and east into the side of the trench.

(v) Some 3.30 m to the south of the middle line two poros bedding blocks of the south line (CC–CC on the plan of Woodward's excavation) were located *in situ* (PLATE 53 *b*), set at a level which confirms that this line also consisted of the heavier blocks (within the area of the stage building the level of the surviving poros bedding blocks of the south line are set consistently *c.* 0.20 m lower than the smaller number which survive of the north line). Since no blocks of conglomerate have been located *in situ* at any point along this south line, it remains unconfirmed that the third line also had channelled surfaces, although this remains the likeliest possibility. Bulle had speculated that the blocks on this south line had no channel but simply provided a bed for heavy rollers, citing as evidence several conglomerate blocks of the heavier category reused in the rear wall of the Roman stage building, whose unchannelled upper surfaces have apparently been worn smooth by rollers.[24] This suggestion was dismissed by Buckler on practical grounds.[25]

(vi) A further 2.37 m south of the bedding blocks of the south line were located the much robbed remains of an east–west wall of mortared poros (1.06 m thick) (PLATE 54 *a*). This appears to match in character that alongside the theatre wall north of the north line of channelled blocks (ii above) and is likely to have been the south wall of a structure (9 m wide), presumably the scenery store (*skanotheke*) designed to house whatever structure ran on the three lines of blocks between the front of the orchestra and the area of the west parodos (see below).

All the remains described above can be associated with the first stage arrangements of Sparta's theatre. In the course of the excavation of this trench there were also identified three phases of later Roman occupation and at least one medieval phase.

PERIOD II (EARLY–MIDDLE ROMAN IMPERIAL)

(vii) Most probably around the time of the construction of the Roman stage building, dated by a dedicatory architrave inscription to AD 78,[26] the area of the west parodos occupied by the

[23] Only the most westerly of the three blocks had been uncovered and recorded by Bulle (n. 16), pl. 4c.

[24] Bulle (n. 16), 7, 10, 12.

[25] Buckler (n. 19), 435–6.

[26] *IG* v 1, 691. Woodward, *BSA* 30 (1928–30), 201–2, 209; Bulle (n. 16), 38–9; Waywell, Wilkes, and Walker (n. 11), fig. 9.26.

channelled blocks was built over with walls of mud brick (0.60 m thick) faced with white mortar and set on foundations of small boulders bonded in clay. It seems that the north and south walls of the scenery store were not dismantled in this phase and that the new structures would have formed subdivisions in the reuse of the existing structure. Occupation evidence associated with this phase was found in several areas and, based on a provisional inspection of the pottery, a dating to the early–middle Roman imperial period (late first to second centuries AD) is suggested. A stack of three moulded square marble bases (with sides of *c.* 0.5 m), placed closed to the line of the north trackway within the building, may also have belonged to this phase, if not to that which follows (PLATE 54 *b*).

PERIOD III (MID-ROMAN IMPERIAL)

(viii) The basin of a Roman nymphaeum (measuring externally 15.1 by 5.1 m, internally 13.2 by 2.2 m, inclusive of the apses at either end), discovered by Woodward in 1927, still occupied most of the excavated area of the west parodos (PLATES 50 *b*, 51 *a* and 55 *a*).[27] The pool, probably fed by a branch of the Roman aqueduct which terminated on the summit of the acropolis behind the theatre, appears more likely to have been an amenity for visitors to festivals and theatrical events than to have formed part of a private residence. The material of the walls, once rendered with thick layers of plaster inside and out but cased in marble along the south front, consisted of fired bricks stamped with the names of several contractors and the eponymous magistrate Kallikrates dating from the late first century BC with also, on many examples, the word ΣΚΑΝΟΘΗΚΑΣ, indicating that they had been manufactured for construction of the scenery store in the west parodos.[28] The date of the nymphaeum's construction remains uncertain. In general form and appearance it seems to belong to the large number of Roman buildings erected in Greece during the middle and later decades of the second century AD, and for this reason we are hesitant to accept Woodward's dating of it to after *c.* AD 250 which was based on the evidence of an inscribed statue base of the early third century being used as a support for one of the five stone basins placed in a row along the outside of the south wall of the nymphaeum.[29] There is no indication that the placing of these basins was part of the original scheme, while a date of construction around the middle of the second century would fit better with the large-scale reuse of bricks, already more than a century old.

Within the area of the trench to the east of the nymphaeum, several cylindrical water pipes of interlocking terracotta sections sealed together with fine white mortar may have borne away all or part of the overflow, although conceivably some of the pipes could have been associated with the earlier occupation phase represented by the mud-brick walls (vii above). A covered drain, rectangular in section, constructed of mortared bricks, leading from an outlet in the north-east corner and running along the east side of the nymphaeum, already recorded by Woodward,[30] was again revealed but in a sadly damaged state. This was found to flow into a larger drain of similar construction which evidently ran along the south front of the nymphaeum, after which it turned to a more ESE line, presumably in order to head around the back of the stage building.

Construction of the nymphaeum appears to have involved clearance of building material from existing structures in the area of the west parodos, except where earlier remains could be incorporated within the new building. Thus the north wall of the scenery store (ii above) was

[27] Above, n. 15.

[28] H. Tillyard, *BSA* 13 (1906–7), 191–6; Woodward, *BSA* 30 (1928–30), 226–31. For a late 1st-c. BC dating for Kallikrates, see G. Steinhauer, *BSA* 93 (1998), 429.

[29] *BSA* 28 (1926–7), 8–9, 12.

[30] Ibid. pl. 3.

stripped away down to two courses above foundation level and then, along with the north and middle lines of channelled blocks, was simply buried within the foundation make-up. On the other hand, the conglomerate blocks of the south line were completely removed, if this had not already happened earlier for use in the construction of the Roman stage building. The same was also the case with the south wall of the scenery store, whose robbing trench down to the foundations was clearly visible in the section cutting down through the burnt layers and level of mud brick that represent the destruction debris of period II (vii above).

PERIOD IV (LATE ROMAN)

(ix) The end of Roman occupation within the area of the trench was indicated by a layer of building debris from the nymphaeum and from the structures associated with it. The date of this event remains uncertain, but the most likely occasion is the construction of the Late Roman Wall along the west side of the stage building and the cavea which excluded the area of the west parodos from the defended perimeter. This appears to have occurred at or after the end of the fourth century AD, following the presence of Alaric and the Visigoths in Achaia.[31] The rubble debris, which covered most of the area, consisted mainly of bricks and mortar with no usable stone. Among the bricks were many stamped examples manufactured in the first century BC for the scenery store and then reused in the nymphaeum.

PERIOD V (MEDIEVAL)

(x) In the south area of the trench, which lay outside the limits of Woodward's 1927 excavation of the nymphaeum, well-preserved levels and structures were found, dated by quantities of pottery to the period between the eleventh and thirteenth centuries when the town of Lakedaimonia was the dominant settlement of the region until the rise of Mistra (PLATE 55 *b*).[32] These included a paved street at least 3 m wide and the south wall with doorway of a building on the north side of the street, which incorporated a mortared wall that may have been of Late Roman date. The flagged stone floor of this building included fragments from at least two circular shallow stone basins (*c.* 1.25 m diameter) of the type common in Roman bath-houses and which may have been among the fittings of the nymphaeum.

ST 97/98 XVI (PLATE 56 *a*) was opened in 1997 as a test excavation against the west face of the Late Roman Wall, within the deep trench cut during the 1906 excavation,[33] following the relocation of channelled blocks on the new middle line first identified by Bulle (CCC–CCC). This revealed two of the foundation blocks of poros limestone belonging to this line still *in situ*, and proved that this third line had like the others once extended across the full width of the stage building. The trench was reopened in 1998 for surveying purposes.

ST 97/98 XVII (PLATE 56 *b*) was a second test excavation in 1997 to relocate the two poros blocks of the south line (CC–CC), already recorded on the plan of Woodward, at the point where they emerged from beneath the west side of the Late Roman Wall and continued into the west parodos. This trench was also reopened in 1998 for surveying purposes.

Three trenches opened during the 1998 season in other areas of the west parodos also yielded significant evidence for the theatre's first stage arrangements.

[31] Waywell and Wilkes, *BSA* 89 (1994), 423.
[32] Ibid. 397, 424.
[33] *BSA* 12 (1905–6), 394–406.

ST 98 XVIII (PLATE 57 *a–b*) lay in the north-east corner of the west parodos, close to the front seats of the cavea and up against the outside (west) face of the Late Roman Wall. Here the foundation course of the north wall of the scenery store (*c.* 1 m wide) was revealed continuing the line established on the north side of the main trench (ST 97/98 XV). Just to the south of it, passing under the Late Roman Wall, was a poros block on the line of trackway C–C from which the grooved conglomerate block had here been removed. Close to the Late Roman Wall the foundation of the scenery store wall doubled in width to 2 m through a rectangular projection on the north side (this is recorded on the plan of Woodward's excavation as a terminal buttress or pier and is assigned to the first phase of the stage building along with the blocks on lines C C and CC–CC).[34] It was this feature, taken together with what appeared to be a corresponding feature 9 m to the south (ST 98 XIX, below), that originally led Bulle to the reasonable conclusion that these were the buttressed entrances of the scenery store, into which the stage platform could be rolled sideways out of public view.[35] A significant discovery made through deeper excavation in 1998 against the face of the Late Roman Wall was that the 2 m wide foundation did not after all terminate at this point but actually continued east beneath the line of that wall, at a depth well beneath the bottom of its foundation trench, although no trace of this foundation could be detected on the far (east) side of the wall. This indicates that the robbing of this part of the scenery store took place long before the construction of the Late Roman Wall, most likely when the first Roman stage building was constructed in the late 1st century AD. If this hypothesis is correct, it is possible that this 2 m wide poros foundation once continued across the rear of the orchestra but in front of the line of the moving stage, so providing a suitable plinth for the free-standing Doric colonnade later smashed into small pieces and used in the foundations and walls of the Roman stage-building. A screen of this sort across the front of the stage area can be paralleled in other theatres of the same period, and there seems no reason why such a feature, including balustrades, could not have served to conceal the moving parts of the stage from the gaze of the audience.

ST 98 XIX (PLATE 57 *c*) was located in the south-east corner of the west parodos, where Bulle's search for remains of the south wall of the scenery store to correspond to that on the north (see above ST 98 XVIII) led him to identify the remains of a pier or buttress 9 m to the south, still visible alongside the Late Roman Wall in the bottom of the 1906 trench. These remains, evidently not noted by Woodward or recorded by De Jong, were examined in 1998, as fully as the lie of the land and the presence of later architectural debris permitted, and were found to consist of a southwards projecting pier or buttress similar to that located on the north. The westward continuation of the wall foundation (*c.* 1 m wide) had been robbed of its facing stones but enough remained to confirm its alignment with the section of the same wall footings, believed to be of the *skanotheke*, located in the south of the main trench (ST 97/98 XV). It was indeed this line first postulated by Bulle for the south wall of the scenery store that originally indicated where the wall should be sought in the main trench further west. On his published sketch-plan Bulle identified the feature as the 2 m wide terminal buttress or pier on the south side of the scenery store.[36] Once again deeper excavation in cramped conditions against the face of the Late Roman Wall revealed that, as on the north, the 2 m wide foundation did not stop at this point but continued east under the wall well below the bottom of its foundation trench, and, presumably, across the rear of the stage area of the theatre. Here all trace will have been removed by the 2 m deep foundations of the rear wall of the Roman stage building that was constructed on the same line. If this hypothesis is correct it is likely that this earlier foundation would have served as the base for a screen or plain wall, perhaps in poros limestone rather than in marble, that closed off the area of the movable stage at the rear.

ST 98 XX (PLATES 58–59) consisted of the re-excavation of Bulle's sounding in the north-west corner of the west parodos, together with the clearing and examination of other visible remains in that area first

[34] Above, n. 7.
[35] Bulle (n. 16), 10–11.
[36] Ibid. pl. 3, designated as Sk.2.

uncovered by Woodward's excavations. The re-excavation revealed the final two poros bedding blocks of the north line of channelled blocks (C–C) at the point where it terminated against a massive retaining wall on the west (see below). To the south of the last bedding block, in the angle formed with the west retaining wall, a single section of terracotta well pithos (0.87 m diameter) had been set into the natural gravel within a protective packing of clean yellow clay to a depth where the top of the vessel would have been at the level of the top surface of the channelled blocks (its presence was already noted by Bulle) (PLATES 58 *b* and 59 *a*).[37] There seems no reason to doubt that this was an original feature associated with the tracks of the moving stage, perhaps containing some lubricant, grease, or other material relating to the mechanism of the stage. This unusual find is matched by an even more unusual discovery made by Woodward near the diagonally opposite corner of the stage area close to the east end of the south line. Here a reused Archaic pithos was found set deep into the natural soil in similar fashion and seems likely to have served the same purpose as the find in the north-west corner of the west parodos.[38]

The re-excavation of Bulle's sounding also exposed the lower courses and footings of the south face of the north wall of the scenery store and those of the east face of its west wall. The former (PLATE 59 *b*) consisted of regular coursed blocks of poros but also included a reused block of local marble. The courses, of which six survive to a height of 1.15 m above rough foundations, began some 0.30 m above the surface of the poros bedding blocks, that is around the level of the top surface of the channelled blocks which once rested upon them and will have been the ground level which extended along the entire length of the west parodos and the stage building.[39] Examination of the west wall was particularly instructive (PLATE 58 *b*). This proved to be a retaining wall 1.20 m thick, with a preserved height of 2.68 m (including 0.50 m of foundations), constructed of mortared rubble faced on the west by courses of irregular but closely fitted blocks of poros pointed with mortar (similar in appearance to the north face of the north wall on the east side of the nymphaeum; see ST 97/98 XV (ii) above). This had been set against the rising ground to the west, which here had to be cut away to a depth of more than 3 m in order to accommodate the level tracks of the stage that extended up to this point. As Woodward observed,[40] the foundation level of the retaining wall of the theatre's cavea is more than 3 m higher at the south-west corner than the ancient ground level in the area of the nymphaeum in the west parodos. It is now clear that this change occurred abruptly at the west retaining wall described above. Moreover, this retaining wall is still visible in section rising to its full original height of over 4 m from trackway level, with massive blocks of poros on the east face and an unfaced rubble core set into the rising ground on the west, extending north into the wall of the theatre cavea (PLATE 58 *a*). One remarkable find that may prove significant in future study of the theatre is what appears to be part of a high-backed theatre seat in poros limestone, reused as a facing-block in this wall, and which could conceivably have come from an earlier version of the Sparta theatre. It is also possible that this wall was not only constructed to serve as a retaining wall in the west parodos but was in fact integral with the construction of the entire cavea, since its line appears to coincide with that of the wall which defined the rear of the seating; this was revealed on the east side of the cavea during excavation in 1992–3 (ST92/93 IV) as a mortared construction of poros ashlar 0.90 m wide.[41]

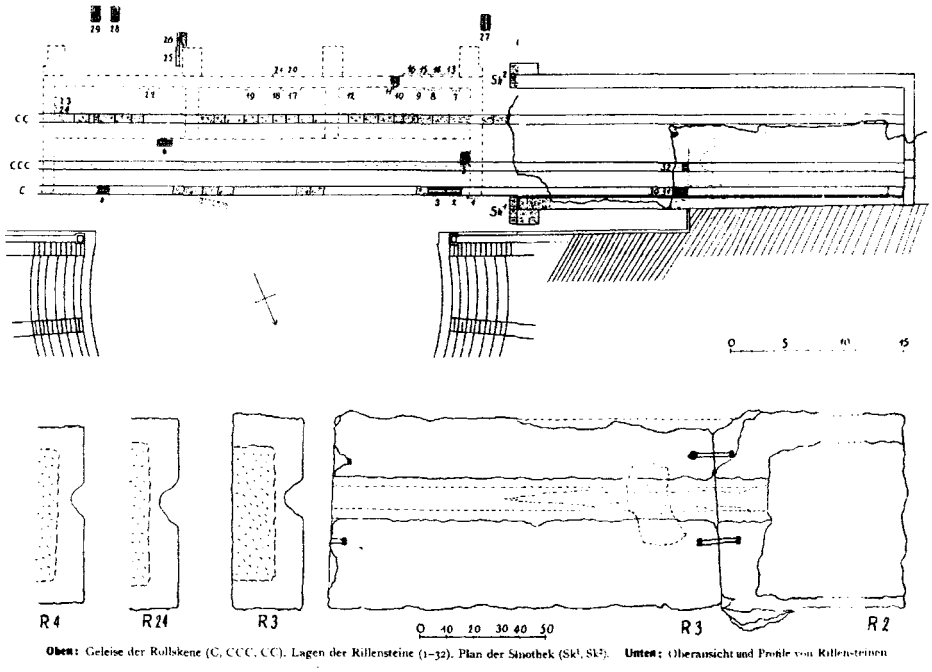
[37] Ibid. 13.

[38] *BSA* 27 (1925–6), 199–200 fig. 7. Bulle, loc. cit. (n. 37) suggests the pithoi may have contained water.

[39] The lowest point of the foundations for the north wall is itself some 5 cm above the surface level of the poros bedding blocks. The heights of the wall courses from bottom to top average out as: 0.20, 0.21, 0.235, 0.235, 0.16, and 0.11. Cf. Bulle (n. 16), 15.

[40] *BSA* 28 (1926–7), 15.

[41] *BSA* 90 (1995), 443. See Bulle (n. 16), 16, who stresses the contemporaneity of the scenery store and the theatre cavea.



Oben: Geleise der Rollskene (C, CCC, CC). Lagen der Rillensteine (1–32). Plan der Sitothek (Sk¹, Sk²). Unten: Oberansicht und Profile von Rillen-steinen

FIG. 3 Restored plan of the channelled blocks and trackways C–C, CC–CC and CCC–CCC within the W parodos and the area of the later stage building, after H. Bulle, *Das Theater zu Sparta* (Munich, 1937), pl. 3.

II THE FIRST STAGE ARRANGEMENTS OF SPARTA'S THEATRE

THE MOVING STAGE (FIGS. 1–3)

The work of 1994–1998 has confirmed beyond reasonable doubt a conclusion that the first stage arrangement of Sparta's theatre incorporated some form of construction which could be drawn sideways out of sight into the west parodos. It is possible that this may be identified as an example of the *scaena ductilis* described in the ancient literary tradition, a suggestion first advanced by Wilhelm Dörpfeld after a visit to the site in 1927.[42]

The remains of three tracks, parallel and horizontal, have been identified running across the area of the stage building, emerging below the Late Roman Wall, and continuing to the west end of the west parodos, for a total distance of *c.* 68 m (roughly twice the length of the phase-two Roman stage building). Each track consisted of a single line of blocks of conglomerate stone, *c.* 0.60 m wide and of variable lengths (ranging between 0.96 and 1.67 m),[43] probably of local origin, which had been closely fitted and clamped, and set upon a single level course of poros limestone bedding blocks, of roughly the same dimensions. The

[42] The term *scaena ductilis* (a 'drawn stage building') perfectly describes the arrangement prescribed by the trackways at Sparta, but it is differently defined by Servius, on Verg. *Georg* iii. 24, as a series of painted scene panels whose layers could be drawn apart to reveal interior views. This is the interpretation followed and discussed by R. C. Beacham, *The Roman Theatre and its Audience* (London, 1995), 169–76.

[43] Cf. Bulle (n. 16), 6–7. Widths vary between 0.58 and 0.745, and lengths mostly fall within 1.25–1.59 m.

north and middle lines are known to have consisted of channelled blocks forming a track with a gauge of 2.06 m. The blocks were laid to an exact level (even today there is a difference in level of barely 0.014 m between a block towards the east end of the stage and the three blocks on the same line located in the west parodos at a distance of *c.* 48 m),[44] and the U-shaped channels were carved once the blocks had been set in place. The channels on the middle line are wider and slightly deeper than those on the north line, just as the blocks themselves are of heavier construction. The surviving evidence for the three lines is here summarized.

(i) The north line (C–C on the plan of Woodward's excavation) is represented by channelled blocks of conglomerate stone (0.26–0.31 m high) still *in situ* at three places: the fragment of a block towards the east end of the stage area on the east side of the east pier of the Roman stage (PLATE 48 *b*) (relocated and recorded in 1995; see above under ST 95 XIV); two entire blocks at the west end of the stage building first located by Woodward (re-examined and recorded in 1995; see ST 95 XIV) (PLATES 48 *a* and 49); and three contiguous blocks in the west parodos, revealed in the excavations of 1997–8 (ST 97/98 XV), of which two were located by Bulle in his 1935 excavation (PLATES 51 *b* and 52). In addition to these, six of the poros bedding-blocks survive in the stage area, as well as the three below the channelled blocks at the west end and one beneath the fragment towards the east end. Four survive in the space between the eastern and central piers of the Roman stage and two between the central and western pier. It should be noted that the three poros blocks on this line at the east end of the stage, indicated on the plan of Woodward's excavation as belonging to this phase, are reused in the mortared wall of a later period, although they appear likely to have been originally bedding blocks for the track line.[45] In 1998 parts of two bedding blocks belonging to this line were located *in situ* in the north-east part of the west parodos (ST 98 XVIII), continuing beneath the foundations of the Late Roman Wall (PLATE 57 *b*). And the two blocks at the west end of the line were revealed in 1998 (ST 98 XX) in the north-west corner of the west parodos running up close to its west wall (PLATES 58–59).

The three blocks in position in ST 97/98 XV, exposed for a length of 3.35 m, provide the most accurate dimensions. The irregular northern edge of the blocks comes between 0.12 and 0.17 m south of the inner face of the *skanotheke* wall, but perhaps more significantly the centre point of the channelled groove (the gauge) is 0.52 m south of the wall face. The channels on these blocks are 0.14 m wide and 0.065 m deep.

(ii) The existence of the middle line was first revealed when Bulle's 1935 trench in the west parodos brought to light one of its channelled blocks still in place (he designated the line CCC–CCC). In 1998 excavation in the same area but on a larger scale revealed three channelled blocks still in place (ST 97/98 XV), forming with the north line a track of 2.06 m gauge (PLATES 51 *b*, 52 *a* and 53 *a*). The blocks of this middle line, exposed now for a length of 2.16 m, were of the heavier type (0.47–0.50 m deep), and had a more substantial

[44] Cf. n. 21.

[45] In their present situation they are too high, by *c.* 0.50 m, to have been bedding for the track blocks, an apparent discrepancy which was cited as significant evidence by C. Buckler in her argument against the existence of a movable stage. See above, p. 442 with n. 21.

channelled groove, with a width of 0.18 m and a depth of 0.07 m. Indication that this middle line had originally extended across the full width of the stage area was obtained in 1997, when two of the poros bedding blocks were located running beneath the foundations of the Late Roman Wall (ST 97 XVI) (PLATE 56 *a*). East of here the middle line was entirely removed by construction of the *scaenae frons* wall of the Roman stage. It is possible that some of the three dozen conglomerate blocks of the heavier type now reused in the rear wall of the Roman stage building could have come from this middle line as well as from the nearer south line.

(iii) The poros bedding blocks of a third line lie 6 m south of those of the north line (measured centre to centre) and were revealed by Woodward (CC–CC on the plan) running across the full width of the stage area, except where they had been removed for the deep foundations of the west wall and the two dividing walls of the three rooms of the Roman stage building (PLATE 47 *a*). Their thickness is 0.50 m, as compared with the lighter 0.35 m thick blocks which supported the north line.[46] Six blocks remain *in situ* in the east room, nine in the central room, and ten in the west room. In the east room a Corinthian column base in the same poros limestone appears to have been reused in the line. At the east end of the west room a bedding block which had been removed in order to dig the foundations of the later wall was left stacked on the adjacent block, which was still in place (ST 95 XII). The westward continuation of this line was also recorded by Woodward on the west side of the Late Roman Wall and confirmed by re-excavation in 1997 (ST 97/98 XVII) (PLATE 56 *b*). In 1998 two more poros bedding blocks of this line were located much further into the west parodos (ST 97/98 XV) (PLATE 53 *b*). Its continuation to the west end of the west parodos was proved by Bulle in 1935 when he located the edge of two poros blocks still *in situ* close to the line of the west wall.

The level of the poros bedding-blocks indicates that track blocks of the heavier type had been set on this line, but whether these were channelled in the same fashion as those of the middle and north lines remains uncertain. The probability is that they were, but the discovery of two otherwise similar conglomerate blocks, but without channels, reused in the south wall of the stage building, led Bulle to suggest that this third line may have supported rollers with a load-bearing but not a guiding function.[47] Most likely the matter will never be resolved, short of excavating the entire area of the west parodos. Even then there would seem to be little chance of finding a track block *in situ* on the south line since, in the areas uncovered, it was more comprehensively stripped away than the middle and north tracks, which were partly preserved in walls of the stage building or, in the area of the west parodos, by the construction of the nymphaeum.

The question as to what precisely was the nature of the moving stage building that was rolled out on these trackways is much more complex, and any answer is bound to be conjectural within the limits of information given by the extent and nature of the tracks.[48] The extension of the grooved blocks and their poros beddings across the full width of the later stage building, and their continuation for at least an equal distance into the west parodos, leads to the startling implication that the moveable stage was of similar dimensions to the permanent *scaena* which replaced it, i.e. *c.* 34 m in length and at least 6.5 m in width

[46] Bulle (n. 16), 8.
[47] See above, nn. 24–5.
[48] Cf. Bulle (n. 16), 18–23.

with a possible maximum of nearly 9 m (the width of the *skanotheke*). This conclusion is reinforced by the way in which the lines of the three tracks determined the main features and walls of the subsequent Roman stage building, the north track supplying the line of the porches, the middle track the *scaenae frons* wall, and the south wall of the *skanotheke* the back wall of the stage building. The second-phase Roman *scaena* was therefore deeper than what it replaced, and had a typically Roman projecting stage that extended further into the orchestra than what had been there before, but the width must have been nearly identical. The variable spacing of the three tracks, and the heavier blocks and larger grooves of the middle and (probably) the south tracks, implies, as Bulle deduced, that the main weight of the moving stage was carried on the middle and south trackways, and that the front north track supported the relatively narrow raised stage of the Greek-style theatre of the late Hellenistic period.[49] The wear on the grooved blocks implies that the contraption moved on rollers some 50 cm thick, with a projecting central flange sufficient to keep the rollers on line by keying into the U-shaped channels, into the sides of which a further indented line was worn by usage.[50] This suggests, therefore, that a full-sized stage building was capable of being moved out, presumably made of wood, and probably constructed in sections, rather than being moved in a single piece.[51] A full-scale *scaena* of this type seems to be required by the size of the theatre auditorium and orchestra that it had to serve. The traditions of such large-scale 'temporary' timber theatrical stages lie in metropolitan Rome, and it would seem most probable that it was from there that the inspiration for the mechanical stage of Eurykles' theatre at Sparta would have derived.[52] It is even possible that the moving stage was a two-storeyed structure, the second storey being constructed after the lower element was wheeled out of the scenery store.[53] That the construction was both sizeable and elaborate, and that it worked, must be supposed from the fact that it was a hundred years before it needed to be replaced.[54] In the light of these conclusions, some further consideration can be given finally to the *skanotheke* and the Doric marble architecture which may have enframed the stage building.

THE SCENERY STORE (*SKANOTHEKE*) (FIG. 1)[55]

When not in use the moving stage platform was accommodated within a structure measuring internally *c.* 34 by *c.* 9 m that occupied most of the west parodos. The stone foundations and lowest courses of the north wall (1.03 m wide) were located in three places, at the north-west corner (ST 98 XX) (PLATES 58–59), around the mid-point (ST 97/98 XV) (PLATE 51), and by

[49] Ibid. 8. 18.

[50] From the evidence of the secondary wear marks, Bulle (ibid. 9) calculated the size of the wheel flanges as 8 cm wide and 4 cm deep.

[51] How the construction moved remains a matter for speculation. Most likely manpower would have sufficed, once initial momentum had been obtained by leverage of some sort, although one might envisage the need for some sort of braking system. Cf. Bulle, ibid. 23, with n. 2.

[52] Vitruvius, *De Architectura*, v. 5. 7. For discussion of wooden theatres, see Beacham (n. 42), 56–85; and ibid. 160–83 for mechanical devices and stage machinery. Bulle (n. 16), 20 suggests influence also from Hellenistic siege engines.

[53] For moving stages of three to four storeys height (*pegmata*), cf. ibid. 180–1, citing Josephus, BJ vii. 139–47, describing the moving stages with remarkable *tableaux vivants* of the sack of Jerusalem which featured in the triumph of Titus in AD 71.

[54] Large-scale moving devices were not uncommon in antiquity both inside and outside the theatre. Of the evidence surveyed by Bulle (n. 16), 68–80, the most interesting non-theatrical comparison for the moving stage at Sparta is the extensive and partly grooved *diolkos* trackway across the isthmus of Corinth, which was capable of moving large ships. See most recently on this, G. Raepsaet, *BCH* 117 (1993), 233–61; and W. Werner, *The International Journal of Nautical Archaeology*, 26.2 (1997), 98–119, with earlier literature.

[55] Bulle (n. 16), 10–18.

the entrance bastion in the north-east (ST 98 XVIII) (PLATE 55). Much less remained of the south wall, which had been robbed of most of its facing stones to foundation level at the two places where it was located around the middle (ST 97/98 XV) (PLATE 54 *a*) and at the south-east corner (ST 98 XIX) (PLATE 57 *c*), but enough was discovered to indicate that it was of similar dimensions and construction to the north wall (width of foundations 1.06 m in ST 97/98 XV). When first identified by Bulle, the remains of the scenery store at the north-east and south-east corners appeared to terminate in buttresses or piers 2 m wide. Fresh investigations in both locations in 1998 confirmed this conclusion, but also suggested that this doubling in width may have marked the beginning of 2 m-wide foundations that continued across the width of the stage area in front of and behind the three lines of tracks laid for the moving stage. This discovery has implications for the location of the Doric colonnade which was also associated with the first stage of the theatre and which is discussed in the following section.

The west wall of the scenery store partially survives in the massive retaining wall (1.20 m thick) set into the rising ground at the end of the lower part of the west parodos (ST 98 XX) (PLATE 58). Its continuation into the retaining wall of the theatre's cavea indicates that it is structurally earlier than the latter, while it is possible that the north wall may also have been constructed shortly before the completion of the marble facing of the theatre wall, which ceased at the point where it met the north wall. The discovery that the construction of the scenery store preceded that of the cavea, if only by a short space of time, offers an explanation for some puzzling features in the face of the poros retaining wall noted by Woodward at the time of the nymphaeum excavation in 1927. He observed three vertical cuttings into the face of the wall, up to 0.85 m in depth, and ranging in width between 0.85 m at the east, 1.10 m in the middle, and 1.25 m at the west, but could offer no explanation.[56] That on the west now proves to be a cavity caused by the extraction of blocks belonging to the west wall of the scenery store which was incorporated into the cavea wall (PLATE 58 *a*). The middle and east slots (PLATE 60), which are set *c.* 8.5 m apart (on centres) with the east close to the corner of the projection of the cavea wall, are in fact not 'cuttings' into the courses of poros but rather voids left by the demolition of features that were built round at the time of construction of the cavea wall, most probably two external buttresses of the north wall of the scenery store. The fired bricks that now fill the lower parts of these slots will have been placed there to level the now-exposed surface of the cavea wall at the time of the construction of the nymphaeum (ST 97/98 XV (iii)). That they, along with the large quantities of similar bricks used in the nymphaeum itself, came from the superstructure of the scenery store or *skanotheke*, is suggested by the fact that many of them are stamped with that name, indicating the purpose of their original manufacture. At what point the stone lower courses of the *skanotheke* wall gave way to brick remains uncertain, as does the original height of the walls from which a (presumably) pitched, tiled roof sprang. But from the large volume of bricks surviving in the nymphaeum, much of the structure of the scenery store was probably of that material, and the considerable thickness of the walls at the base implies a substantial height, perhaps up to the 9 m estimated by Bulle.[57] The use of such high-quality fired brick in late Hellenistic Euryklean Sparta is

[56] *BSA* 28 (1926–7), 11, pl. 3; cf. Bulle (n. 16), 16, who gives the depths from east to west as: 0.80, 0.85, and 0.20–0.40 m. He also notes that the tops of the east and central slots come *c.* 4 m and 4.3 m above the ground-level of the nymphaeum.

[57] Bulle (n. 16), 17.

noteworthy, implying a need for fire-proofing and damp-proofing, which further suggests the movable stage contained within was largely of timber construction.

THE DORIC COLONNADE (PLATE 61)

Ever since the presence of many broken architectural fragments was first observed by Woodward reused in the foundations and fabric of the Roman stage building, it had been known that some form of colonnaded structure in the Doric order formed an element in the first stage structure of the theatre.[58] In 1994–5 a full record of these fragments was completed, including those that were visible reused in the walls of the second phase Roman stage building and many that were revealed by limited excavation of the footings of those walls in the stage area (ST 95 XII–XIV) (PLATE 47).[59] Scale-drawings have confirmed that that they belonged to a colonnaded Doric structure in marble similar to, but slightly larger than, the colonnade that has been shown to have been placed around the top of the upper cavea.[60]

Fragments have been identified of almost all the elements of a Doric order elegantly carved in the local Laconian marble. Several fragments of lower columns (numbered, in the architectural register of the current series of excavations, A678, A683) have a lower diameter of *c.* 0.64–0.65 m, which allows for an order of 5.50 m in height overall, following Vitruvian proportions (PLATES 47 *b* and 61 *a*).[61] Other significant fragments included a capital with its necking-rings, echinus, and abacus (A704) (PLATE 61 *b*), architrave blocks (A790, A791, A722), a triglyph (A767), and plain metopes (A804 and A805). It is noteworthy, and of some importance for the interpretation of the original form of the structure, that there were two different varieties of cornice and sima. One is of the regular Doric type, with a downward canted soffit decorated with mutules and guttae (A799, A800, A806, A793, A796, A802), the other has a more ornate Corinthianizing sima decorated with acanthus tendrils and leaves (A693, A786, A797, A679, A798). The latter can be compared with simas of the Augustan Temple E and the Tiberian Temple F at Corinth, which adds confirmatory evidence for the association of this Doric structure with the original stage arrangements of the Sparta theatre.[62] The reason for the existence of two simas could be that there were two storeys to the structure, or perhaps that it was double-sided, facing inwards and outwards from the theatre. Possible confirmatory evidence for two storeys may be provided by some fragments of smaller Doric shafts that could have belonged to an order on which the Corinthianizing sima rested. The roof-line was decorated with marble palmette antefixes, a fine example of which (A785) was found built into the foundations of the west wall of the later stage building.

The Doric order, as reconstructed, is too massive in all respects to have been set upon any of the three lines of poros blocks now identified as having supported conglomerate blocks of the tracks for the moving stage. It is certainly possible that such a structure could have rested upon either of the 2 m wide poros foundations which represent continuations of the lines of the north and south walls of the scenery store, if, as suspected from evidence on both lines (ST 98 XVIII and XIX), these continued across the width of the stage area. It could well be that a permanent Doric marble colonnade fronted the movable stage platform, so giving an

[58] *BSA* 30 (1928–30), 159.
[59] Waywell, Wilkes and Walker (n. 1).
[60] Ibid.; cf. Waywell and Wilkes, *BSA* 90 (1995), 443.
[61] Vitruvius, *De Architectura*, iv. 3 for the Doric order, citing a ratio of 7 lower diameters for the column height, and *c.* 8.5 lower diameters for the order to cornice-level.
[62] R. L. Scranton, *Corinth*, i. 3 (1951), 61–2, 66, fig. 43.

appearance similar to that of the Doric-supported stages of several Hellenistic theatres,[63] and there may have been a similar structure with elements of a Doric order enclosing the stage area from the rear. Some elements of this architecture may have been executed in poros limestone, for several Doric fragments in this material have been recorded as reused in the walls of the later stage building.

Our excavations and study since 1995, presented here in preliminary form, have confirmed the previously held view that, in its stage arrangements just as in its orchestra and auditorium, the original design of the Sparta theatre was Late Hellenistic Greek rather than Roman. It may indeed have been a conscious evocation of the Classical type of Greek theatre, drawing many aspects of its layout from the fourth-century BC theatre at Megalopolis,[64] but at the same time it employed the latest technology and machinery (as manifest in the moving stage), and placed deliberate emphasis on the Dorian heritage of Sparta under the regime of its native dynast C. Julius Eurykles.[65]

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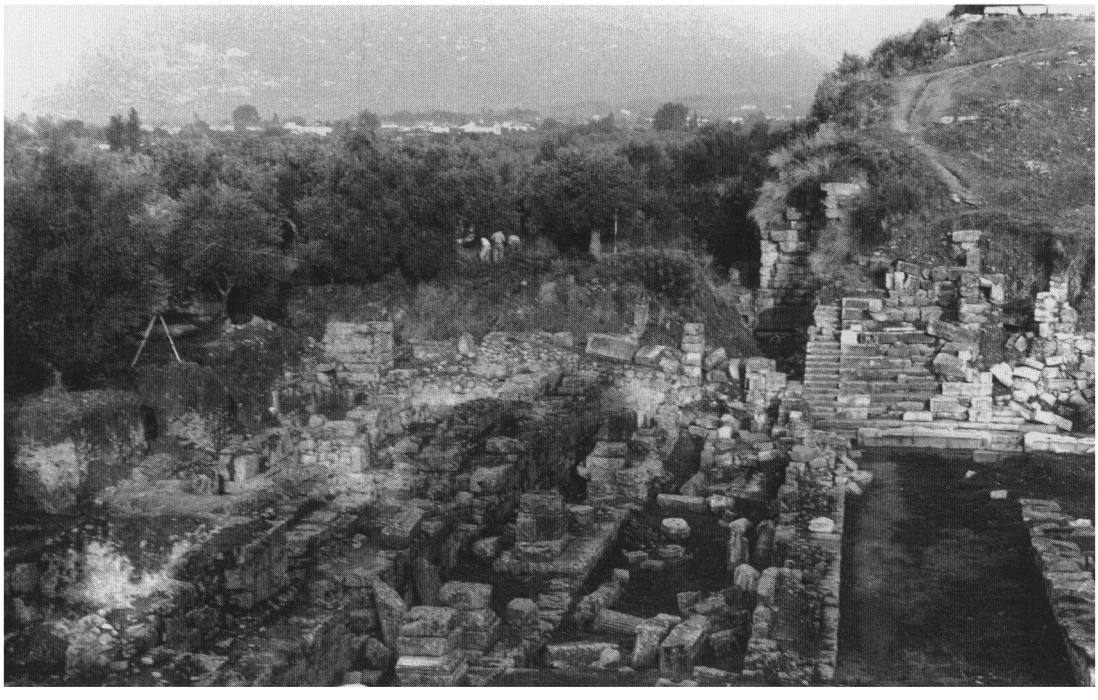
Institute of Archaeology, University College London J. J. WILKES

[63] M. Bieber, *The History of the Greek and Roman Theater* (Princeton, 1961), 108–28; the use of the Doric order to support the stage frontage is noteworthy also at Aphrodisias theatre, which is roughly contemporary with the first phase of Sparta theatre.

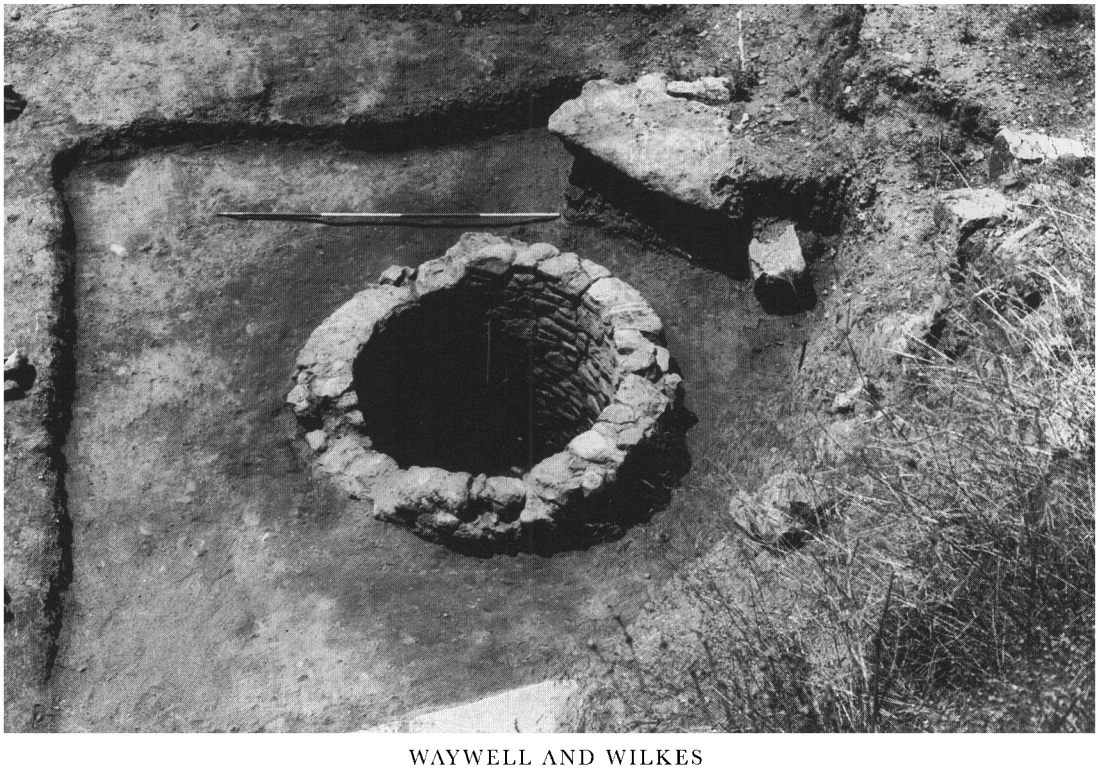
[64] E. A. Gardner and W. Loring, *Excavations at Megalopolis 1890–1891* (London, 1892), 23–50, 69–100; E. Fiechter, *Das Theater in Megalopolis* (Stuttgart, 1931); H. Bulle (n. 16), 23–27; C. Buckler (n. 19), 431–3.

[65] P. Cartledge and A. Spawforth, *Hellenistic and Roman Sparta: A Tale of Two Cities* (London, 1989), 97–104.

(*a*)



(*b*)



WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998
(*a*) Sparta theatre. General view looking W of the remains of the second-phase Roman stage-building and the projecting stage wall. (*b*) Medieval well in trench ST 95 XI, looking S.

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(*a*)

WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995 1998

(*a*) Trench ST 95 XII, showing the W face of the dividing wall between the W and central rooms of the second-phase Roman stage building, with earlier broken Doric architecture reused in the foundations. (*b*) Trench ST 95 XIII, showing broken Doric column drums reused in the footings of the N face of the *scaenae frons* wall.

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(*a*)

(*b*)

WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998

(*a*) Trench ST 95 XIV to the north-west of the *scaenae frons* wall, showing reused architectural fragments in the footings of the W wall (above), and to the right (N) two channelled blocks in position on their poros foundation blocks (line C–C). (*b*) Fragment of a channelled block from the N line (C–C) in position to the E of the E porch of the stage building, looking to NW. To the right is one of a series of three reused poros foundation blocks relaid on concrete foundations.

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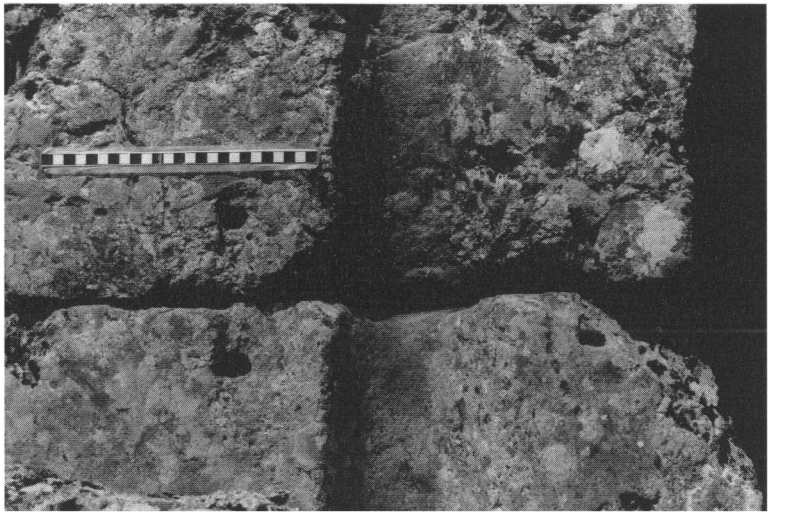
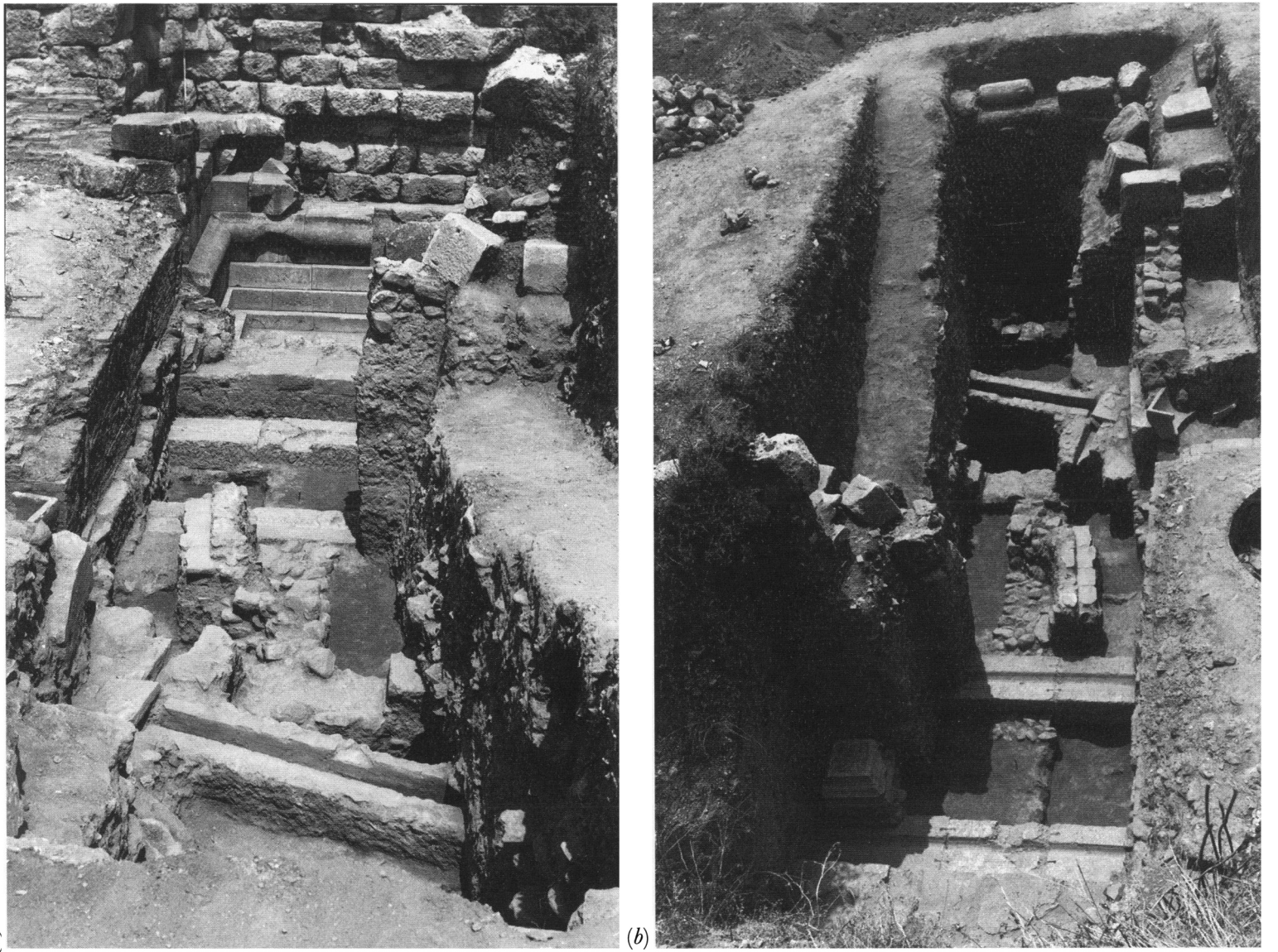
(*a*)



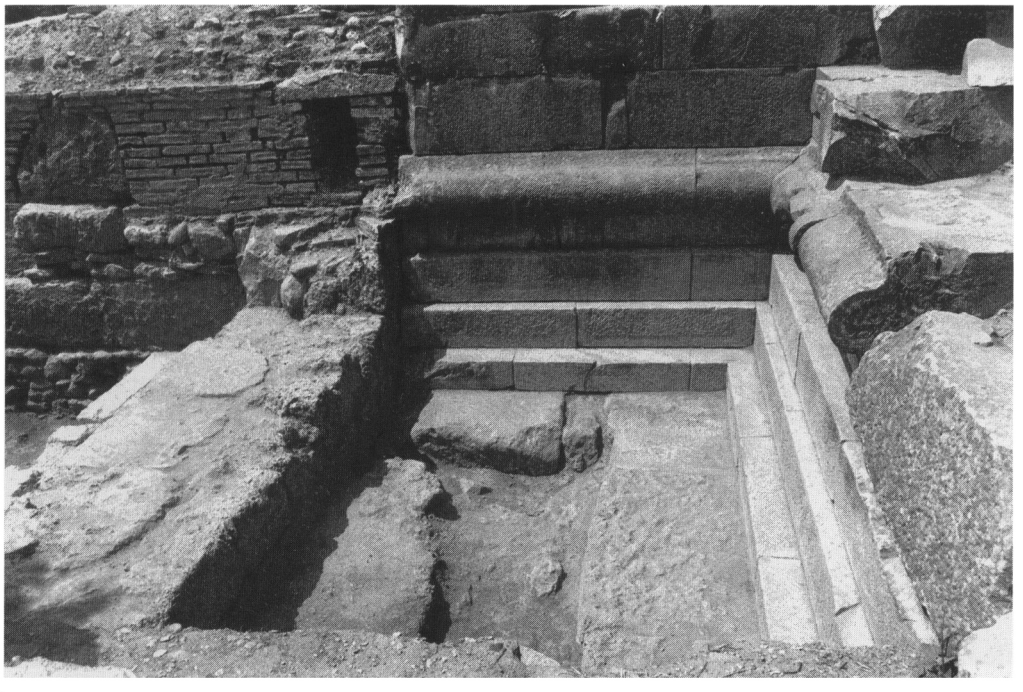
(*b*)

WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998
(*a*) Detail of channelled blocks shown in PLATE 48 (*a*). (*b*) Detail of aligned clamp cuttings in channelled blocks shown in PLATE 48 (*a*).



WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998
(*b*) General view of trench ST 97/98 XV, looking N. (*b*) General view of trench ST 97/98 XV, looking S.

(*a*)



(*b*)

EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998

(*a*) View of N end of trench ST 97/98 XV looking W, showing marble courses of facing of cavea wall and its southward projection, abutting on the N wall of the *skanotheke* (left) and the brick-built nymphaeum constructed over it. (*b*) Trench ST 97/98 XV, looking E, showing the N *skanotheke* wall (left), the N channelled track (C–C) and the central channelled track (CCC–CCC)

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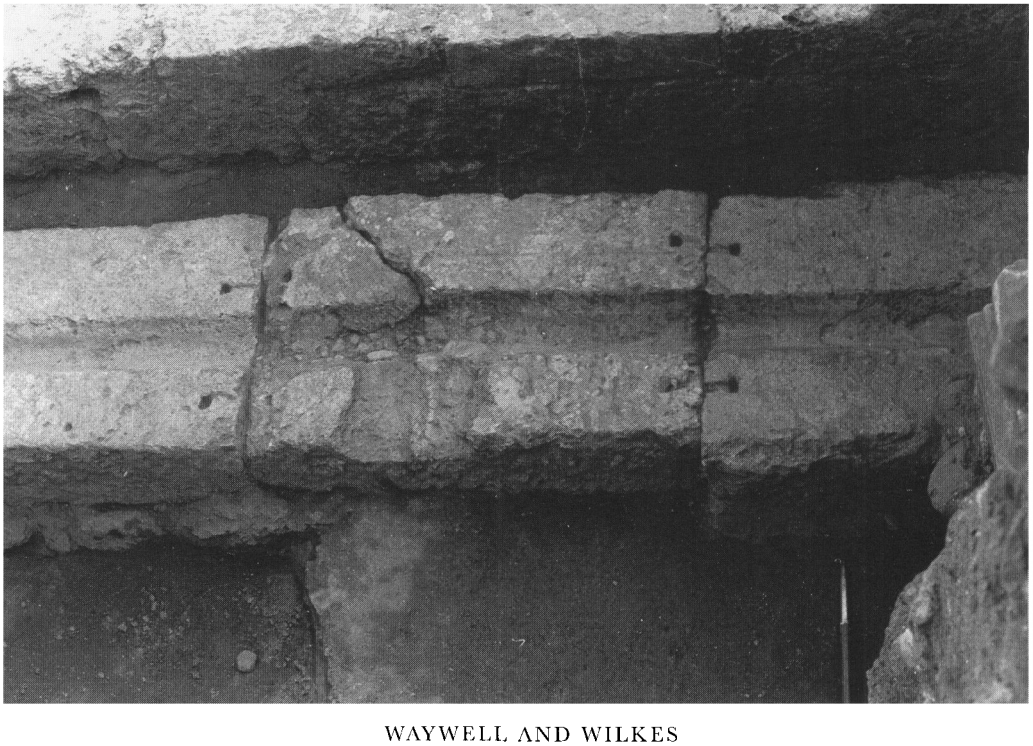
(*a*)

(*b*)



WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998
(*a*) Trench ST 97/98 XV, looking N towards central and N channelled tracks. (*b*) The N channelled track in ST 97/98 XV, looking N.

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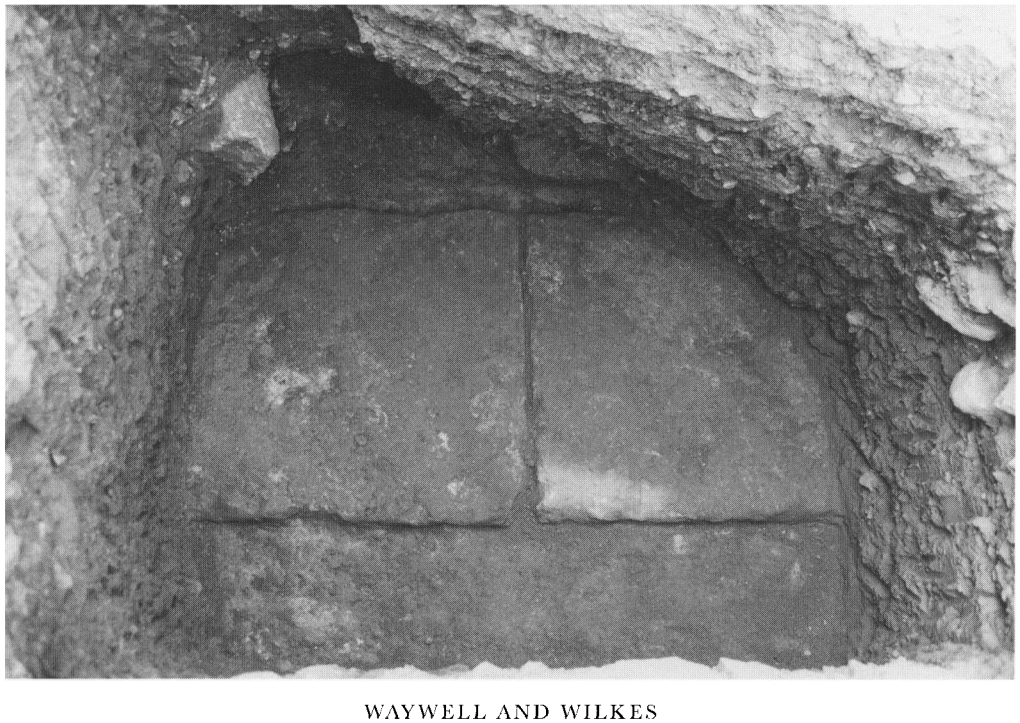
(*a*)

(*b*)



WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998
(*a*) Trench ST 97/98 XV, looking S, with three channelled blocks of the central track (CCC–CCC) in position. (*b*) Trench ST 97/98 XV, looking S, with two poros bedding blocks for the S trackway (CC CC) in place.

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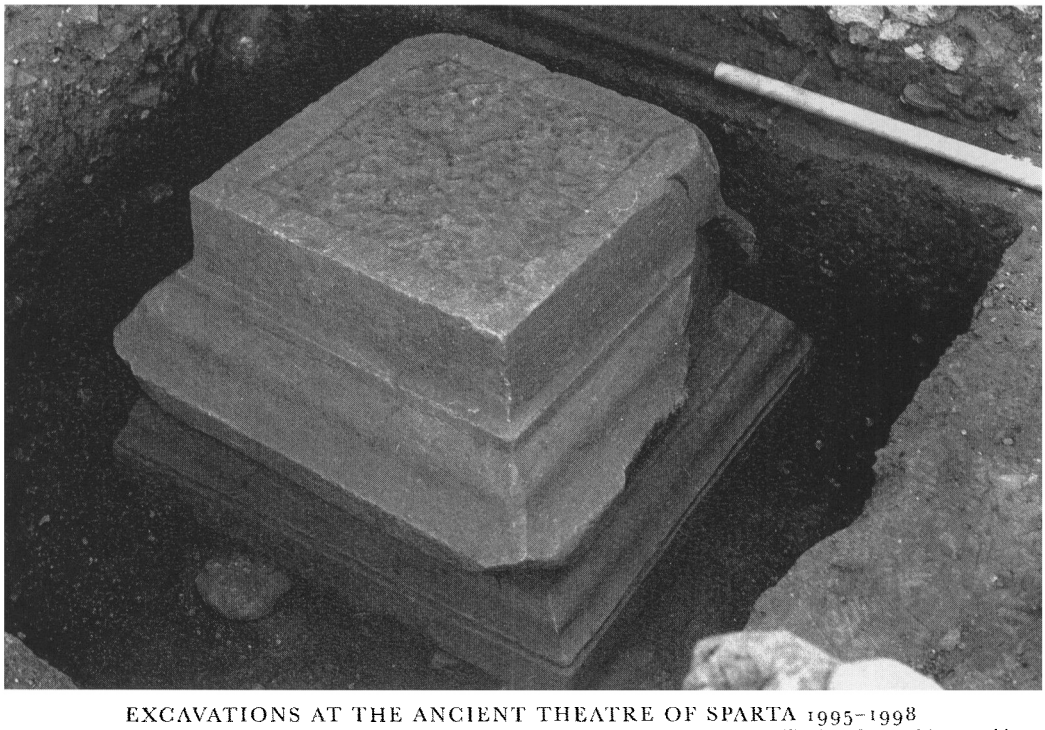
(*a*)

(*b*)



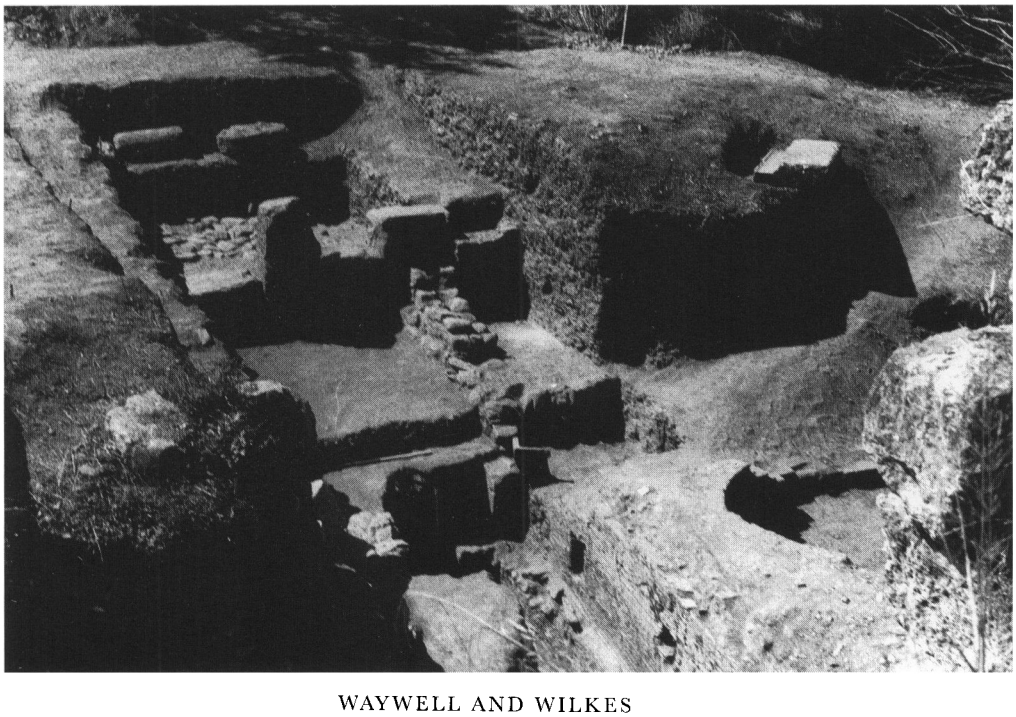
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998

(*a*) S end of trench ST 97/98 XV, looking S, with footings of S wall of *skanotheke* in position. (*b*) Moulded architectural bases stacked above line of N track (C–C) in trench ST 97/98 XV.

https://doi.org/10.1017/S0068245400000678 Published online by Cambridge University Press

(*a*)

(*b*)



WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998
(*a*) Partial view of trench ST 97/98 XV, looking S, showing nymphaeum (right) and the remains of its drainage system.
(*b*) Medieval levels at S end of trench ST 97/98 XV.

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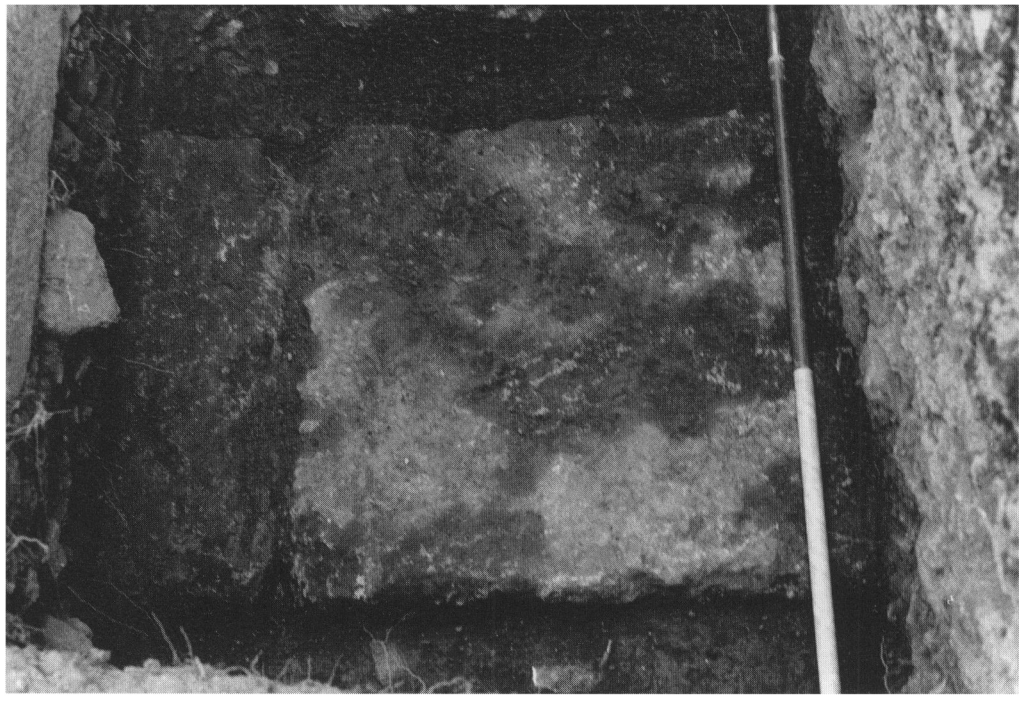
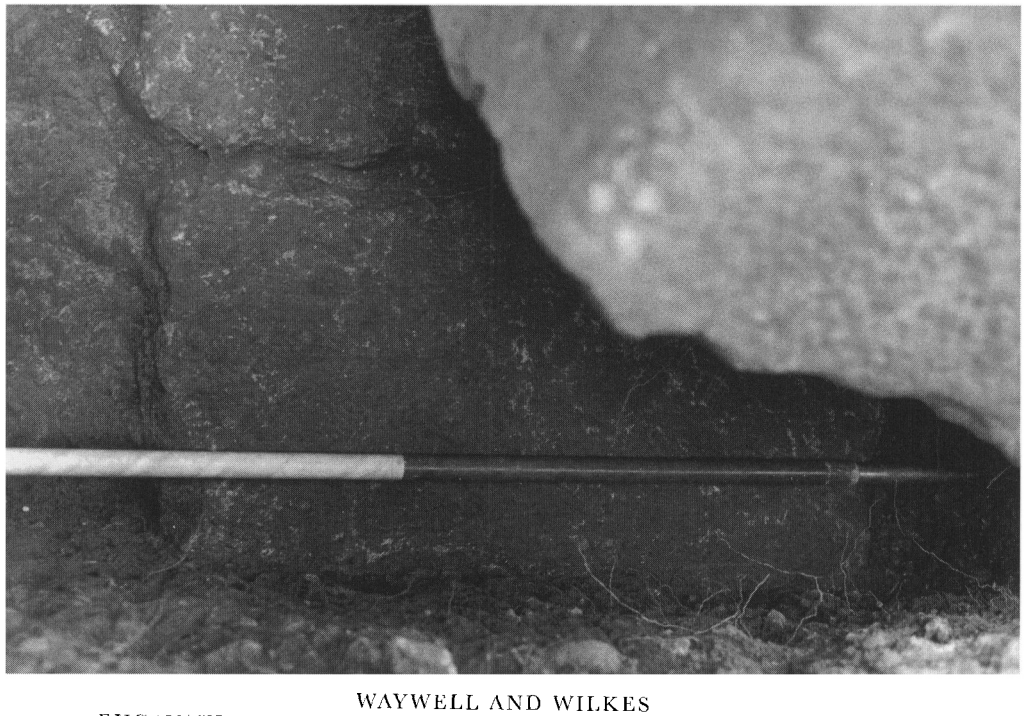
(*a*)



(*b*)



WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998

(*a*) Trench ST 97/98 XVI, showing poros foundation blocks for central line of trackway (CCC–CCC) emerging from beneath Late Roman Wall (right). (*b*) Trench ST 97/98 XVII, showing two poros foundation blocks of trackway CC–CC emerging from beneath W face of Late Roman Wall (below).

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(*a*)

(*b*)

(*c*)

WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998

(*a*) Trench ST 98 XVIII, looking S, with buttress end of N *skanotheke* wall. (*b*) Trench ST 98 XVIII, looking N, showing buttress end of N *skanotheke* wall, and the continuation of its foundations eastwards below the Late Roman Wall (right). In the foreground is a poros bedding block of the N trackway (C C) in position. (*c*) Trench ST 98 XIX, looking W from Late Roman Wall, with remains of buttress end of S *skanotheke* wall, and its eastward continuing foundations, overlain by later architectural debris.

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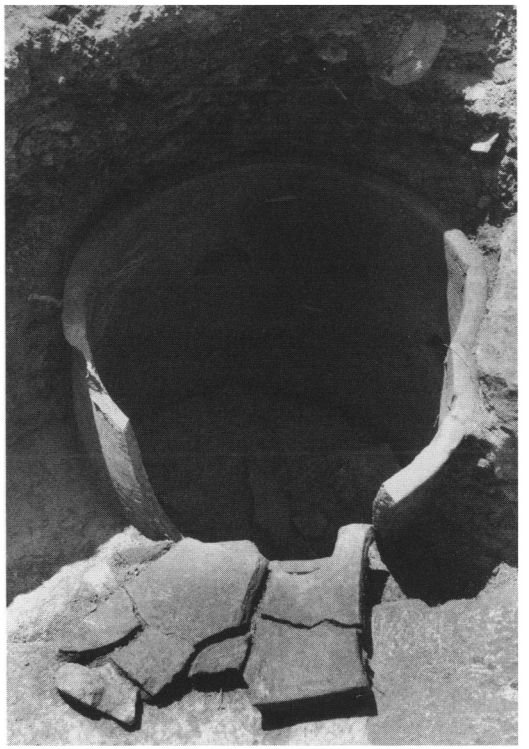
(a)

(b)

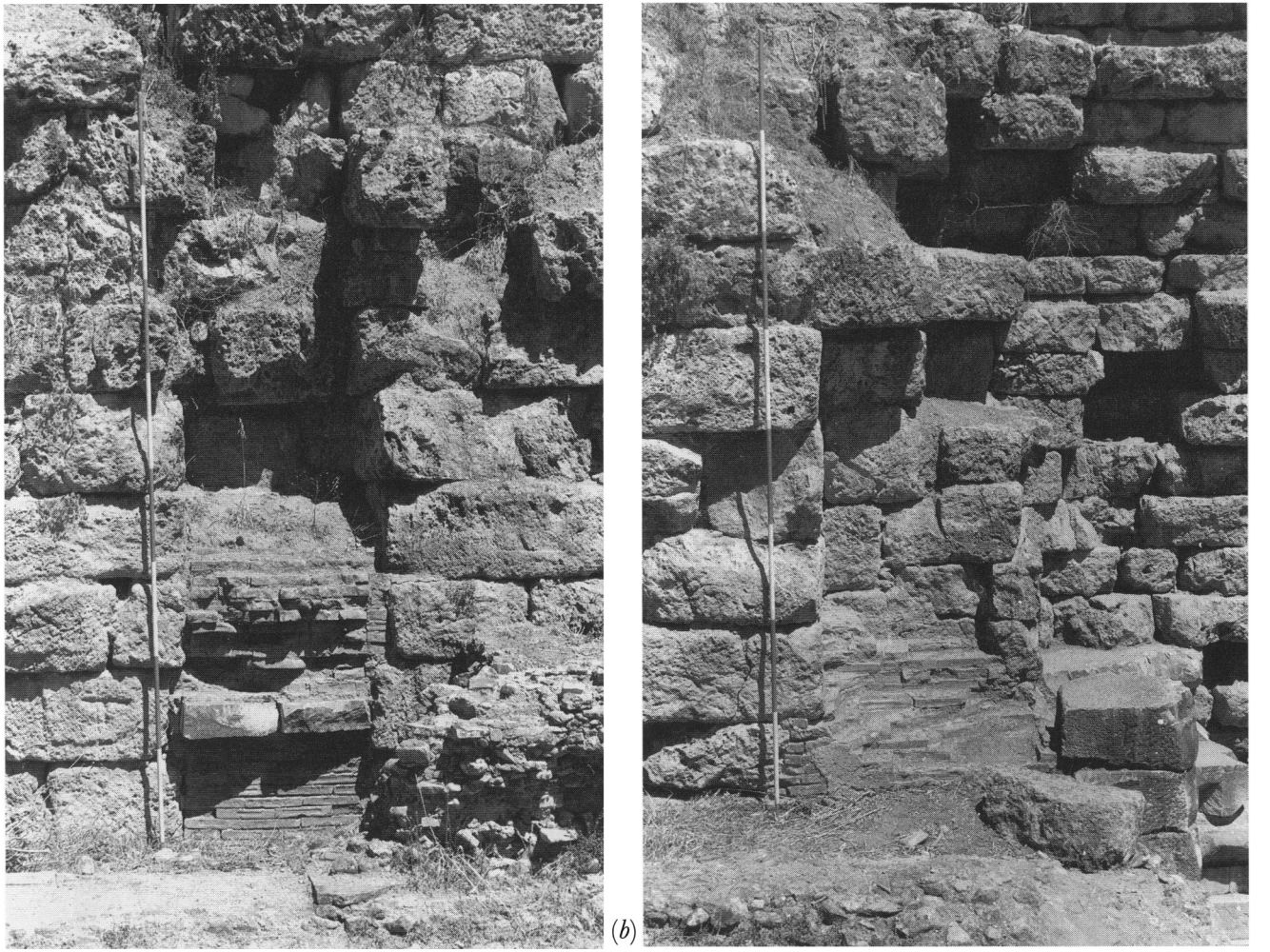
WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998

(*a*) Trench ST 98 XX, looking NNW, with remains of NW angle of *skanotheke* walls, and retaining wall of W cavea with holes where the upper courses of the W wall of the *skanotheke* were incorporated. (*b*) Trench ST 98 XX, looking W to remains of W wall of *skanotheke*, the last poros foundation block of the N trackway (C–C), and the terracotta pithos to the S of it.



WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998
(*a*) Detail of terracotta well-pithos in position to S of line C–C in trench ST 98 XX. (*b*) Trench ST 98 XX, with detail of N wall of *skanotheke* at angle with W wall, and poros foundation block of N trackway (C–C) in position.

PLATE 59

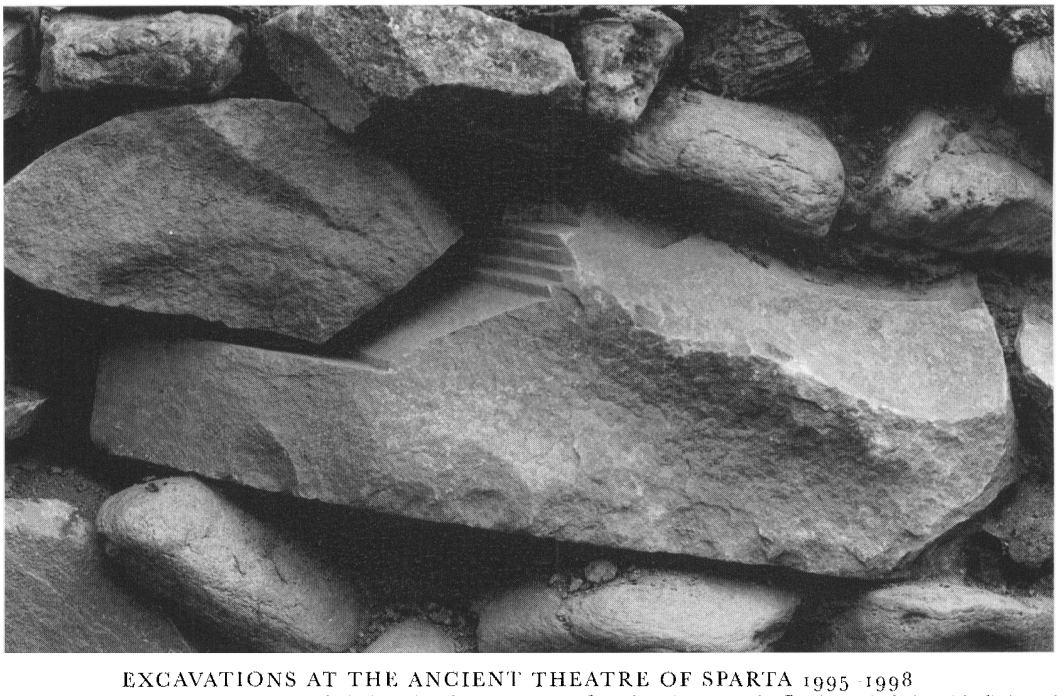


WAYWELL AND WILKES
EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998

(*a*) W retaining wall of cavea with central cavity, perhaps for buttress of *skanotheke*, later partly filled with bricks reused in nymphaeum. (*b*) W retaining wall of cavea at point where its S projection abuts on the nymphaeum, showing E cavity perhaps for buttress of *skanotheke*.

(*a*)

(*b*)



EXCAVATIONS AT THE ANCIENT THEATRE OF SPARTA 1995–1998

(*a*) W room of second-phase Roman stage-building, showing fragments of Doric columns and a Doric capital (A704) built into the foundations of the S wall, near the inner SE angle. (*b*) Detail of block A704 (on PLATE 61 (*a*)), showing upturned Doric capital with abacus, echinus, necking-rings, and part of one flute.

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